FINAL DRAFT

LOS OSOS BASIN PLAN GROUNDWATER MONITORING PROGRAM 2025 ANNUAL MONITORING REPORT

Prepared for the

BASIN MANAGEMENT COMMITTEE

JUNE 2026

CLEATH-HARRIS GEOLOGISTS
75 Zaca Lane, Suite 110
San Luis Obispo, California 93401

TABLE OF CONTENTS

FINAL DRAFT

FINAL DRAFT

List of Tables

FINAL DRAFT

List of Figures

List of Appendices

FINAL DRAFT

Acronyms used in this Annual Report

AEM	Aerial Electromagnetic
BBMR	Basin Boundary Modification Request
BMC	Basin Management Committee
BOS	San Luis Obispo County Board of Supervisors
CASGEM	California Statewide Groundwater Elevation Monitoring
CCRWQCB	Central Coast Regional Water Quality Control Board
CEC	Constituents of Emerging Concern
CHG	Cleath-Harris Geologists
DEET	Diethyl-meta-toluamide
DDW	Division of Drinking Water
DWR	Department of Water Resources
EFH	Equivalent Freshwater Head
FW	First Water
GMO	Growth Management Ordinance
GSA	Groundwater Sustainability Agency
GSI	GSI Water Solutions
GSWC	Golden State Water Company
ISJ	Interlocutory Stipulated Judgment
LA	Lower Aquifer
LOBP	Los Osos Basin Plan
LOCP	Los Osos Community Plan
LOCSD	Los Osos Community Services District
LOHCP	Los Osos Habitat Conservation Plan
LOWRF	Los Osos Water Recycling Facility
Lynker	Lynker One Water Hydrologic
MCL	Maximum Contaminant Level
NAVD 88	North American Vertical Datum of 1988
NDMA	N-Nitrosodimethylamine
NDMC	National Drought Mitigation Center
NGVD 29	National Geodetic Vertical Datum of 1929
NOAA	National Oceanic and Atmospheric Administration
PFAS	Per- and polyfluoroalkyl Substances
S&T	S&T Mutual Water Company
SGMA	Sustainable Groundwater Management Act
SNMP	Salt and Nutrient Management Plan
SWRCB	State Water Resource Control Board
TAC	Technical Advisory Committee
TDS	Total Dissolved Solids
UA	Upper Aquifer
USDA	United States Department of Agriculture
WRFP	Water Recycling Funding Program
WSC	Water Systems Consulting

FINAL DRAFT

EXECUTIVE SUMMARY

The Los Osos Basin Plan Groundwater Monitoring Program – 2025 Annual Report (Annual Report) describes activities related to the Los Osos Basin Plan (LOBP) Groundwater Monitoring Program and provides results and interpretation of these activities for calendar year 2025. The LOBP Groundwater Monitoring Program is necessary to accomplish the following continuing goals set forth in Section 2.4 of the LOBP (ISJ Group, 2015):

1. Provide for a continuously updated hydrologic assessment of the Los Osos Groundwater Basin (Basin), its water resources and Sustainable Yield.

2. Create a water resource accounting which is able to meet the information needs for planning, monitoring, trading, environmental management, utility operations, land development and agricultural operations.

The LOBP Groundwater Monitoring Program is also necessary to support other goals of the LOBP, including halting or reversing seawater intrusion, establishing a long-term environmentally and economically sustainable and beneficial use of the Basin, and the equitable allocation of costs associated with Basin management.

Groundwater Production

Groundwater production for calendar year 2025 is summarized in Table ES-1 below. Reported Purveyor (Los Osos Community Services District, Golden State Water Company, and S&T Mutual Water Company) production has increased 3.8 percent compared to 2024, while total Basin production is estimated to have decreased by 0.6 percent compared to 2024.

Table ES-1. Groundwater Production

Description	2024 Production in Acre-Feet	2025 Production in Acre-Feet
Los Osos Community Services District	491	494
Golden State Water Company	505	538
S&T Mutual Water Company	26	29
Purveyor Subtotal (metered)	**1,022**	**1,061**
Domestic wells[1]	110	110
Community facilities[1]	50	40
Agricultural wells[1]	510	470
Total Estimated Production[1]	**1,690**	**1,680**

[1] Rounded to the nearest 10 acre-feet. Production from non-metered wells (Domestic, Community, Agricultural) estimated per methods described in Appendix F and LOBP Section 4 and Section 7.5.

FINAL DRAFT

Basin Status

The status of the Basin in terms of key parameters and metrics is listed below, along with the page reference for definitions and additional details on each key parameter:

Precipitation (p. 41). The Basin received above average rainfall in calendar year 2025. San Luis Obispo County started 2025 with no drought to abnormally dry conditions in January; by end of the calendar year in December 2025 no drought conditions were reported (NDMC/USDA/NOAA, 2026).

Seawater Intrusion Front (p. 57). The seawater intrusion front in Zone D retreated between Fall 2024 and Fall 2025. This interpretation is based on localized conditions contoured to represent regional trends. The seawater intrusion front in Zone E moved inland at LA11 between Fall 2024 and Fall 2025. Seawater intrusion into Zone E is a significant threat to Basin sustainability and has been for decades. Zone E intrusion is interpreted to be laterally pervasive in the Western Area, and the overall trend indicates a worsening condition over time.

Basin Yield Metric (p. 71). The Basin Yield Metric was steady between 2024 and 2025 (no change) and meets the LOBP goal in 2025. An update to the Basin sustainable yield was approved in Fall 2025 based on the Transient Model, which is expected to lower the Basin Yield Metric in 2026 (Section 7.5.1).

Water Level Metric (p. 75). The Water Level Metric decreased between Spring 2024 and Spring 2025 (a deterioration) and has not reached the target value.

Chloride Metric (p. 77). The Chloride Metric decreased between Fall 2024 and Fall 2025 (an improvement) but has not reached the target value.

Nitrate Metric (p. 78). The Nitrate Metric decreased between Winter 2024 and Winter 2025 (an improvement) but has not reached the target value.

Upper Aquifer Water Level Profile (p. 81). Water levels in the Upper Aquifer along the bay remain safely above the Protective Elevation, except for near well UA5, where chloride concentrations have increased but remain at relatively low concentrations.

Recommendations for improving the quality and availability of data are contained in Section 9 of the Annual Report. Recommendations from the 2024 Annual Report that were completed in 2025 included construction and calibration of the Transient Model and development of updated Sustainable Yield estimates with the second Program C well and other LOBP programs, continued water quality monitoring at UA5, and a discussion of Chromium-6 and PFAS concentrations in purveyor wells.

Recommendations from 2024 that are on-hold, in progress, or planned for 2026 include re-evaluating the Water Level, Chloride, and Nitrate Metrics (in progress), and continuing to implement recommendations for new monitoring well construction to help characterize Lower Aquifer seawater intrusion (Sweet Spring monitoring well cluster planned; Section 7.3).

LOBP Metrics

As described in Section 7.5 ("Basin Metrics") of this Annual Report, the LOBP established several Basin metrics to evaluate nitrate impacts to the Upper Aquifer, seawater intrusion into the Lower Aquifer, and the effect of management efforts of the Basin Management Committee (BMC). These metrics allow the BMC, regulatory agencies, and the public to evaluate the status of nitrate levels and seawater intrusion, and the impact of implementation of the LOBP programs in the Basin through objective, numerical criteria that can be tracked over time. The status of key Basin metrics is summarized in Table ES-2.

Table ES-2. LOBP Metric Summary

Metric[1]	LOBP Goal	Calculated Value from 2025 Data	Change in Condition from 2024
Basin Yield Metric[2]	80 or less	71	No change from 71 (steady)
Water Level Metric	8 feet above mean sea level or higher	3.5 feet above mean sea level	Decrease from 4.1 ft. (deterioration)
Chloride Metric	100 mg/L or lower	230 mg/L	Decrease from 249 mg/L (improvement)
Nitrate Metric	10 mg/L or lower	12.9 mg/L (NO_3-N)	Decrease from 15.7 mg/L (improvement)

[1]Revisions to the Water Level, Chloride, and Nitrate Metrics are currently in progress.
[2]An update to the Basin sustainable yield was approved by the BMC in Fall 2025 based on the Transient Model, which is expected to lower the Basin Yield Metric in 2026 (Section 7.5.1).

Approval of the Annual Monitoring Report by the BMC does not constitute unanimous approval of actions listed under Section 5.11.4 (Approval Requirements) of the Stipulated Judgment or setting the Sustainable Yield for a given year. These actions require a separate action and unanimous approval by the BMC.

Adaptive Management

In addition to the programs described in the LOBP, the following additional initiatives were under evaluation or completed by the BMC in 2025 through adaptive management. Details regarding the status of each program listed below are provided in Section 10 of this Annual Report.

- Basin Metrics
- Program C Adaptive Management
- Lower Aquifer Nitrate Investigation
- Evaluation of Water Conservation Measures
- Water Recycling Funding Program (WRFP) Study/Transient Groundwater Model
- Discussion and Recommendation of Criteria for Future Growth

LOBP Infrastructure Programs

The status of LOBP infrastructure programs is summarized in Table ES- 3.

Table ES-3. Basin Infrastructure Projects

Project Name	Parties Involved	Funding Status	Capital Cost	Status
Program A				
Water Systems Interconnection	LOCSD/ GSWC			Completed
Upper Aquifer Well (8th Street)	LOCSD	$307,000		Completed
South Bay Well Nitrate Removal	LOCSD			Completed
Palisades Well Modifications	LOCSD			Completed
Blending Project (Skyline Well)	GSWC			Completed
Water Meters	S&T			Completed
Program B				
LOCSD Wells	LOCSD	Not Funded	LOBP: $2.7 mil	Project not initiated
GSWC Wells	GSWC	Not Funded	LOBP: $3.2 mil	Project not initiated
Community Nitrate Removal Facility	LOCSD/GSWC/S&T	GSWC Portion Funded	GSWC: $1.23 mil	GSWC's Program A Blending Project might be capable of expanding to be the first phase of the Program B Community Nitrate Removal Facility.

FINAL DRAFT

Project Name	Parties Involved	Funding Status	Capital Cost	Status
Program C				
Expansion Well No. 1 (Los Olivos)	GSWC			Completed
Expansion Well No. 2	LOCSD	LOCSD	LOBP: $2.5 mil	The Bay Oaks well is completed and operational as of January 2026.
Expansion Well 3 and LOVR Water Main Upgrade	GSWC/LOCSD	Cooperative Funding	LOBP: $1.6 mil	The deferral from Program C for this project was removed by the BMC on August 16, 2023.
LOVR Water Main Upgrade	GSWC	May be deferred	LOBP: $1.53 mil	Project may not be required, depending on the pumping capacity of the drilled Program C wells. It may be deferred to Program D.
S&T/GSWC Interconnection	S&T/ GSWC	Pending	LOBP: $30,000	Currently on hold pending further evaluation of the project.

Project Name	Parties Involved	Funding Status	Capital Cost	Status
Program D				
Shift production within the Lower Aquifer from the Western Area to the Eastern Area of the Basin				Currently being considered for deferment through Adaptive Management. BMC to review on an annual or semi-annual basis.
Program M				
New Zone D/E Lower Aquifer monitoring well in Cuesta by the Sea	All Parties			Completed
Sweet Springs Monitoring Well	All Parties	$150,000 in Rose Foundation Grant Funding, $50,000 match from LOCSD's 2025 BMC contributions	TBD	In progress, anticipated completion in 2026.
Program U				
Creek Discharge Program	All Parties		TBD	These activities are currently on hold. The Transient Model and Water Recycling Funding Study are intended to better inform the BMC on the most effective opportunities for increasing the sustainable yield of the Basin.
8th and El Moro Urban Storm Water Recovery Project	All Parties		TBD	These activities are currently on hold. The Transient Model and Water Recycling Funding Study are intended to better inform the BMC on the most effective opportunities for increasing the sustainable yield of the Basin.

FINAL DRAFT

1. INTRODUCTION

The Los Osos Groundwater Basin (the Basin) was adjudicated in October 2015 (*Los Osos Community Services District v. Southern California Water Company [Golden State Water Company] et al.* (San Luis Obispo County Superior Court Case No. CV 040126) and is managed by the Los Osos Groundwater Basin Management Committee (BMC), consisting of representatives from Los Osos Community Services District (LOCSD), Golden State Water Company (GSWC), S&T Mutual Water Company (S&T), and the County of San Luis Obispo (County). This is the eleventh Annual Report for the Basin.

The 2025 Annual Report (Annual Report) describes Basin activities related to the Los Osos Basin Plan (LOBP) Groundwater Monitoring Program and provides results and interpretation of these activities. The LOBP Groundwater Monitoring Program is necessary to accomplish the following continuing goals set forth in Section 2.4 of the LOBP (ISJ Group, 2015):

1. Provide for a continuously updated hydrologic assessment of the Basin, its water resources and sustainable yield.

2. Create a water resource accounting which is able to meet the information needs for planning, monitoring, trading, environmental management, utility operations, land development and agricultural operations.

The LOBP Groundwater Monitoring Program is also necessary to support other LOBP goals, including halting or reversing seawater intrusion, establishing a long-term environmentally and economically sustainable and beneficial use of the Basin, and the equitable allocation of costs associated with Basin management (ISJ Group, 2015). The program will provide significant overlap with several regulatory requirements, including:

- The Sustainable Groundwater Management Act (SGMA)

- California Statewide Groundwater Elevation Monitoring (CASGEM) Program

- State Water Resource Control Board's (SWRCB) salt and nutrient monitoring guidelines as adopted in the state Recycled Water Policy. The County Board of Supervisors adopted the Salt and Nutrient Management Plan (SNMP) for the Los Osos Groundwater Basin on January 23, 2018. The SNMP has been reviewed by the Regional Water Quality Control Board.

- Recycled Water Management Plan requirements for the Los Osos Water Recycling Facility (LOWRF)

This report was prepared by Cleath-Harris Geologists (CHG). Confluence Engineering Solutions (ConfluenceES) contributed to the Executive Summary and Section 10.

2. BACKGROUND

In August 2008, the Superior Court of the State of California for the County of San Luis Obispo (Court) approved an Interlocutory Stipulated Judgment (ISJ) between LOCSD, GSWC, S&T, and the County. Under the ISJ, these Parties formed a working group, undertaking technical studies and management discussions that produced the LOBP in January 2015. The LOBP presents a comprehensive groundwater management strategy and serves as the cornerstone of a physical solution to address the significant problems facing the Basin, including seawater intrusion and elevated nitrate concentrations, and for restoration of Basin water resources, while respecting existing water rights. The LOBP Groundwater Monitoring Program is a key component of the LOBP, providing water level and water quality data that serve as measures of effectiveness for LOBP programs and activities with respect to the restoration of Basin water resources. A Stipulated Judgment was approved by the Court on October 14, 2015 and covers the plan areas shown in Figure 1.

In 2019, the Department of Water Resources (DWR) separated the Los Osos Valley groundwater basin (Bulletin 118 basin 3-08) into two jurisdictional subbasins, the Los Osos Area Subbasin and the Warden Creek Subbasin (DWR, 2019). The Los Osos Area Subbasin lies within the LOBP plan area and overlaps with the LOBP Basin but does not replace or update the scientific boundary defined in the 2015 Basin adjudication (see Section 2.2.4 for details). A figure showing the DWR Los Osos Subbasin boundary and the LOBP Basin boundary is included in Appendix A.

2.1 Groundwater Monitoring History

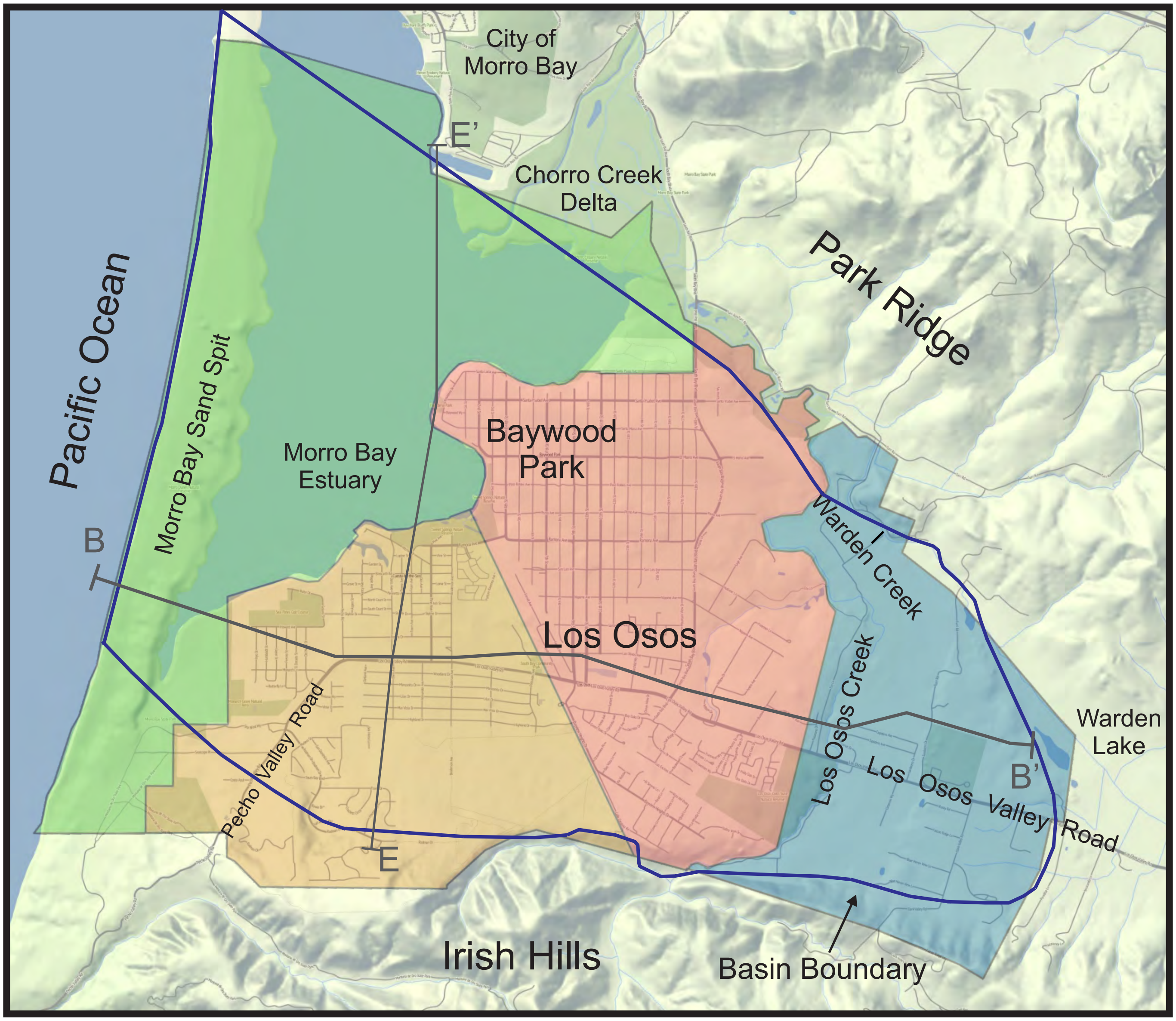
Groundwater monitoring has been performed by public agencies, water purveyors, and consultants for various Basin studies and programs over several decades. A list of historical investigations, monitoring reports, and monitoring programs with a major focus on Basin water levels and water quality through 2025 is included in Appendix A.

2.2 LOBP Groundwater Monitoring Program Design

The purpose of the LOBP Groundwater Monitoring Program is to collect and organize groundwater data on a regular basis for use in management of the Basin. Design of the LOBP Groundwater Monitoring Program is detailed in Section 7 of the LOBP. The basic elements of the program are as follows:

- Monitor long-term groundwater level trends in a network of wells for three monitoring groups within the Basin: First Water (FW), Upper Aquifer (UA), and Lower Aquifer (LA). These terms are defined in Section 2.2.1 below. The abbreviations are used for network well numbering purposes (e.g. Lower Aquifer well 43 is LA43).

FINAL DRAFT



Base Image: Stamen-Terrain

0 2000 4000 6000 8000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Basin Plan Areas:

Dunes and Bay Area

Western Area

Central Area

Eastern Area

Cross-section alignments (Figures 5, 19, 20 and 21).
Labeled B-B' and E-E' to be consistent with Basin Plan.

Basin Boundary from Los Osos Plan

Figure 1
Basin Location and Plan Areas
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

- Monitor seasonal fluctuations and long-term water quality trends at selected wells in each of the three monitoring groups.

- Compare hydrologic data pertinent to Basin management, including groundwater production from the two principal water supply aquifers (Upper Aquifer and Lower Aquifer), wastewater disposal and recycled water use, local precipitation data and County stream gage records for Los Osos Creek.

- Collect data sufficient to evaluate the effectiveness of Basin management strategies adopted in the LOBP via established metrics.

There are currently 96 wells in the 2025 LOBP Groundwater Monitoring Program, including 45 BMC member agency monitoring wells, 18 municipal wells (active and inactive) and 33 private wells (Appendix B). Private well participation in the monitoring program during 2025 was approximately 65 percent (22 out of 33 wells in Spring, 21 out of 33 in the Fall). "Private" wells refer to domestic wells, agricultural irrigation wells, and monitoring wells that are not controlled by BMC member agencies.

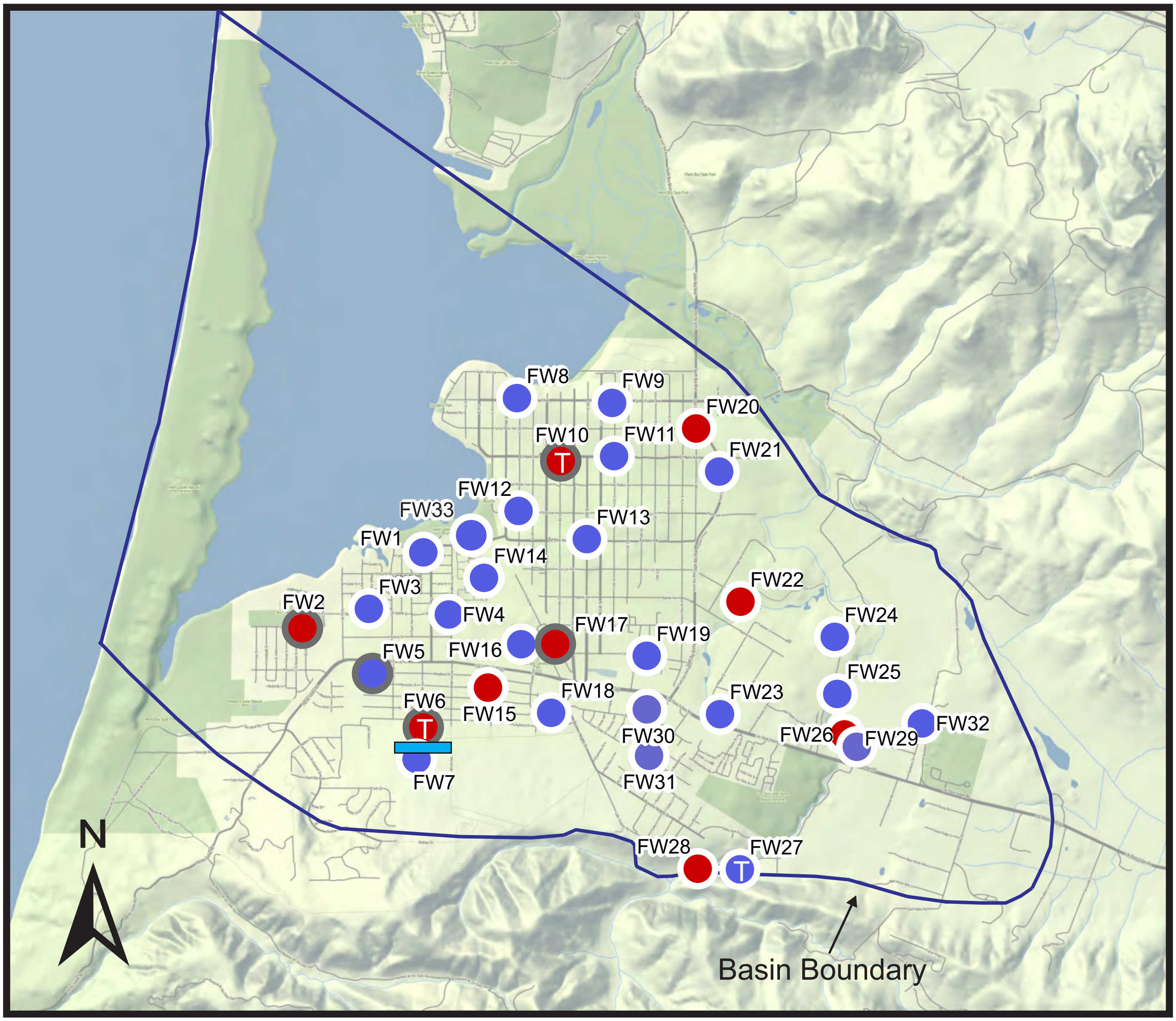
Existing groundwater monitoring wells were selected to achieve, to the degree possible, horizontal, and vertical coverage throughout the Basin. The LOBP Groundwater Monitoring Program coverage within the Basin is shown in Figures 2, 3, and 4. Correlation between LOBP Groundwater Monitoring Program well numbers and state well numbers, along with well construction information and monitoring tasks are included in Appendix B.

Despite the relatively high density of available monitoring locations in the Basin, only a few of the wells are dedicated to monitoring Lower Aquifer Zone E, which is the deepest aquifer in the Basin and the most susceptible to seawater intrusion. Close to half of the 96 wells in the monitoring network as of 2025 are water supply wells, which are not specifically designed for groundwater monitoring, and may include mixed aquifer zone completions and wellbore leakage. There is a need for additional monitoring locations in the Lower Aquifer (see Section 2.2.5).

2.2.1 Water Level Monitoring

Water level monitoring is a fundamental tool for characterizing Basin hydrogeology and is performed at LOBP Groundwater Monitoring Program locations. Groundwater elevations in wells are measures of hydraulic head in an aquifer. Groundwater moves in the direction of decreasing head, and groundwater elevation contours can be used to show the general direction and hydraulic gradient associated with groundwater movement. Changes in the amount of groundwater in storage within an aquifer can also be estimated based on changes in hydraulic head, along with other parameters.

FINAL DRAFT



Base Image: Stamen-Terrain

Scale: 1 inch ≈ 4,000 feet

Explanation

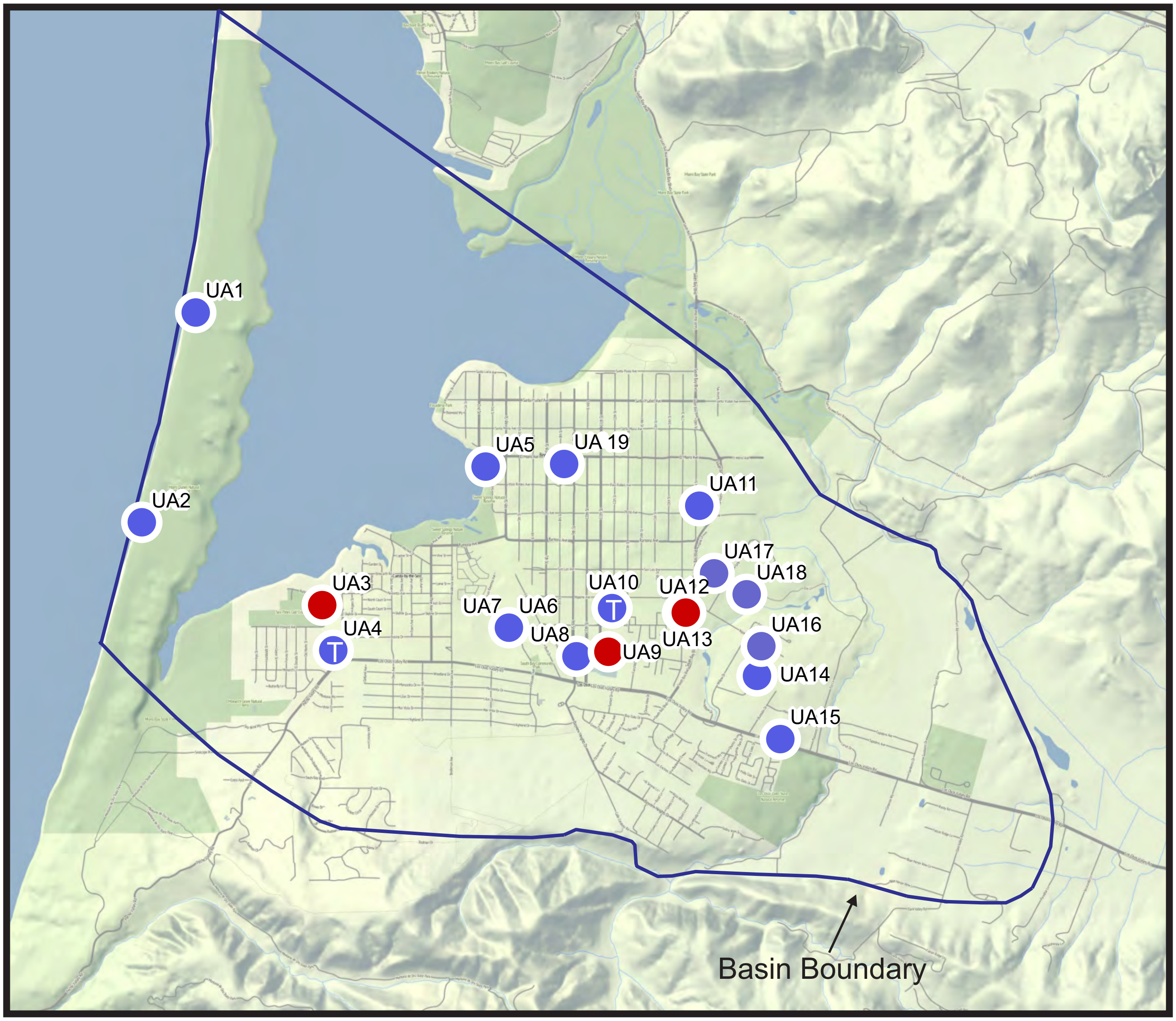
- LOBP Water Level Monitoring Well
- Water Level Transducer
- Water Level and Water Quality Monitoring Well
- Water Level Transducer and Water Quality Monitoring Well
- Gray ring denotes nitrate metric well
- Broderson Leach Field

Note: First Water wells refers to wells screened within the first 50 feet of saturated sediments across the basin, regardless of the aquifer.

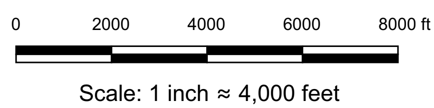
Figure 2
Groundwater Monitoring Program
First Water Wells
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain



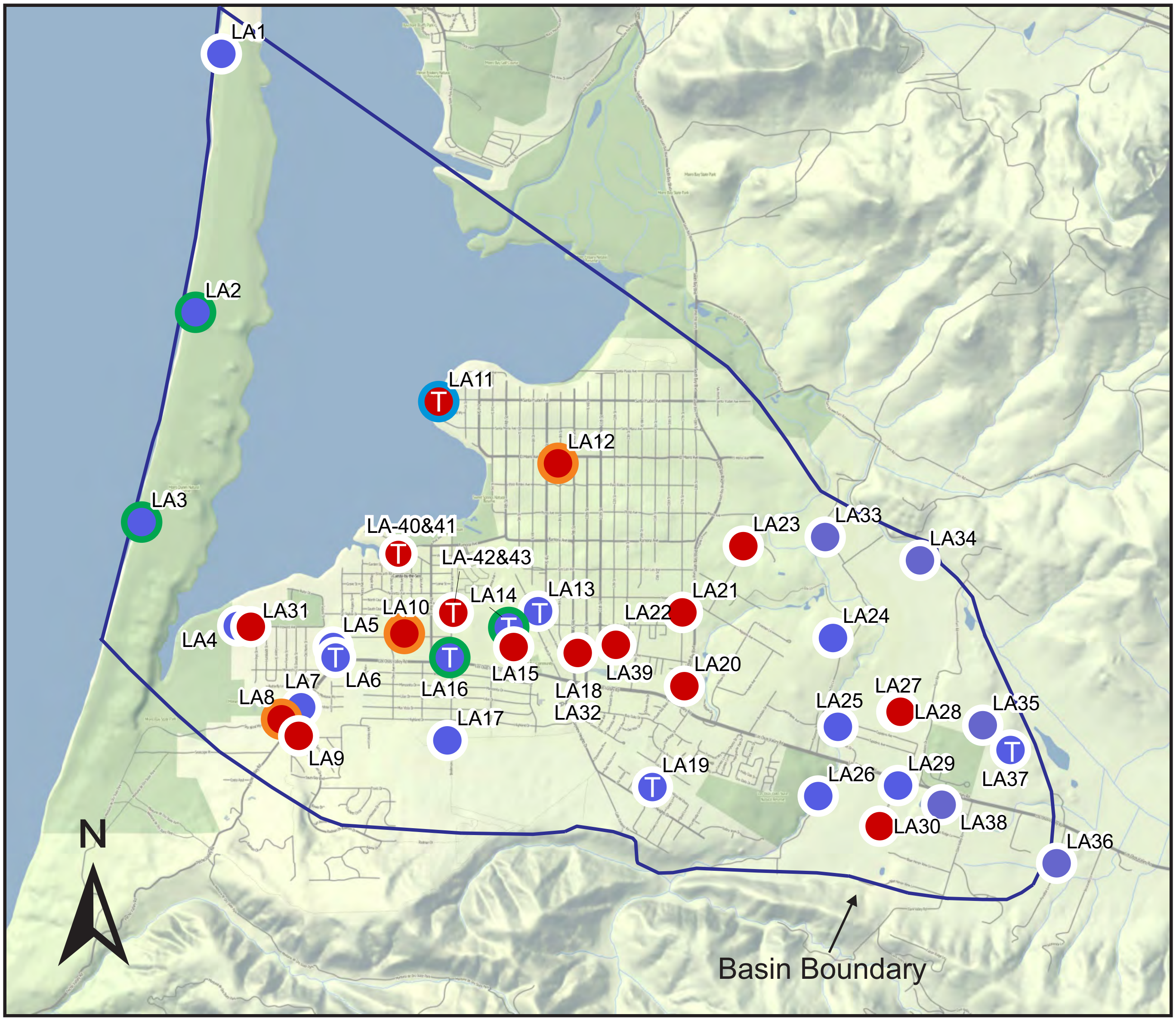
Explanation

- LOBP Water Level Monitoring Well
- Water Level Transducer
- Water Level and Water Quality Monitoring Well
- Water Level Transducer and Water Quality Monitoring Well

Figure 3
Groundwater Monitoring Program
Upper Aquifer Wells
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain

0 2000 4000 6000 8000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

- LOBP Water Level Monitoring Well
- Water Level Transducer
- Water Level and Water Quality Monitoring Well
- Water Level Transducer and Water Quality Monitoring Well
- Orange ring denotes chloride metric well
- Green ring denotes water level metric well
- Blue ring denotes chloride and water level metric well

Note: LA24 & FW24, LA 40 & 41, and LA 42 & 43 are nested wells (same borehole).

LA18 and LA32 at same site (two symbols used in 2016 Annual Report figure to indicate LA32 was a program addition).

Figure 4
Groundwater Monitoring Program
Lower Aquifer Wells
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Sixteen monitoring network wells are equipped with transducers as of 2025, to provide an efficient and high level of resolution for tracking dynamic changes in Basin groundwater levels. Of the 96 wells currently included in the 2025 LOBP Groundwater Monitoring Program, 33 are representative of First Water, 19 are representative of the Upper Aquifer, and 44 wells are representative of the Lower Aquifer. Spatially, five water level monitoring wells are located in the Dunes and Bay Area, 31 wells are located in the Western Area, 40 wells are located in the Central Area, and 20 wells are located in the Eastern Area.

First Water

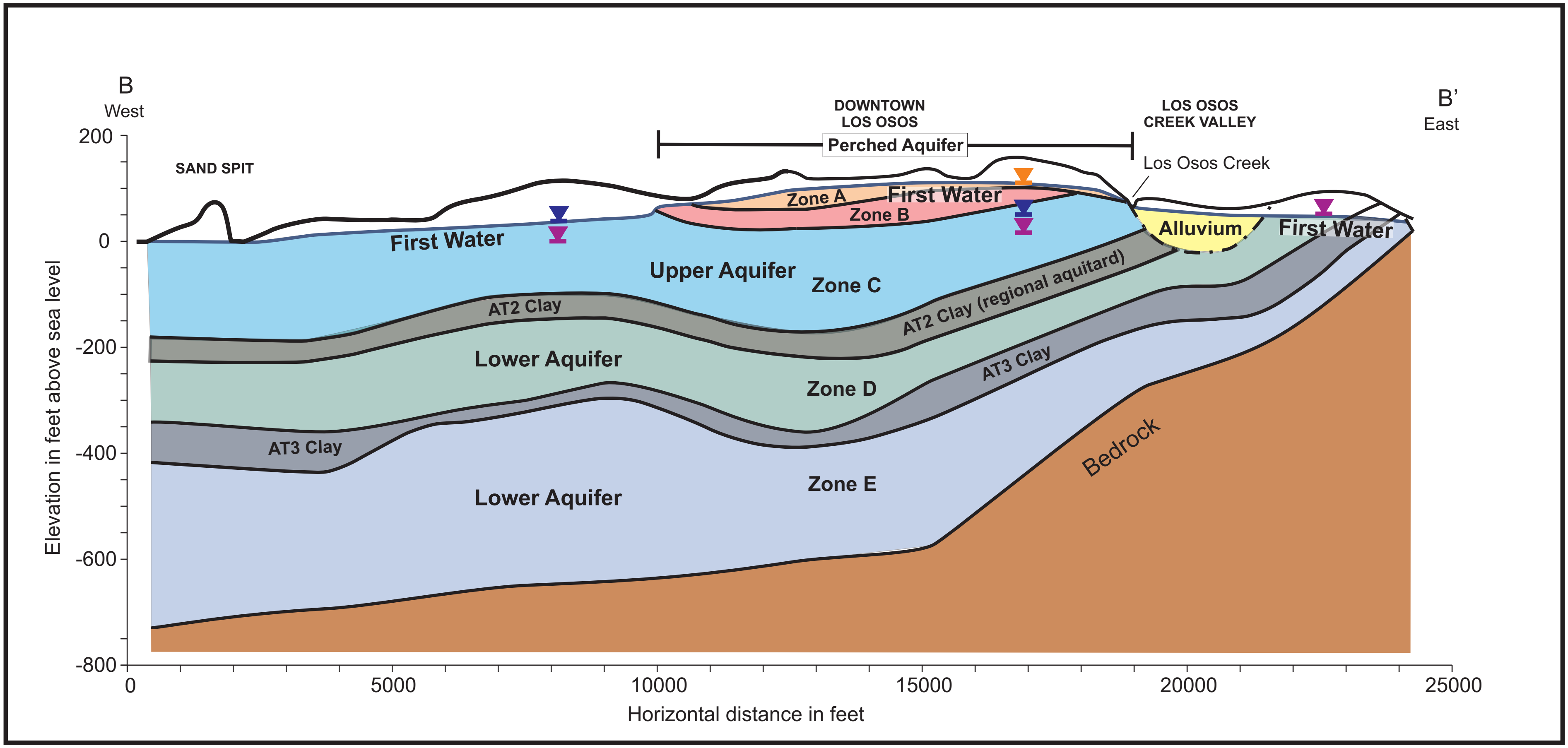
The First Water group refers to wells screened within the first 50 feet of saturated sediments across the Basin, regardless of the aquifer (Figure 5). First Water is the interface where percolating waters, including precipitation and return flows from irrigation and wastewater, mix with Basin waters. This interface occurs within unconfined sediments and generally rises and falls seasonally with water level fluctuations. Where First Water is close to ground surface, it also impacts drainage and is associated with flooding issues in low-lying areas. First Water extends across the Basin, and may be present in dune sands, Paso Robles Formation deposits, or Los Osos Creek alluvium (Figure 5). Selected First Water wells, including those in downtown Los Osos are used to represent the Perched Aquifer, Upper Aquifer, and Alluvial Aquifer for water level contouring.

Upper Aquifer

The Upper Aquifer (Zone C) refers to the non-perched aquifer above the regional aquitard (Figure 5). As noted above, a portion of the Upper Aquifer may also be considered First Water in certain Basin areas. Historically, the Upper Aquifer was developed as the main water supply for the community and is still the main source of water for rural residential parcels. Beginning in the late 1970's, purveyor production from the Lower Aquifer became the main source of water for the community. A significant increase in Upper Aquifer production could be implemented under LOBP infrastructure Program B. Monitoring the Upper Aquifer in the urban area (properties contained within the Urban Reserve Line as shown in Figure 10 of the LOBP) is important to the Purveyors and rural residential parcels.

Lower Aquifer

The Lower Aquifer refers to water bearing sediments below the regional aquitard. There are both Paso Robles Formation and Careaga Formation deposits in the Lower Aquifer. The base of the Lower Aquifer is claystone and sandstone bedrock, although the effective base of fresh water lies above bedrock at the western edge of the Basin, due to the presence of seawater intrusion. There are two separate Lower Aquifer zones defined for Basin management and seawater intrusion mitigation. Zone D lies between the regional aquitard (AT2 clay) and a deeper aquitard (AT3 clay). Zone E is below the AT3 clay (Figure 5). Lower Aquifer Zone D is currently the main water supply source for the community.



Cross-section alignment shown in Figure 1

Explanation

Perched Aquifer Water level

Upper Aquifer Water level

Lower Aquifer Water level

Figure 5
Basin Aquifers
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Seawater intrusion is a major concern for the Lower Aquifer. The seawater intrusion front corresponds to the position of the 250 mg/L chloride concentration isopleth, which has been advancing inland for decades, and continues to advance under current Basin conditions, based on the monitoring program data. A significant reduction in Lower Aquifer production in the Western Area, together with other LOBP programs, is necessary to halt, slow and/or reverse intrusion.

2.2.2 Groundwater Quality Monitoring

Groundwater quality monitoring refers to the periodic collection and chemical or physical analysis of groundwater from wells. The analytical requirements are highly variable, depending on the purpose of monitoring. General minerals and nitrate are common water quality constituents of analysis for groundwater basin investigations. There are many other classes of water quality constituents of concern, however, such as volatile organic compounds, inorganic compounds (metals), petroleum hydrocarbons or emerging contaminants. Chromium-6 has been a concern in shallow wells as described in the 2015 Annual Groundwater Monitoring Report (CHG, 2015) and remains a concern in 2025. Perfluoroalkyl and Polyfluoroalkyl substances (PFAS) have also become a concern in recent years and are being monitored in public water supply wells throughout California. A discussion of Chromium-6 concentrations and PFAS concentrations in groundwater at purveyor wells is included in Section 4.2.3.

Monitoring Constituents

Constituents of analysis for the LOBP Groundwater Monitoring Program have been selected to evaluate salt loading and associated nitrate impacts, seawater intrusion, and wastewater disposal. Table 1 lists the general mineral constituents, including nitrate, which will be monitored as part of the program, although additional constituents are quantified in the general mineral suite performed by the analytical laboratory (See Appendix C). Total Dissolved Solids (TDS) and specific conductance are standard measures for groundwater mineralization and salinity. Temperature and pH are parameters that are routinely measured during sampling to confirm that the groundwater samples represent the aquifer. Table 1 presents constituents to be tested in the wells designated for water quality monitoring, which are distributed laterally and vertically across the Basin (Figures 2, 3 and 4).

The Lower Aquifer (via wells LA4, LA14, and LA40) are also monitored using down hole geophysics once every three years (natural gamma and induction logs) to provide a unique measure of seawater intrusion over time in one location within the Basin. Vertical movement of the freshwater-seawater interface has historically averaged two to three feet per year between 1985 and 2015 (CHG, 2015). The practical resolution of the methodology for measuring vertical interface movement is close to five feet, so a three-year monitoring frequency provides sufficient time to identify movement, based on the historical data. LA4 is located at Sea Pines Golf Course in the Western Area, LA14 is located at the north end of Palisades Avenue, and LA40 is on Lupine Avenue. Seawater is highly conductive, compared to fresh water, and an induction log performed in a borehole penetrating the fresh water/seawater interface shows the vertical transition from fresh water to seawater.

Table 1. Water Quality Monitoring Constituents[1]		
Constituent	**Reporting Limit**	**Units**
Specific Conductance	1.0	µS/cm
pH (field)	0.01	pH units
Temperature (field)	0.1	°F
TDS	20	mg/L
Carbonate Alkalinity	10	mg/L
Bicarbonate Alkalinity	10	mg/L
Total Alkalinity as $CaCO_3$	10	mg/L
Chloride	1.0	mg/L
Nitrate – Nitrogen	0.1	mg/L
Sulfate	0.5	mg/L
Boron	0.1	mg/L
Calcium	1.0	mg/L
Magnesium	1.0	mg/L
Potassium	1.0	mg/L
Sodium	1.0	mg/L

[1]From LOBP (ISJ Group, 2015)

Constituents of Emerging Concern

Monitoring Constituents of Emerging Concern (CECs) is a requirement of salt and nutrient management plans adopted pursuant to the SWRCB Recycled Water Policy (SWRCB, 2009). Such monitoring can measure potential dilution and soil-aquifer treatment of recycled water constituents, and travel time and movement of recycled water.

The initial CECs to be monitored are listed in Table 2, and were selected based on the SWRCB Recycled Water Policy. There are three types of CECs, each of which has a different function. Health-based indicators directly monitor the presence of classes of constituents in groundwater, while performance-based and surrogate indicators measure the effectiveness of the wastewater treatment process. The list of CECs is not intended to be comprehensive, but meant to be representative. CECs may be added to (or removed from) the monitoring list once data has been collected and analyzed, subject to approval by the BMC.

FINAL DRAFT

Table 2. CEC Monitoring Constituents[1]			
Constituent or Parameter	**Type of Constituent**	**Type of Indicator**	**Reporting Limit (µg/L)**
17β-estradiol	Steroid Hormones	Health	0.004
Triclosan	Antimicrobial		0.008
Caffeine	Stimulant		0.004
NDMA (N-Nitrosodimethylamine)	Disinfection Byproduct		0.002
Gemfibrozil	Pharmaceutical Residue	Performance	0.004
DEET (Diethyl-meta-toluamide)	Personal Care Product		0.004
Iopromide	Pharmaceutical Residue		0.004
Sucralose	Food additive		0.020
Ammonia	N/A	Surrogate	N/A
Nitrate-Nitrogen	N/A		N/A
Total Organic Carbon	N/A		N/A
UV Light Absorption	N/A		N/A
Specific Conductance	N/A		N/A

[1]From LOBP (ISJ Group, 2015)

2.2.3 Monitoring Frequency

Monitoring frequency is the time interval between data collection. Seasonal fluctuations relating to groundwater levels or quality are typically on quarterly or semi-annual cycles, correlating with seasonal precipitation, recharge, water levels, and often well production. The monitoring schedule for groundwater levels collected under the LOBP Groundwater Monitoring Program will coincide with seasonal water level fluctuations, with higher levels (i.e. elevations) in April (Spring) and lower levels in October (Fall). The LOWRF Groundwater Monitoring Program (First Water and Upper Aquifer groups) is conducted in June and December, although water levels at many of these wells are also measured under the LOBP program in April and October for use in water level contouring and groundwater storage calculations. A semi-annual monitoring frequency provides a measure of seasonal cycles, which can then be distinguishable from the long-term trends. At the transducer-monitored locations, water level measurements are recorded automatically on a daily basis and downloaded during the regular semi-annual water level monitoring events.

The monitoring frequency for water quality sampling and analyses performed under the LOBP Groundwater Monitoring Program will generally be once per year in October (Fall), when groundwater levels (i.e. elevations) are seasonally low and many water quality constituents have historically been at a higher concentration than their corresponding Spring measurement. Lower Aquifer groundwater monitoring will also be performed in April (Spring) as a means of tracking seawater intrusion in greater detail. The schedule for water quality testing performed under the LOWRF Groundwater Monitoring Program (First Water and Upper Aquifer) is in June and December.

2.2.4 SGMA Activities

SGMA took effect on January 1, 2015 and requires that certain actions be taken in groundwater basins designated as either high or medium priority by DWR, including the Basin. Prior to 2019, DWR had identified the Los Osos Valley groundwater basin as a high priority basin subject to critical conditions of overdraft due to seawater intrusion and nitrate impairment (DWR, 2014, 2016, 2018a). The majority of SGMA requirements, however, including formation of a Groundwater Sustainability Agency (GSA) and development and implementation of a Groundwater Sustainability Plan, did not apply to the LOBP plan areas covered by the Stipulated Judgment, since this portion of the DWR Basin is adjudicated.

In order to comply with SGMA, the County formed the Los Osos Fringe Areas GSA to cover Basin areas between the 2016 Bulletin 118 Los Osos Valley groundwater basin boundaries (Basin 3-8) and the LOBP adjudicated area boundary, which were designated as "fringe areas". A Basin Boundary Modification Request (BBMR) was initiated in 2018 (DWR, 2018b). The Los Osos BBMR included scientific external and jurisdictional subdivision modifications intended to improve the community's ability to sustainably manage the Basin. The proposed boundary modifications would better align DWR's Bulletin 118 Basin boundary with current scientific data as well as existing management boundaries in the Basin.

In 2019, DWR published the final basin boundary modifications updating Bulletin 118 and reassessing groundwater basin prioritizations (DWR, 2019). The Los Osos Valley groundwater basin was separated into two jurisdictional subbasins, the Los Osos Area Subbasin (3-08.01) and the Warden Creek Subbasin (3-08.02). Both subbasins are designated as very low priority for SGMA, although the Los Osos Area subbasin is still classified as subject to critical overdraft due to seawater intrusion (DWR, 2021). The Los Osos Area Subbasin, with the exception of minor fringe areas, lies within the LOBP plan area and overlaps with the LOBP Basin, but does not replace or update the scientific boundary defined in the 2015 Basin adjudication. A figure showing the DWR Los Osos Subbasin boundary and the LOBP Basin boundary is included in Appendix A.

2.2.5 Additional Basin Studies

Several Basin studies and activities in addition to regular groundwater monitoring were authorized or completed in 2025, including:

- In February of 2025, LA 14 and LA 16 were modified from their original constructions to only tap water in aquifer Zone E as monitoring wells. This was done in order to more completely understand the movement of the seawater intrusion front; and 2025 is the first year they have been sampled with this intent. This has resulted in a change in their static water levels compared to those taken previously. Monitoring these wells will reduce data gaps and enhance the understanding of Zone E seawater intrusion.

- Planning and funding for the Transient Model was initiated in 2021. In 2022, the project was combined with the Recycled Water Funding Program Grant Initiative (see Section 10.2), and began in 2023. The Transient Model was completed in October 2025 and replaces the existing steady-state model.

- A Sustainable Yield estimate for calendar year 2026 of 2,000 acre-feet was approved by the BMC at the October 15, 2025 Board of Directors meeting. This is the first change in the Sustainable Yield since 2021, and reflects a reduction of 380 acre-feet from prior years. The 2026 Sustainable Yield estimate was developed using the Transient Model, which was completed in 2025.
- In October of 2024, the BMC approved the construction of a new lower aquifer monitoring well near the Sweet Springs nature preserve that will fill Lower Aquifer water quality data gaps in the region for the purpose of tracking seawater intrusion. The construction of this well is expected to take place in 2026.

- On January 28, 2026, the BMC approved preparation of an agricultural irrigation water use estimate using remote sensing data for the 2025 Annual Report. The results of the enhanced estimate have been included herein for comparison with the current methodology.

Other BMC activities performed in 2025 are summarized in Section 10.2

3. CONDUCT OF WORK

This Annual Report covers monitoring activities performed during the 2025 calendar year. While information from prior years is included in data presentation and interpretation, the conduct of work and detailed groundwater monitoring results reported herein are for 2025.

3.1 Services Provided

All 2025 groundwater monitoring data compiled for this report, unless described otherwise, comes from the following monitoring programs:

- San Luis Obispo County Public Works, Semi-Annual Water Level Monitoring Program: water level data.
- Purveyor water supply well monitoring: water level, water quality and production data.
- LOWRF Waste Discharge Order R3-2011-0001 Groundwater Monitoring Program (CCRWQCB, 2011): water level and water quality data.
- LOBP Groundwater Monitoring Program: water level and water quality data.

3.2 Field Methods

Groundwater level measurement and groundwater sampling are the primary field activities performed for the LOBP Groundwater Monitoring Program. Field activities include measuring and recording water levels in wells and collecting groundwater samples for laboratory analytical testing. The field methods approved for use in the LOBP Groundwater Monitoring Program are presented in Appendix D. These methods are recommended for services performed directly for the BMC and for other monitoring programs that contribute data to the LOBP Groundwater Monitoring Program.

3.2.1 Elevation Datum

The original survey for wells in the County's Semi-Annual Water Level Monitoring Program was based on the National Geodetic Vertical Datum of 1929 (NGVD 29), which has been replaced in land surveying practice by the North American Vertical Datum of 1988 (NAVD 88). Monitoring network wells were re-surveyed in 2003, 2005, 2020 and 2021 using NAVD 88. LA42, LA43, and LA44 were surveyed in October 2025 along with a re-survey of LA16 following its modification to a Zone E well in February of 2025. Wellhead elevations are shown in Tables 3 through 8.

3.2.2 Water Level Monitoring Procedures

Groundwater level monitoring typically uses an electric sounder or steel tape. If the well is equipped and active, monitoring would take place when the pump is off and the water level is relatively static. Sixteen monitoring network wells are currently equipped with a pressure transducer, allowing for automatic water level data collection between regular (manual) monitoring events. These devices are placed below the water surface in a well and record changes in pressure that occur in response to changes in the height of the water column above the transducer. Detailed water level monitoring procedures are included in Appendix D.

3.2.3 Groundwater Sampling Procedures

Groundwater sampling procedures ensure collection of a representative groundwater sample from an aquifer for water quality analysis. Unused or unequipped wells are purged of standing or stagnant water prior to sampling. Stabilization of field measurements for conductivity, pH, and temperature, along with minimum purge volumes, are included in the approved methods. Sampling procedures for general mineral and nitrate sampling (with additional procedures for wastewater indicator compounds) are presented in Appendix D.

FINAL DRAFT

3.3 Monitoring Staff Affiliations

Monitoring services that contributed data to the 2025 Annual Report were performed by staff or consultants affiliated with the following agencies:

- San Luis Obispo County monitoring programs. Beginning in 2022, the County has contracted Semi-Annual Water Level Program monitoring services in the Los Osos Basin to outside consultants. The Spring and Fall 2025 monitoring events were conducted by PHDM Environmental Services. The County Public Works Department staff continue to collect and maintain precipitation and stream gage records. CHG performed semi-annual (June and December) water level monitoring and water quality sampling at selected private wells and monitoring wells for the LOWRF Groundwater Monitoring Program (data from this program is used in the LOBP Groundwater Monitoring Program).
- Los Osos Water Purveyors (LOCSD, GSWC, S&T). Water agency staff performed semi-annual water level monitoring and water quality sampling at municipal water supply wells.
- Los Osos BMC (LOCSD, GSWC, S&T, and County). CHG performed semi-annual (April and October) water level monitoring, water quality sampling at private wells, monitoring wells, and municipal supply wells for the LOBP Groundwater Monitoring Program.

4. MONITORING RESULTS

The results of groundwater monitoring activities performed in 2025 for the various Basin monitoring programs are summarized below. Overlap between the LOBP Groundwater Monitoring Program and other ongoing monitoring programs are shown in Appendix B. Laboratory analytical reports of groundwater samples collected for the LOWRF Groundwater Monitoring Program are contained in their respective June and December 2025 monitoring program reports (CHG, 2025).

4.1 Water Level Monitoring Results

Tables 3 through 8 present the results of groundwater level measurements at LOBP Groundwater Monitoring Program wells, as reported by the various monitoring programs. Available water levels for wells labeled “private” are not reported herein, but those listed as measured have been used for aggregated water level contour maps. Private wells refer to domestic wells, agricultural irrigation wells, and monitoring wells that are not controlled by BMC member agencies.

Most of the Spring and Fall water levels were measured in April and October 2025, respectively, for the County Semi-Annual Water Level Monitoring Program and the LOBP Groundwater Monitoring Program. The LOWRF Groundwater Monitoring Program schedule moved from April to June and from October to December beginning in Fall 2016. For consistency with the LOBP Groundwater Monitoring Program, however, CHG also monitored water levels at selected LOWRF monitoring program wells in April and October 2025, rather than using the June and December 2025 LOWRF monitoring event values.

FINAL DRAFT

Table 3. Spring 2025 Water Levels – First Water					
Well ID	State Well Number	R. P. Elevation (feet NAVD 88)	Date	Water Level (feet NAVD 88)	
				Depth	Elevation
FW1	30S/10E-13A7	PRIVATE (not measured)			
FW2	30S/10E-13L8	32.63	4/1/2025	21.2	11.4
FW3	30S/10E-13G	50.95	4/1/2025	38.27	12.7
FW4	30S/10E-13H	49.33	4/2/2025	19.90	29.4
FW5	30S/10E-13Q2	101.27	4/1/2025	78.37	22.9
FW6	30S/10E-24A	193.04	4/11/2025	137.54	55.5
FW7	30S/10E-24Ab	Not measured (damaged)			
FW8	30S/11E-7L4	45.76	4/1/2025	37.90	7.9
FW9	30S/11E-7K3	90.71	4/1/2025	53.60	37.1
FW10	30S/11E-7Q1	25.29	4/11/2025	8.1	17.2
FW11	30S/11E-7R2	61.93	4/2/2025	23.34	38.6
FW12	30S/11E-18C2	34.55	4/1/2025	19.20	15.4
FW13	30S/11E-18B2	79.89	4/2/2025	21.28	58.6
FW14	30S/11E-18E1	PRIVATE (not measured – destroyed)			
FW15	30S/11E-18N2	125.53	4/2/2025	69.07	56.5
FW16	30S/11E-18L11	88.02	4/2/2025	40.39	47.6
FW17	30S/11E-18L12	103.85	4/2/2025	20.66	83.2
FW18	30S/11E-18P	143.92	4/11/2025	21.14	122.8
FW19	30S/11E-18J7	125.74	4/2/2025	24.24	101.5
FW20	30S/11E-8Mb	94.75	4/4/2025	44.51	50.2
FW21	30S/11E-8N4	95.99	4/4/2025	38.64	57.4
FW22	30S/11E-17F4	PRIVATE (measured)			
FW23	30S/11E-17N4	PRIVATE (measured)			
FW24	30S/11E-17J2	PRIVATE (measured)			
FW25	30S/11E-17R1	PRIVATE (not measured)			
FW26	30S/11E-20A2	PRIVATE (measured)			
FW27	30S/11E-20L1	PRIVATE (measured)			
FW28	30S/11E-20M2	PRIVATE (measured)			
FW29	30S/11E-20A1	PRIVATE (not measured)			
FW30	30S/11E-18R1	PRIVATE (measured)			
FW31	30S/11E-19A	214.67	4/11/2025	28.20	186.5
FW32	30S/11E-21D14	PRIVATE (measured)			
FW33	30S/11E-18D1S	PRIVATE (measured)			

FINAL DRAFT

Table 4. Spring 2025 Water Levels – Upper Aquifer					
Well ID	State Well Number	R. P. Elevation (feet NAVD 88)	Date	Water Level (feet NAVD 88)	
				Depth	Elevation
UA1	30S/10E-11A1	16.01	4/17/2025	13.73	2.3
UA2	30S/10E-14B1	23.9	4/17/2025	21.14	2.8
UA3	30S/10E-13F1	17.57	4/14/2025	7	10.6
UA4	30S/10E-13L1	40.31	4/11/2025	29.58	10.7
UA5	30S/11E-7N1	10.66	4/15/2025	5.8	4.9
UA6	30S/11E-18L8	79.18	4/4/2025	52.96	26.2
UA7	30S/11E-18L7	79.16	4/4/2025	63.05	16.1
UA8	30S/11E-18K7	137.17	4/3/2025	117.39	19.8
UA9	30S/11E-18K3	123.42	4/14/2025	101	22.4
UA10	30S/11E-18H1	110.02	4/11/2025	91.42	18.6
UA11	30S/11E-17D	PRIVATE (not measured)			
UA12	30S/11E-17E9	107.39	4/3/2025	85.97	21.4
UA13	30S/11E-17E10	107.81	Out of Service		
UA14	30S/11E-17P4	PRIVATE (not measured)			
UA15	30S/11E-20B7	PRIVATE (not measured)			
UA16	30S/11E-17L4	PRIVATE (measured)			
UA17	30S/11E-17E1	PRIVATE (measured)			
UA18	30S/11E-17F2	PRIVATE (measured)			
UA19	30S/11E-7Q__	26.80	4/4/2025	17.08	9.7

FINAL DRAFT

Table 5. Spring 2025 Water Levels – Lower Aquifer					
Well ID	State Well Number	R. P. Elevation (feet NAVD 88)	Date	Water Level (feet NAVD 88)	
				Depth	Elevation
LA1	30S/10E-2A1	23.13	4/17/2025	15.78	7.4
LA2	30S/10E-11A2	16.07	4/17/2025	10.88	5.2
LA3	30S/10E-14B2	23.89	4/17/2025	20.9	3.0
LA4	30S/10E-13M1	42.7	4/17/2025	43.03	-0.3
LA5	30S/10E-13L7	37.87	4/1/2025	30.9	7.0
LA6	30S/10E-13L4	70.02	4/11/2025	62.09	7.9
LA7	30S/10E-13P2	PRIVATE (not measured)			
LA8	30S/10E-13N	141.36	4/25/2025	133.83	7.5
LA9	30S/10E-24C1	180.34	4/17/2025	170	10.3
LA10	30S/10E-13J1	98.33	4/14/2025	97	1.3
LA11	30S/10E-12J1	8.43	4/2/2025	3.14	5.3
LA12	30S/11E-7Q3	27.75	4/15/2025	25.8	2.0
LA13	30S/11E-18F2	103.57	4/10/2025	98.68	4.9
LA14	30S/11E-18L6	79.52	4/11/2025	72.74	6.8
LA15	30S/11E-18L2	88.08	4/15/2025	88.5	-0.4
LA16	30S/11E-18M1	109.53[1]	4/11/2025	105.13	4.4
LA17	30S/11E-24A2	212.82	4/4/2025	199.73	13.1
LA18	30S/11E-18K8	137.13	4/3/2025	131.46	5.7
LA19	30S/11E-19H2	257.35	4/11/2025	255.43	1.9
LA20	30S/11E-17N10	141.22	4/14/2025	142	-0.8
LA21	30S/11E-17E7	107.22	4/4/2025	105.19	2.0
LA22	30S/11E-17E8	107.27	4/4/2025	135.1	-27.8
LA23 to LA30		PRIVATE (measured LA 24 – LA30, LA 23 not measured)			
LA31	30S/10E-13M2	(Mixed aquifer – used for water quality only)			
LA32	30S/11E-18K9	(Mixed aquifer – used for water quality only)			
LA33	30S/11E-17A1	PRIVATE (measured)			
LA34	30S/11E-8F	26.15	4/2/2025	3.83	22.3
LA35	30S/11E-21Bb	86.80	4/11/2025	65	21.8
LA36	30S/11E-21Ja	PRIVATE (not measured)			
LA37	30S/11E-21B1	81.61	4/11/2025	57.92	23.7
LA38	30S/11E-21E	PRIVATE (measured)			
LA39	30S/11E-18K_	123.17	4/14/2025	136	-12.8
LA40	30S/10E-13Ba	11.47	4/7/2025	7	4.5
LA41	30S/10E-13Bb	11.46	4/9/2025	5.57	5.9
LA42	30S/10E-13Ja	52.46[1]	4/11/2025	48.08	4.4
LA43	30S/10E-13Jb	51.98[1]	4/11/2025	47.54	4.4
LA44	30S/11E-18R_	177.33[1]	Not Measured		

1: Reference point survey updated in 2025

FINAL DRAFT

Table 6. Fall 2025 Water Levels – First Water					
Well ID	State Well Number	R. P. Elevation (feet NAVD 88)	Date	Water Level (feet NAVD 88)	
				Depth	Elevation
FW1	30S/10E-13A7	PRIVATE (not measured)			
FW2	30S/10E-13L8	32.63	10/1/2025	21.82	10.8
FW3	30S/10E-13G	50.95	10/1/2025	39.24	11.7
FW4	30S/10E-13H	49.33	10/1/2025	24.40	24.9
FW5	30S/10E-13Q2	101.27	10/15/2025	79.43	21.8
FW6	30S/10E-24A	193.04	10/15/2025	139.64	53.4
FW7	30S/10E-24Ab	Not measured (damaged)			
FW8	30S/11E-7L4	45.76	10/1/2025	38.51	7.3
FW9	30S/11E-7K3	90.71	10/1/2025	54.71	36.0
FW10	30S/11E-7Q1	25.29	10/10/2025	9.20	16.1
FW11	30S/11E-7R2	61.93	10/1/2025	24.70	37.2
FW12	30S/11E-18C2	34.55	10/1/2025	20.01	14.5
FW13	30S/11E-18B2	79.89	10/1/2025	23.45	56.4
FW14	30S/11E-18E1	PRIVATE (not measured – destroyed)			
FW15	30S/11E-18N2	125.53	10/1/2025	69.52	56.0
FW16	30S/11E-18L11	88.02	10/1/2025	41.96	46.1
FW17	30S/11E-18L12	103.85	10/1/2025	22.23	81.6
FW18	30S/11E-18P	143.92	10/3/2025	23.00	120.9
FW19	30S/11E-18J7	125.74	10/1/2025	26.47	99.3
FW20	30S/11E-8Mb	94.75	10/1/2025	45.90	48.9
FW21	30S/11E-8N4	95.99	10/1/2025	40.27	55.7
FW22	30S/11E-17F4	PRIVATE (measured)			
FW23	30S/11E-17N4	PRIVATE (measured)			
FW24	30S/11E-17J2	PRIVATE (measured)			
FW25	30S/11E-17R1	PRIVATE (not measured)			
FW26	30S/11E-20A2	PRIVATE (measured)			
FW27	30S/11E-20L1	PRIVATE (measured)			
FW28	30S/11E-20M2	PRIVATE (measured)			
FW29	30S/11E-20A1	PRIVATE (not measured)			
FW30	30S/11E-18R1	PRIVATE (measured)			
FW31	30S/11E-19A	214.67	10/10/2025	28.06	186.6
FW32	30S/11E-21D14	PRIVATE (measured)			
FW33	30S/11E-18D1S	PRIVATE (measured)			

FINAL DRAFT

Table 7. Fall 2025 Water Levels – Upper Aquifer					
Well ID	State Well Number	R. P. Elevation (feet NAVD 88)	Date	Water Level (feet NAVD 88)	
				Depth	Elevation
UA1	30S/10E-11A1	16.01	10/28/2025	12.38	3.6
UA2	30S/10E-14B1	23.9	10/28/2025	19.59	4.3
UA3	30S/10E-13F1	17.57	10/15/2025	7	10.6
UA4	30S/10E-13L1	40.31	10/10/2025	28.98	11.3
UA5	30S/11E-7N1	10.66	10/15/2025	6.2	4.5
UA6	30S/11E-18L8	79.18	10/3/2025	53.16	26.0
UA7	30S/11E-18L7	79.16	10/3/2025	62.77	16.4
UA8	30S/11E-18K7	137.17	10/6/2025	114.99	22.2
UA9	30S/11E-18K3	123.42	10/15/2025	101	22.4
UA10	30S/11E-18H1	110.02	10/10/2025	91.65	18.4
UA11	30S/11E-17D	PRIVATE (not measured)			
UA12	30S/11E-17E9	107.39	10/8/2025	85.47	21.9
UA13	30S/11E-17E10	107.81	10/15/2025	88.90	18.9
UA14	30S/11E-17P4	PRIVATE (not measured)			
UA15	30S/11E-20B7	PRIVATE (not measured)			
UA16	30S/11E-17L4	PRIVATE (measured)			
UA17	30S/11E-17E1	PRIVATE (measured)			
UA18	30S/11E-17F2	PRIVATE (measured)			
UA19	30S/11E-7Q_	26.80	10/2/2025	17.07	9.7

FINAL DRAFT

Table 8. Fall 2025 Water Levels – Lower Aquifer					
Well ID	State Well Number	R. P. Elevation (feet NAVD 88)	Date	Water Level (feet NAVD 88)	
				Depth	Elevation
LA1	30S/10E-2A1	23.13	10/28/2025	15.60	7.5
LA2	30S/10E-11A2	16.07	10/28/2025	9.97	6.1
LA3	30S/10E-14B2	23.89	10/28/2025	20.86	3.0
LA4	30S/10E-13M1	42.70	10/16/2025	43.03	-0.3
LA5	30S/10E-13L7	37.87	10/30/2025	31.3	6.6
LA6	30S/10E-13L4	70.02	10/15/2025	61	9.0
LA7	30S/10E-13P2	PRIVATE (not measured)			
LA8	30S/10E-13N	141.36	10/6/2025	133.8	7.6
LA9	30S/10E-24C1	180.34	10/14/2025	171	9.3
LA10	30S/10E-13J1	98.33	10/14/2025	95	3.3
LA11	30S/10E-12J1	8.43	10/2/2025	2.25	6.2
LA12	30S/11E-7Q3	27.75	10/15/2025	26.3	1.5
LA13	30S/11E-18F2	103.57	10/8/2025	98.58	5.0
LA14	30S/11E-18L6	79.52	10/3/2025	72.83	6.7
LA15	30S/11E-18L2	88.08	10/15/2025	86.60	1.5
LA16	30S/11E-18M1	109.53[1]	10/9/2025	104.91	4.6
LA17	30S/11E-24A2	212.82	10/5/2025	202.11	10.7
LA18	30S/11E-18K8	137.13	10/6/2025	130.94	6.2
LA19	30S/11E-19H2	257.35	10/3/2025	256.39	1.0
LA20	30S/11E-17N10	141.22	10/14/2025	139	2.2
LA21	30S/11E-17E7	107.22	10/3/2025	106.88	0.3
LA22	30S/11E-17E8	107.27	10/8/2025	135.01	-27.7
LA23 to LA30		PRIVATE (measured LA 24 – 27,29, 30; LA 23 & 28 not measured)			
LA31	30S/10E-13M2	(Mixed aquifer – used for water quality only)			
LA32	30S/11E-18K9	(Mixed aquifer – used for water quality only)			
LA33	30S/11E-17A1	PRIVATE (measured)			
LA34	30S/11E-8F	28.17[1]	10/2/2025	7.57	20.6
LA35	30S/11E-21Bb	86.80	10/10/2025	75	11.8
LA36	30S/11E-21Ja	PRIVATE (not measured)			
LA37	30S/11E-21B1	81.61	10/10/2025	67.08	14.5
LA38	30S/11E-21E	PRIVATE (measured)			
LA39	30S/11E-18K_	123.17	10/15/2025	128	-4.8
LA40	30S/10E-13Ba	11.47	10/10/2025	6.36	5.1
LA41	30S/10E-13Bb	11.46	10/10/2025	5.15	6.3
LA42	30S/10E-13Ja	52.46[1]	10/10/2025	47.87	4.6
LA43	30S/10E-13Jb	51.98[1]	10/10/2025	48.23	3.8
LA44	30S/11E-18R_	177.33[1]	Not Measured		

1: Reference point survey updated in 2025 (new LA34 RP applies only to measurements after Spring 2025)

FINAL DRAFT

4.2 Water Quality Results

Available Fall 2025 water quality results for First Water and Upper Aquifer monitoring wells designated for water quality reporting in the LOBP Groundwater Monitoring Program are presented in Table 9. The LOBP Groundwater Monitoring Program does not include Spring 2025 water quality monitoring at First Water or Upper Aquifer Wells. Available Spring and Fall 2025 water quality for Lower Aquifer monitoring wells designated for water quality reporting in the LOBP Groundwater Monitoring Program are presented in Tables 10 and 11. Groundwater monitoring field logs and laboratory analytical reports for the 2025 LOBP Groundwater Monitoring Program are included in Appendix C.

Some of the constituents of analysis that are part of the LOBP Groundwater Monitoring Program listed in Table 1 are not included in the LOWRF Groundwater Monitoring Program. The missing constituents include specific conductance, alkalinity (bicarbonate, carbonate, and total), calcium, magnesium, and potassium.

Lower Aquifer wells LA2 and LA3 on the Morro Bay sand spit are scheduled for water quality monitoring every five years to track changes in salinity at the coast (2015 LOBP). The sand spit wells were due to be sampled in the Fall of 2025, but access was not permitted, and the event has been rescheduled to Fall of 2026. The next sampling event after Fall 2026 will be in the Fall of 2030 to make up for the schedule delay.

4.2.1 Nitrate and Chloride Results

Results for First Water wells indicate elevated nitrate concentrations across much of the central and western areas, which are attributed to historical septic system discharges in high-density residential areas (LOBP; ISJ Group, 2015). A more extensive compilation of shallow water quality, including nitrate and TDS concentration maps, are presented for June and December 2025 in the County's LOWRF Groundwater Monitoring Program reports (CHG, 2025). Nitrate concentration trends are tracked using the Nitrate Metric (see Section 7.5.3).

Lower Aquifer water quality results for 2025 show six wells impacted by seawater intrusion, based on chloride concentrations over 250 mg/L. Five of the six wells had been identified in previous annual reports. These five wells are LA10 (Western Area, Zone D/E), LA11 (Central Area Zone E), LA31 (Western Area Zone C/D; intrusion in Zone D), LA40 (Western Area Zone E), and LA42 (Western Area, Zone E). The sixth well, LA16 (Central Area Zone E), is a large-diameter public supply well completed in Zones D and E that was modified in 2025 to reduce the purge volumes required for sampling and to isolate Lower Aquifer Zone E. LA16 had last been sampled in 2005, but was subject to Upper Aquifer influence due to borehole leakage and could not be used for seawater intrusion monitoring. Following modification to isolate Zone E, dilution from the low-chloride waters of Zone C (through borehole leakage) and D was eliminated. There is also a seventh well, LA15 (Western Area Zone D), which has chloride concentrations below 250 mg/L but is showing a trend of increasing chlorides. The overall trend in chloride concentration and seawater intrusion is tracked using the Chloride Metric (see Section 7.5.3).

FINAL DRAFT

Table 9. Fall 2025 Water Quality Results – First Water and Upper Aquifer																	
LOBP Well	State Well Number	Date	SC	pH (field)	TDS	Alkalinity			Cl	NO3-N	SO4	B	Ca	Mg	K	Na	T (field)
						CO3	HCO3	Total as CaCO3									
			µS/cm	pH units	------------------------------------- mg/L -------------------------------------												°F
FW2*	30S/10E-13L8	12/2/2025	*572*	6.88	380	--	--	--	86	14	--	--	--	--	--	68	66.20
FW5	30S/10E-13Q2	10/15/2025	791	7.19	530	<10	110	90	160	5.6	49.4	0.2	33	24	2	75	65.30
FW6	30S/10E-24A	10/15/2025	878	7.15	500	<10	180	150	160	3.0	54	0.2	28	21	2	110	68.00
FW10	30S/11E-7Q1	10/13/2025	549	7.13	360	<10	100	80	63	13.5	40.4	0.2	22	18	3	55	66.74
FW15*	30S/11E-18N2	12/4/2025	*751*	7.16	450	--	--	--	130	22	--	--	--	--	--	60	66.20
FW16*	30S/11E-18L11	12/1/2025	*349*	7.30	200	--	--	--	44	4.8	--	--	--	--	--	37	66.92
FW17*	30S/11E-18L12	12/1/2025	*368*	7.07	220	--	--	--	28	12	--	--	--	--	--	31	66.92
FW22*	30S/11E-17F4	12/4/2025	*1104*	6.72	560	--	--	--	280	0.16	--	--	--	--	--	77	64.76
FW28	30S/11E-20M2	10/1/2025	878	7.78	580	<10	420	350	57	<0.4	58.5	0.1	63	54	1	37	60.44
UA1	30S/10E-11A1	Not Sampled															
UA3	30S/10E-13F4	10/6/2025	539	6.71	350	<10	80	60	76	15.9	20.4	<0.1	21	16	1	50	62.78
UA9	30S/11E-18K3	10/6/2025	354	6.76	270	<10	60	50	49	9.1	6.2	<0.1	16	13	<1	28	65.84
UA12*	30S/11E-17E9	12/4/2025	*576*	7.30	340	--	--	--	55	15.0	--	--	--	--	--	43	66.20
UA13	30S/11E-17E10	Not Sampled															

NOTES: *Field Reading*, “–" = no result available; SC = specific conductance; TDS = total dissolved solids; CO3 = carbonate; HCO3= bicarbonate; CaCO3 = total alkalinity as calcium carbonate; Cl = chloride; NO3-N = nitrate as nitrogen; SO4 = sulfate; B = boron; Ca = calcium; Mg = magnesium; K = potassium; Na = sodium; T = temperature; µS/cm = microsiemens per centimeter; mg/L = milligrams per liter; °F = degrees Fahrenheit; < indicates less than Practical Quantitation Limit as listed in laboratory report.
* = results from the LOWRF Groundwater Monitoring Program sampling event in December 2025 (CHG, 2025)

FINAL DRAFT

LOBP Well	State Well Number	Date	SC	pH (field)	TDS	Alkalinity			Cl	NO3-N	SO4	B	Ca	Mg	K	Na	T (field)
						CO3	HCO3	CaCO3									
			µS/cm	pH units	mg/L												°F
LA8	30S/10E-13N	4/1/2025	452	7.85	270	<10	60	50	88	6.9	15.5	<0.1	17	16	2	40	65.12
LA9	30S/10E-24C1	4/2/2025	549	7.60	350	<10	70	60	100	7.0	19.1	<0.1	21	19	2	48	68.00
LA10	30S/10E-13J1	4/2/2025	894	7.58	750	<10	80	70	210	2.2	14.2	<0.1	51	45	2	33	69.00
LA11	30S/10E-12J1	4/2/2025	2060	7.64	1240	<10	340	280	430	<0.4	193	0.2	106	119	5	94	68.90
LA12	30S/11E-7Q3	4/1/2025	848	7.78	470	<10	320	260	98	<0.4	56.3	0.2	48	45	2	55	69.26
LA13	30S/11E-18F2	4/10/2025	625	7.99	350	<10	310	250	42	<0.4	28.3	0.1	32	35	2	47	71.78
LA14	30S/11E-18L6	4/22/2025	893	7.61	530	<10	350	290	84	<0.4	92.1	<0.1	69	51	2	34	71.42
LA15	30S/11E-18L2	4/16/2025	913	7.39	560	<10	260	210	160	0.7	34.7	<0.1	53	47	2	39	68.54
LA16	30S/11E-18M1	4/21/2025	732	7.59	400	<10	190	150	140	<0.4	25.7	<0.1	39	34	2	40	69.80
LA18	30S/11E-18K8	4/3/2025	667	7.66	420	<10	270	220	64	<0.4	60.9	<0.1	55	31	2	35	72.14
LA20	30S/11E-17N10	4/2/2025	593	7.50	310	<10	270	230	44	1.4	26.4	0.1	35	33	2	39	66.00
LA22	30S/11E-17E8	4/16/2025	473	7.43	280	<10	170	140	47	6.0	15.2	<0.1	25	24	1	28	68.18
LA30	30S/11E-20H1	4/10/2025	910	7.89	550	<10	410	340	58	<0.4	87.3	0.1	68	58	1	39	64.58
LA31	30S/10E-13M2	4/17/2025	1290	7.75	750	<10	90	70	300	1.0	69.6	0.1	32	30	5	136	64.04
LA32	30S/11E-18K9	4/1/2025	500	7.71	280	<10	200	160	50	1.4	24.0	<0.1	27	27	1	33	69.26
LA39	30S/11E-18K_	4/2/2025	607	7.50	340	<10	300	240	39	0.5	30.5	<0.1	34	34	2	41	71.00
LA40	30S/10E-13Ba	4/7/2025	8830	7.41	9070	<10	280	230	2700	<0.4	249	<0.1	693	590	6	211	70.16
LA41	30S/10E-13Bb	4/9/2025	744	7.41	420	<10	340	280	52	<0.4	48.4	<0.1	49	37	2	46	70.52
LA42	30S/10E-13Ja	4/14/2025	6090	7.51	5220	<10	270	220	2100	<0.4	166	<0.1	576	345	5	96	70.70
LA43	30S/10E-13Jb	4/14/2025	712	7.47	390	<10	330	270	55	<0.4	41.0	<0.1	42	38	2	39	68.72

Table 10. Spring 2025 Water Quality Results – Lower Aquifer

NOTES:"–" = no result available; SC = specific conductance; TDS = total dissolved solids; CO3 = carbonate; HCO3= bicarbonate; CaCO3 = total alkalinity as calcium carbonate; Cl = chloride; NO3-N = nitrate as nitrogen;SO4 = sulfate; B = boron; Ca = calcium; Mg = magnesium; K = potassium; Na = sodium; T = temperature; µS/cm = microsiemens per centimeter; mg/L = milligrams per liter; °C = Celsius (some values converted from degrees Fahrenheit as reported on field logs); < indicates less than Practical Quantitation Limit as listed in laboratory report.

FINAL DRAFT

Table 11. Fall 2025 Water Quality Results – Lower Aquifer

LOBP Well	State Well Number	Date	SC	pH (field)	TDS	Alkalinity			Cl	NO3-N	SO4	B	Ca	Mg	K	Na	T (field)
						CO3	HCO3	Total as CaCO3									
			µS/cm	pH units	mg/L												°F
LA8	30S/10E-13N	10/1/2025	446	7.80	330	<10	60	50	84	6.7	8.9	<0.1	16	16	1	37	65.30
LA9	30S/10E-24C1	10/6/2025	597	6.84	400	<10	80	60	120	6.6	19.9	<0.1	23	21	2	51	64.04
LA10	30S/10E-13J1	10/6/2025	945	6.86	750	<10	80	70	240	3.1	15	<0.1	53	47	2	36	65.48
LA11	30S/10E-12J1	10/2/2025	2080	7.60	1480	<10	330	270	390	<0.4	184	0.2	114	124	5	97	69.62
LA12	30S/11E-7Q3	10/1/2025	846	7.66	560	<10	310	250	98	0.4	50.4	0.2	47	45	2	52	69.62
LA13	30S/11E-18F2	10/8/2025	613	8.12	330	<10	260	220	57	<0.4	29.1	<0.1	28	32	2	52	72.86
LA14	30S/11E-18L6	10/23/2025	892	7.53	580	<10	350	290	82	<0.4	91.2	<0.1	68	50	2	35	72.86
LA15	30S/11E-18L2	10/2/2025	943	7.78	590	<10	240	190	160	1.1	31.9	<0.1	65	59	2	46	69.08
LA16	30S/11E-18M1	10/9/2025	1320	7.58	820	<10	200	170	330	<0.4	24.3	<0.1	83	70	3	49	70.88
LA18	30S/11E-18K8	10/6/2025	657	7.58	440	<10	260	210	49	<0.4	61.3	<0.1	54	29	2	35	73.04
LA20	30S/11E-17N10	10/6/2025	505	7.24	350	<10	200	160	43	3.2	21.5	0.1	28	26	2	33	67.64
LA22	30S/11E-17E8	10/8/2025	473	7.57	280	<10	170	140	48	6.5	14	<0.1	28	25	2	30	68.36
LA30	30S/11E-20H1	10/2/2025	910	7.67	600	<10	410	340	57	<0.4	76.8	0.1	67	58	1	39	66.20
LA31	30S/10E-13M2	10/16/2025	1470	7.66	900	<10	100	80	390	0.9	73.9	0.1	35	33	6	165	67.10
LA32	30S/11E-18K9	10/1/2025	507	7.40	320	<10	200	160	52	1.4	18.9	<0.1	27	27	1	31	69.62
LA39	30S/11E-18K_	10/6/2025	609	7.04	370	<10	290	240	38	0.5	29.4	<0.1	34	34	1	40	68.54
LA40	30S/10E-13Ba	10/20/2025	8990	7.28	8570	<10	270	220	3200	<0.4	259	<0.1	736	601	7	219	70.70
LA41	30S/10E-13Bb	10/21/2025	730	7.44	470	<10	340	280	52	<0.4	44.4	<0.1	49	37	2	44	69.80
LA42	30S/10E-13Ja	10/16/2025	5980	7.42	6710	<10	260	210	2000	<0.4	462	<0.1	564	234	5	96	71.78
LA43	30S/10E-13Jb	10/16/2025	678	7.40	420	<10	340	280	43	<0.4	37	<0.1	43	39	2	40	70.16

NOTES: *LA10 chloride result affected by wellbore leakage (see Section 7.5.3); "–" = no result available; SC = specific conductance; TDS = total dissolved solids; CO3 = carbonate; HCO3= bicarbonate; CaCO3 = total alkalinity as calcium carbonate; Cl = chloride; NO3-N = nitrate as nitrogen; SO4 = sulfate; B = boron; Ca = calcium; Mg = magnesium; K = potassium; Na = sodium; T = temperature; µS/cm = microsiemens per centimeter; mg/L = milligrams per liter; °F = degrees Fahrenheit.

FINAL DRAFT

4.2.2 CEC Results

CEC sampling was conducted at well FW5 and FW6 in October 2025 (CEC constituents list and reporting limits shown in Table 2). FW6, which is the first monitoring well hydraulically downgradient of the Broderson Site, was originally designated in the LOBP (along with FW26) as a CEC monitoring well. Due to extreme drought conditions when CEC testing started in 2016, there was insufficient water for representative CEC testing at FW6, so FW5 was used as a replacement (CHG, 2017). Following Broderson mound development and higher than normal rainfall in 2019, CEC testing at FW6 was possible beginning in Fall 2020 (testing at FW5 continued). Wells FW5 and FW6 are both hydraulically downgradient of the Broderson leach field site, where most of the recycled water from LOWRF is discharged into the Basin, and where high-density (>1 per acre) septic systems were active prior to being connected to the sewer. LOWRF Monitoring did not include CEC analyses in 2025.

FW26 is located in the Los Osos Creek Valley, where there are low-density (<1 per acre) septic systems (Figure 2). FW26 is normally included in the CEC analyses every Fall, but the well pump has not been operational since 2022, and it is still unavailable for sampling. A creek valley well to fill in this gap may be considered for future sampling events. CEC results are presented in Table 12, with laboratory reports included in Appendix C.

Table 12. CEC Monitoring Results

Constituent or Parameter	Units	FW5	FW6
		10/15/2025	
Health-based			
17β-estradiol	ng/L	ND (<4)	ND (<4)
Triclosan	ng/L	ND (<8)	ND (<8)
Caffeine	ng/L	ND (<4)	ND (<4)
NDMA	ng/L	ND (<2)	ND (<2)
Performance-based			
Gemfibrozil	ng/L	ND (<4)	ND (<4)
DEET	ng/L	ND (<4)	ND (<4)
Iopromide	ng/L	ND (<4)	ND (<4)
Sucralose[1]	ng/L	16,000	11,000
Surrogate			
Ammonia	mg/L	ND (<0.1)	ND (<0.1)
Nitrate-Nitrogen	mg/L	6	3.2
Total Organic Carbon	mg/L	0.77	1
UV Light Absorption	1/cm	0.014	0.016
Specific Conductance	µmhos/cm	790	870

[1] Concentration is an estimated value above calibration range
ND (<) = indicates less than Method Reporting Limit as listed in laboratory report ("not detected")

FINAL DRAFT

The CEC Laboratory results, and a summary sheet of the CEC constituents tested, along with analytical method information, are included in Appendix C. Constituents detected above the reporting limits and listed in Table 12 are discussed below.

Sucralose, an artificial sweetener, was reported at 16,000 nanograms per liter (ng/L) in groundwater from FW5 and is an indicator of wastewater influence (i.e. originating from sources of wastewater including septic discharges or recycled water discharges). Sucralose was detected in FW6 at 11,000 ng/L. Laboratory reports indicated that these concentrations are estimated values above the calibration range. Nitrate-nitrogen was reported at 6 mg/L in groundwater from FW5, and 3.2 mg/L in FW6. NDMA (N-Nitroso-dimethylamine) was not detected in either FW5 or FW6. NDMA is a byproduct of ion-exchange water treatment and chloride, ozone, or chloramine disinfection. CEC-constituent testing of recycled water quality from LOWRF was discontinued in 2024. The last CEC testing data is from December 2023 (CHG, 2023).

Results of the CEC testing are interpreted to indicate wastewater influence at FW5, based on sucralose and nitrate concentrations. However, sucralose concentrations decreased from 23,000 ng/L to 16,000 ng/L at FW5 between 2024 and 2025. Nitrate-nitrogen concentrations at the well decreased from 8.7 mg/L in 2024 to 6 mg/L in 2025. Concentrations of these constituents have shifted significantly in the direction of LOWRF recycled water discharge quality since CEC monitoring began in 2016, when sucralose was 280 ng/L and nitrate nitrogen was 26 mg/L in groundwater collected from FW5 (CHG, 2016b).

FW6 is the sentry well for Broderson recycled water discharges entering the Basin. As expected, the CEC results for FW6 also show recycled water influence attributed to Broderson discharges. The nitrate-nitrogen concentrations are an order of magnitude less than concentrations detected prior to Broderson site operation and have been similar to LOWRF effluent. Sucralose concentrations at FW6 have increased over time, and are significantly elevated relative to the initial value of 2,300 ng/L measured in 2020. Sucralose is a food additive and there is no State Notification Level (NL) for sucralose concentrations in drinking water.

A review of CEC testing constituents and locations is recommended. With several years of available data at the CEC wells, the list of CEC constituents may be reviewed to determine whether some of the constituents being tested are unnecessary, or if there are others that would be useful to include. Now that wastewater influence from Broderson discharges has reached both FW5 and FW6, which are relatively close to the community leach field, it may be beneficial to move the sampling locations to other wells that are farther away, in order to obtain new information. The well pump at FW26 has also not been functional the last four years, and alternatives may be considered for finding another well to sample in the vicinity, or re-evaluating the necessity for continued CEC sampling in the Creek Valley.

4.2.3 Chromium-6 and PFAS Compounds

While this Annual Report is intended to focus on the contaminants of concern described in the Basin Plan, including nitrate and seawater intrusion, other constituents of concern may be addressed to the extent that they impact water supplies. A discussion of Chromium-6 and PFAS concentrations in groundwater at purveyor wells was recommended in the 2024 Annual Report and is provided below.

Chromium-6

Chromium-6 concentrations in groundwater at purveyor wells was previously discussed in the 2015 Annual Report. Chromite (iron chromium oxide ore) deposits are naturally occurring in San Luis Obispo County, and are associated with serpentinite bodies (Smith and Griggs, 1944). Other sources of chromium in groundwater are associated with contamination from industrial activities such as metal plating and leather tanning, and from paints, dyes, and wood preservatives. Chromium is typically stable and non-toxic as Chromium-3, but when oxidized can be converted to Chromium-6. The Maximum Contaminant Level (MCL) in California for Chromium-6 is 10 µg/L. Out of 14 purveyor wells with available test results for 2024-2026, two Upper Aquifer wells had concentrations above the MCL. Both these wells are in Baywood Park where there are no known sources of industrial chromium contamination. Chromium-6 concentrations have been detected in groundwater at low levels across the urban area in both Upper and Lower Aquifer wells, indicating a natural source is present. A summary of maximum Chromium-6 concentrations from available test results is presented in Appendix E. The maximum detected concentrations from available samples are useful for screening purposes but do not directly represent compliance determinations; running annual averages would be necessary. The Chromium-6 compliance deadline for systems with 1,000-9,990 service connections is January 2028.

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)

Per- and Polyfluoroalkyl Substances (PFAS) are a group of man-made chemicals that include Perfluorooctanoic Acid (PFOA), Perfluorooctane Sulfonate (PFOS), and many others. While consumer products are a large source of exposure to these chemicals for most people, drinking water can be an additional source in the communities where these chemicals have infiltrated water supplies. Such contamination is typically associated with a specific facility, including near groundwater recharge facilities where recycled water is used; industrial facilities where these chemicals were produced or used to manufacture other products; an airfield where they were used for firefighting; or wastewater treatment plants or landfills where products containing the chemicals were disposed of (GSWC, 2025).

There are six PFAS compounds being monitored by the purveyors (PFOA, PFOS, PFHxS, PFBS, PFNA, and PFDA). Four of these compounds (PFOA, PFOS, PFHxS, and PFBS) have California Division of Drinking Water (DDW) Notification Levels (NLs) and Response Levels (RLs). NLs and RLs are health-based advisory levels. Four PFAS compounds also have MCLs regulated under the U.S. EPA National Primary Drinking Water Regulation.

Out of the 13 wells with available test results for 2024–2026, there were four wells that reported one or more PFAS compounds with maximum concentrations exceeding one or more standard. These include two Upper Aquifer wells and two Lower Aquifer wells. A summary of the maximum PFAS concentrations from available test results is in Appendix E. The maximum detected concentrations from available samples are useful for screening purposes but do not directly represent compliance determinations; confirmation sampling and evaluation of running annual averages would be necessary. The original federal compliance deadline is 2029, although the U.S. Environmental Protection Agency (USEPA) intends to extend the deadline for PFOA/PFOS until 2031 and rescind the other MCLs.

4.3 Geophysics

Seawater is highly conductive, compared to fresh water, and an induction log performed in a borehole penetrating the fresh water/seawater interface will show the vertical transition from fresh water to seawater. Because natural gamma emissions are not affected by changes in water quality, the gamma ray log can be used as a depth calibration tool when comparing induction logs from different monitoring events. The fresh water/seawater interface on geophysical logs is selected where resistivity becomes a relatively straight and vertical line close to zero ohm-meters. This interface does not correspond to the 250 mg/L chloride concentration isopleth used to delineate the seawater intrusion front in contour maps, but represents a much greater chloride concentration transition that is used for relative comparison between geophysical surveys.

Geophysical monitoring events have been performed in 1985, 2004, 2009, 2014, 2015, 2018, 2021 and 2024 at LA4 and LA14. The fresh water/seawater interface at LA4 rose approximately 50 feet between 1985 and 2009, with Lower Aquifer production reaching historical highs. Since 2009, induction logging at well LA4 indicates the fresh water/seawater interface has dropped approximately 20 feet in elevation in response to a general reduction in the west side Lower Aquifer pumping, and remains stable at approximately 320 feet depth in the borehole through 2024. No evidence of seawater intrusion has been observed in geophysical logging at Lower Aquifer monitoring well LA14. Now that LA14 has been modified for water quality sampling, geophysical monitoring is no longer needed at this well in order to track seawater intrusion. Historical geophysical records were included in the 2023 Annual Report (CHG, 2024) and the 2024 geophysical records are shown in Appendix E of the 2024 Annual Report (CHG, 2025). Geophysical monitoring events were completed in 2019, 2021, and 2024 at LA40. The fresh water/seawater interface is interpreted to have remained unchanged at approximately 410 feet depth between monitoring events (CHG, 2025). The next scheduled geophysical logging will be in October of 2027.

5. GROUNDWATER PRODUCTION

Land use and water use areas overlying the Basin, including Purveyor service areas, agricultural parcels, domestic parcels, and community facilities are included in Appendix F. Annual Basin groundwater production between 1970 and 2013 was reported in the LOBP (ISJ Group, 2015).

FINAL DRAFT

Tables 13 and 14 present municipal and Basin production beginning in calendar year 2013.

Table 13. Municipal Groundwater Production (2013-2025)

Year	LOCSD	GSWC	S&T	Total
	Acre-Feet[1]			
2013	726	689	55	1,470
2014	634	564	48	1,246
2015	506	469	32	1,007
2016	519	453	31	1,003
2017	568	450	32	1,050
2018	522	464	32	1,018
2019	506	454	31	991
2020	527	502	34	1,063
2021	503	491	32	1,026
2022	496	491	29	1,016
2023	487	470	27	984
2024	491	505	26	1,022
2025	494	538	29	1,061

Note: [1]Metered production

Table 14. Estimated Basin Groundwater Production (2013-2025)

Year	Purveyors	Domestic	Community	Agriculture	Total
	Acre-Feet[1]				
2013	1,470	200	140	750	2,560
2014	1,246	220	130	800	2,400
2015	1,007	220	140	800	2,170
2016	1,003	220	140	800	2,160
2017	1,050	220	130	670	2,070
2018	1,018	220	120	670	2,030
2019	991	220	60	630	1,900
2020	1,063	220	80	650	2,010
2021	1,026	220	130	620	2,000
2022	1,016	220	90	680	2,010
2023	984	110	60	500	1,650
2024	1,022	110	50	510	1,690
2025	1,061	110	40	470	1,680

Note: [1]All figures except Purveyors rounded to the nearest 10 acre-feet. Production from non-metered wells (Domestic, Community, Agricultural) estimated per methods described in Appendix G and LOBP Section 4 and Section 7.5. Domestic production beginning in 2023 uses recommended updates from 2023 Water Offset Study (see Appendix G).

FINAL DRAFT

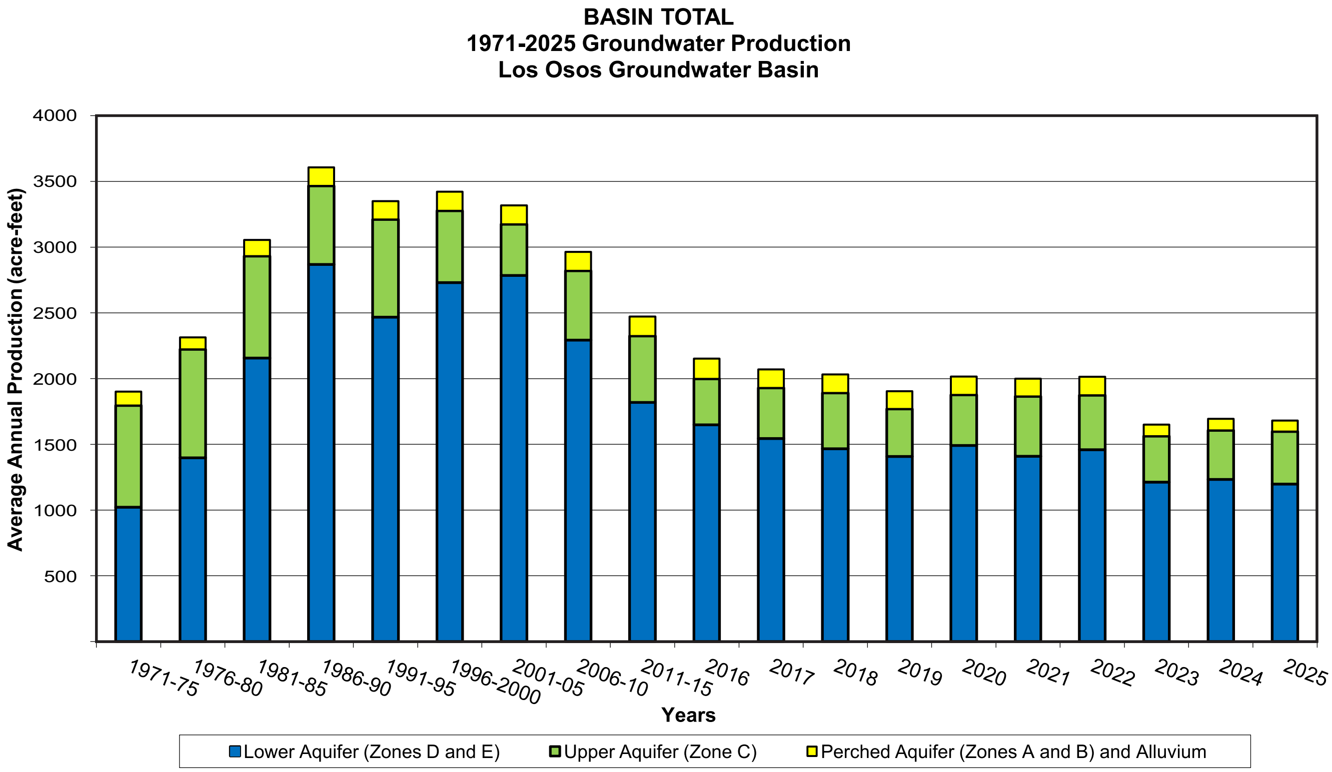
Table 14 shows the recent trend in Basin water use, which is an overall decline since 2013. Produced water from purveyors has remained at a relatively consistent rate since 2015. The estimate of private domestic water use in 2025 has been reduced significantly from previous years, based on the recommendations of the 2023 Water Offset Study (Maddaus Water Management, 2023). The decrease is directly attributable to the community trending towards drought-tolerant landscaping and a reduction in private lawns, based on a comparison of CHG's study (CHG, 2009b) and the recent Maddaus study. Although the decrease was implemented in 2023, there has likely been a gradual reduction in private domestic water use from wells over time.

Community facilities water use had been relatively stable until 2019, when recycled water deliveries began for golf course studies. Estimated agricultural irrigation has been lower in 2025 compared to prior years (details in Appendix G). Overall declines in Basin production since 2015 are primarily from declines in estimated (non-purveyor) production values, rather than metered purveyor production.

Figure 6 shows the historical pumping distribution between Basin aquifers since 1970, along with the pumping distribution in the Western Area. Figure 7 shows the historical pumping distribution for the Central and Eastern Areas. There was an estimated 22 percent reduction in Basin production over the last 10 years (Figure 6). Over the last five-year period, overall Lower Aquifer production in the Basin declined, although in the Western Area annual production from the Lower Aquifer has increased by 44 acre-feet.

On January 28, 2026, the BMC approved preparation of an agricultural irrigation water use estimate using remote sensing data for the 2025 Annual Report. The results of the enhanced estimate have been included as a Technical Memorandum in Appendix G2 for comparison with the current methodology.

Purveyor municipal production data are based on meter readings and reported to the closest acre-foot. Domestic groundwater production estimates through 2022 are based on the last reported water use estimates for 2013 from the LOBP, with minor adjustments in 2016 for the inclusion of additional residences in the Eastern Area (CHG, 2017). Beginning with the 2023 Annual Report, the domestic water production estimates are based on the estimates from the 2023 Water Offset Study. Production estimates for community facilities and agricultural wells are based on a daily soil-moisture budget using local precipitation, land use, and evapotranspiration data (Appendix G). Basin groundwater production, which combines metered and unmetered production estimates, is reported to the closest 10 acre-feet. Unmetered production estimates currently account for approximately 60 percent of the total production in the Basin, of which agricultural irrigation is the greatest unmetered component. Potential uncertainty in Basin production has been estimated at +/- 100 acre-feet, or approximately 10 percent of the unmetered production component and five percent of the Sustainable Yield of the Basin (LOBP page 47; ISJ Group, 2015).



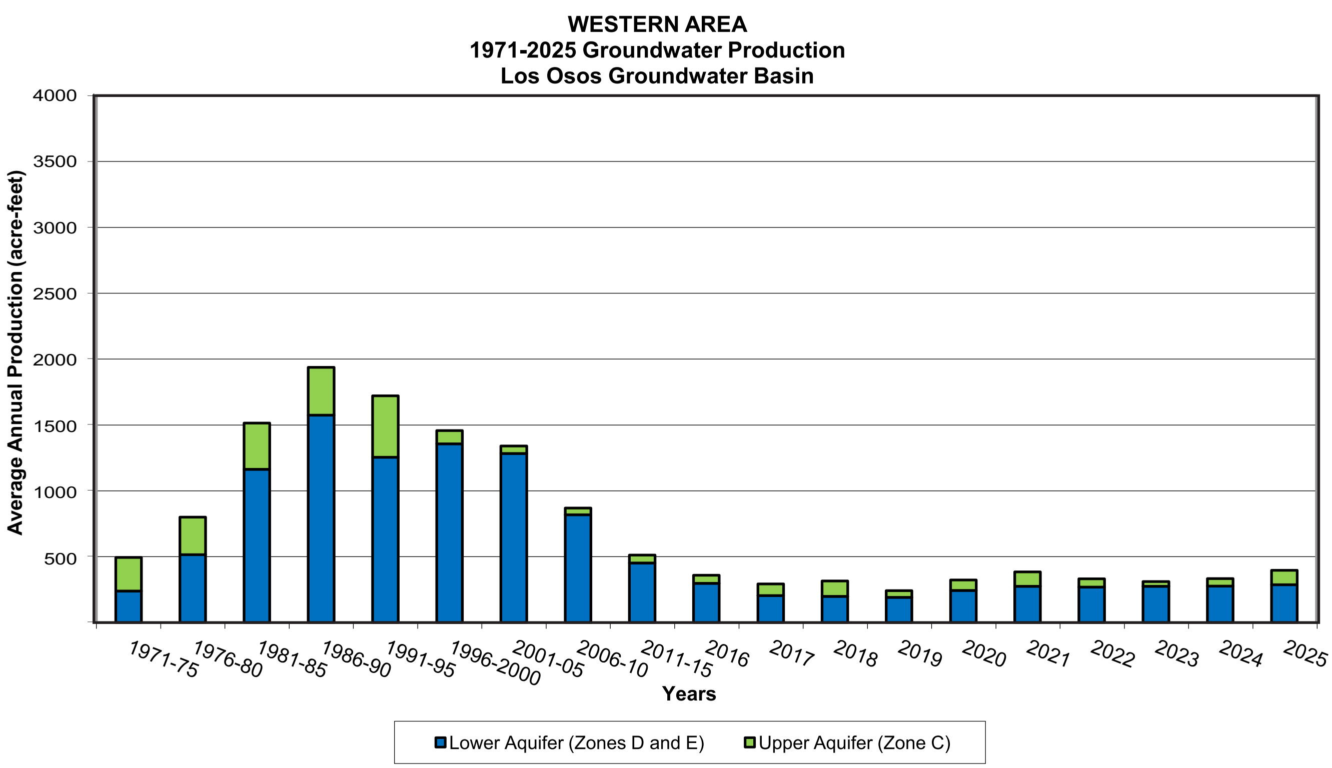
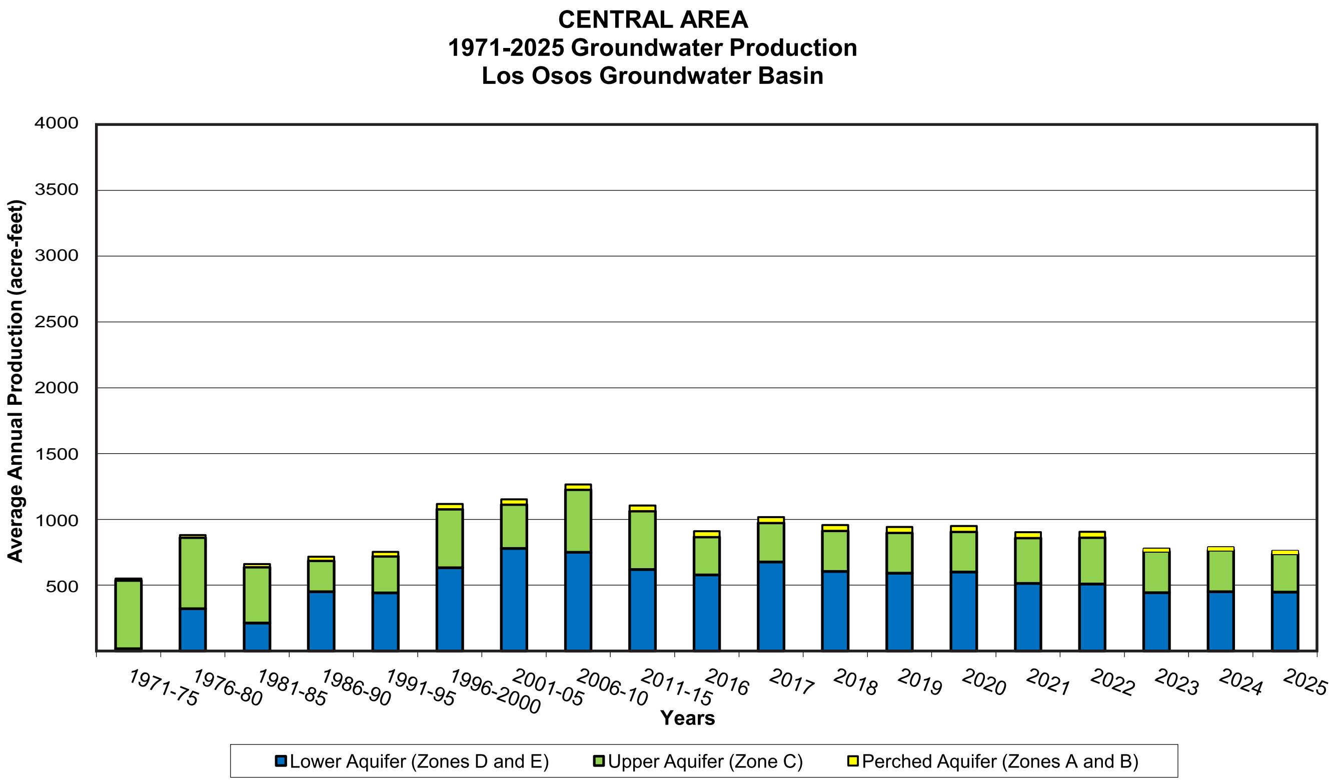


Figure 6
Basin Production 1971-2025
Basin Total and Western Areas
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



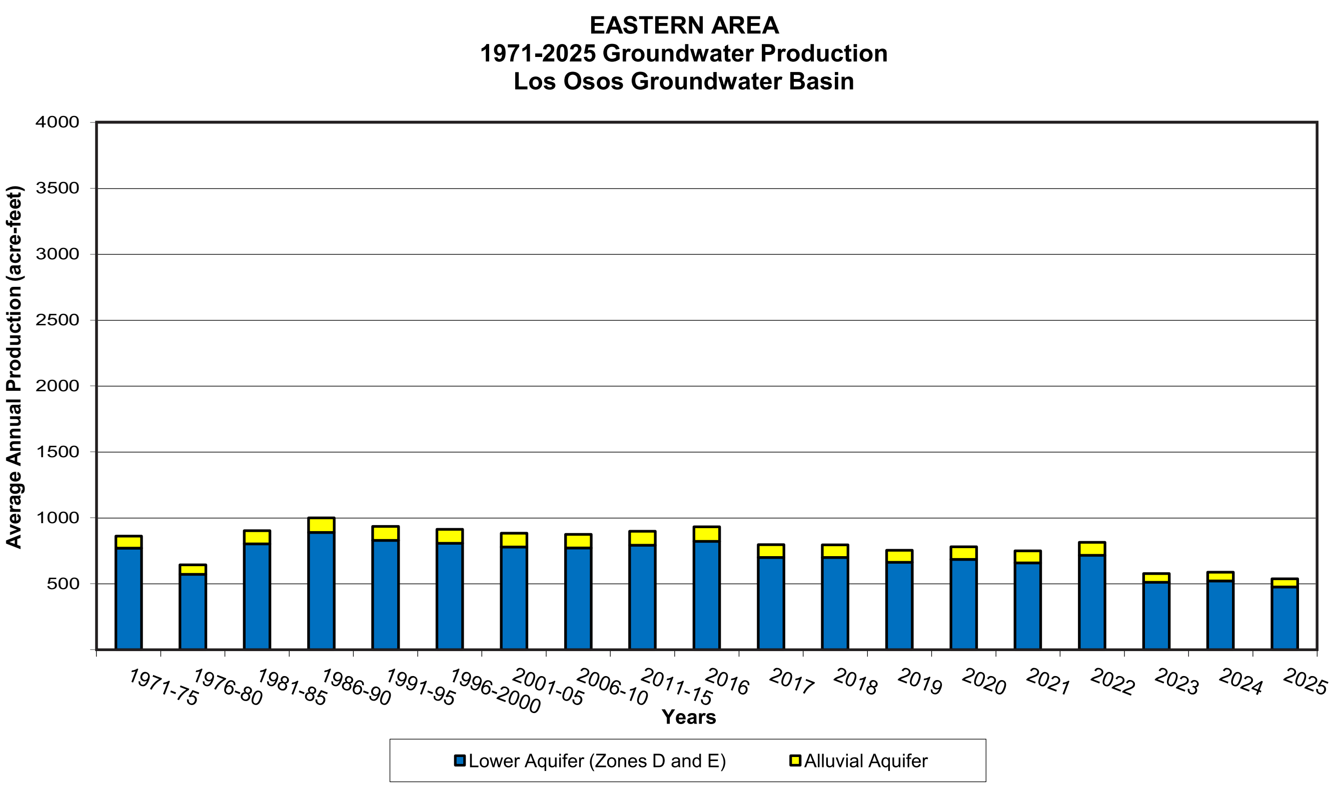


Figure 7
Basin Production 1971-2025
Central and Eastern Areas
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

6. PRECIPITATION AND STREAMFLOW

Precipitation data are currently available from the County rain gage located at the former Los Osos landfill (Station #727). Continuous precipitation records for Station #727 are available beginning with the 2006 rainfall year (July 2005 through June 2006), and show that rainfall has averaged 16.87 inches, with a minimum of 6.83 inches in the 2014 rainfall year and a maximum of 34.74 inches in the 2023 rainfall year. Precipitation for the 2025 rainfall year (July 1 2024 – June 30 2025) was 12.03 inches (dry), but for the 2025 calendar year rainfall measured 19.52 inches (above average). Records for Station #727 through the calendar year 2025 are included in Appendix H.

Historically, precipitation records at rain gage stations were compiled by the County for the LOCSD maintenance yard on 8th Street (Station #177), at the South Bay fire station on 9th Street (Station #197), and at two private volunteer stations (Station #144.1 in the Los Osos Creek Valley and Station #201.1 on Broderson Avenue). The longest active period of record in the vicinity is at the Morro Bay Fire Department (Station #152). A summary of precipitation data for these stations is presented in Table 15.

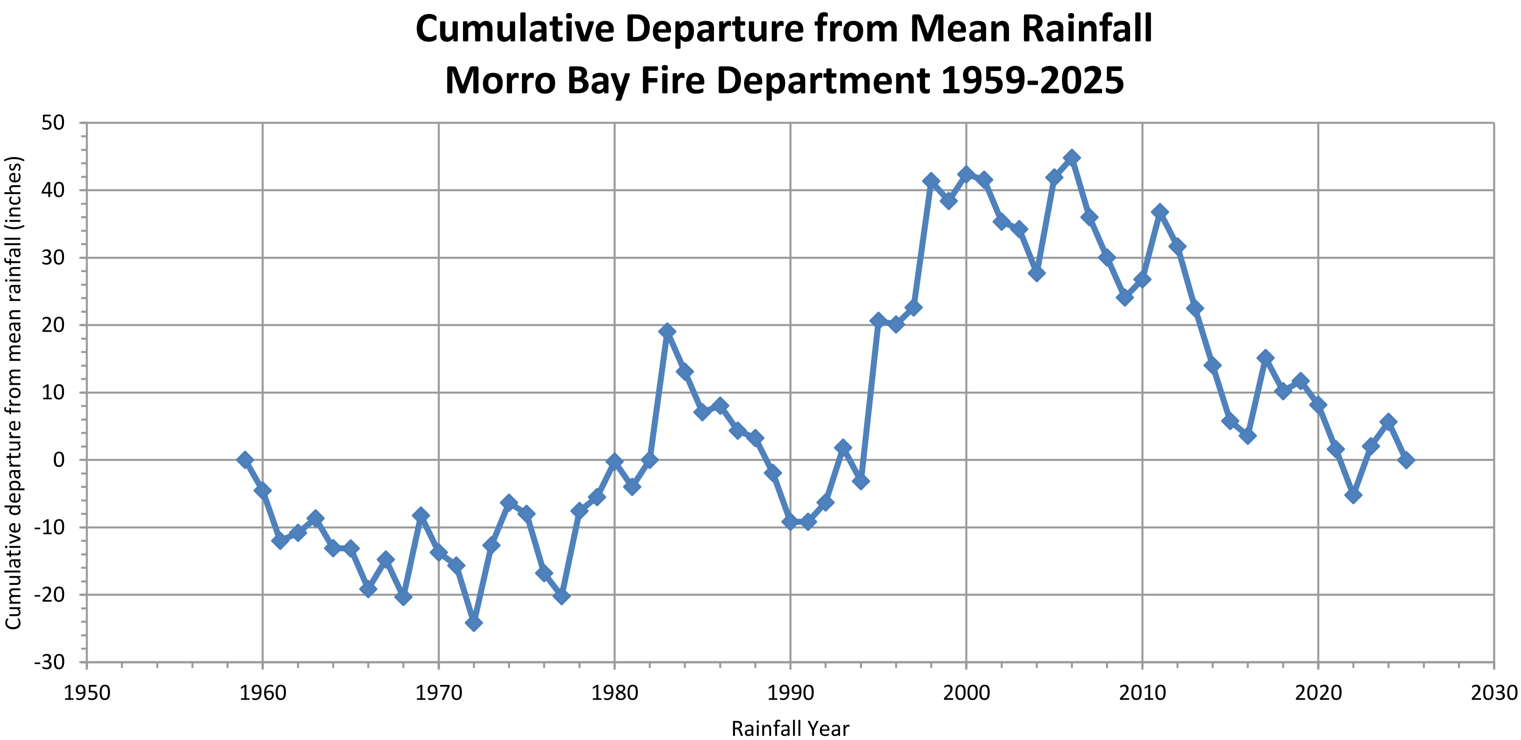
Table 15. Active and Former Precipitation Stations

Station No.	Name	Period of Record (rainfall years)	Average Annual Precipitation (inches)
144.1	Bender	1955-1987	19.17
152	Morro Bay Fire Dept.	1959-2025 (active)	16.01
		2006-2025 (active)	**13.9***
177	CSA9 Baywood Park	1967-1980	17.49
197	South Bay Fire	1975-2001	19.52
201.1	Simas	1976-1983	21.16
727	Los Osos Landfill	**2006-2025** (active)	**16.87***

*Averages are lower than normal, based on correlation with Station #152 long-term dataset

Figure 8 shows the long-term cumulative departure from mean precipitation at Station #152. Note that between 2006 and 2025 (the period of record for Station #727), rainfall at Station #152 was averaging 13.9 inches per year, two inches per year less than the long-term normal (Table 15). This indicates that the average of 16.87 inches per year at Station #727 is also likely below normal. Once data for Los Osos Landfill Station #727 becomes more representative of long-term climatic conditions, it would be appropriate to use the gage in the cumulative departure from mean precipitation graph.

The U.S. Drought Monitor, a partnership of federal agencies, monitors drought conditions across the country based on various climatological indexes and data inputs. San Luis Obispo County started 2025 with no drought to abnormally dry conditions in January; by end of the calendar year in December 2025 no drought conditions were reported (NDMC/USDA/NOAA, 2026).



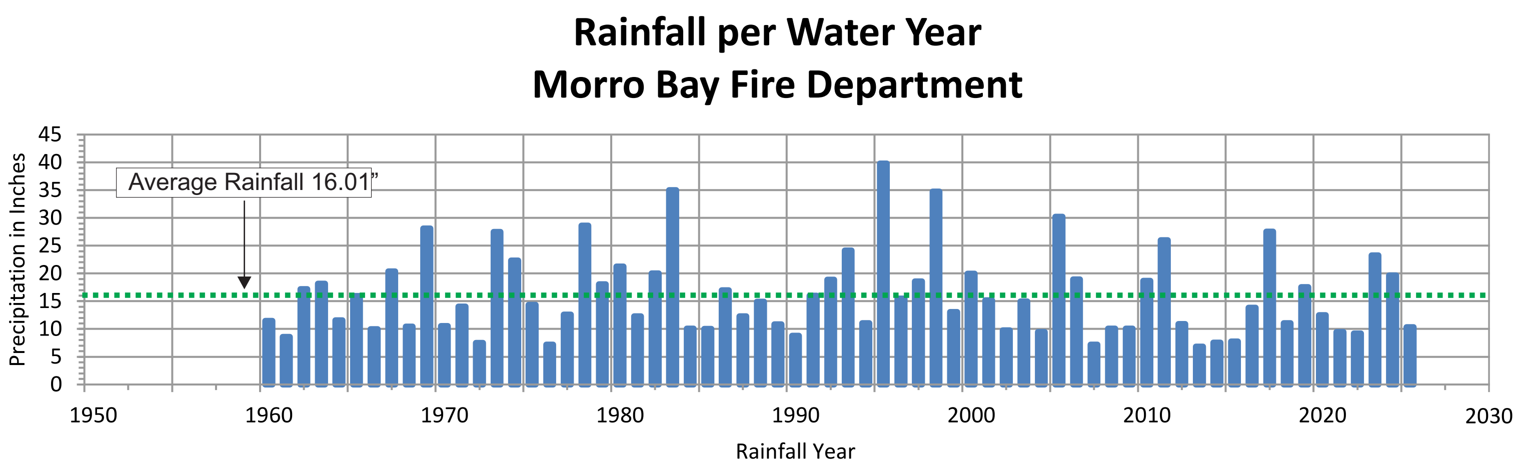


Figure 8
Cumulative Departure from
Mean Rainfall at Morro Bay Fire Department
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

The recently completed Transient Model is a numerical groundwater flow and transport model that uses a long-term average annual rainfall of 18.3 inches across the Basin, developed from a compilation of available data from local rain gauges since 1955. As shown in the cumulative departure curve in Figure 8, the climate has been drier than normal since 2006, with a cumulative drop of 45 inches from the long-term average, equivalent to 2.4 inches per year below average. Station #727 records begin in 2006, therefore, the current average rainfall of 16.87 for that station is interpreted to be below the long-term average for the Basin.

Los Osos Creek drains the Clark Valley watershed. Streamflow on Los Osos Creek is monitored by the County stream gage (formerly Gage #6, now Sensor 751) at the Los Osos Valley Road bridge. The location has been gaged intermittently since 1976, with 18 years of reported flow records ending in 2001. The average flow measured on Los Osos Creek at the gage (drainage area of 7.6 square miles) was 3,769 acre-feet per year between 1976 and 2001 (San Luis Obispo County, 2005). Development of a rating curve for Sensor 751 to convert historical stage data into flow measurements was completed in 2023 (CHG, 2023a). CHG processed County stage data for 16 years between 2008 and 2023. When the 16 additional years of flow are added to the 18 years of historical flow data, the average annual flow at the gage is 3,128 acre-feet per year. A summary of the available annual streamflow data is in Appendix H.

Streamflow was recorded at the gage for 96 individual days during the 2025 water year (October 1, 2024 to September 30, 2025). The dates and maximum stage value from Sensor #751 for the peak flow days in each month are listed below in Table 16.

Table 16. Maximum Stream Stage for Los Osos Creek, 2025 Water Year

Date	Maximum Stream Stage County Sensor #751 (feet)
10/25/2024	0.77
11/10/2024	0.54
12/12/2024	0.41
01/14/2025	0.42
02/13/2025	**5.50**
03/13/2025	2.97
04/01/2025	2.61
05/07/2025	0.42
06/18/2025	0.36
07/15/2025	0.36
08/13/2025	0.35
09/30/2025	0.42

Graphs of the available stream stage data over time for water years 2011 through 2025 are included in Appendix H.

Warden Creek (Figure 1) drains approximately nine square miles of the eastern Los Osos Valley. This creek flows along 3,700 feet of the northern Basin boundary, at low invert elevations (less than 20 feet above sea level) in an area underlain by shallow bedrock. The U.S. Geological Survey reported winter flows in Warden Creek similar to Los Osos Creek, but with greater baseflow during the summer, because Warden Creek serves as a drain (point of groundwater discharge) for shallow groundwater at the north end of the Los Osos Creek floodplain (Yates and Wiese, 1988).

7. DATA INTERPRETATION

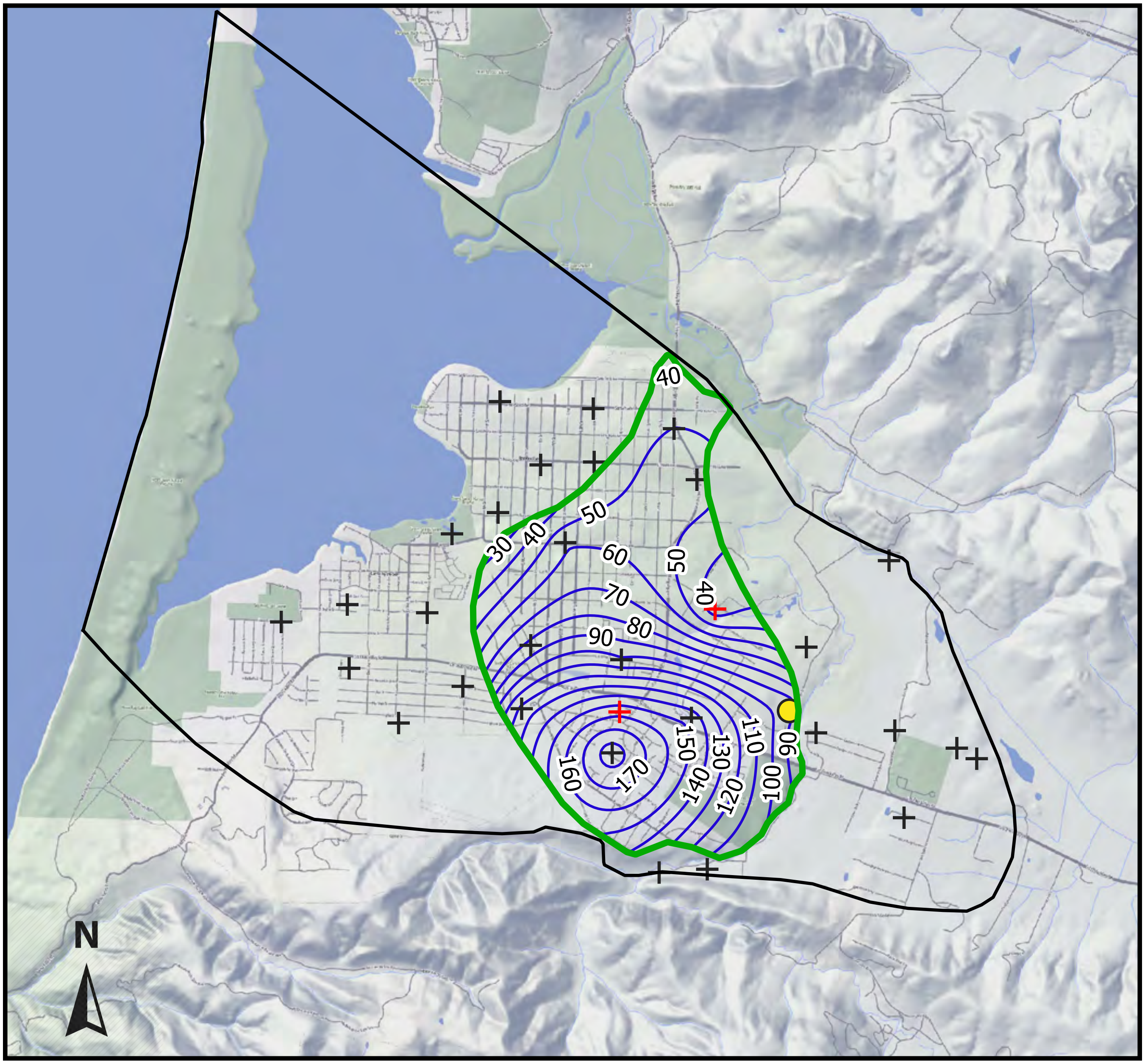
Groundwater level and groundwater quality data for 2025, together with selected historical data, have been used to develop the following information:

- Groundwater elevation contour maps for the Perched Aquifer, Upper Aquifer (with Alluvial Aquifer), and Lower Aquifer for both Spring and Fall 2025 conditions.
- Water level hydrographs for wells representative of aquifers in the Western, Central, and Eastern Areas of the Basin.
- The lateral extent of seawater intrusion and the Fall 2025 position of the seawater intrusion front.
- Estimates of groundwater in storage for Spring and Fall 2025, including amount above mean sea level.
- Estimates of changes to groundwater in storage from Spring 2024 to Spring 2025, including the volume of seawater intrusion.
- Basin Yield Metric, Basin Development Metric, Water Level Metric, Chloride Metric, and Nitrate Metric.
- Upper Aquifer Water Level Profile

7.1 Water Level Contour Maps

Water level contour maps for Spring 2025 are presented in Figures 9, 10, and 11 for the Perched Aquifer, Upper Aquifer with Alluvial Aquifer, and Lower Aquifer, respectively. Corresponding water level contour maps for Fall 2025 are presented in Figures 12, 13, and 14. The water level elevations are shown at a 5-foot contour interval for the Upper and Lower Aquifers, and a 10-foot contour interval for the perched aquifer, based on the ordinary kriging interpolation method, which provides a best (least-squares) estimate of values at unmeasured points based on the mapped values.

FINAL DRAFT



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Approximate limits of Perched Aquifer

Groundwater elevation contour
in feet above sea level (NAVD 88 datum)

Spring 2025 groundwater elevation data point

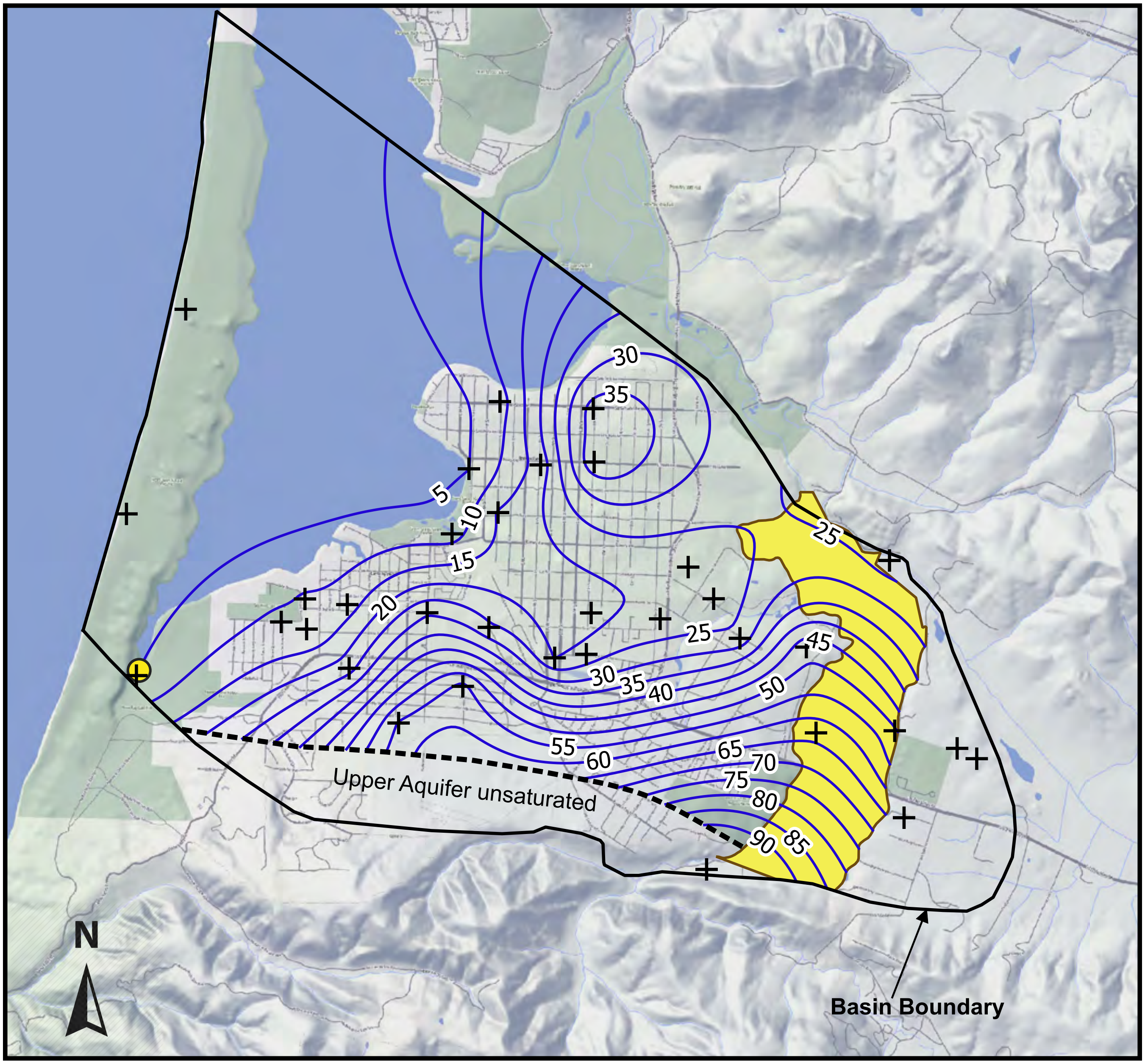
Winter 2025 groundwater elevation data point

Spring seep used for groundwater elevation

Figure 9
Spring 2025 Water Level Contours
Perched Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Groundwater elevation contour in feet above sea level (NAVD 88 datum)

Limits of Alluvial Aquifer

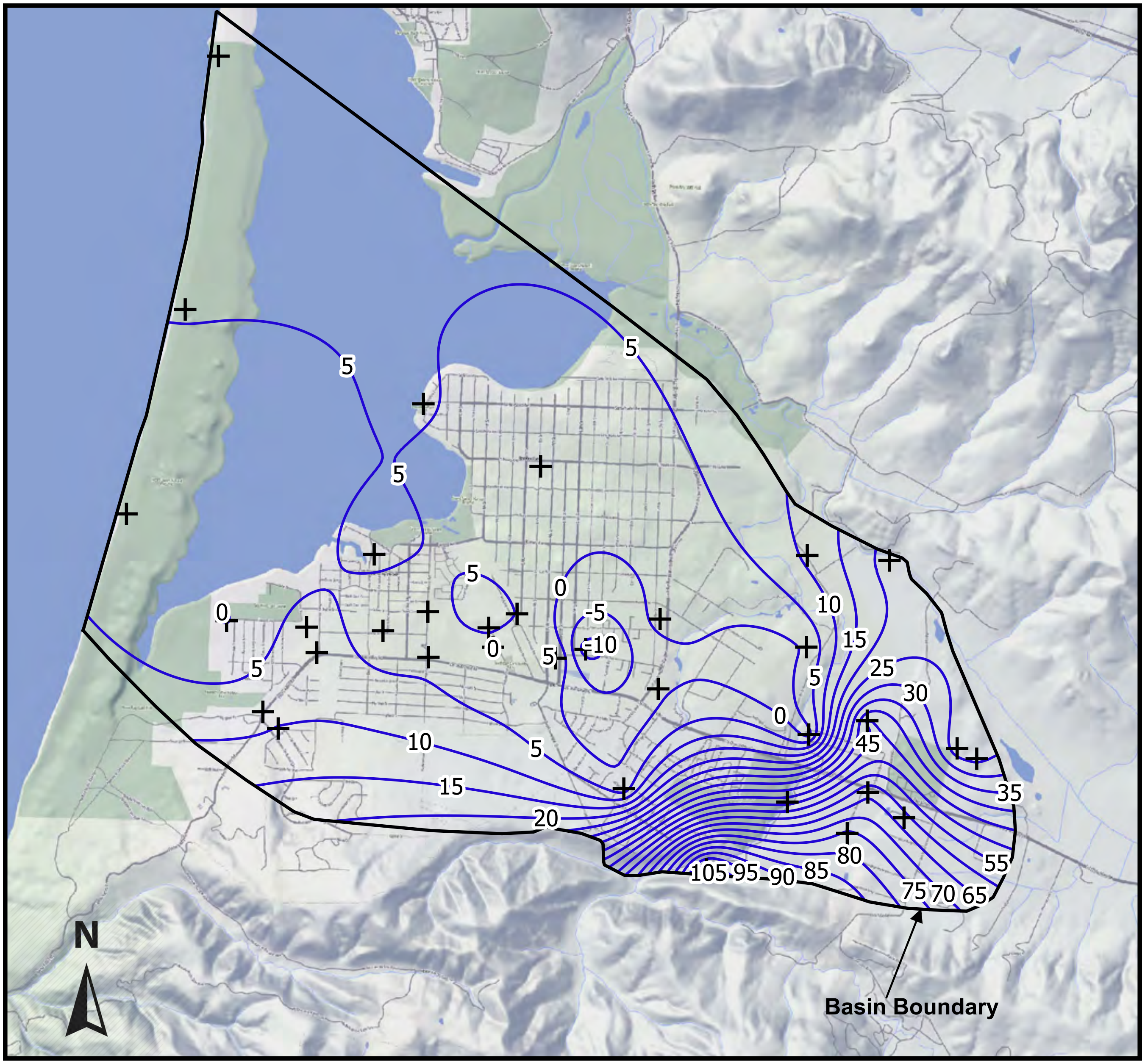
Spring 2025 groundwater elevation data point

Spring seep used for groundwater elevation

Figure 10
Spring 2025 Water Level Contours
Upper Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

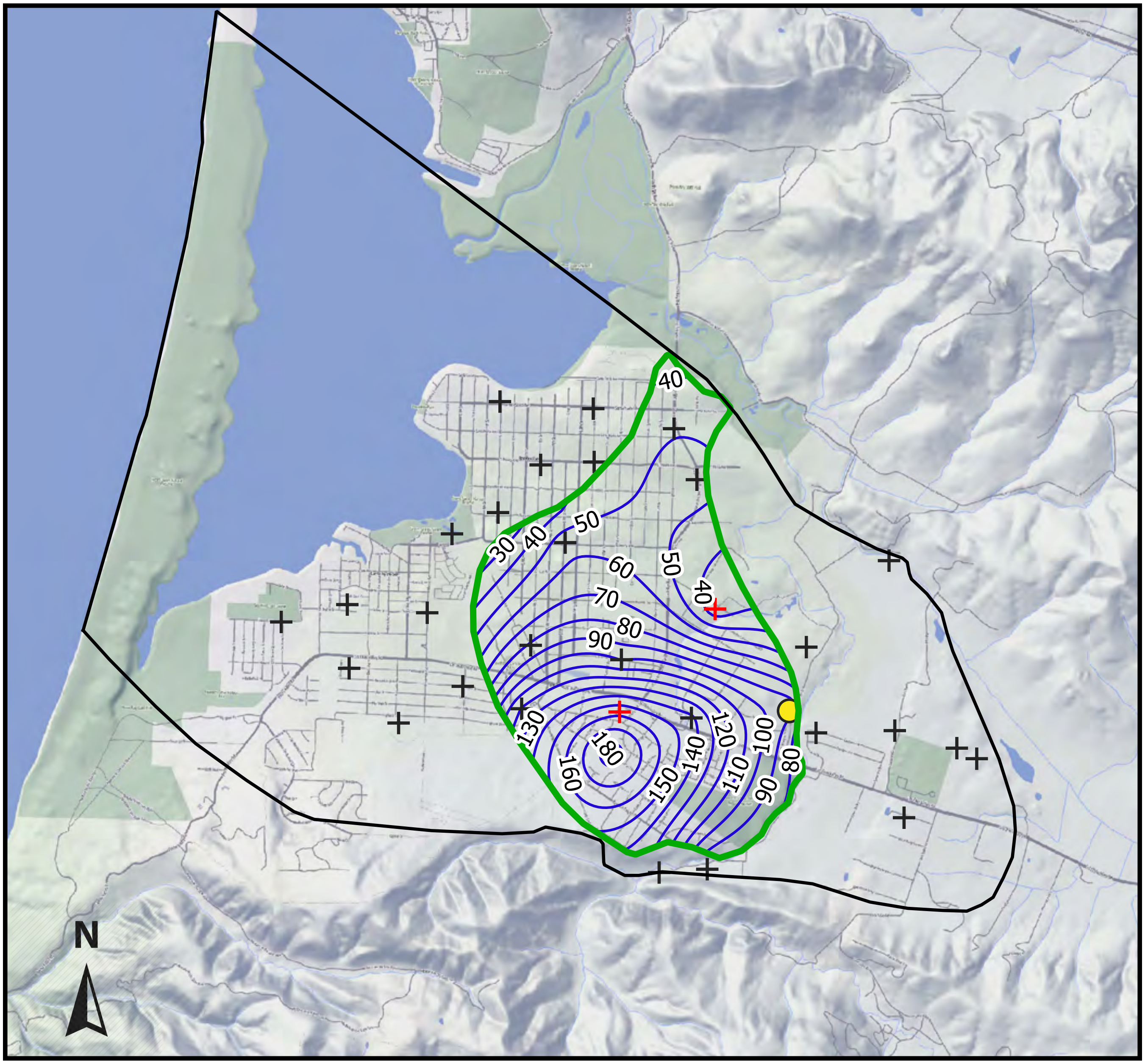
Groundwater elevation contour in feet above sea level (NAVD 88 datum)

\+ Spring 2025 groundwater elevation data point

Figure 11
Spring 2025 Water Level Contours
Lower Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Approximate limits of Perched Aquifer

Groundwater elevation contour
in feet above sea level (NAVD88 datum)

Winter 2025 groundwater elevation data point

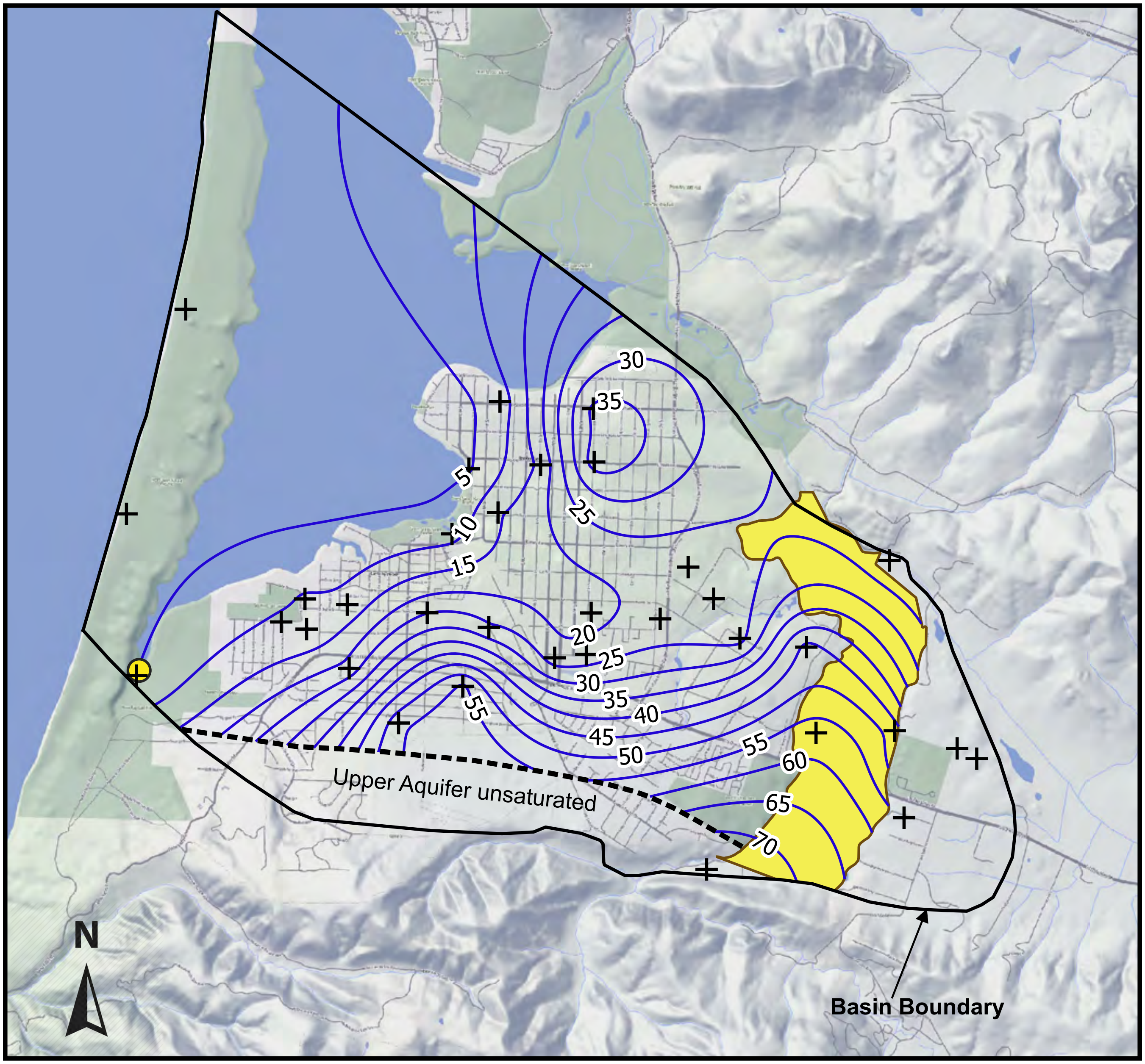
Spring 2025 groundwater elevation data point

Spring seep used for groundwater elevation

Figure 12
Fall 2025 Water Level Contours
Perched Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Limits of Alluvial Aquifer

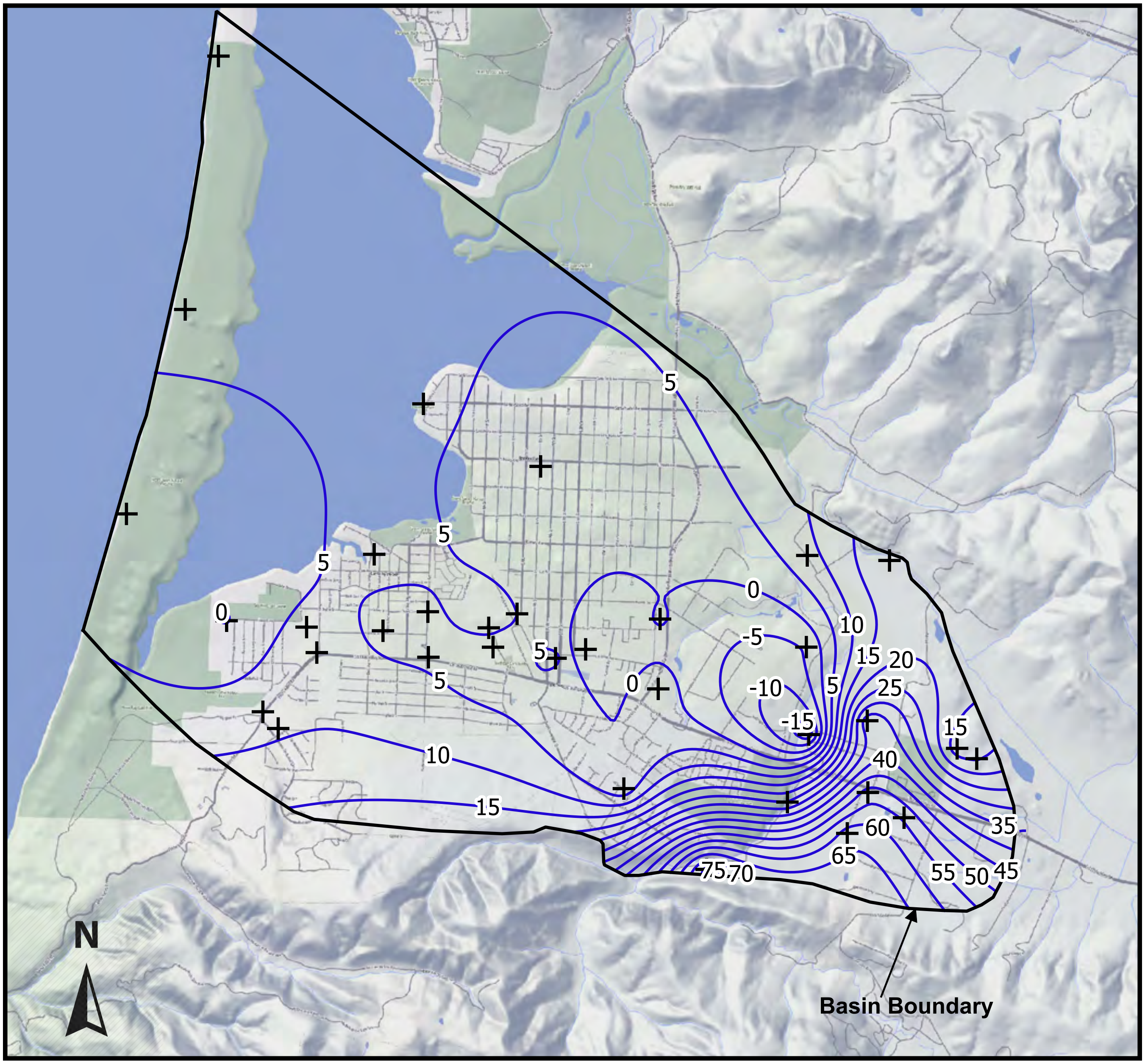
Fall 2025 groundwater elevation data point

Spring seep used for groundwater elevation

Figure 13
Fall 2025 Water Level Contours
Upper Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Groundwater elevation contour in feet above sea level (NAVD 88 datum)

+ Fall 2024 groundwater elevation data point

Figure 14
Fall 2025 Water Level Contours
Lower Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Water level data available from private irrigation and domestic wells were used in the development of the water level contour maps, although these water levels are not listed in the data tables in this report (Table 3 through 8). Private well participation in the monitoring program during 2025 was approximately 65 percent (22 out of 33 wells in Spring, 21 out of 33 in the Fall). With completion of the 2025 wellhead elevation survey, all of the LOBP monitoring network wells that are used for water level monitoring now have surveyed NAVD 88 elevations.

Perched Aquifer water level contour maps (Figures 9 and 12) show the highest groundwater elevations at Well FW31 in the Bayridge Estates (at the Bayridge Estates recycled water disposal field), with a radial direction of groundwater flow from the higher topographic elevations to lower elevations. Overall Perched Aquifer groundwater levels decreased approximately 3 feet from Spring to Fall 2025, which is normal (water levels typically decline in the fall and recover in the spring). The average seasonal water level decline in the Perched Aquifer over the last five years has been 2.7 feet, followed by water level recovery in the spring.

Contour maps for the Upper Aquifer and Alluvial Aquifer (Figures 10 and 13) show the highest groundwater elevations are at the southern edge of the Los Osos Creek alluvial valley. The general direction of groundwater flow is to the northeast along the creek valley and to the northwest toward the Morro Bay estuary. Significant features include a pumping depression interpreted to be present in the area of downtown Los Osos, and a groundwater high interpreted to be present beneath dune sand ridges in Baywood Park. Upper Aquifer groundwater elevation contours averaged approximately 2.2 feet of water level decline from Spring to Fall 2025, which is normal. The average seasonal water level decline in the Upper Aquifer over the last five years has been 2.2 feet, followed by water level recovery in the spring.

Contour maps for the Lower Aquifer (Figures 11 and 14) show the highest groundwater elevations are at the southern edge of the Los Osos Creek alluvial valley and near the eastern Basin boundary. The steep hydraulic gradient between the Upper Creek Valley and downtown Los Osos suggests significant permeability restrictions between these two areas, possibly fault related (Yates and Wiese, 1988; Cleath & Associates, 2005). Groundwater flow in the Lower Aquifer is generally toward Central Area pumping depressions which are below sea level. Lower Aquifer groundwater elevations averaged approximately 2.2 feet of water level decline from Spring to Fall 2025, which is less decline than normal. The average seasonal water level decline in the Lower Aquifer over the last five years has been 3.4 feet, followed by water level recovery in the spring.

7.2 Water Level Hydrographs

Water level hydrographs for representative First Water, Upper Aquifer, and Lower Aquifer wells have been compiled for the Western and Central Basin Areas, including one of the Lower Aquifer wells in the Dunes and Bay Area. These wells present the general water level trends. The hydrographs are shown in Figures 15, 16, and 17, respectively. Due to the modification of LA16 that has limited it to Zone E only, there has been a significant drop in the well's water level.

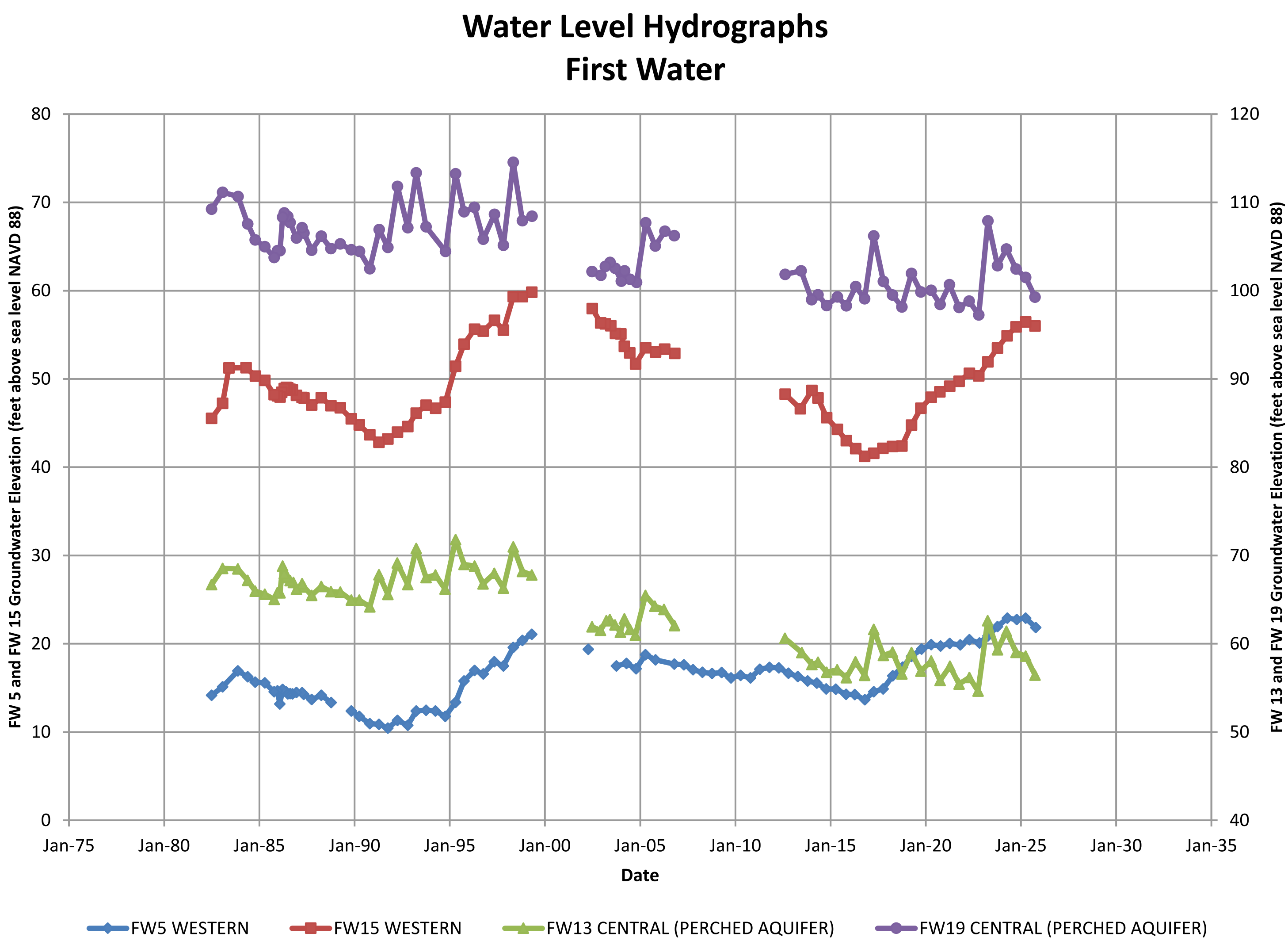


Figure 15
Water Level Hydrographs
Perched Aquifer / First Water
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

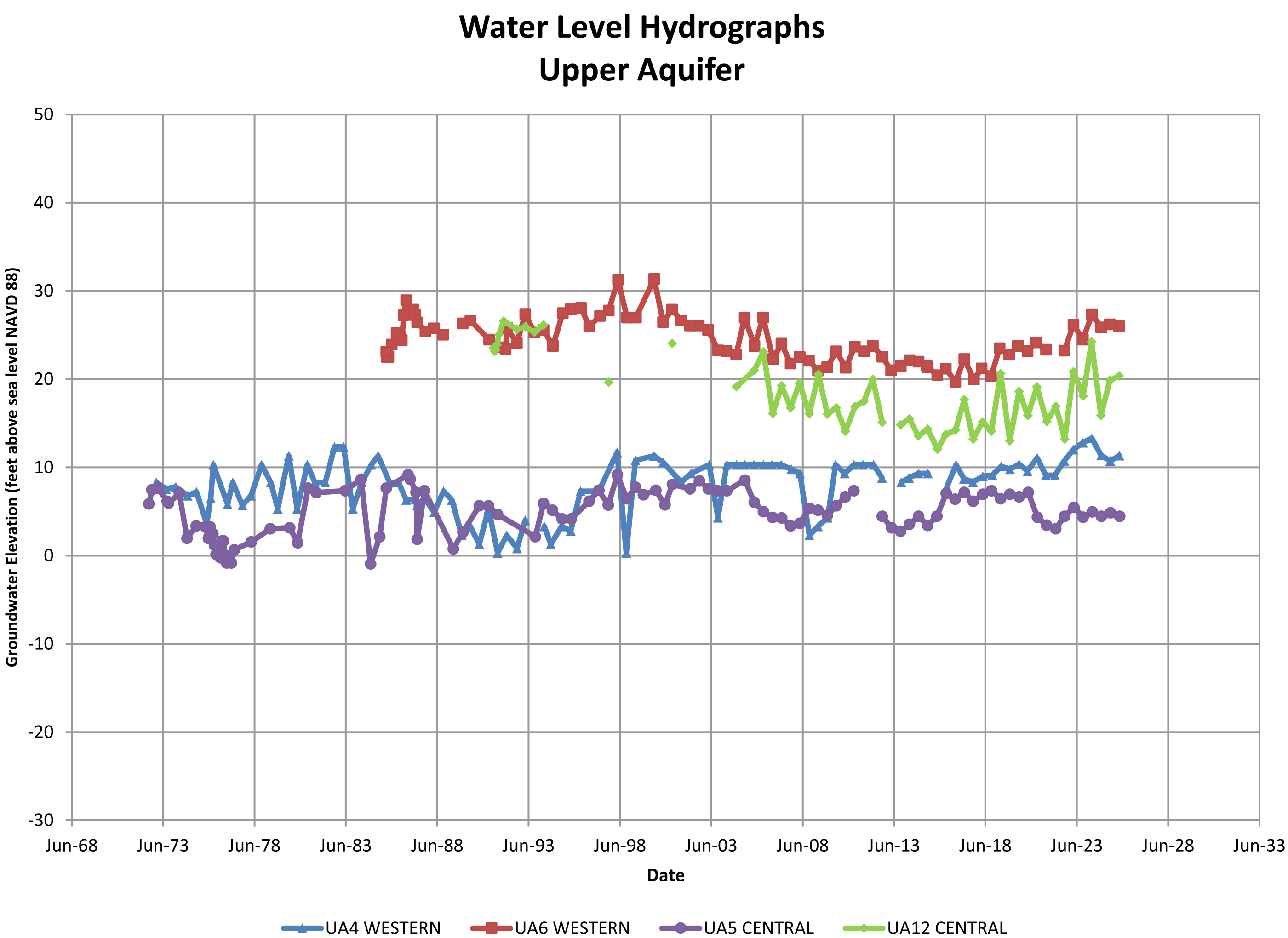


Figure 16
Water Level Hydrographs
Upper Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

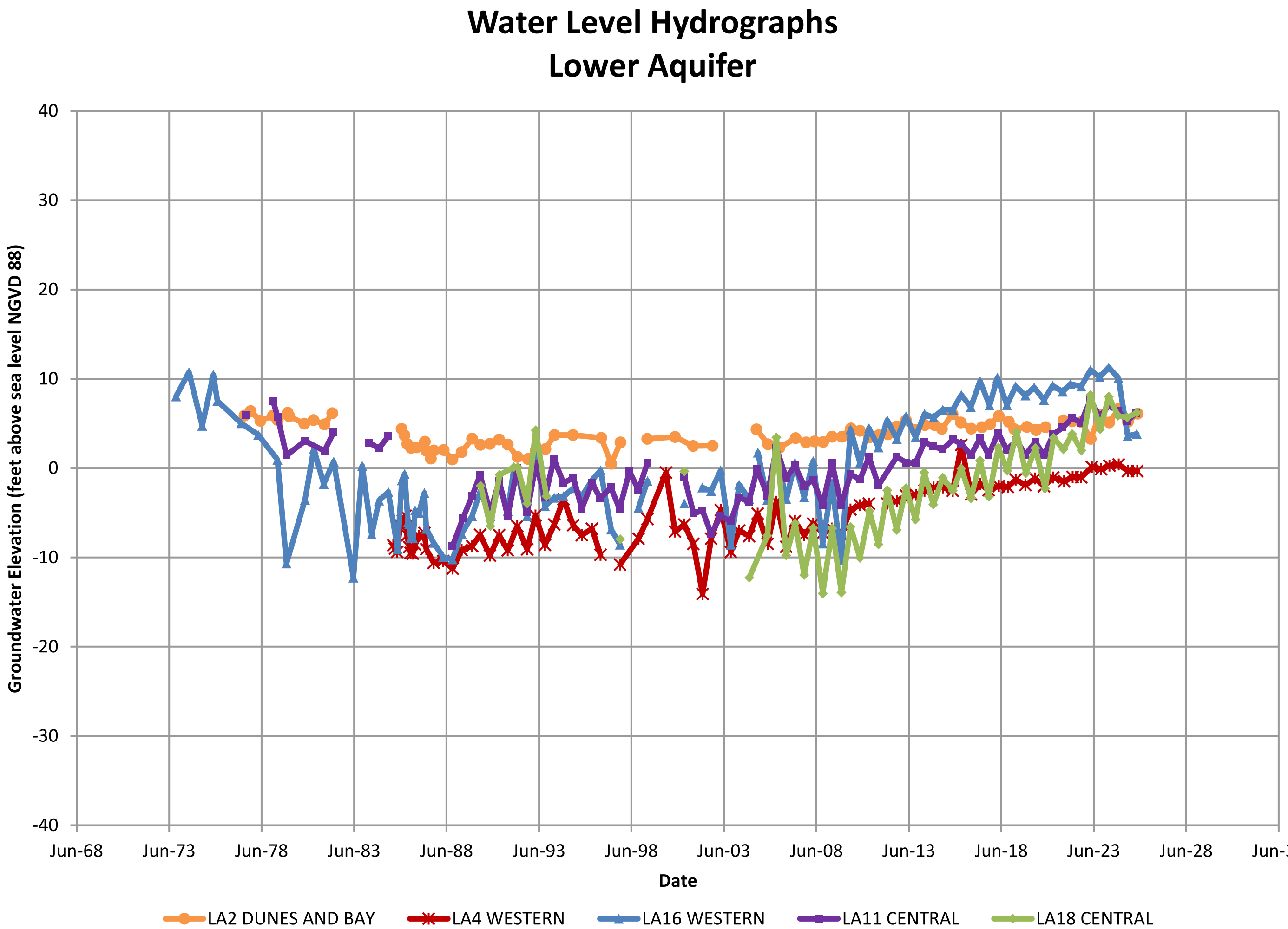


Figure 17
Water Level Hydrographs
Lower Aquifer
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

The Spring-to-Spring water level trends, based on representative hydrographs, show generally declining water levels in First Water and the Upper Aquifers since the wet period in the late 1990's through the most recent severe drought, with recovery beginning in 2017. By Spring 2023 and through 2025, Upper Aquifer water levels are generally recovered to non-drought conditions.

Perched Aquifer water level hydrographs in Figure 15 (FW13 and FW10) show recovery during the 2017 and 2023 wet years, but between these wet years and in 2025, water levels have declined back to 2015 drought levels. These wells are in the LOWRF collection area, where perched water levels may be impacted by the lack of septic return flows since 2017. Overall Perched Aquifer water levels are normal (non-drought range), based on groundwater elevation contours and storage calculations.

For Lower Aquifer wells, water levels have been generally rising since 2010. LA16 was modified to isolate Zone E beginning in 2025, which resulted in sudden drop in water level of approximately 7 feet. Adjusting for this, the Spring-to-Spring water level trend over the last ten years (2015-2025), based on representative Central and Western wells, was an increase of 0.38 feet of rise per year (Figure 17).

Hydrographs for sixteen wells equipped with pressure transducers are shown in Appendix I. Transducer locations are shown in Figures 2, 3, and 4. The transducers have been installed to provide greater detail of water level trends and fluctuations. There are three First Water wells, two Upper Aquifer wells, and eleven Lower Aquifer wells equipped with transducers. Seven of the transducer hydrographs were initiated in 2016-17, the rest from 2021-2025. Data from these wells has been interpreted to show the following trends:

- There was a relatively sharp water level decline in many Central and Western Area Lower Aquifer Wells in the Summer of 2025, followed by complete recovery in the Fall. This decline and recovery is shown in the hydrographs for LA13, LA14, LA16, and LA19 (averaging 4.6 feet of decline before recovering), and is interpreted to be the result of well interference from pumping a Lower Aquifer well.

- FW6 is screened in the Upper Aquifer near the Broderson leach field in the Western Area of the Basin. Starting in June 2017, water levels have shown a rise of approximately 25 feet through 2025 (Appendix I). The rise in water level is credited to groundwater mounding on the regional aquitard beneath the Broderson leach field. This mounding is expected to increase the downward hydraulic gradient and promote leakage through the regional aquitard, which will help to mitigate seawater intrusion in the Western Area. Beginning in mid-2022, the hydrograph at FW6 shows an undulating behavior in the water levels, which is interpreted to indicate that the Broderson groundwater mound is reaching stabilization.

- FW10 is screened at the top of the Upper Aquifer in the Central Area of the Basin, while UA4 and UA10 are screened at the base of the Upper Aquifer in the Western Area and Central Area of the Basin, respectively. These wells have displayed seasonal fluctuations of two to five feet (i.e., lower elevations during the summer and higher elevations during the winter and spring), including one to two feet of interference related to nearby pumping wells. Overall water level trends have been relatively flat (FW10) to rising slightly (UA4 and UA10) since 2016 (Appendix I). UA4 water levels include tidal influence.

- FW27 is screened in the Alluvial Aquifer in the Eastern Area of the Basin. The well was equipped with a transducer in April of 2017, near the seasonal high-water period, and has shown seasonal fluctuations since then between approximately 15 and 40 feet (Appendix I). The relatively large seasonal fluctuations are attributable to the well's location in the upper Los Osos Creek alluvial valley (Figure 2), where the majority of seasonal recharge from stream seepage in the Basin occurs.

- LA37 is screened in the Lower Aquifer in the Eastern Area of the Basin. It displays a seasonal fluctuation of approximately six to seven feet, including interference related to nearby pumping wells. Overall water level trends have been flat since 2017, with a general rise of approximately five feet in 2023 and slightly declining through 2025 (Appendix I).

- LA13 displays a seasonal fluctuation of approximately five to seven feet. Overall water level trends have been mostly rising since 2016 (Appendix I). In 2022, LA13 underwent modification in order to stabilize the old steel casing and to convert it into a monitoring well. It remains screened in the Lower Aquifer in the Central Area of the Basin; but a liner was installed to isolate Zone E. The well completion (modification) report and construction diagram were presented in the 2022 Annual Report (CHG, 2023b).

Seven transducers were installed in 2021, and have 5 years of recorded data. The y-axis (vertical scale) of the hydrographs at the wells with newly installed transducers are set to 10 feet (instead of 50 feet), due to the short monitoring interval. The hydrographs from these wells are interpreted to show the following trends:

- Tidal influence is observed in the hydrographs for LA11, LA40 and LA41, which are dedicated Lower Aquifer monitoring wells close to the bay, and in the hydrograph for UA4, which is an Upper Aquifer well close to the bay (discussed above). The tidal influence is interpreted to be a result of pressure loading and unloading to aquifers underlying the bay as the tides ebb and flow. Overall short-term trends, besides the dominant tidal effects and seasonal fluctuation, are stable water levels in LA11; stable in LA40, and stable to rising water levels in LA41. According to the transducer recording, LA11 may have been flowing artesian for a brief period in early 2023. If so, this would likely be the first time the well has flowed in over 40 years (semi-annual hydrograph in Figure 17).

- LA14 and LA16 underwent modification in February of 2025, isolating aquifer pressures and waters of Lower Aquifer Zone E. After removing the influence from Zone D, there was a reduction in aquifer pressure that caused an approximate seven-foot water level drop in LA16. LA6, LA14, LA16 (prior to modification), and LA19 show seasonal fluctuations and overall steady to slightly rising water level trends as of December 2025.

- Transducers at LA42 and LA43 were installed in 2024 and have compiled two years of data. The hydrographs show seasonal fluctuations, along with the previously discussed water level decline in the Summer of 2025, with subsequent full recovery.

7.3 Seawater Intrusion

The estimated position of the Fall 2025 seawater intrusion front in Lower Aquifer Zone D, along with selected prior years, are shown in Figures 18a and 18b. There is limited information to represent current Lower Aquifer Zone E intrusion in a plan view figure, but a generalized plan view interpretation of Zone E intrusion using current data and data from prior years is included in Figure 18c. The seawater intrusion front corresponds to the position of the 250 mg/L chloride concentration isopleth, based on water quality samples from Lower Aquifer wells.

The addition of LA41 (Lupine Avenue Zone D) in 2019 contributed to a refinement of the location of the seawater intrusion front in Zone D along the bay, compared to prior years, and resulted in a more westerly (improved) position compared to previous years. Figure 18a shows the seawater intrusion front for years prior to installation of LA41, while Figure 18b shows the intrusion front for years when LA41 data was available.

FINAL DRAFT

Base Image: Stamen-Terrain

0 750 1,500 2,250 3,000 ft

Scale: 1 inch ≈ 1,500 feet

Explanation

Cross-section alignment (Figures 5 and 19)

Bulletin 118 Basin Boundary

Well with chloride concentration data

Seawater intrusion front in Western Area - Zone D (250 mg/L chloride isopleth)

Winter 2005

Fall 2015

Fall 2016

Fall 2017

Fall 2018

Figure 18a
Seawater Intrusion Front
Western Area
Lower Aquifer Zone D
2005 - 2018

Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Base Image: Stamen-Terrain

0 750 1,500 2,250 3,000 ft

Scale: 1 inch ≈ 1,500 feet

Explanation

Cross-section alignment (Figures 5 and 19)

Bulletin 118 Basin Boundary

360 Well with chloride concentration data (Fall 2025 values shown)

Seawater intrusion front in Western Area - Zone D (250 mg/L chloride isopleth)

- Fall 2019
- Fall 2020
- Fall 2021
- Fall 2022
- Fall 2023
- Fall 2024
- Fall 2025

*Fall 2023 chloride value (600 mg/L) used at LA31 for contouring due to upper aquifer influence in Fall 2025

Figure 18b
Seawater Intrusion Front
Western Area
Lower Aquifer Zone D
2019 - 2025

Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Base Image: Stamen-Terrain

0 750 1,500 2,250 3,000 ft

Scale: 1 inch ≈ 1,500 feet

Explanation

Cross-section alignment (Figures 5 and 19)

Bulletin 118 Basin Boundary

390 Well with chloride concentration data (Values for Fall 2025 except where year noted)

Seawater intrusion front in Western Area - Zone E (250 mg/L chloride isopleth)

Fall 2025

Figure 18c
Seawater Intrusion Front
Western Area
Lower Aquifer Zone E
2025

Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

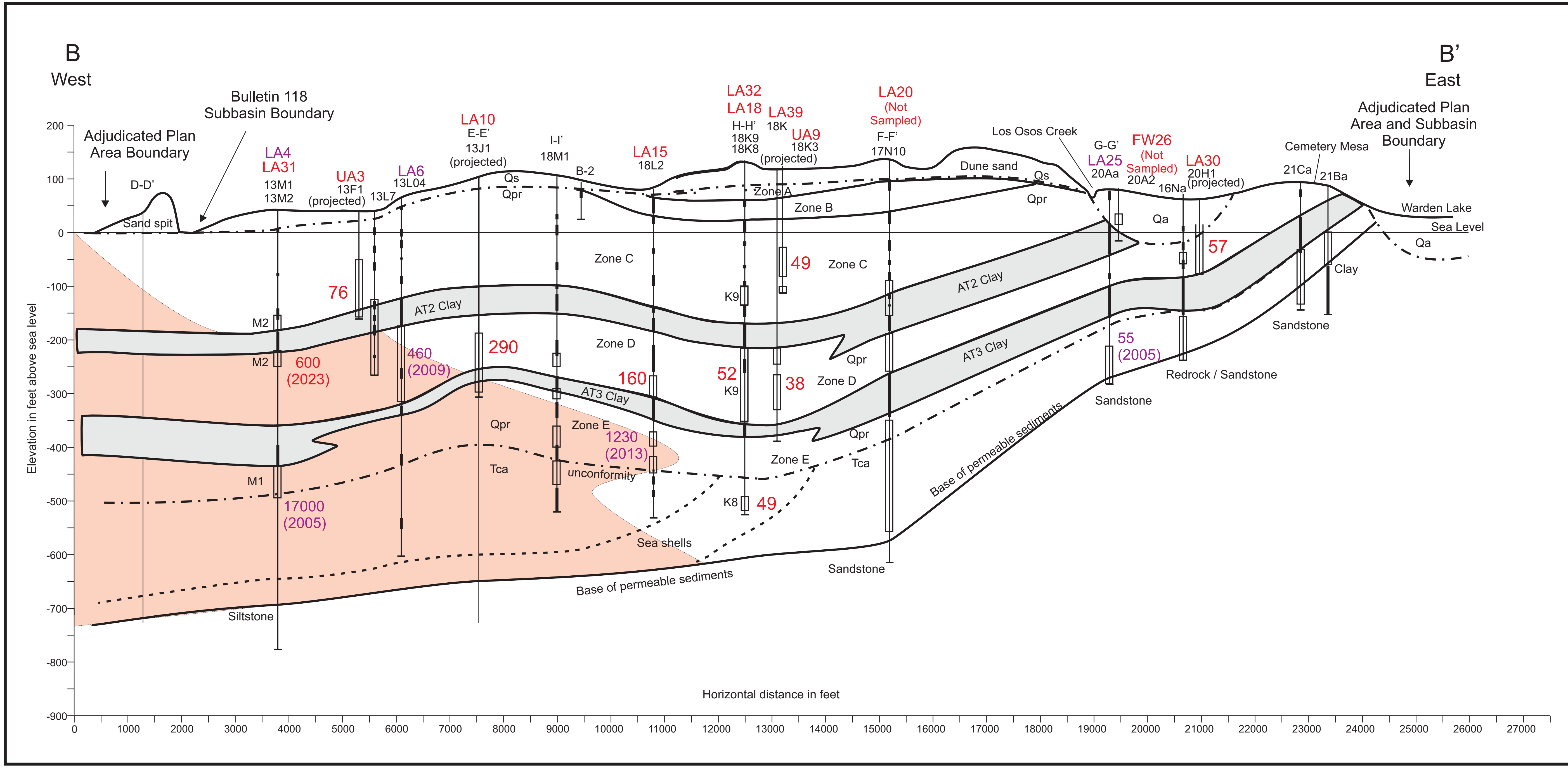
FINAL DRAFT

Based on the contours in Figure 18b, seawater intrusion in Zone D has decreased between Fall 2024 and Fall 2025, with the intrusion front remaining east of LA10 (similar to the position shown for 2021). Figure 18b is a simplification of Basin conditions, and the calculated position of the intrusion front and associated velocity of the intrusion front movement can vary significantly from year to year, and from Spring to Fall due to localized chloride fluctuations, particularly at well LA10. The seawater intrusion front shown in Figure 18b is generally representative of Zone D, although LA10 is completed in both Lower Aquifer Zone D and the top of Zone E. The Zone E intrusion shown in Figure 18c has advanced inland of LA11 on the north and LA16 on the south. The farthest inland extent of intrusion is interpreted to be between LA15 and LA18.

Contouring for the intrusion front (250 mg/L chloride isopleth) shown in Figures 18a, 18b, and 18c uses the ordinary kriging interpolation method, which provides a best (least-squares) estimate of values at unmeasured points based on the mapped values. Chloride concentrations at Dunes and Bay Area wells LA2 and LA3 were not analyzed in 2025, but in general they are two orders of magnitude greater than the Western Area wells and are not used for contouring the intrusion front in the Western Area. The ordinary kriging interpolation method involves weighted linear interpolation, whereas the chloride concentrations approaching wells LA2 and LA3 on the sandspit do not appear to follow linear gradients. There is a data gap south of the intrusion front in Zone D (Between LA8 and LA15; Figure 18b) where a surrogate data point was introduced to constrain the kriging algorithm.

The location of the intrusion front is also shown in cross-section on Figure 19 and Figure 20 (cross-section alignments shown in Figure 1). Figure 19 (Basin cross-section B'B') runs from the sandspit to the eastern Basin boundary. The intrusion front in the Upper Aquifer remains beneath the sandspit, based on the triennial geophysics performed at LA4 (see Section 4.3) and on water quality data from active bayfront municipal supply well UA3. In Zone E, the intrusion front reached LA15 (Palisades Avenue) in 2013, after which the zone was sealed off from production. There has been no evidence of further inland movement east of Palisades Avenue along the B-B' cross-section, based on the latest geophysics at LA14 (Section 4.3) and on water quality monitoring at Zone E monitoring well LA32 (10^{th} Street) and the recently modified LA14. Movement of the Zone E front in the vicinity of LA11 had been steadily advancing for years, then appeared to have stalled in 2024. Intrusion has restarted at LA11 in 2025; with 430 mg/L in Spring 2025 and 390 mg/L in Fall of 2025 (Figure 20). Chloride concentrations at LA40 increased between 2019 and 2021, remained stable through Spring of 2023, and then increased to the highest concentration to date in Fall of 2023 and Spring 2024 at 3,200 mg/L before declining to 2,900 mg/L chloride in Fall 2024. Elevated chloride concentrations continue at LA40 in 2025, with 2,700 mg/L in Spring 2025 and 3,200 mg/L in Fall 2025. Seawater intrusion into Zone E is a significant threat to Basin sustainability and has been for decades.

Figure 20 (section E-E') runs from Morro Bay on the north to the Los Osos fault on the south, and crosses section B-B' at Los Osos Valley Road (Figure 1). Zone D intrusion is interpreted in section E-E' to have reached LA10 near the middle of the Basin, with the lateral extent along the section constrained by LA40 on the north, and by the rising limb of the syncline on the south.



Aquifer Zones:
Zone A - Perched Aquifer
Zone B - Transitional Aquifer
Zone C - Upper Aquifer
Zone D - Lower Aquifer (shallow)
Zone E - Lower Aquifer (deep)

Well data point
18M1 Well ID
Clay layer
Well screen
Clay layers not shown at projected wells

Formation:
Qa - alluvium
Qs - dune sand
Qpr - Paso Robles Formation
Tca - Careaga Formation

Cross-section alignment shown in Figure 1

LA31 - LOBP Monitoring Network ID

160 - Chloride concentration in mg/L (Fall 2025)

Estimated extent of seawater intrusion (Fall 2025)

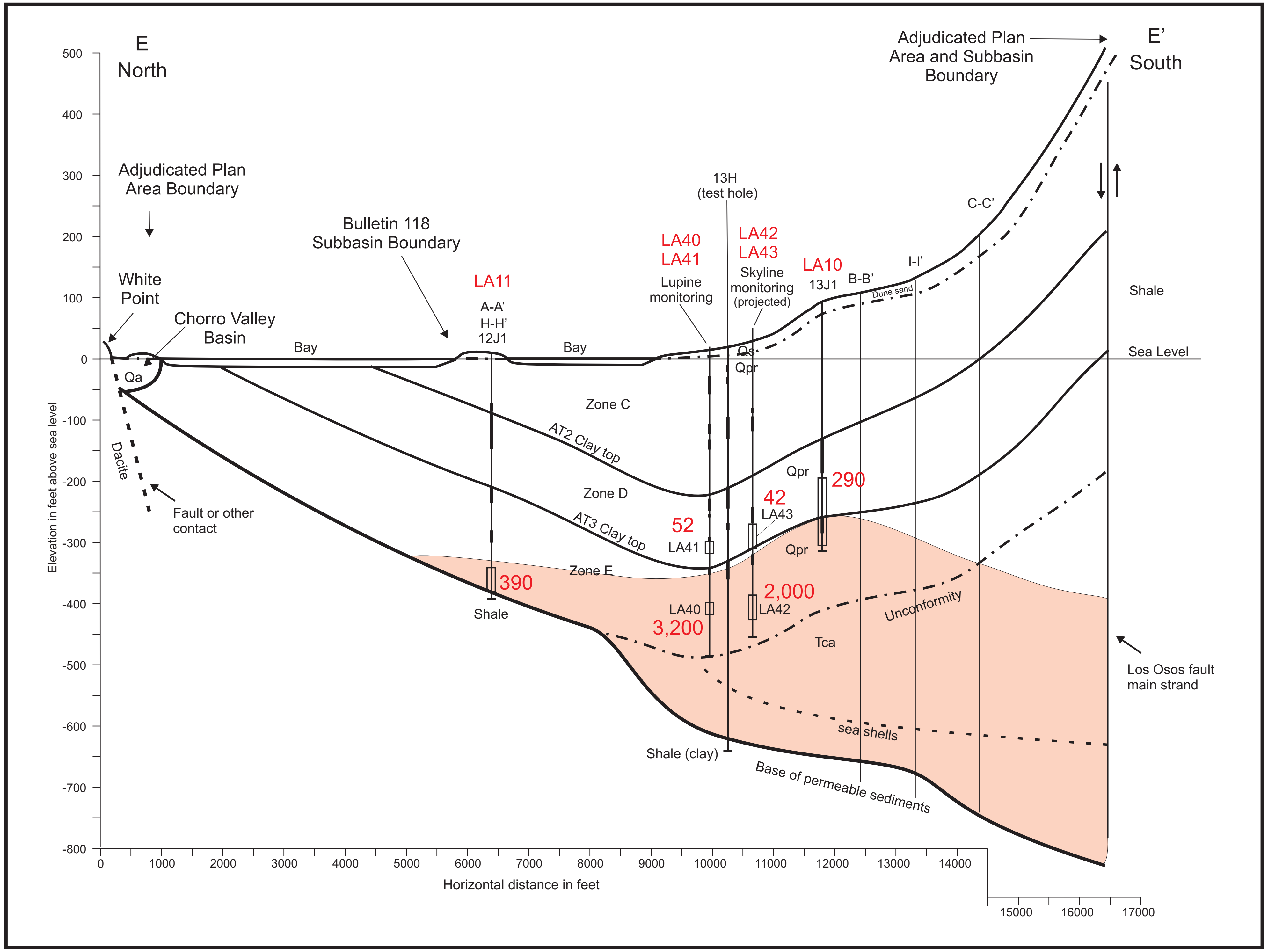
460 - Historical Chloride concentration in mg/L (year listed)

Figure 19

Seawater Intrusion Front
Cross-Section B-B'
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT



Aquifer Zones:
Zone A - Perched Aquifer
Zone B - Transitional Aquifer
Zone C - Upper Aquifer
Zone D - Lower Aquifer (shallow)
Zone E - Lower Aquifer (deep)

Well data point
12J1 Well ID
Clay layer
Well screen

Formation:
Qa - alluvium
Qs - dune sand
Qpr - Paso Robles Formation
Tca - Careaga Formation

Cross-section alignment shown in Figure 1

LA41 - LOBP Monitoring Network ID

390 - Chloride concentration in mg/L (Fall 2025)

Estimated extent of seawater intrusion (Fall 2025)

Figure 20

Seawater Intrusion Front
Cross-Section E-E'
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologsts

FINAL DRAFT

The intrusion front is not present in Zone D along the Basin synclinal axis at the Lupine Avenue nested monitoring well location, where the chloride concentration in LA41 is 52 mg/L. Water quality results for the new Skyline Drive monitoring well cluster (LA42/LA43) are similar to Lupine Avenue (LA40/LA41), confirming no intrusion in Zone D (42 mg/L chloride in LA43) and intrusion in Zone E (2,000 mg/l chloride in LA42).

Chloride concentration data and graphs for Lower Aquifer wells in the Basin are included in Appendix J. Besides the wells where active intrusion has been observed in recent years (LA10, LA11, and LA40), most other wells show a relatively stable (flat) chloride trend. Chlorides at LA15, however, have increased overall since 2021. This well currently pumps from Zone D, but was a mixed Zone D/E well prior to 2013. While the level of chloride (160 mg/L) remains below the threshold of the intrusion front (250 mg/L), chloride concentrations at LA15 have increased by 47% percent over the past five years.

In Zone E, seawater intrusion is interpreted to be laterally pervasive in the Western Area, based on the elevated chloride concentrations in LA40 (Lupine Avenue), LA42 (Skyline Drive), historical data at LA15 (Palisades Avenue), and LA11 (Pasadena Drive). Although the intrusion front appeared to have stalled at LA11 in 2024, chloride concentrations increased in 2025. This overall trend indicates a worsening condition over time. Additional deep monitoring wells are needed to further define the extent and movement of intrusion in both Zone D and Zone E. Summary tables with historical water quality for individual Lower Aquifer wells are included in Appendix J for reference, along with graphs of chloride concentrations over time at individual wells.

Seawater intrusion in Zone E is anticipated to be halted through a combination of reduced pumping in the Western Area together with increased recharge across the regional aquitard, following development of the groundwater mound beneath the Broderson disposal site. The redistribution of pumping and development of the Broderson groundwater mound are both still in progress, although the mound appears to be reaching a stabilized condition in the Upper Aquifer in 2025.

Recommendations for well modifications and new Lower Aquifer well locations were provided in a draft 2022 Technical Memorandum (CHG, 2022b). Through 2025, all three recommended well modifications (LA13, LA14, and LA16), and one new Lower Aquifer monitoring well cluster (Skyline Drive; LA42/LA43) have been completed. LA13 shows no seawater intrusion at that location in Zone E (Figure 18c). The new Skyline monitoring well cluster shows no intrusion in Zone D (LA43; Figure 18b), with intrusion in Zone E (LA42; Figure 18c). The two well modifications completed in 2025 (LA 14 and LA16) are documented in Appendix K. An additional new well cluster near the Sweet Springs Preserve is scheduled to be completed in 2026 and will help fill data gaps in characterizing and monitoring Zone E intrusion.

Continuing efforts to improve the definition of seawater intrusion and close data gaps are needed. In particular, better definition of the Zone D intrusion front in the Western Area along the synclinal axis of the Basin (near LA10 and LA6) is recommended. This may be accomplished with a deep well cluster in the vicinity of LA10 and with modification of LA6 (an inactive municipal supply well).

7.4 Groundwater in Storage

Groundwater in storage for Basin areas and aquifers has been estimated through a systematic approach of water level contouring, boundary definition, volume calculations, and aquifer property estimation. The methodology was developed to facilitate change in storage calculations from year to year. An example storage calculation for the Eastern Area is shown in Appendix L.

There are uncertainties with groundwater storage estimates. A sensitivity analysis was performed for the 2017 Annual Report (CHG, 2018a). The analysis evaluated variables related to tape bias/survey error, specific yield error, and data gaps. Results of the sensitivity analysis indicated the potential error for storage and change in storage was within 20 percent (+/- 20 percent) of the estimated storage values for most variables and storage compartments.

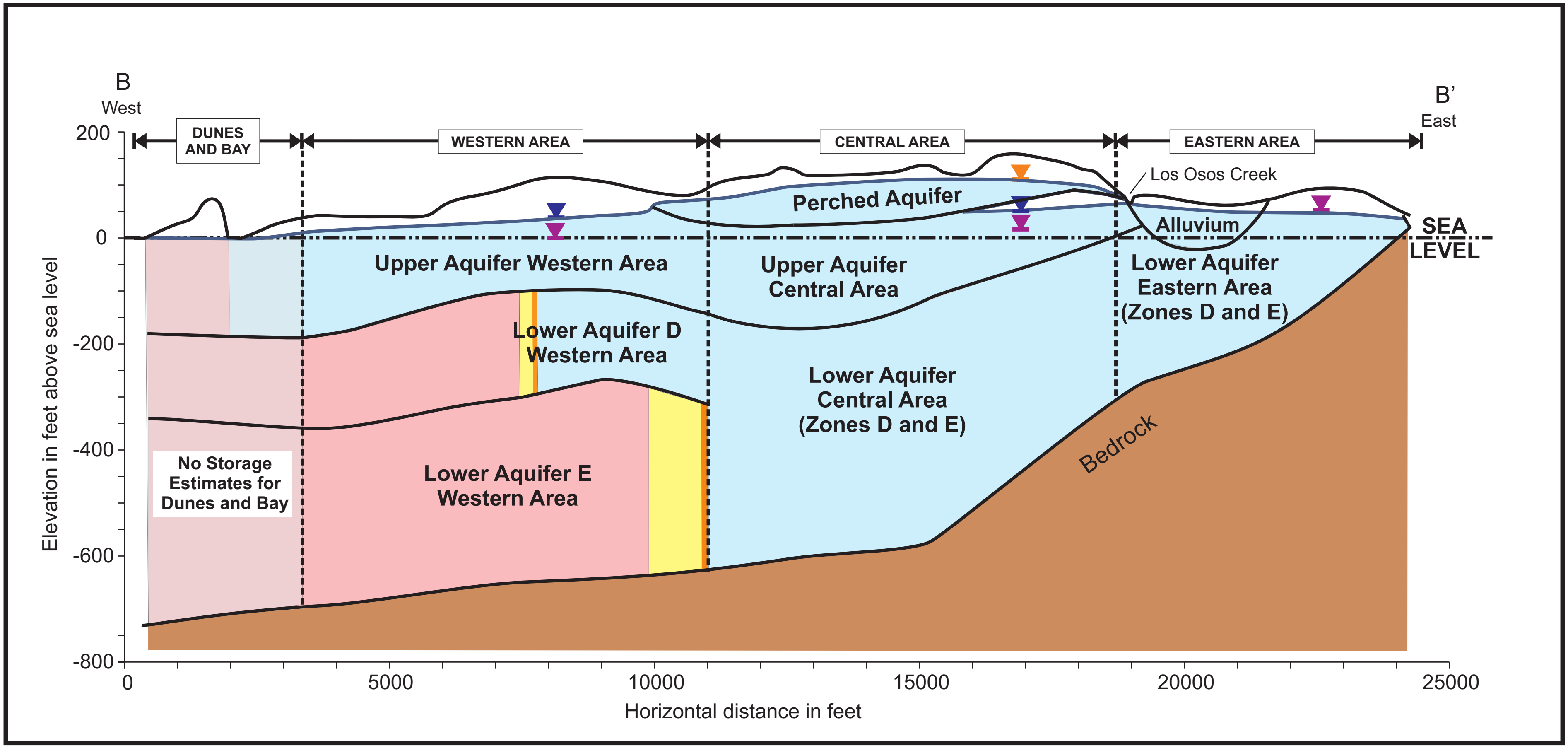
Storage estimates were performed for Spring and Fall 2025 and included separate estimates for the following areas and aquifers shown in Figure 21:

- Perched Aquifer
- Western Area Upper Aquifer
- Western Area Lower Aquifer
- Central Area Upper Aquifer
- Central Area Lower Aquifer
- Eastern Area Alluvial and Lower Aquifer

The various storage compartments are shown conceptually in Figure 21. Storage estimates for the Lower Aquifer in the Western and Central Areas combine fixed pore space volume and confined pore space volume components. The fixed volume component of storage is based on the specific yield of the aquifer sediments and is fixed because the Lower Aquifer is never dewatered in the Western and Central Areas. The confined component adds a relatively small volume of transient storage associated with the aquifer pressure and is based on the storativity of the aquifer. Specific yield values for aquifer zones are shown in Table 17. Detailed lithologic log correlations were provided in the 2018 Annual Report (CHG, 2019b).

Table 17. Estimated Specific Yield Values	
Aquifer Zone	**Specific yield[1] (percent of volume)**
Zone A&B	12.8
Zone C	10.2
Zone D	8.8
Zone E	10.5
Qal [2]	13.0
Zones D&E [3]	9.8
Qal, Zones D&E [4]	10.1

Notes: [1] Weighted specific yield values based on log correlations shown in the 2018 Annual Report.
[2] Los Osos Creek Valley alluvium
[3] Used for Central Area storage calculations
[4] Used for Eastern Area storage calculations



Cross-section alignment shown in Figure 18

Explanation

Groundwater in Storage <250 mg/l Chloride 2025

Groundwater in Storage >250 mg/l Chloride 2025

Change in Groundwater in Storage >250 mg/l Chloride Winter 2005-2025

Fall 2025 seawater intrusion front

Perched Aquifer Water level

Upper Aquifer Water level

Lower Aquifer Water level

Figure 21
Basin Storage Compartments
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Beginning in 2018, Basin storage calculations have been based on specific yields for each individual aquifer zone. Confined and semi-confined aquifer storativity values are typically orders of magnitude less than the specific yield. The average specific yield for Basin sediments is estimated to range from 9.8 percent to 13 percent (Table 17). The storativity value used for the confined aquifer in the Western and Central Areas is estimated at 0.0008 (Cleath & Associates, 2005).

The storage component of the Lower Aquifer in the Western Area Zone D represents the groundwater volume with a chloride concentration of 250 mg/L or less. Zone E in the Western Area is excluded from the storage calculations, because chloride concentrations are interpreted as mostly above 250 mg/L (Figure 18c and Figure 21).

All storage calculations were based on upper and lower contoured surfaces specific to the aquifer (fixed volume and confined volume were combined). For example, elevation contours on the base of the Perched Aquifer were used as the lower bounding surface for Perched Aquifer storage calculations, so no storage was assigned to unsaturated pore space between the base of the perched aquifer and saturated Upper Aquifer sediments (Figure 21). Appendix L includes a list of wells used for 2025 groundwater elevation contours and associated upper surfaces for storage calculations. Fixed surfaces used for storage calculations (base of perched aquifer, base of Upper Aquifer, base of Lower Aquifer Zone D, and base of permeable sediments were developed from existing contour maps and control points presented in prior reports (Cleath & Associates, 2003, 2005; CHG, 2016a). Table 18 summarizes the estimates of fresh groundwater in storage for 2025.

Table 18. Groundwater in Storage Spring and Fall 2025 (<250 mg/L Chloride)

Basin Area	Aquifer	Zone	Spring 2025		Fall 2025	
			Total	Above Sea Level	Total	Above Sea Level
			ACRE-FEET			
Western and Central	Perched	A, B	6,000	6,000	5,700	5,700
	Upper	C	29,500	7,700	28,700	6,800
Western	Lower[1]	D[2]	16,000	<10	15,200	<10
Central	Lower[1]	D, E	55,100	<10	55,100	<10
Eastern	Alluvial and Lower	Alluvial, D, E	19,600	5,100	18,800	4,300
TOTAL			126,200	18,800	123,500	16,800

NOTES:[1]Includes fixed and confined storage.
[2]Western Area Zone E not included due to chloride>250 mg/L.

Total estimated fresh groundwater in storage for the Basin (excluding Dunes and Bay Area) averaged 126,200 acre-feet in Spring 2025, with an estimated 18,800 acre-feet above sea level (Table 18). There was a calculated net seasonal storage decline of 2,700 acre-feet between Spring 2025 and Fall 2025, with 800 acre-feet of that being a loss of freshwater storage in Lower Aquifer

FINAL DRAFT

Zone D. Changes to freshwater storage in Zone D are based on shifts in the position of the 250 mg/L contour line as shown in Figure 18b (results for Fall monitoring events shown). Storage losses are recoverable.

There are approximately 71,000 acre-feet of fresh groundwater in storage within the Lower Aquifer in the Western Area Zone D and Central Area Zones D and E (Table 18). Because groundwater levels in the Lower Aquifer within the Western and Central Areas average more than 100 feet above the top of the aquifer, dewatering is unlikely, and this volume of storage will only change with movement of the seawater intrusion front. The Lower Aquifer storage includes a relatively small component (less than 200 acre-feet) of confined pore space volume, representing water that is available without dewatering any portion of the Lower Aquifer (the pressure component). Water is relatively incompressible, so once the pore spaces of an aquifer have been filled, substantial confining pressure is required to further increase the storage volume. Conversely, there is a much greater drop in aquifer water levels for storage withdrawals under confined conditions, compared to unconfined conditions. This smaller storage volume assumes a confined aquifer storativity of 0.0008, compared to the unconfined specific yields of 0.098 to 0.13. Table 19 compares Spring 2024 groundwater in storage with Spring 2025.

Table 19. Change in Storage Spring 2024 to Spring 2025 (<250 mg/L Chloride)

Basin Area	Aquifer	Zone	Spring 2024		Change from Spring 2024 to Spring 2025	
			Total	Above Sea Level	Total	Above Sea Level
			ACRE-FEET			
Western and Central	Perched	A, B	6,300	6,300	-300	-300
	Upper	C	29,800	8,000	-300	-300
Western	Lower[1]	D[2]	16,200	<10	-200	0
Central	Lower[1]	D, E	55,100	<10	0	0
Eastern	Alluvial and Lower	Alluvial, D, E	20,000	5,500	-400	-400
TOTAL			127,400	19,800	-1,200	-1,000

NOTES: [1] Includes fixed and confined storage.

[2] Western Area Zone E not included due to chloride>250 mg/L.

As reported in Table 19, there was a loss of 200 acre-feet of freshwater storage in the Lower Aquifer in the Western and Central Areas between Spring 2024 and Spring 2025. There was a loss of 1,000 acre-feet in fresh water storage in other areas of the Basin over the same period, resulting in a net loss in Basin storage of 1,200 acre-feet between Spring 2024 and Spring 2025. Note that Spring to Spring storage is a measure of annual change, while Spring to Fall storage is a measure of seasonal fluctuation.

Groundwater in storage above sea level is a measure of basin health and sustainability. Basin production from both the Upper and Lower Aquifers needs to be replenished over time from storage above sea level, otherwise seawater intrusion will advance inland. Most of the groundwater stored in the Lower Aquifer is below sea level. Therefore, to be sustainable, water pumped from the Lower Aquifer in the Western and Central areas needs to be replenished by an equal amount of recharge from the Upper Aquifer, boundary inflows, or inflows from the Eastern area where storage is mostly above sea level. The Basin model can simulate these dynamic processes, but tracking groundwater in storage from monitoring data, similar to tracking associated water levels or water quality, also reflects these complex processes.

Storage estimates show the volume of Spring groundwater in storage has been relatively stable to slightly rising in the Basin over the last five years; until a decline this last year. Table 20 shows the Spring and Fall storage estimates from 2018 to 2025. Rainfall totals are based on the San Luis Obispo County rainfall year; for example, rain year 2025 would be totaled from July 1, 2024 to June 30, 2025.

Table 20. Groundwater in Storage above Sea Level

Rain Year	Spring	Fall	Rainfall (Sta. 727)*
	acre-feet		inches
2018	17,000	15,100	13.63
2019	17,600	16,600	23.82
2020	17,700	15,800	13.60
2021	17,400	15,200	13.94
2022	16,800	15,000	13.58
2023	19,400	17,900	34.74
2024	19,800	18,000	21.63
2025	18,800	16,800	12.0

*SLO County Rainfall Year reporting (July1 – June30)

The seasonal change in groundwater storage above sea level (spring to fall) has averaged 1,760 acre-feet per year since 2018, which appears reasonable considering that there is a similar amount of average annual groundwater production in the basin (1,870 acre-feet per year). The 1,000 acre-feet of loss in estimated groundwater storage above sea level between Spring 2024 and Spring 2025 is the largest year-to-year loss in storage since 2018; but the overall groundwater in storage is still higher than most years (Table 20). The changes in groundwater storage above sea level generally show declines during periods of below normal rainfall and increases during above normal rainfall years.

FINAL DRAFT

Average water levels declined approximately 1-2 feet between Spring 2024 and Spring 2025 in the Perched Aquifer and Upper Aquifer, and declined approximately 3 feet in the Lower Aquifer over the period.

7.5 Basin Metrics

LOBP Section 1.3.1 established two methods for measuring progress in management of seawater intrusion (ISJ Group, 2015): one based on comparing annual groundwater extractions with the estimated Sustainable Yield of the Basin as calculated by the Basin numerical groundwater model, and one based on evaluating water level and water quality data from the LOBP Groundwater Monitoring Program. The first method involves the Basin Yield Metric and the Basin Development Metric, while the latter method involves the Water Level Metric, The Chloride Metric, and the Nitrate Metric.

7.5.1 Basin Sustainable Yield

One of the components used to calculate the Basin Yield Metric is the Sustainable Yield. On October 13, 2025, the BMC considered and adopted a revised methodology for estimating Sustainable Yield, along with a Sustainable Yield for Year 2026. This was the second revision to the Sustainable Yield methodology since 2015. The Sustainable Yield for 2021 and prior years was estimated (using the steady-state Basin model) as the maximum amount of water that may be extracted from the Basin with no further inland advance of the front (i.e. a stationary front under steady-state conditions) and with none of the active wells producing water with chloride concentration in excess of 250 mg/L (ISJ Group, 2015). In 2021 the BMC added the condition that no further inland advance is allowed from threshold lines drawn parallel to the coast that represent the 2021 position of the seawater intrusion front in the Lower Aquifer. Finally, in October 2025, the BMC adopted a 50-year planning horizon over which the threshold lines condition would apply. This planning horizon was selected to align with SGMA's planning and implementation horizon, and was needed in order to use the Transient Model, which was completed in 2025 and replaces the steady-state Basin Model for informing and supporting Basin management actions (see Section 10.2 - WRFP Study/Transient Groundwater Model for a complete list of references).

In accordance with the Stipulated Judgement Section 4.2, the BMC used the updated methodology to adopt a Sustainable Yield value for 2026. Based on developed purveyor infrastructure capacity for year-end 2025, along with the updated methodology, a Sustainable Yield of 2,000 acre-feet was approved for Year 2026 by the BMC. For Year 2025 Basin Metric calculations, however, the Sustainable Yield remains unchanged from 2024 at 2,380 acre-feet.

7.5.2 Basin Yield Metric

The Basin Yield Metric compares the actual amount of groundwater extracted in a given year with the estimated Sustainable Yield of the Basin under then-current conditions. Sustainable Yield for

Year 2025 was estimated, based on the Adaptive Method and the Basin model, as the maximum amount of groundwater that may be extracted from the Basin with a stationary seawater intrusion front at a position no further inland than the 2021 position, and with none of the active wells producing water with chloride concentration in excess of 250 mg/L (CHG, 2022a, Appendix M). A chloride concentration of 250 mg/L is the recommended limit for drinking water (one-half of the Secondary Maximum Contaminant Level Upper Limit of 500 mg/L). Further assumptions for the Basin Yield Metric in 2025 are that the Broderson mound is at 50 percent development (CHG 2022a, Appendix M) and the long-term rainfall average for the Basin is 16.8 inches per year. The Basin Yield Metric for 2025 is a ratio expressed as follows:

$$\frac{\text{2025 Groundwater Production}}{\text{2025 Sustainable Yield}} * 100$$

Groundwater production in 2025 was 1,680 acre-feet. The Sustainable Yield of the Basin with the infrastructure in place at year-end 2025 is 2,380 acre-feet[1], and the resulting Basin Yield Metric for 2025 is 71. The LOBP objective for the Basin Yield Metric is 80 or less, and has been maintained in 2025. Approval of the Annual Monitoring Report by the BMC does not constitute unanimous approval of actions listed under Section 5.11.4 (Approval Requirements) of the Stipulated Judgment or setting the Sustainable Yield for a given year. These actions require a separate action and unanimous approval by the BMC.

The estimated Sustainable Yield is not just a volume of water that can be pumped from anywhere in the Basin, however. Sustainability is achieved through a balanced distribution of groundwater pumping across the Basin, both vertically and laterally, that precludes the inland advance of the intrusion front across the 2021 threshold lines, and with no active well producing water with chloride concentrations above 250 mg/L, over a 50-year planning horizon. Long-term climatic conditions are incorporated into the estimated Sustainable Yield.

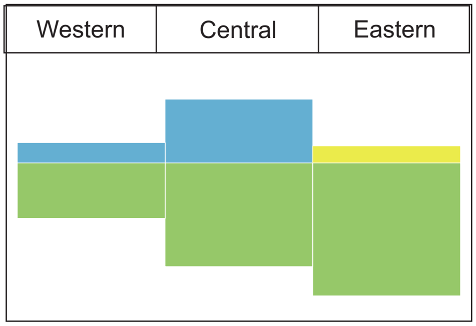
Figure 22 compares the Basin Yield Metric and area production in the Basin. The Basin Yield Metric has dropped from an average of 106 between 2010 and 2014 to 71 in 2025. The current Sustainable Yield baseline scenario (i.e. BYM 100) using the Transient Model is also provided for comparison in Figure 22. Note that the Sustainable Yield adopted by the BMC for 2026 is 2,000 acre-feet per year (AFY), which is expected to increase the Basin Yield Metric.

---

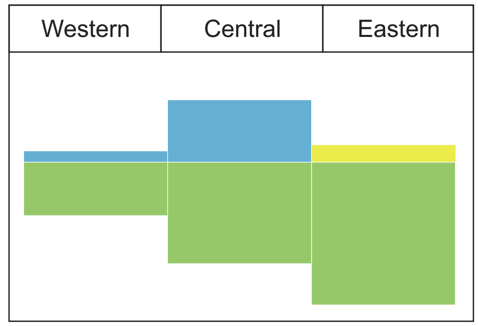
[1] 2015 LOBP established the Sustainable Yield methodology and estimated it to be 2,450 AFY. The subsequent 2015 Stipulated Judgement set the default Sustainable Yield at 2,400 AFY. On June 30, 2016, the BMC unanimously approved the 2015 Annual Report with a Sustainable Yield of 2,450 AFY. On June 21, 2017, the BMC unanimously approved the 2016 Annual Report with a Sustainable Yield of 2,760 AFY. On June 16, 2021, the BMC approved submitting the 2020 Final Draft Annual Report to the Court with a Sustainable Yield of 2,760 AFY, but clarified that approval of the report should not be construed as "evaluating, setting, or establishing" the sustainable yield under the terms of the Stipulated Judgement. In October 2021, a Sustainable Yield of 2,380 AF for 2022 was approved by the BMC. In December 2022, a Sustainable Yield of 2,380 AF for 2023 was approved by the BMC. In December 2023, a Sustainable Yield of 2,380 AF for 2024 was approved by the BMC. In October 2024, a Sustainable Yield of 2,380 AF for 2025 was approved by the BMC. The 2026 Sustainable Yield of 2,000 AF approved in October 2025 will be used for the Basin Yield Metric in next year's Annual Report.

FINAL DRAFT

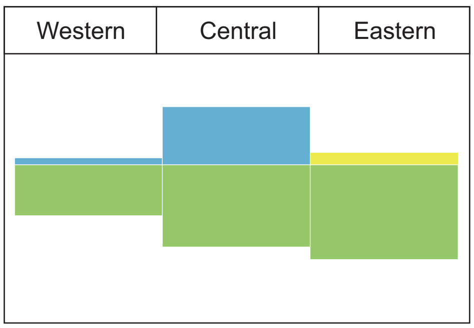
Year 2021
Average Production 2,000 AF
Sustainable Yield 2,760 AF
Basin Yield Metric = 72



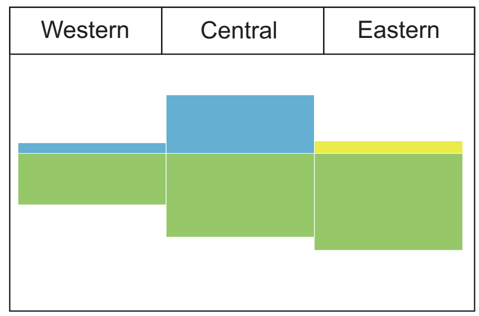
Year 2022
Average Production 2,010 AF
Sustainable Yield* 2,380 AF
Basin Yield Metric = 84



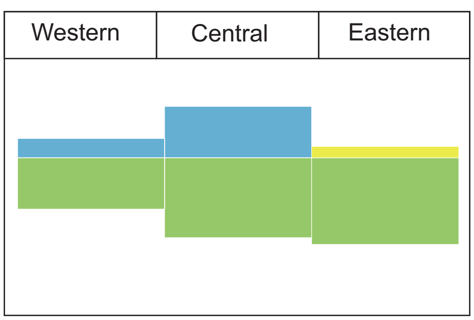
Year 2023
Average Production 1,650 AF
Sustainable Yield 2,380 AF
Basin Yield Metric = 69



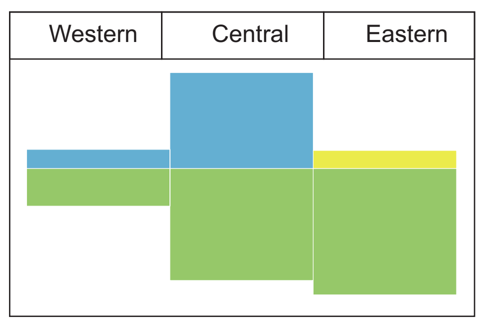
Year 2024
Average Production 1,690 AFY
Sustainable Yield 2,380 AFY
Basin Yield Metric = 71



Year 2025
Average Production 1,680 AFY
Sustainable Yield 2,380 AFY**
Basin Yield Metric = 71



Sustainable Yield Scenario
Transient Model - October 2025
Average Production 2,000 AFY
Sustainable Yield 2,000 AFY
Basin Yield Metric = 100



Explanation:

Size of rectangle is proportional to groundwater production

Alluvial Aquifer

Upper and Perched Aquifer

Lower Aquifer

*Sustainable Yield decreased due to methodology revision in 2021
**A decrease to the Sustainable Yield for Year 2026 (2,000 AFY) is expected to increase the Basin Yield Metric.

Figure 22
Basin Yield Metric Comparison
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Seawater intrusion in Zone E appears to have increased at LA11 in 2025 (Appendix J). Water levels at LA11 reached 40-year highs in 2023, although they remain a few feet below the Ghyben-Herzberg relation threshold for avoiding intrusion into the well. Besides the wells where active intrusion has been observed (LA10, LA11, and LA40), most other wells show a relatively stable (flat) chloride trend. Chlorides in Zone D at LA15, however, have increased overall since 2021, and while the level of chloride (160 mg/L) remains below the threshold of the intrusion front (250 mg/L), chloride concentrations at LA15 have increased by approximately 47 percent over the past five years.

The steady-state Basin model was developed in 2009 and has been in use since then with no significant changes. A peer review was conducted by Stetson Engineers (2010) which characterized the model as an appropriate planning tool that could be utilized as intended, and that would benefit from updates as more data is collected. A peer review of the model is also required by the Stipulated Judgement every 10 years. In 2025, the Transient Model was completed as part of the Los Osos Water Recycling Funding Program grant project (Section 2.2.5). The Transient Model was used for estimating Year 2026 Basin sustainable yield.

7.5.3 Basin Development Metric

The Basin Development Metric compares the estimated Sustainable Yield of the Basin in a given year with the estimated maximum Sustainable Yield of the Basin with all potential LOBP Program projects implemented (see Section 10 for a brief overview of LOBP Programs). The Basin Development Metric for 2025 is a ratio expressed as follows:

$$\frac{\text{2025 Sustainable Yield}}{\text{Maximum Sustainable Yield}} * 100$$

The 2025 Sustainable Yield is estimated at 2,380 acre-feet. The Maximum Sustainable Yield with all LOBP projects implemented was estimated at 3,500 acre-feet in the LOBP, but has not been re-evaluated using the Adaptive Method or the Transient Model. Therefore, no Basin Development Metric has been calculated for 2025. The purpose of the metric is to inform the BMC on the percentage of the Basin's Maximum Sustainable Yield that has been developed. There is no LOBP objective for the Basin Development Metric.

The Transient Model was used as part of the WRFP Study to evaluate the Sustainable Yield for various recycled water projects. For perspective, the greatest overall Basin Sustainable Yield in the WRFP Study was for the Upper Aquifer development scenario, which was estimated at 2,405 AFY. A supplemental water project is also being considered (see Section 10), which would add a nominal 300 acre-feet of supply to the Basin. If both these projects are implemented, the effective Sustainable Yield (as available Basin supply) would be close to 2,700 AFY, which is significantly less than the 3,500 AFY Maximum Sustainable Yield estimate from the LOBP.

7.5.4 Water Level, Chloride, and Nitrate Metrics

The Water Level, Chloride, and Nitrate Metrics are measurements of the effectiveness of Basin management. The Water Level and Chloride Metrics address changes in the Lower Aquifer related to seawater intrusion mitigation, while the Nitrate Metric addresses changes in First Water and the Upper Aquifer related to nitrate contamination mitigation.

Water Level Metric

The Water Level Metric is defined as the average Spring groundwater elevation, measured in feet above mean sea level, in five Lower Aquifer wells. These wells are LA2, LA3, LA11, LA14, and LA16 (Figure 4).

Two Water Level Metric wells (LA14 and LA16) are positioned in the Western Area near the current seawater intrusion front (250 mg/L chloride isopleth) and one well is in the Central Area on the bay front (LA11). As Basin production is redistributed through the Basin infrastructure program, these Water Level Metric wells will monitor Lower Aquifer groundwater levels in critical areas near the seawater intrusion front. The last two Water Level Metric wells are located on the Morro Bay sand spit (LA2 and LA3), where monitoring will help evaluate regional effects, rather than just localized water level rebound. Figure 23 graphs historical trends in the metric. Table 21 presents the 2025 Water Level Metric. Water Level Metric well locations are shown in Figure 4.

Table 21. 2025 Water Level Metric

Metric Well	Spring 2025 Groundwater Elevation (feet above sea level – NGVD 29 Datum*)
LA2	2.39
LA3	0.19
LA11	2.49
LA14	3.98
LA16**	8.32 (Spring 2024 value used for Metric)**
Water Level Metric (average)	3.50

Data Source: LOBP and County Groundwater Monitoring Programs
*Subtracted 2.8 feet from NAVD 88 elevations in Table 5 to convert to NGVD 29 datum for metric.
**LA16 was modified in 2025 to isolate Zone E for water quality monitoring and water levels at the well are no longer comparable with the historical data used for the Water Level Metric. The Spring 2024 groundwater elevation at LA16 of 8.32 feet NGVD 29 was used for the 2025 Water Level Metric calculation.

The NGVD 29 datum has been used for the Water Level Metric through 2025 because it matched the steady-state Basin model datum and conveniently equates zero elevation with mean sea level. Groundwater elevations have been adjusted to the NGVD 29 datum using a 2.8 feet downward shift, based on North American Vertical Datum Conversion (VERTCON) data reviewed for the Basin, as published by the National Geodetic Society. A Basin metric review and update is underway that will shift the Water Level Metric to the current NAVD 88 elevation datum.

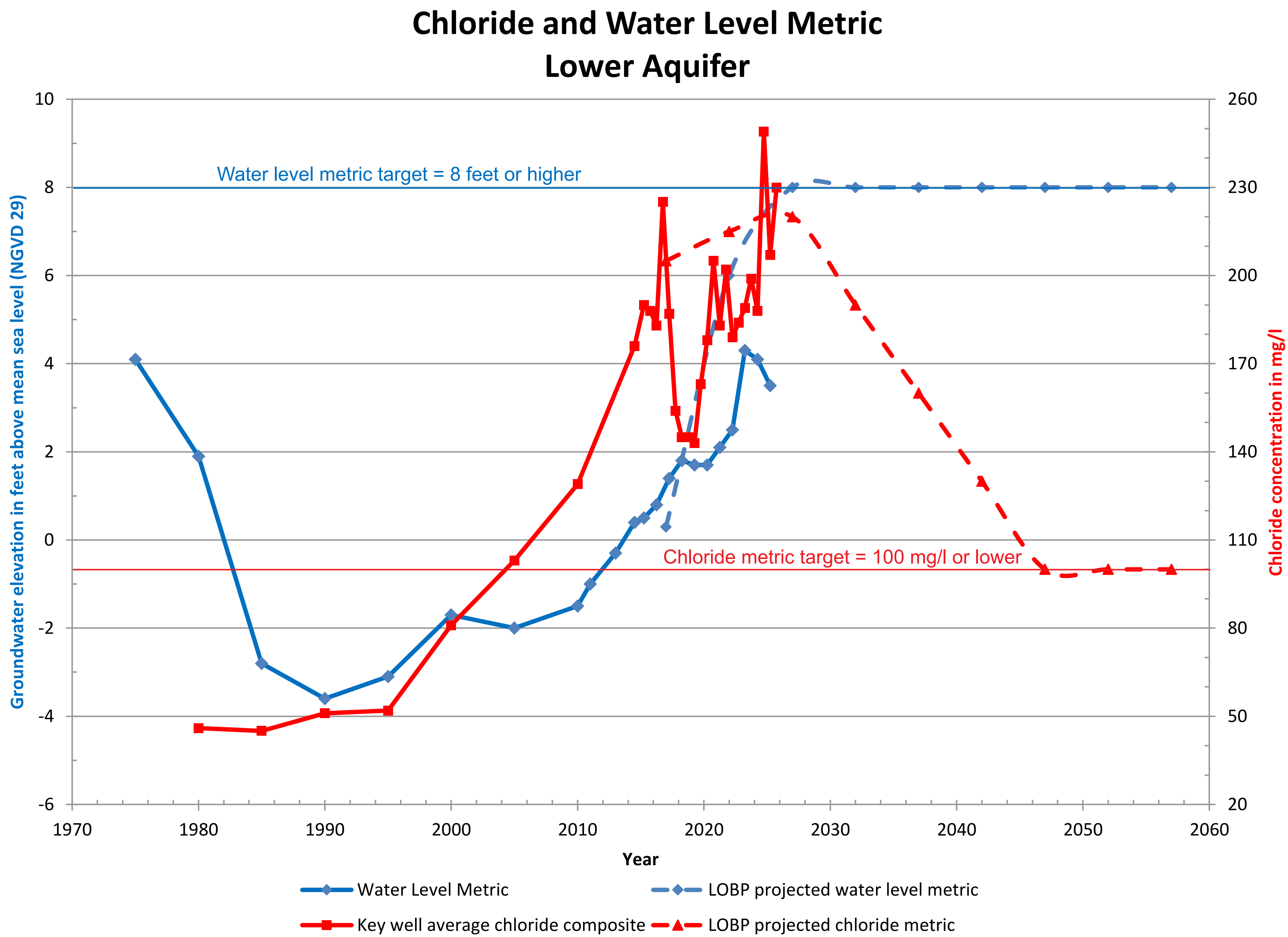


Figure 23
Chloride and Water Level Metric
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

The Spring 2025 Water Level Metric is 3.5 feet NGVD 29 (approximately 6.3 feet NAVD 88). Mean sea level is approximately 0 feet in the NGVD 29 datum, and 2.8 feet in the NAVD 88 datum for the central coast of California, where the Basin is located. The metric was rising (an improvement) from 2005 through 2018, likely in response to a decrease in Lower Aquifer production. Following a flat interval between 2018 and 2020, the metric continued rising through 2023. There has been a dip in the Water Level Metric in 2024 and 2025 which is likely a correction following the large increase between 2022 and 2023 (Figure 23). Since 2015, the Water Level Metric has increased by 3 feet. The LOBP objective for the Water Level Metric is 8 feet NGVD 29 or higher (ISJ Group, 2015).

Included in Figure 23 are projected trendlines for the Water level and Chloride Metric from the LOBP. The actual metrics are not expected to follow straight lines, but the trendlines are useful to depict the general nature of the anticipated trends. Several years of continued rise in the Water Level metric is expected before reaching the LOBP objective.

A re-evaluation of the Water Level Metric (and other metrics discussed below) is currently in progress (Section 10.2). There have been new monitoring wells drilled and modifications made to existing wells (including Water Level Metric well LA16) that provide better coverage for tracking water levels and water quality in Lower Aquifer Zone E, which is where seawater intrusion appears most active. Metric well LA16 now provides both Zone E water level and water quality data. As a result of the modification, however, the recent Zone E water levels at LA16 are not directly comparable to the historical LA16 data used for the Water Level Metric. The Spring 2024 water level at LA16 was used for the 2025 metric calculation, which avoids the effect of LA16 well modification and allows the remaining metric wells to represent the water level trend. There have been no corrections for tidal effects in the Water Level Metric calculation, and this is being addressed in the metric re-evaluation.

Chloride Metric

The Chloride Metric is defined as the weighted average concentration of chlorides in four key Lower Aquifer wells. One key well (LA10) is within the historical path of seawater intrusion (Cleath & Associates, 2005). Reduction in pumping from the Lower Aquifer should result in measurable declines in chloride concentrations at this well, as the hydraulic head in the Lower Aquifer increases and the inland movement of seawater decreases or is reversed. The Chloride Metric target level is 100 mg/L or lower, and the LOBP Groundwater Monitoring Program schedule for measuring the Chloride Metric is in the Spring and Fall.

The three other key wells are on the perimeter of the seawater intrusion front (LA8, LA11, and LA12). Wells LA11 and LA12 monitor Lower Aquifer chloride concentrations in the northern portion of the Basin, while LA8 monitors chloride concentrations in the southern portion. When calculating the Chloride Metric, the concentration of Well LA10 is given twice the weight of the other three wells, in order to increase the sensitivity of the metric to management actions (refer to the LOBP for a description of the development of the metric). The Chloride Metric is a simplification of Basin conditions and can vary significantly from year to year due to localized

FINAL DRAFT

chloride fluctuations, particularly at well LA10 due to wellbore leakage from the Upper Aquifer (2018 Annual Report, Appendix J) and potential upconing effects in Zone E. Table 22 presents the Spring and Fall 2025 Chloride Metric. Figure 23 graphs historical values in the metric. Chloride Metric well locations are shown in Figure 4.

Table 22. 2025 Chloride Metric

Metric Well (Aquifer Zone)	**Spring 2025 Chloride Concentrations**	**Fall 2025 Chloride Concentrations**
LA8 (Zone D)	88 mg/L	84 mg/L
LA10 (Zone D/E)	210 mg/L (double counted for average)	290 mg/L (double counted for average)*
LA11 (Zone E)	430 mg/L	390 mg/L
LA12 (Zone D)	98 mg/L	98 mg/L
Chloride Metric (weighted average)	207 mg/L	230 mg/L

Data Source: LOBP Groundwater Monitoring Program (Appendix C)
*The reported chloride value of 240 mg/L at LA10 in Fall 2025 was affected by Upper Aquifer leakage, therefore the value was substituted with 290 mg/L from a purveyor sample result with lower nitrate concentration from August 2025 in order to calculate the chloride metric.

Seawater intrusion is typically most active in the fall, when water levels (fresh water pressures) are lowest, although chloride concentrations at individual wells may vary based on local influences. A comparison between Spring 2025 and Fall 2025 shows an increase in the metric, and the Chloride Metric has decreased relative to the target value between Fall 2024 (249 mg/L) and Fall 2025 (230 mg/L), indicating a slight improvement during 2025 (Figure 23). Figure 23 includes projected trendlines for the Water level and Chloride Metric from the LOBP. As with the Water Level Metric, a re-evaluation of the Chloride Metric is currently in progress (Section 10.2).

Table 22 lists the Lower Aquifer zone tapped by the individual Chloride Metric wells. Two wells are in Zone D, one is Zone E, and one is mixed Zone D/E. The Zone E and Zone D/E wells show the greatest impact from seawater intrusion, and Zone E is interpreted to have much higher chloride concentrations than Zone D in most of the Western Area (Figure 19).

Nitrate Metric

The Nitrate Metric is defined as the average concentration of nitrate in five First Water key wells located in areas of the Basin that have been impacted by elevated nitrate concentrations. The Nitrate Metric data is obtained from the LOWRF Groundwater Monitoring Program's winter sampling event and focuses on shallow, adversely impacted wells to track changes in nitrate concentrations in groundwater over time. Table 23 presents the Nitrate Metric for 2025. Figure 24 graphs historical values in the metric, along with the 5-year average for 2002-2006 and a 5-year running average beginning in 2020. The Nitrate Metric target level is 10 mg/L or lower. Nitrate Metric well locations are shown in Figure 2.

Table 23. 2025 Nitrate Metric	
Metric Well	**Winter 2025 Nitrate-Nitrogen (NO_3-N) Concentrations**
FW2	14 mg/L
FW6	3 mg/L
FW10	13.5 mg/L
FW15	22 mg/L
FW17	12 mg/L
Nitrate Metric (average)	12.9 mg/L

Data Source: LOWRF Groundwater Monitoring Program (CHG 2025)

The Nitrate Metric for Winter 2025 was calculated at 12.9 mg/L nitrate-nitrogen (NO_3-N), which is above the Maximum Contaminant Level of 10 mg/L (the drinking water standard). There was a 2.8 mg/L decrease in the Nitrate Metric from Winter 2024 (15.7 mg/L), to Winter 2025, which is an improvement in conditions (Figure 24). The greatest decrease in NO_3-N over the last several years was measured at key well FW6, where concentrations measured 15 mg/L in 2016 and have declined to 3 mg/L in 2024. FW6 is hydraulically downgradient of the Broderson site, and NO_3-N declines are largely attributable to recycled water discharges at Broderson. In 2025, another well hydraulically downgradient of the Broderson site (FW5; not a metric well) continues to show decline in nitrate concentrations, from 8.2 mg/L NO_3-N in 2024 to 5.6 mg/L in 2025.

Independent of LOBP actions, construction, and operation of the community sewer system and LOWRF have largely stopped nitrate loading in the Basin from septic disposal within the wastewater service area. Nitrate concentrations in First Water (includes portions of the Perched Aquifer and Upper Aquifer) are expected to begin declining over the next decade, and this year in 2025 the Nitrate Metric reached the lowest point recorded in the last 23 years. The five-year running average (currently 2020-2025), which represents long term trends, continues to decrease (Figure 24).

Included in Figure 24 is the projected trendline for the Nitrate Metric from the LOBP. The actual metric is not expected to follow straight lines, but a trendline is useful to depict the general nature of the anticipated trend. The anticipated trend following wastewater project implementation was several years of stable (but elevated) nitrate-nitrogen concentrations, followed by a gradual and long-term decline in the Nitrate Metric, reaching the LOBP objective mid-century.

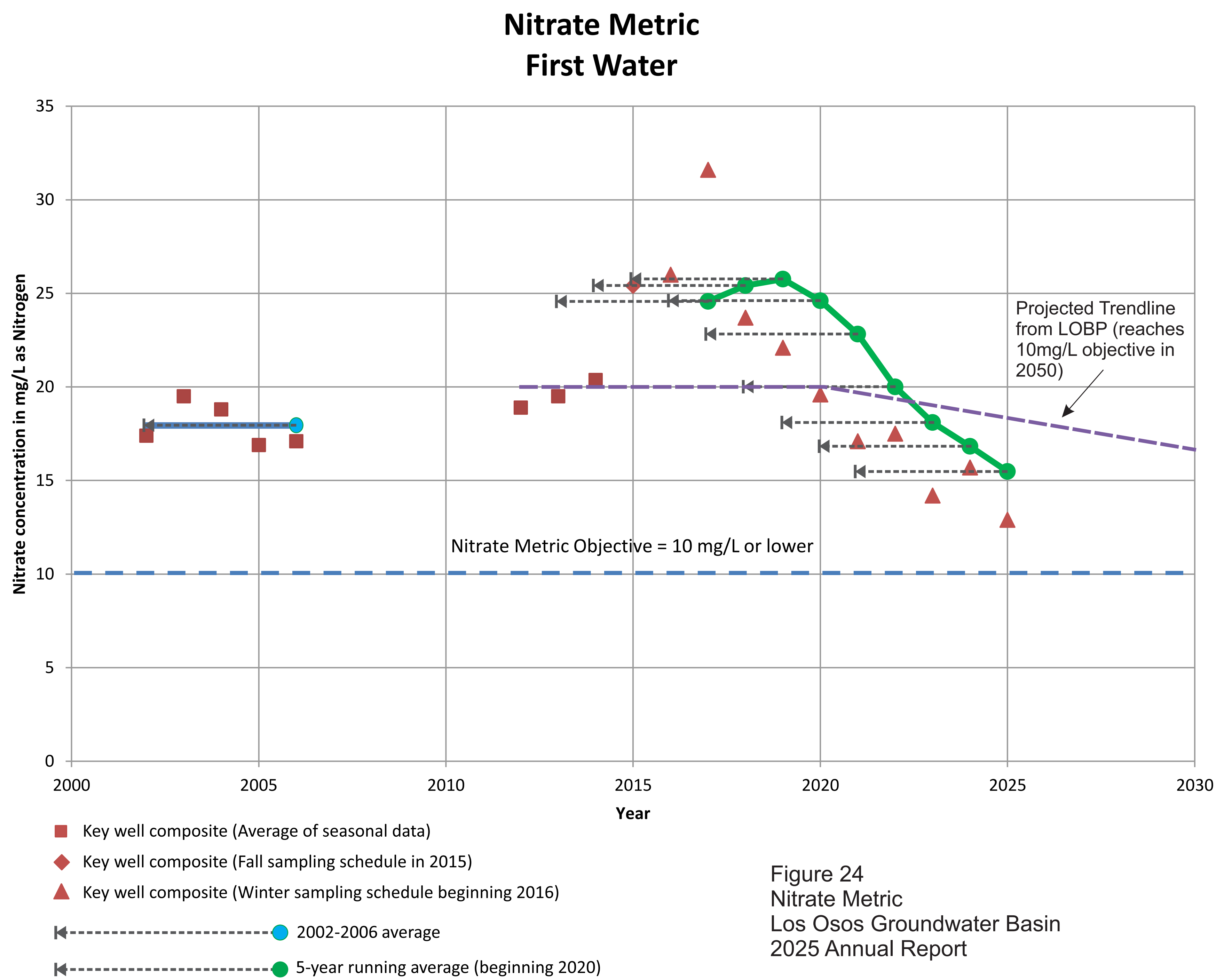


Figure 24
Nitrate Metric
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Lower Aquifer Nitrate

The Nitrate Metric is specific to the Upper Aquifer, however, nitrate is also a concern in areas of the Lower Aquifer. Nitrate concentrations in Lower Aquifer groundwater have been increasing historically, and a reduction in nitrate loading to the Basin does not prevent the movement of existing nitrate from the Upper Aquifer into the Lower Aquifer, which is expected to continue adversely impacting Lower Aquifer water quality. Septic discharges are still occurring in certain portions of the basin where the sewer collection system was not installed.

A 2019 Technical Memorandum prepared for the BMC (CHG, 2019a) identified two areas where nitrate concentrations were threatening Lower Aquifer community water supply wells, one in the Western Area near LA8 and LA9, and the other in the Central Area near LA21 and LA22 (Figure 4). S&T funded an investigation focused on identifying the sources of Lower Aquifer nitrate in groundwater produced by LA8, which concluded that septic system discharges from Cabrillo Estates appeared to be the primary source, although there were others (CHG, 2021b). The BMC subsequently authorized Phase 2 of the Lower Aquifer Nitrate investigation, which has since been delayed, pending ongoing discussions between the Regional Board and the County of San Luis Obispo (Section 10).

7.5.5 Upper Aquifer Water Level Profile

Metrics allow the BMC, regulatory agencies, and the public to evaluate the status of nitrate concentrations and seawater intrusion in the Basin through objective, numerical criteria that can be tracked over time (LOBP; ISJ Group, 2015). The Upper Aquifer has a Nitrate Metric, but does not have a Water Level Metric or Chloride Metric because seawater intrusion is not occurring in the Upper Aquifer. Seawater intrusion affects chloride concentrations in groundwater and moves primarily in response to changes in water levels and associated hydraulic head in an aquifer.

A Water Level Metric and Chloride Metric for the Upper Aquifer was recommended in the 2016 Annual Report to provide the BMC with a management tool for addressing the potential for seawater intrusion into the Upper Aquifer as Upper Aquifer production increases. There are only a few Upper Aquifer wells, however, along the shoreline of the Morro Bay estuary where seawater intrusion would be most likely to occur. An alternative management tool proposed for the Upper Aquifer is the Water Level Profile. The benefit of a profile, rather than a metric, is that spatial information is included. Conditions for seawater intrusion along the Water Level Profile could occur before an equivalent metric-based threshold is reached, since there is no averaging in the Water Level Profile. Metrics were not designed for early detection, which is what is needed for Upper Aquifer seawater intrusion monitoring.

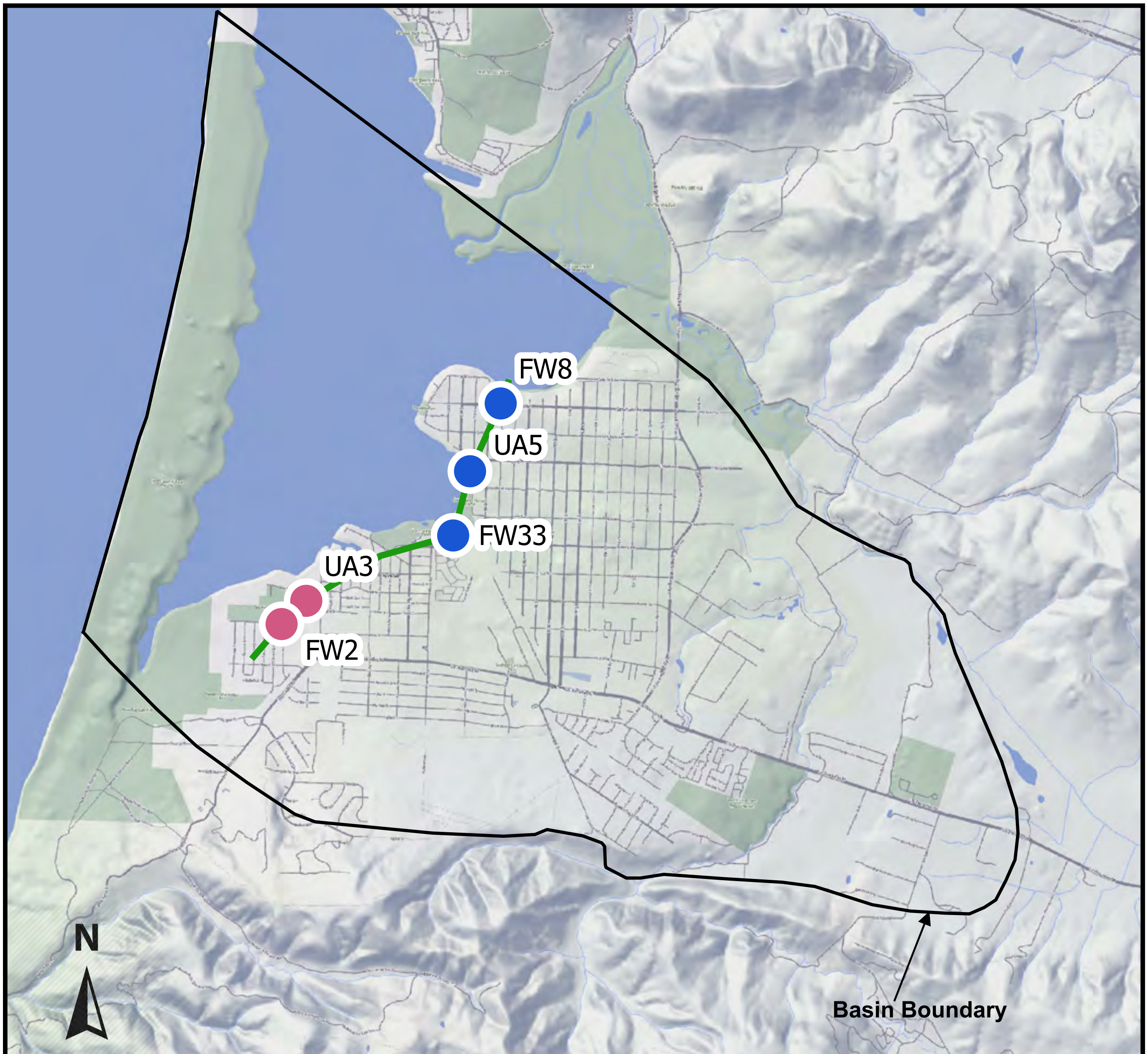
Seawater has a density that is 1.025 times greater than fresh water. For every foot of fresh water head above sea level, the seawater interface will be displaced 40 feet below sea level, according to the Ghyben-Herzberg relation (Freeze and Cherry, 1979). Using the Ghyben-Herzberg relation and elevation contours on the base of the Upper Aquifer, a profile showing the groundwater elevations needed to avoid seawater intrusion beneath the bay shoreline (the Protective Elevation) has been prepared, along with the Spring 2025 Upper Aquifer groundwater elevations along the same profile, adjusted to the NGVD 29 datum. The resulting comparison of the Upper Aquifer Water Level Profile and the Protective Elevation is shown in Figures 25 and 26.

Most water levels along the Water Level Profile in Spring 2025 were above the Protective Elevation; UA5 was only slightly below, which is an Upper Aquifer supply well along the bay in Baywood Park (Figure 25). Spring 2025 water levels shown above ground surface in low-lying areas near the bay represent artesian pressures in the aquifer, and incorporate pressure measured in an artesian well at Sweet Springs. Groundwater seeps and springs are common along the bay shoreline, including Sweet Springs and the 3rd Street marsh.

If water levels decline below the Protective Elevation, there would be a theoretical potential under hydrostatic conditions (zero hydraulic gradient) for seawater intrusion to occur at the base of the Upper Aquifer. Water levels have been below the Protective Elevation in the past along portions of the profile without any seawater intrusion detected, particularly during drought periods (e.g. mid 1970's at UA5 and early 1990's at UA3).

Water levels at UA5 declined below the Protective Elevation in 2021, 2022, 2024 and 2025. Chloride concentrations from UA5 available from purveyor records indicated a relatively sharp rise in chlorides between Fall 2020 (32 mg/L) and Fall 2021 (64 mg/L), with continued increases through Spring and Fall 2023 (76 mg/L and 69 mg/L, respectively). The Spring 2025 chloride concentration remained steady at 68 mg/L but it showed a significant decrease to 28 mg/L in Fall 2025. Although these chloride concentrations are relatively low (250 mg/L is the recommended limit and 500 mg/L is the upper limit for drinking water), continued monitoring by the water purveyor is warranted.

There have been no corrections for potential tidal effects to water levels used in the Water Level Profile. This is being addressed in the metric re-evaluation.



Base Image: Stamen-Terrain

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

LOBP Water Level Monitoring Well

Water Level and Water Quality Monitoring Well

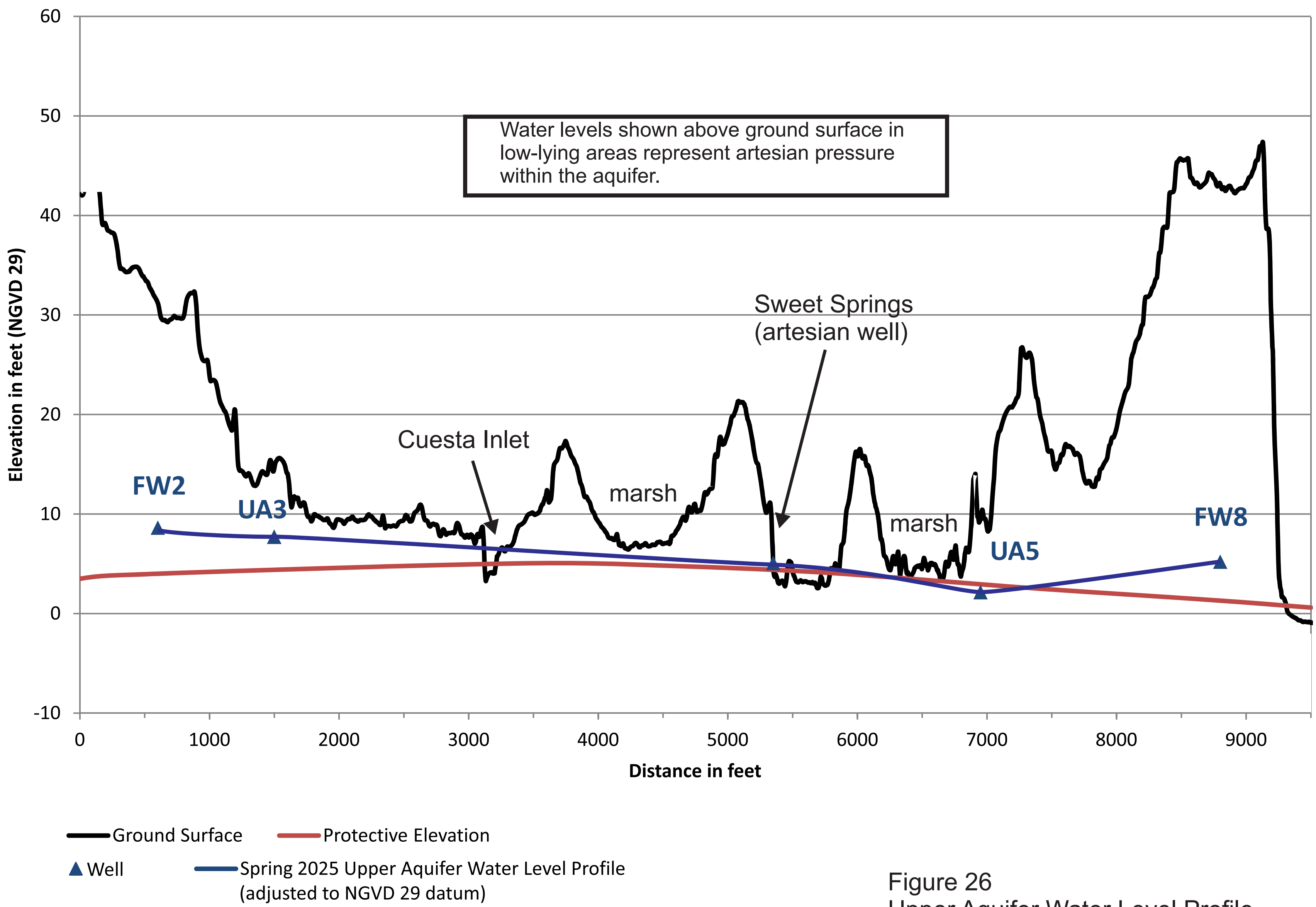
Water Level Profile Alignment

Figure 25
Water Level Profile Alignment
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Upper Aquifer Water Level Profile



Note: Sweet Springs artesian well marker at estimated wellhead pressure.

Figure 26
Upper Aquifer Water Level Profile
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

8. BASIN STATUS

The status of the Basin in 2025 is summarized as follows:

- The Basin received above average rainfall in calendar year 2025. San Luis Obispo County started 2025 with no drought to abnormally dry conditions in January; by end of the calendar year in December 2025 no drought conditions were reported (NDMC/USDA/NOAA, 2026).

- Groundwater production for the Basin totaled an estimated 1,680 acre-feet in the 2025 calendar year, which is a decrease of 10 acre-feet from 2024. Purveyor groundwater production increased by approximately 40 acre-feet, while production for community facilities decreased by an estimated 10 acre-feet in 2025, compared to 2024. Production for agricultural irrigation decreased by an estimated 40 acre-feet, and private domestic production remained steady at 110 acre-feet in 2025.

- Average water levels declined by approximately 1-2 feet between Spring 2024 and Spring 2025 in the Perched Aquifer and Upper Aquifer, and declined approximately 3 feet in the Lower Aquifer over the period.

- Seawater intrusion in Zone D has decreased between 2024 and 2025, although the intrusion front remains east of LA10 (similar to the position shown for 2021) and LA15 on Palisades Avenue near the boundary between the Western and Central Areas has reported a 47 percent increase in chloride concentrations over the last five years. Zone E seawater intrusion is pervasive in the Western Area. In the Central Area, Zone E seawater intrusion continues to advance inland of LA11.

- The Basin Yield Metric for 2025 is 71, which is below the LOBP goal of 80. However, the Sustainable Yield estimate for 2026 has been reduced from prior years, and the Basin Yield Metric is expected to increase in 2026, potentially over the LOBP goal of 80.
- The Basin Development Metric was not estimated in 2025, pending application of the updated Sustainable Yield methodology and Transient Model to all LOBP programs. There is no LOBP objective for the Basin Development Metric.
- The Water Level Metric decreased between 2024 and 2025 from 4.1 feet to 3.5 feet, which is a deterioration in conditions, and remains several feet below the target value of 8 feet.
- The Chloride Metric decreased relative to the 100 mg/L target value between Fall 2024 (249 mg/L) and Fall 2025 (230 mg/L), indicating an improvement of conditions in 2025.

- The Nitrate Metric remains above the 10 mg/L target value, decreasing from 15.7 mg/L NO_3-N in 2024 to 12.9 mg/L NO_3-N in 2025, indicating an improvement of conditions.

- Upper Aquifer water levels were above the Protective Elevation along the bay, except for near UA5. Chloride concentrations at UA5 have increased over time, but remain low and are being closely monitored.

FINAL DRAFT

9. RECOMMENDATIONS

The following LOBP Groundwater Monitoring Program recommendations from the 2024 Annual Report were completed in 2025, or are in progress and planned for completion in 2026:

- Updating the Maximum Sustainable Yield now that the location of the second Program C well is finalized and the Transient Model is completed, including revised expectations for recycled water availability and revisions to the Sustainable Yield methodology (Section 7.5.2). – ***Partially completed - selected WRFP Study Sustainable Yield scenarios included second Program C well and other LOBP programs.***

- Re-evaluate Water Level Metric target after completion of wellhead surveys (Section 7.5.3). This task has been expanded to include Water Level, Chloride, and Nitrate Metric updates – ***In progress (2026)***

- A peer review of the Basin model is required by the Stipulated Judgement every 10 years. Upgrading to a fully transient Basin model was recommended prior to the next peer review (Section 7.5.2). Planning and funding efforts for a transient Basin model was initiated in 2021. The transient Basin model would replace the existing steady-state model, once completed. – ***Transient Model completed***

- Water levels at UA5 are below the Protective Elevation for the fourth consecutive year. Continued close monitoring of UA5 water quality by the water purveyor is recommended (Section 7.5.4). – ***Ongoing***

- Install the Sweet Springs Lower Aquifer monitoring well in order to better monitor the movements of the seawater intrusion front (Section 2.2.5). A location for the cluster has been finalized in 2025– ***Planned for 2026***

- A discussion of Chromium-6 concentrations and PFAS concentrations in purveyor wells was recommended for the 2025 Annual Report - ***Completed***

The following additional LOBP Groundwater Monitoring Program recommendations are provided for BMC consideration. Recommendations on Adaptive Management are provided in Section 10.

- Continue to implement recommendations for well modifications and new monitoring well constructions to help characterize Lower Aquifer seawater intrusion. Following completion of the Sweet Springs monitoring well cluster, consider locating a new Zone D and Zone E monitoring well cluster in the vicinity of LA10, along with the modification of LA6 (Zone D) to facilitate groundwater quality monitoring (Section 7.3).

- A review of CEC testing constituents and locations is recommended (Section 4.2.2).

At the May 29, 2026 BMC Board meeting, the BMC agreed to add a report appendix with responses to public and Board comments on the Public Draft of the Annual Report. These comments and responses are in Appendix M.

10. STATUS OF BASIN METRICS, BMC INITIATIVES AND LOBP PROGRAM IMPLEMENTATION

The LOBP provides for periodic review of the implementation of the LOBP through establishment of an Adaptive Management Plan that allows the BMC to do the following:

- Evaluate trends of key Basin metrics;
- Identify additional data needs;
- Report the data analysis to various interested parties;
- Modify the LOBP programs and schedule, if necessary, in response to current conditions and observed trends in the Basin;
- Modify procedures to utilize current best management practices; and
- Modify pumping, treatment, and/or water reuse procedures in response to Basin conditions and trends that show signs of water quality degradation, including increased levels of contamination and/or increased levels of seawater intrusion.

The following sections provide a status update on the Basin metrics, BMC Initiatives and LOBP Program implementation. The Adaptive Management Plan offers a tool with which the BMC can modify the LOBP programs, based on the performance of Basin metrics and other monitoring results, to better meet overall LOBP objectives.

10.1 Basin Metrics

As noted in Section 7 ("Data Interpretation") of this Annual Report, the LOBP established several metrics to measure nitrate impacts to the Upper Aquifer, seawater intrusion into the Lower Aquifer, and the effect of management efforts on the Basin. These metrics allow the BMC, regulatory agencies and the public to evaluate the status of nitrate levels, seawater intrusion, and the impact of implementation of the LOBP programs, through objective and numerical criteria that can be tracked over time. The 2025 metric values are summarized in Table 24 for easy reference during discussion and evaluation of the LOBP programs.

FINAL DRAFT

Table 24. LOBP Metric Summary			
Metric[1]	LOBP Goal	Calculated Value from 2025 Data	Change in Condition from 2024
Basin Yield Metric[2]: Comparison of current well production to Sustainable Yield[2]	80 or less	71	No change from 71 (steady)
Water Level Metric: Average groundwater elevation in 5 key wells in the Lower Aquifer	8 feet above mean sea level or higher	3.5 feet above mean sea level	Decrease from 4.1 ft. (deterioration)
Chloride Metric: Weighted average chloride concentration in 4 key wells in the Lower Aquifer	100 mg/L or lower	230 mg/L	Decrease from 249 mg/L (improvement)
Nitrate Metric: Average nitrate concentration in 5 key wells in the Upper Aquifer	10 mg/L or lower	12.9 mg/L (NO_3-N)	Decrease from 15.7 mg/L (improvement)

[1]Revisions to the Water Level, Chloride, and Nitrate Metrics are currently in progress.
[2]An update to the Basin sustainable yield was approved by the BMC in Fall 2025 based on the Transient Model, which is expected to lower the Basin Yield Metric in 2026 (Section 7.5.1).

10.2 Update on BMC Initiatives

Based on the Basin status (Section 8) and recommendations (Section 9), the BMC will evaluate opportunities to develop and pursue additional measures to improve Groundwater Monitoring and Management. The following is an update on additional measures related to BMC Groundwater Monitoring and Management:

[2]On October 27th, 2021 the BMC unanimously adopted a new methodology for calculating the Sustainable Yield for Basin that reduced the Sustainable Yield estimate from 2,760 to 2,380 AF for Calendar Year 2022. A Sustainable Yield estimate of 2,380 AF was subsequently adopted for Calendar Years 2023, 2024, and 2025. An update to the sustainable yield is expected in Fall 2025 based on the transient model, which could change the Basin Yield Metric.

Program C Adaptive Management. At its April 20, 2022 Meeting, the BMC approved CHG to evaluate the re-inclusion of the 3rd Well into Program C. Additional detail regarding the history of the 3rd Program C Well is available in the April 20, 2022 BMC agenda packet. This analysis includes evaluation of the anticipated increase in the Sustainable Yield that the 2nd and 3rd Program C Wells would provide utilizing the updated criteria for calculating the Sustainable Yield approved by the BMC at their October 27, 2021 meeting. The findings from the analysis were presented to the BMC at their August 16, 2023 BMC Meeting, where the BMC approved removal of the deferral of the 3rd Well from Program C.

Lower Aquifer Nitrate Investigation. On March 15, 2023 the BMC received a presentation from representatives from the Central Coast Regional Water Quality Control Board (CCRWQCB) on the Lower Aquifer Nitrate Contamination Investigation Update, which had been initiated by S&T in 2021 (CHG, 2021b). Further BMC investigations into the Lower Aquifer nitrate contamination in the western portion of the Los Osos Basin are currently on hold pending ongoing discussions between the CCRWQCB and the County of San Luis Obispo. Additional information on the Lower Aquifer Nitrate Investigation is included in Section 7.5.4 Water Level, Chloride, and Nitrate Metrics of this Annual Report.

Evaluation of Water Conservation Measures. To improve the understanding of the effectiveness of existing conservation programs and the future conservation potential within the community, the purveyors collaborated with the County on a Title 19 Water Offset Study to update water usage estimates for urban and rural residences sourcing water from the Los Osos Groundwater Basin, propose new water conservation measures for the retrofit-to-build program, and estimate remaining water savings potential for the community. This study was completed and published in June 2023. Findings from the study were utilized to inform proposed modifications to Title 8 (Health and Sanitation Ordinance) and Title 19 (Building and Construction Ordinance) of the County Code for evaluation by County Board of Supervisors (BOS) in 2024. The Title 19 retrofit-to-build program is currently active.

WRFP Study/Transient Groundwater Model: At its October 27, 2021 meeting, the BMC authorized the preparation of a Water Recycling Funding Program (WRFP) Grant Application and to request access to the $150,000 of funding that the County budgeted to develop a transient groundwater model. The LOCSD is the lead agency for the grant on behalf of the BMC and on February 2, 2022 submitted an application for a WRFP grant to develop a transient model and analyze recycled water and supplemental water projects to improve the sustainability of the Basin (WRFP Study). The BMC and the Los Osos CSD were notified of the award of the grant in January 2023 and all the required documents were signed and fully executed. The Los Osos CSD released the Request for Proposals for the WRFP Study on February 27, 2023 and proposals were due March 31st, 2023. The WRFP Study Consultant Selection Committee reviewed the proposals and interviewed the two top ranked consulting firms and the BMC approved Cleath-Harris Geologist (CHG) to complete the WRFP Study on May 17, 2023.

A proposed modification to the schedule for completion of the WRFP Study was executed on March 7, 2025 by the SWRCB to allow for additional time to incorporate published data from the Department of Water Resources (DWR) Aerial Electromagnetic (AEM) Survey. The BMC and LOCSD received the agreement amendment from the SWRCB which reflected the updated schedule. CHG incorporated findings from the AEM data, completed calibration, and met with the Technical Advisory Committee (TAC) and Peer Review Consultant on March 14, 2025, March 29, 2025, and April 9, 2025 to discuss the Transient Model calibration and recycled water/supplemental water supply alternatives.

The Peer Review Consultant GSI Water Solutions (GSI) provided feedback to CHG, which is incorporated into the Transient Model Construction/Calibration TM and the groundwater model. Their comments are available in Appendix N of the Construction/Calibration TM dated June 2025. In addition to GSI's peer review, the County coordinated a review by Lynker One Water Hydrologic (Lynker) and their comments have been incorporated and are included in Appendix N of the June 2025 Transient Model Construction/Calibration TM.

The Transient Model Construction/Calibration TM and Baseline Scenario Results were brought to the BMC at the regularly scheduled June 18, 2025 BMC Meeting. Cleath-Harris Geologists provided a presentation on these items at the August 20, 2025 BMC meeting. At the July 16, 2025 meeting the lead consultant preparing the Engineering Report component of the WRFP Study, Water Systems Consulting (WSC), provided a presentation on the current status of the WRFP Study Supply Alternatives Analysis. The Draft Project Report was submitted to the SWRCB on September 9, 2025. The Final Draft WRFP report was approved by the BMC Board at the November 12, 2025 Special BMC Meeting. The Final Draft was submitted to SWRCB. SWRCB provided the Final Approval Letter on January 21, 2026.

Discussion and Recommendation of Criteria for Future Growth. At its May 17, 2017 Meeting, the BMC provided input on the Los Osos Community Plan (LOCP), including consideration of Basin metrics and defined goals as they relate to the timing of future growth within the Basin. At this meeting, the BMC authorized the release of a letter to the County Planning Department and Coastal Commission staff recommending that future development should be subject to the following provisions:

1. Any growth projections in the updated LOCP should be consistent with the water supply estimates provided in the LOBP.

2. The LOCP should acknowledge any infrastructure projects contemplated by the LOBP that would require coastal planning action subject to the authority of the Coastal Commission. This provision would help expedite completion of any affected projects.

3. Amendments to the County's Growth Management Ordinance (GMO) [separate from the LOCP/LCP] should provide a growth rate for Los Osos consistent with

FINAL DRAFT

> the adaptive management provisions of the LOBP. In particular, the rate of growth must be set so that the monitoring provisions of the LOBP confirm the adequacy of a sustainable water supply in support of any contemplated future growth.

On December 15, 2020, the County Board of Supervisors adopted the LOCP and Final Environmental Impact Report and tentatively adopted amendments to the GMO that would establish a residential growth rate for the Los Osos urban area. The LOCP and GMO amendments were approved by the County BOS on October 29, 2024. On October 29, 2024, the County BOS approved an updated version of Title 26 of the County Code (i.e. GMO) which established a 0.4% growth rate for Los Osos in Calendar Year 2025. On December 10, 2024, the County BOS adopted a resolution establishing the maximum annual allocation for Calendar Year 2025 for the unincorporated county, including an allocation of 25 new dwelling units in Los Osos. The LOCP and amendments to the Estero Area Plan were certified by the California Coastal Commission at a hearing on December 11, 2024. Both the LOCP and the Estero Area Plan are now in effect.

On December 10, 2024, the County BOS approved funding for the implementation of the Los Osos Habitat Conservation Plan (LOHCP). This funding will be used to pursue mitigation credits for habitat conservation through fee title or easement acquisition, fund habitat restoration projects, and fund staffing needed to implement the plan. Staff returned to the BOS in February 2025 where the BOS adopted the fee which will allow applicants to pay into the LOHCP to offset disturbance caused by development. At this time, the San Luis Obispo Department of Planning and Building does not have mitigation credits available for purchase. Credits are anticipated to be available for purchase in mid-2026. More information can be found on the County's website (Development in Los Osos Page) which will be updated as information becomes available.

At the December 15, 2020 County BOS meeting, the GMO was amended to include the updated LOCP and framework for the annual growth rate for new residential development in Los Osos. Section 26.01.070 – General Procedures Subsection 11 of the GMO states "the annual growth rate shall be established based on review of the best available groundwater monitoring data. The department shall conduct such review and provide a recommendation to the board of supervisors. Such review shall include consideration of recommendations from the Los Osos Basin Management Committee and the groundwater sustainability director's review of such recommendations."

In February 2025, the County of San Luis Obispo (County) requested the BMC provide a letter recommendation for the CY 2026 Growth Rate. The BMC's letter recommendation was requested for use by the County's Groundwater Sustainability Director for reference and consideration in preparing a letter recommendation from the County's Groundwater Sustainability Director to the County BOS regarding the Calendar Year (CY) 2026 Growth Rate for Los Osos. The Growth Rate is established on an annual basis by the County BOS in accordance with the provisions for the GMO.

BMC Staff brought a proposed recommendation letter to the BMC at the October 15, 2025 Los Osos BMC Board of Directors Meeting. The BMC voted 3-0, with the County abstaining, to provide the County Groundwater Sustainability Director with the letter recommending a growth rate of 0% for 2026. The recommendation was based on the reduced Sustainable Yield estimate predicted utilizing the newly developed Transient Groundwater Model (Transient Model) and the uncertainty of impacts from the growth rate approved for 2025 but not yet implemented. The letter was provided to the County Groundwater Sustainability Director on October 25, 2025, shortly after the BMC meeting.

At the December 16, 2025 County BOS Meeting, the County's Groundwater Sustainability Director brought a letter, dated November 6, 2025, to the County BOS recommending the County BOS adopt a CY 2026 Growth Rate for the Los Osos Urban Reserve Line of 0.4%. The BMC's recommendation letter is included as an attachment to the letter provided to the County BOS. At the December 16, 2025 Meeting the County BOS adopted County's Groundwater Sustainability Director's proposed growth rate of 0.4%.

10.3 LOBP Programs

The LOBP outlines a number of programs developed to meet the goals of the various metrics outlined above. The BMC has analyzed the impacts of implementing various combinations of programs on the Basin[3]. In particular, the BMC modeled the impact of each combination on the Basin Yield Metric, Water Level Metric, and Chloride Metric. Based on this analysis, the LOBP recommends the following programs for immediate implementation:

- Groundwater Monitoring Program;
- Urban Water Use Efficiency Program;
- Urban Water Reinvestment Program;
- Basin Infrastructure Programs A and C; and
- Wellhead Protection Program.

Two additional programs were included in the LOBP and will be considered by the BMC for implementation if the County and the Coastal Commission were to allow future development in Los Osos as part of the LOCP and the LOHCP: (1) Basin Infrastructure Program B; and (2) either Basin Infrastructure Program D or the Agricultural Water Reinvestment Program.

As described above, the County and Coastal Commission have permitted future development within the limitations of the LOHCP and the LOCP. In 2025, the BMC developed a transient model and

[3]The LOBP analyzed the following seven potential programs: (1) Groundwater Monitoring Program; (2) Urban Water Use Efficiency Program: (3) Water Reinvestment Program; (4) Basin Infrastructure Program; (5) Supplemental Water Program; (6) Imported Water Program; (7) Wellhead Protection Program.

analyzed recycled water and supplemental water projects to improve the sustainability of the Basin (WRFP Study). The findings from the WRFP Study will help inform the BMC on which Programs to consider implementing in the future.

10.3.1 Groundwater Monitoring Program

In order to allow calculation of the above metrics with a higher degree of accuracy, the BMC has implemented the Groundwater Monitoring Program. The Groundwater Monitoring Program is designed to collect, organize and report data regarding the health of the Basin from a current network of 96 wells.[4] In addition to facilitating the calculation of metrics, this data provides information needed to manage the Basin for long-term sustainability. Implementation of the Groundwater Monitoring Program also satisfies various external monitoring requirements, such as the former California Statewide Groundwater Elevation Monitoring Program (CASGEM), now the Adjudicated Basins Annual Reporting System which is integrated into the SGMA Portal's Monitoring Network Module, and waste discharge and recycled water permits for the LOWRF. Monitoring under the program began in 2014 and will continue to occur in the spring and fall of each year when water levels are typically at their highest and lowest. This Annual Report represents the thirteenth monitoring event under the Groundwater Monitoring Program. The BMC plans to continue to report the values for all Basin metrics and other relevant, non-proprietary data to the Parties, the Court and the public in its future Annual Reports. Additional recommendations and planned actions relating to the Groundwater Monitoring Program are described in Section 9. Table 26 summarizes the status of the various implementation tasks set forth in the LOBP that is related to the Groundwater Monitoring Program.

In September 2024, the BMC was awarded $150,000 from the Rose Foundation's Central Coast Community-Based Water Quality Grant Program for the construction of a new, lower aquifer monitoring well (the Sweet Springs Monitoring Well). This Monitoring Network improvement near the intersection of Ramona Ave and 5th Street or Pismo Ave and 5th Street (final location TBD), could help fill a gap in the BMC's monitoring network between the Pasadena Well (LA11) and the Cuesta-by-Sea/Lupine Wells (LA40/41). With the observation of increasing chloride concentrations in LA11, a new Sweet Springs Monitoring Well would help the BMC better detect seawater intrusion potentially occurring in that portion of the Basin. The project is anticipated to be completed by the end of 2026.

[4]The wells are distributed laterally across the Western, Central and Eastern Areas and vertically among First Water and the Upper and Lower Aquifers. Eighteen existing wells and two new wells have been added to the program since 2015.

10.3.2 Urban Water Use Efficiency Program

In order to reduce annual groundwater production from the Basin, and thus reduce the Basin Yield Metric, the LOBP recommends implementation of the Urban Water Use Efficiency Program. As described previously, the purveyors and the County completed an updated evaluation of the conservation potential for the community in 2023. The results of this evaluation informed the BMC and the BMC Parties on the potential future water savings that could be achieved through conservation efforts and program, and were utilized to inform proposed modifications to Title 8 (Health and Sanitation Ordinance) and Title 19 (Building and Construction Ordinance) of the County Code which were adopted by the County BOS in 2024. Additional information on the status of the current water conservation programs offered by the BMC Parties can be found on their respective websites.

Table 26. Basin Groundwater Monitoring Program Status

Recommended Implementation Measure	Current Status	Funding Status	Projected Completion
Wellhead Surveys: Perform wellhead surveys to establish reference point elevations and locations	Complete		
Protocols and Objectives: Establish well monitoring protocols and data quality objectives	Complete		
Water Level Monitoring: Assign water level monitoring responsibilities to the Parties or other stakeholders	Complete		
Access to Private Wells: Contact private well owners to request permission for participation in the groundwater elevation and water quality portions of the Groundwater Monitoring Program	Complete		
Water Quality Monitoring: Assign water quality monitoring responsibilities. The BMC will adopt a set of procedures for recording groundwater elevations and sampling for water quality.	Complete		
Data: Assign data compilation, organization and reporting duties	Complete		

10.3.3 Urban Water Reinvestment Program

Implementation of the Urban Water Reinvestment Program was recommended in the LOBP to increase the Sustainable Yield of the Basin (and thus further reduce the Basin Yield Metric). The Water Reinvestment Program will accomplish the LOBP's goal of reinvesting all water collected and treated by the LOWRF in the Basin, either through disposal via percolation to the aquifers or reuse. Water treated by the LOWRF will be of a sufficient quality to directly percolate into the Basin or to reuse for landscape or agricultural irrigation purposes. The planned uses of that water are listed in Table 27, along with the actual uses and amounts of reused water from 2025[5].

Table 27. Planned Recycled Water Uses in the Urban Water Reinvestment Program

Potential Use	LOBP Planned Annual Volume (AFY)	Actual Annual Volume in 2025 (AFY)
Broderson Leach Fields	448	422
Bayridge Estates Leach Fields	33	14
Urban Reuse[6]	63	8
Sea Pines Golf Course	40	74
Los Osos Valley Memorial Park	50	0
Agricultural Reuse	146	3
Construction Water	0	0
Total	780	521

The LOWRF construction was completed in March 2016. Through the end of 2022, the sewer service area had connected 99.5 percent of parcels that are required to connect, with approximately 29 properties remaining to connect. In 2025 treated wastewater plant effluent flows averaged approximately 464,735 gallons per day and totaled 521 AF for the year. Average wastewater flows are lower than anticipated due to conservation measures implemented by the community. Projecting the average flow per connection for 100 percent of the parcels required to connect results in a total estimated treated effluent volume of 540 AFY, which is 240 AFY less than the 780 AFY the LOBP anticipated for recycled water available for the urban water reinvestment program.

Recycled water in 2025 was conveyed to the Broderson and Bayridge Estates leach fields, Agricultural users, Sea Pines Golf Course, Los Osos Middle School, Monarch Grove, Los Osos Community Park, and the median in Los Osos Valley Road between South Bay Blvd and Fairchild Way.

[5]This Table was reproduced (with slight edits) from Table 2 of the LOBP.
[6]Urban reuse includes Los Osos Middle School irrigation, Monarch Grove Elementary School irrigation, Los Osos Community Park irrigation, and irrigation for the Los Osos Valley Road median between South Bay Blvd and Fairchild Way.

The anticipated groundwater mound[7] resulting from infiltration of treated wastewater disposal to leach fields at the Broderson site was detected hydraulically downgradient beginning in June 2017. As of 2025, it is estimated that the Broderson mound is reaching stabilization. Additional information on the current status of the Broderson Mound can be found in Section 7.2 Water Level Hydrographs of this Annual Report.

The BMC received final notification of obtaining grant funding in Calendar Year 2023 for the development of a Transient Groundwater Model and completion of a recycled water and supplemental water supply alternatives study. This study analyzed benefits of delivering recycled water to Broderson, Bay Ridge, Sea Pines and/or other future locations (e.g. ag reuse, school landscape irrigation, Los Osos Creek, etc.). The study additionally evaluated opportunities to utilize recycled for Indirect and Direct Potable Reuse to improve water supply conditions in the Basin. The study was completed in November 2025.

10.3.4 Basin Infrastructure Programs

Implementation of the Basin Infrastructure Program is designed to reduce Purveyor groundwater production from the Lower Aquifer in the Western Area and replace it with additional pumping from the Upper Aquifer and Central and Eastern Areas. This shift is anticipated to increase the Basin's Sustainable Yield, which in turn will help lower or improve the Basin Yield Metric if groundwater production does not increase.

The Program is divided into four parts, designated Programs A through D. Programs A and B shift groundwater production from the Lower Aquifer to the Upper Aquifer, and Programs C and D shift production within the Lower Aquifer from the Western Area to the Central and Eastern Areas, respectively. A fifth program, Program M, was also established to implement the development of a Groundwater Monitoring Program outlined in Chapter 7 of the LOBP, and new Lower Aquifer monitoring wells in the Cuesta by the Sea area and at the eastern end of Skyline Drive were completed in 2019 and 2023 respectively. The new Lower Aquifer Sweet Springs Monitoring Well is anticipated to be completed in 2026. Table 28 provides an overview of the status of the Projects that are currently moving forward or have been completed. Note, no projects are currently moving forward in Program D, thus they are not shown in Table 28.

10.3.5 Wellhead Protection Program

The Wellhead Protection Program is designed to protect water quality in the Basin by managing activities within a delineated source area or protection zone around drinking water wells. This program consists primarily of the Purveyors conducting Drinking Water Source Assessment and Protection surveys for each of their wells, as well as construction and operation of the LOWRF. The BMC will evaluate opportunities for specific actions to protect water quality in the Basin as deemed appropriate in the future, though no specific actions are recommended at this time.

[7]Cleath & Associates, 2000, Hydrogeologic Investigation of the Broderson Site, Phase 2 Impacts Assessment, prepared for Los Osos Community Services District, November 2000.

FINAL DRAFT

Table 28. Basin Infrastructure Projects				
Project Name	**Parties Involved**	**Funding Status**	**Capital Cost**	**Status**
Program A				
Water Systems Interconnection	LOCSD/ GSWC			Completed
Upper Aquifer Well (8th Street)	LOCSD	$307,000		Completed
South Bay Well Nitrate Removal	LOCSD			Completed
Palisades Well Modifications	LOCSD			Completed
Blending Project (Skyline Well)	GSWC			Completed
Water Meters	S&T			Completed
Program B				
LOCSD Wells	LOCSD	Not Funded	LOBP: $2.7 mil	Project not initiated
GSWC Wells	GSWC	Not Funded	LOBP: $3.2 mil	Project not initiated
Community Nitrate Removal Facility	LOCSD/GSWC/S&T	GSWC Portion Funded	GSWC: $1.23 mil	GSWC's Program A Blending Project might be capable of expanding to be the first phase of the Program B Community Nitrate Removal Facility.

Project Name	Parties Involved	Funding Status	Capital Cost	Status
Program C				
Expansion Well No. 1 (Los Olivos)	GSWC			Completed
Expansion Well No. 2	LOCSD	LOCSD	LOBP: $2.5 mil	The Bay Oaks well is completed and operational as of January 2026.
Expansion Well 3 and LOVR Water Main Upgrade	GSWC/LOCSD	Cooperative Funding	LOBP: $1.6 mil	The deferral from Program C for this project was removed by the BMC on August 16th, 2023.
LOVR Water Main Upgrade	GSWC	May be deferred	LOBP: $1.53 mil	Project may not be required, depending on the pumping capacity of the drilled Program C wells. It may be deferred to Program D.
S&T/GSWC Interconnection	S&T/ GSWC	Pending	LOBP: $30,000	Currently on hold pending further evaluation of the project.

FINAL DRAFT

Project Name	Parties Involved	Funding Status	Capital Cost	Status
Program D				
Shift production within the Lower Aquifer from the Western Area to the Eastern Area of the Basin				Currently being considered for deferment through Adaptive Management. BMC to review on an annual or semi-annual basis.
Program M				
New Zone D/E Lower Aquifer monitoring well in Cuesta by the Sea	All Parties			Completed
New Zone D/E Lower Aquifer monitoring wells at the eastern end of Skyline Drive	All Parties			Completed
Sweet Springs Monitoring Well	All Parties	$150,000 in Rose Foundation Grant Funding	$50,000 match from LOCSD's BMC contribution	In progress, anticipated completion in 2026.
Program U				
Creek Discharge Program	All Parties		TBD	These activities are currently on hold. The Transient Model and Water Recycling Funding Study are intended to better inform the BMC on the most effective opportunities for increasing the Sustainable Yield of the Basin.
8th and El Moro Urban Storm Water Recovery Project	All Parties		TBD	These activities are currently on hold. The Transient Model and Water Recycling Funding Study are intended to better inform the BMC on the most effective opportunities for increasing the Sustainable Yield of the Basin.

FINAL DRAFT

11. REFERENCES

Burt, C.M., Mutziger, A., Howes, D.J., and Solomon, K.H., 2002, Evaporation from Irrigated Agricultural Land in California, January.

Brown and Caldwell, 1983, Los Osos – Baywood Park Phase I Water Quality Management Study, prepared for San Luis Obispo Service Area No. 9, April 1983.

Carollo, 2012, San Luis Obispo County Master Water Report, prepared for the San Luis Obispo County Flood Control and Water Conservation District, May 2012. https://www.slocounty.ca.gov/departments/public-works/services/plans-reports/master-water-report

Central Coast Regional Water Quality Control Board (CCRWQCB), 2011, Waste Discharge/Recycled Water Requirements for the Los Osos Water Recycling Facility, San Luis Obispo County, Order No. R3-2011-001, May 5. https://www.waterboards.ca.gov/centralcoast/board_decisions/adopted_orders/2011/2011_0001_wdr_order.pdf.

Cleath & Associates, 2000, Hydrogeologic Investigation of the Broderson Site, Phase 2 – Impacts Assessment, prepared for the Los Osos Community Services District, November 2000.

Cleath & Associates, 2003, Geologic Structure of the Los Osos Valley Ground Water Basin, prepared for the Los Osos Community Services District, November 2003.

Cleath & Associates, 2005, Sea Water Intrusion Assessment and Lower Aquifer Source Investigation of the Los Osos Valley Ground Water Basin, San Luis Obispo County, California, prepared for the Los Osos Community Services District, October 2005.

Cleath & Associates, 2006, Task 3 Upper Aquifer Water Quality Characterization, prepared for the Los Osos Community Services District, June 2006.

Cleath & Associates, 2002-2006, Quarterly and Semi-Annual Groundwater Monitoring Reports for the Los Osos Nitrate Monitoring Program, prepared for the Los Osos Community Services District.

Cleath-Harris Geologists, 2009a, Flow Model Conversion and Urban Area Yield Update, Technical Memorandum prepared for the Los Osos ISJ Group, July 29, 2009.

Cleath-Harris Geologists, 2009b, Water Use Estimates for Private Domestic Wells, Technical Memorandum prepared for the Los Osos ISJ Group, July 29, 2009.

FINAL DRAFT

Cleath-Harris Geologists, 2009c, Water Use Estimates for Los Osos Creek Valley Irrigation Wells, Technical Memorandum prepared for the Los Osos ISJ Group, July 29, 2009.

Cleath-Harris Geologists, 2010, Water Quality Monitoring Results Summary, November 2009-January 2010, Los Osos Valley Groundwater Basin, Technical Memorandum prepared for the Los Osos ISJ Group, April 26, 2010.

Cleath-Harris Geologists, 2012, Los Osos Water Recycling Facility Baseline Groundwater Quality Monitoring, August 2012, prepared for San Luis Obispo County Department of Public Works, October 2012.

Cleath-Harris Geologists, 2013, Los Osos Water Recycling Facility Baseline Groundwater Quality Monitoring, June 2013, prepared for San Luis Obispo County Department of Public Works, July 2013.

Cleath-Harris Geologists, 2014, Seawater Intrusion Monitoring, Los Osos Valley Groundwater Basin, Technical Memorandum, prepared for the Los Osos ISJ Group, October 7, 2014.

Cleath-Harris Geologists, 2015a, April 2015 Lower Aquifer Monitoring, Los Osos Groundwater Basin, Draft Technical Memorandum prepared for the Los Osos ISJ Group, May 26, 2015.

Cleath-Harris Geologists, 2015b, October 2015 Lower Aquifer Monitoring, Los Osos Groundwater Basin, Technical Memorandum prepared for the Los Osos ISJ Group, December 28, 2015.

Cleath-Harris Geologists, 2015c, Los Osos Water Recycling Facility Baseline Groundwater Quality Monitoring, May 2015, prepared for San Luis Obispo County Department of Public Works, June 2015.

Cleath-Harris Geologists, 2015d, Los Osos Water Recycling Facility Baseline Groundwater Quality Monitoring, November 2015, prepared for San Luis Obispo County Department of Public Works, December 2015.

Cleath-Harris Geologists, 2016a, Los Osos Valley Groundwater Basin Boundary Modification Request, Technical Memorandum prepared for San Luis Obispo County Department of Public Works, March 25, 2016.
http://sgma.water.ca.gov/basinmod/docs/download/2071

FINAL DRAFT

Cleath-Harris Geologists, 2016b, Los Osos Basin Plan, Groundwater Monitoring Program 2015 Annual Monitoring Report, prepared in association with Wallace Group for the Los Osos Groundwater Basin Management Committee, September 2016. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2015-lobmc-annual-report

Cleath-Harris Geologists, 2017, Los Osos Basin Plan, Groundwater Monitoring Program 2016 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2017. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2016-lobmc-annual-report

Cleath-Harris Geologists, 2018a, Los Osos Basin Plan, Groundwater Monitoring Program 2017 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2017. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2017-lobmc-annual-report

Cleath-Harris Geologists, 2018b, Los Osos Valley Groundwater Basin Fringe Areas Characterization, prepared for San Luis Obispo County Flood Control and Water Conservation District, May 2017.

Cleath-Harris Geologists, 2018c, Los Osos Valley Groundwater Basin Boundary Modification Request, prepared for San Luis Obispo County Flood Control and Water Conservation District, September 2018.

Cleath-Harris Geologists, 2019a, Lower Aquifer nitrate concentrations trends review and LA11 seawater intrusion evaluation, prepared for the Los Osos Groundwater Basin Management Committee, November 6, 2019.

Cleath-Harris Geologists, 2019b, Los Osos Basin Plan Metric Trends Review and Infrastructure Program C, prepared for the Los Osos Groundwater Basin Management Committee, February 28, 2019.

Cleath-Harris Geologists, 2019c, Los Osos Basin Plan, Groundwater Monitoring Program 2018 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2019. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2018-lobmc-annual-report

Cleath-Harris Geologists, 2020, Los Osos Basin Plan, Groundwater Monitoring Program 2019 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2020. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2019-lobmc-annual-report

Cleath-Harris Geologists, 2021a, Los Osos Basin Plan, Groundwater Monitoring Program 2020 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2021. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2020-lobmc-annual-report

Cleath-Harris Geologists, 2021b, Nitrate Source Investigation at S&T Lower Aquifer Well LA8, Los Osos Groundwater Basin, prepared for S&T Mutual Water Company, September 24, 2 021 (revised 10/5/21).

Cleath-Harris Geologists, 2022a, Los Osos Basin Plan, Groundwater Monitoring Program 2021 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2022. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2021-lobmc-annual-report

Cleath-Harris Geologists, 2022b, Recommendations for Well Modification and New Monitoring Well Locations for the Los Osos BMC Groundwater Monitoring Program, draft Technical Memorandum, July 22, 2022.

Cleath-Harris Geologists, 2023a, Los Osos Creek Rating Curve Development and Stage Data processing, Draft Technical Memorandum, October 3, 2023.

Cleath-Harris Geologists, 2023b, Los Osos Basin Plan, Groundwater Monitoring Program 2022 Annual Monitoring Report, prepared for the Los Osos Groundwater Basin Management Committee, June 2023. https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/los-osos-basin-management-committee-(bmc)/annual-reports/2022-lobmc-annual-report-final-061523

Department of Water Resources (DWR), State of California, 1973, Los Osos – Baywood Ground Water Protection Study, Southern District Report, October 1973.

Department of Water Resources (DWR), State of California, 1979, Morro Bay Sandspit Investigation, Southern District Report, August 1979.

FINAL DRAFT

Department of Water Resources (DWR), State of California, 2014, California Groundwater Elevation Monitoring Basin Prioritization Process, Appendix A, June 2014.

Department of Water Resources (DWR), State of California, 2016, California's Groundwater, Working Toward Sustainability, Bulletin 118 Interim Update 2016, December 22, 2016. https://cawaterlibrary.net/wp-content/uploads/2017/05/Bulletin_118_Interim_Update_2016.pdf

Department of Water Resources (DWR), State of California, 2018a, Bulletin 118 Groundwater Basins Subject to Critical Conditions of Overdraft – Update based on 2018 Final Basin Boundary Modifications. https://www.downeybrand.com/wp-content/uploads/2020/03/2018CODBasins.pdf

Department of Water Resources (DWR), State of California, 2018b, Basin Boundary Modification Request System – San Luis Obispo County 3-008 Los Osos Valley https://sgma.water.ca.gov/basinmod/basinrequest/preview/238

Department of Water Resources (DWR), State of California, 2019, Basin Boundary Modifications – Final Decisions, February 11, 2019. https://water.ca.gov/Programs/Groundwater-Management/Basin-Boundary-Modifications#:~:text=The%20DWR%20developed%20the%20Basin%20Boundary%20Emergency,the%20Basin%20Boundary%20Modification%20Request%20System%20(BBMRS).

Department of Water Resources (DWR), State of California, 2021, California's Groundwater – Update 2020. November 17, 2021. https://catalog.data.gov/dataset/californias-groundwater-update-2020-bulletin-118-8a66f#:~:text=California's%20Groundwater%20Update%202020%20(CalGW,Bulletin%20118)%20Open%20Data%20Page.

Department of Water Resources (DWR), State of California, 2025, California's Groundwater, The Foundation of California's resilience, Bulletin 118 Update 2025 Highlights, October 2025. https://data.cnra.ca.gov/dataset/calgw_update2025/resource/4be4ea13-af34-4b67-8799-2f9653b0095a/view/8a588bd1-bd2a-4d8f-af3c-a73ea377aa81

Freeze, R. A., and Cherry, J. A., 1979, Groundwater, Prentice-Hall, 604 p.

Golden State Water Company, 2025 Consumer Confidence Report on Water Quality for 2024, Los Osos Water System.

ISJ Group, 2015, Updated Basin Plan for the Los Osos Groundwater Basin, January 2015, https://lobmc.specialdistrict.org/files/605a4a6a4/Los-Osos-Groundwater-Basin-Plan-January-2015.pdf

Los Osos Community Services District v. Southern California Water Company [Golden State Water Company] et al. (San Luis Obispo County Superior Court Case No. CV 040126).

Maddaus Water Management, 2023, Los Osos Water Offset Study, prepared for San Luis Obispo County Planning and Building, June 28, 2023.

Metcalf & Eddy, 1995, Task F – Sanitary Survey and Nitrate Study, prepared for San Luis Obispo County, March 2, 1995.

National Drought Mitigation Center / U.S. Department of Agriculture / National Oceanic and Atmospheric Administration, 2026, U.S. Drought Monitor, California maps. https://droughtmonitor.unl.edu/Maps/MapArchive.aspx

Rincon Consultants, 2014, 2016-2023, Semiannual, Biennial, and Annual Groundwater Quality Monitoring Reports, Los Osos Water Recycling Facility, prepared for San Luis Obispo County Department of Public Works, various dates.

Smith, C. T., and Griggs, A. B., 1944, Chromite Deposits near San Luis Obispo, San Luis Obispo County, California, U. S. Geological Survey Bulletin 945-B. https://pubs.usgs.gov/bul/0945b/report.pdf

SWRCB, 2009, Recycled Water Policy, adopted in Resolution No. 2009-0011 – Adoption of Policy for Water Quality Control for Recycled Water. http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2009/rs2009_0011.pdf

San Luis Obispo County Engineering Department, 1999, Baywood Groundwater Study, Fourth Quarter 1998, January 21, 1999.

San Luis Obispo County Public Works Department, 2005, Water Years 2001-02 and 2002-03 Hydrologic Report, May 16, 2005. https://www.slocounty.ca.gov/departments/public-works/forms-documents/water-resources/groundwater-reports/2002-hydrologic-report

San Luis Obispo County Public Works Department, 2021a, Los Osos Water Recycling Facility Laboratory Report for CEC Blue Ribbon, prepared by Eurofins-Eaton Analytical, November 23, 2021.

San Luis Obispo County Public Works Department, 2021b, Los Osos Water Recycling Facility 2021 Annual Report.

Stetson Engineers, 2010, Peer Review of the Los Osos Groundwater Model, TM dated May 3, 2010.

Yates, E.B., and Wiese, J. H., 1988, Hydrogeology and Water Resources of the Los Osos Valley Ground-Water Basin, San Luis Obispo County, California, U. S. Geological Survey, Water-Resources Investigations Report 88-4081. http://pubs.usgs.gov/wri/1988/4081/report.pdf

FINAL DRAFT

APPENDIX A

Groundwater Monitoring History

Groundwater Monitoring History

Groundwater monitoring has been performed by public agencies, water purveyors, and consultants for various Basin studies and programs over several decades. The following lists include historical investigations, monitoring reports, and monitoring programs with a major focus on Basin water levels and water quality through December 31, 2024, which is the end of the period covered by this Annual Report. Figure A1 compares the scientific basin boundary used for the LOBP and prior work with the new jurisdictional boundary defined by the DWR for the Los Osos Area Subbasin.

Historical Investigations

- *Los Osos-Baywood Ground Water Protection Study* (DWR, 1973);
- *Morro Bay Sandspit Investigation* (DWR, 1979);
- *Los Osos -Baywood Park Phase I Water Quality Management Study* (Brown & Caldwell, 1983);
- *Hydrogeology and Water Resources of the Los Osos Valley Ground-Water Basin, San Luis Obispo County, Water-Resources Investigation 88-4081* (U.S. Geological Survey; Yates and Wiese, 1988);
- *Task F – Sanitary Survey and Nitrate Source Study* (Metcalf & Eddy, 1995);
- *Sea Water Intrusion Assessment and Lower Aquifer Source Investigation of the Los Osos Valley Groundwater Basin* (Cleath & Associates, 2005);
- *Task 3 Upper Aquifer Water Quality Characterization* (Cleath & Associates, 2006);
- *Los Osos Valley Groundwater Basin Fringe Areas Characterization, Technical Memorandum (CHG, 2018b).*
- *Los Osos Valley Groundwater Basin Boundary Modification Request, Technical Memorandum (CHG, 2018c).*

Monitoring Reports:

- *Baywood Groundwater Study – Fourth Quarter 1998 (San Luis Obispo County Engineering Department, 1999)*;
- *Quarterly and Semi-Annual Groundwater Monitoring Reports for the Los Osos Nitrate Monitoring Program* (Cleath & Associates, 2002-2006)
- *Water Quality Monitoring Results Summary, November 2009-January 2010, Los Osos Valley Groundwater Basin* (CHG, 2010);
- *Semi-Annual Groundwater Monitoring Reports for Los Osos Water Recycling Facility Baseline Groundwater Quality Monitoring* (CHG, 2012-2013);
- *Semi-Annual Groundwater Monitoring Reports for Los Osos Water Recycling Facility Baseline Groundwater Quality Monitoring* (Rincon Consultants, 2014, 2016-2023; CHG, 2015, 2024, 2025);
- *Semi-Annual Groundwater Monitoring Reports for Lower Aquifer* (CHG, 2014-2015);
- *Annual Groundwater Monitoring Reports for Los Osos Basin Plan* (CHG, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024);
- Consumer Confidence Reports (Water Quality Reports) published annually by the water purveyors.

Monitoring Programs:

- *San Luis Obispo County Public Works, Semi-Annual Water Level Monitoring Program. Period of record for individual wells varies; most begin in 1970's and 1980's, and some end in 1999; program remains active.*

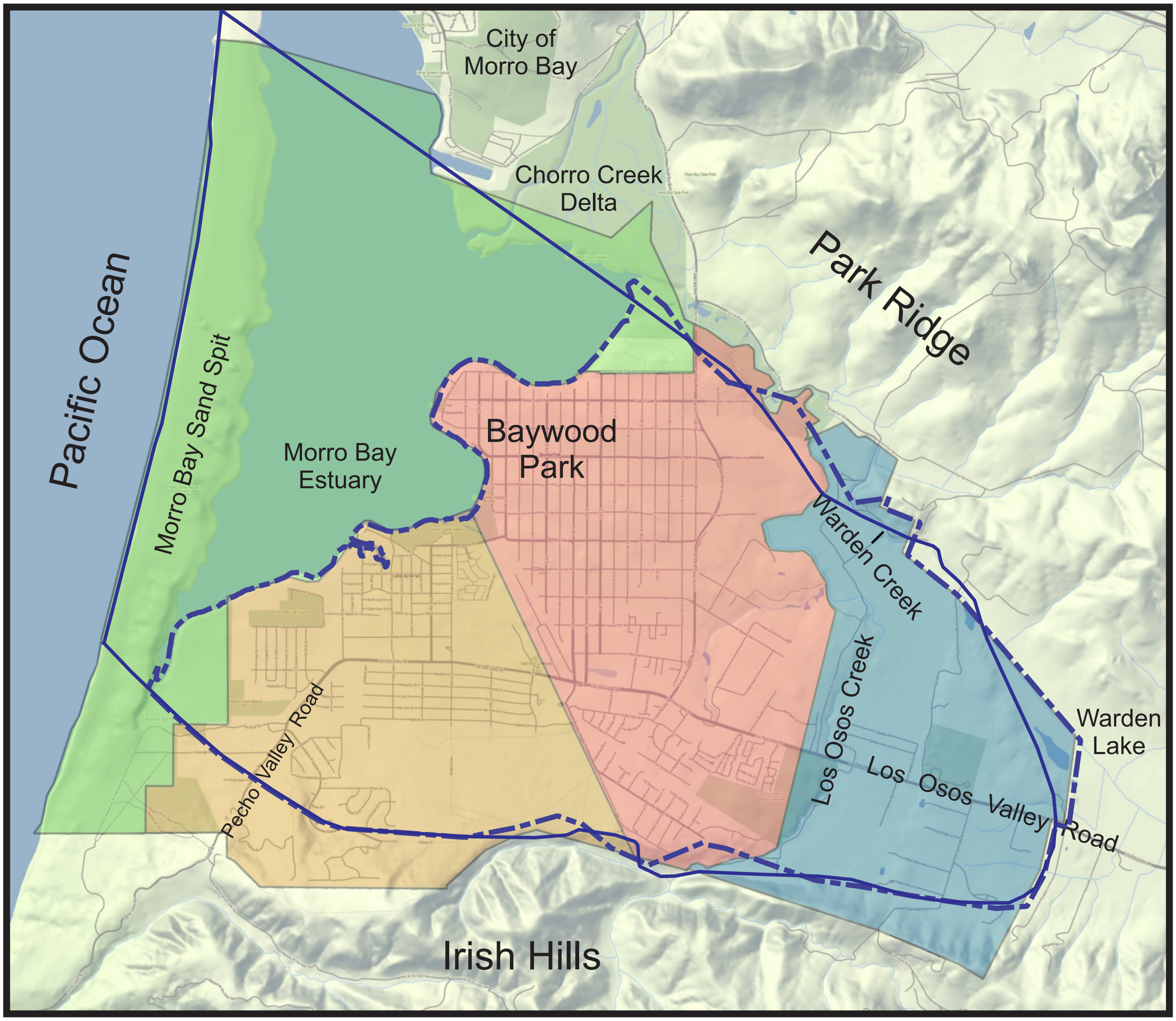
- *Purveyor Water Supply Well Monitoring per SWRCB-Division of Drinking Water requirements. Period of record for individual wells varies; program remains active.*

- *2002-2006 Los Osos Nitrate Monitoring Program. Water levels measured quarterly to semi-annually; program ended October 2006.*

- *2012-2024 Los Osos Water Recycling Facility Groundwater Monitoring Program. Water levels measured semi-annually, currently on a June and December schedule; program remains active.*

- *2014-2015 Lower Aquifer Monitoring Program. Water levels measured semi-annually; program ended in 2015 (replaced by LOBP Groundwater Monitoring Program).*

In addition to water quality and water level reporting, this 2024 Annual Report compiles groundwater production, precipitation, and stream flow data from water purveyors (LOCSD, GSWC, and S&T, providing metered production records) and San Luis Obispo County Department of Public Works, providing precipitation at the Los Osos Landfill and stream flow data for Los Osos Creek. Purveyor municipal production data are based on meter readings. Domestic groundwater production estimates through 2022 are based on the last reported water use estimates for 2013 from the LOBP, with minor adjustments in 2016 for the inclusion of additional residences in the Eastern Area (CHG, 2016). Beginning in 2022, domestic groundwater production is based on updated estimates in the Los osos Water Offset Study (Maddaus Water Management, 2023). Production estimates for community facilities and agricultural wells are based on a soil-moisture budget using local precipitation, land use, and evapotranspiration data (Appendix G).



Base Image: Stamen-Terrain

0 2000 4000 6000 8000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Basin Plan Areas:

- Dunes and Bay Area
- Western Area
- Central Area
- Eastern Area

DWR Bulletin 118 Basin Boundary (Los Osos Area Subbasin)

Basin Boundary from Los Osos Basin Plan

Figure A1
Basin Location and Plan Areas
Los Osos Groundwater Basin
2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

APPENDIX B

Los Osos Basin Plan
Groundwater Monitoring Program Well Information

FINAL DRAFT

Los Osos Basin Plan
Monitoring Well Network
First Water/Perched Aquifer Group

Program ID	State Well Number	Name/Location	Basin Area	Coordinates			Well Type	Current Well Owner	Well Data			Aquifer				
				Latitude	Longitude	RP Elevation* (feet amsl)			Screened Interval (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Creek Valley Alluvium	Zone A/B	Zone C	Zone D	Zone E
FW1	30S/10E-13A7							PRIVATE								
FW2	30S/10E-13L8	Howard/ Del Norte	Western	35.3149	120.8552	32.63	MW	LOCSD	26-36	37	2			x		
FW3	30S/10E-13G	South Court	Western	35.3162	120.8498	50.95	MW	LOCSD	47-52	54	2			x		
FW4	30S/10E-13H	Broderson/Skyline	Western	35.3158	120.8432	49.33	MW	LOCSD	154-164	164	2			x		
FW5	30S/10E-13Q2	Woodland Dr.	Western	35.3119	120.8495	101.27	MW	LOCSD	97-100	105	2			x		
FW6	30S/10E-24A	Highland/Alexander	Western	35.3083	120.8453	193.04	MW	LOCSD	154-164	164	2			x		
FW7	30S/10E-24Ab	Broderson leach field	Western	35.3065	120.8460	255	MW	LOCSD	200-240	240	5			x		
FW8	30S/11E-7L4	Santa Ysabel/5th	Central	35.3302	120.8377	45.76	MW	LOCSD	40-50	50	2			x		
FW9	30S/11E-7K3	12th/ Santa Ysabel	Central	35.3299	120.8300	90.71	MW	LOCSD	55-65	70	2			x		
FW10	30S/11E-7Q1	LOCSD 8th Street - shallow	Central	35.3260	120.8342	25.29	MW	LOCSD	29-43, 54-75	75	8			x		
FW11	30S/11E-7R2	El Moro/12th St.	Central	35.3263	120.8298	61.93	MW	LOCSD	25-35	35	2			x		
FW12	30S/11E-18C2	Pismo Ave./ 5th St.	Central	35.3227	210.8376	34.55	MW	LOCSD	25-35	35	2			x		
FW13	30S/11E-18B2	Ramona/10th	Central	35.3208	120.8320	79.89	MW	LOCSD	25-35	35	2		x			
FW14	30S/11E-18E1							PRIVATE								
FW15	30S/11E-18N2	Manzanita/Ravenna	Central	35.3109	120.8401	125.53	MW	LOCSD	85-95	95	2		x			
FW16	30S/11E-18L11	Palisades Ave.	Western	35.3138	120.8374	88.02	MW	LOCSD	43-53	53	2		x			
FW17	30S/11E-18L12	Ferrell Ave.	Central	35.3138	120.8346	103.85	MW	LOCSD	25-35	35	2		x			
FW18	30S/11E-18P	Sunnyside #1	Western	35.3095	120.8352	143.92	MW	SLCUSD	15-35	35	2		x			
FW19	30S/11E-18J7	Los Olivos/Fairchild	Central	35.3130	120.8271	125.74	MW	LOCSD	25-35	35	2		x			
FW20	30S/11E-8Mb	Santa Maria/18th Street	Central	35.3287	120.8233	94.75	MW	LOCSD	37-47	47	2		x			
FW21	30S/11E-8N4	South Bay Blvd. OBS	Central	35.3253	120.8213	95.99	MW	LOCSD	40-50	50	2		x			
FW22	30S/11E-17F4							PRIVATE								
FW23	30S/11E-17N4							PRIVATE								
FW24	30S/11E-17J2	USGS Eto North - shallow	Eastern	35.3142	120.8119	84.95	MW	PRIVATE[1]	50-70	70	2			x		
FW25	30S/11E-17R1							PRIVATE								
FW26	30S/11E-20A2							PRIVATE								
FW27	30S/11E-20L1							PRIVATE								
FW28	30S/11E-20M2							PRIVATE								
FW29	30S/11E-20A1							PRIVATE								
FW30	30S/11E-18R1							PRIVATE								
FW31	30S/11E-19A	Bayridge Field #2	Central	35.3066	120.8276	214.67	MW	LOCSD	18-38	38	4		x			
FW32	30S/11E-21D14							PRIVATE								
FW33	30S/11E-18D1S							PRIVATE								

[1] FW24 is former USGS monitorng well (information in public domain)

*NAVD 88 Datum	MW = Monitoring Well

State Well Numbers for Reconstructed Wells

	NEW (2002)	OLD (1982)
FW2	30S/10E-13L8	30S/10E-13L5
FW5	30S/10E-13Q2	30S/10E-13Q1
FW8	30S/11E-7L4	30S/11E-7L3
FW9	30S/11E-7K3	30S/11E-7K2
FW11	30S/11E-7R2	30S/11E-7R1
FW12	30S/11E-18C2	30S/11E-18C1
FW13	30S/11E-18B2	30S/11E-18B1
FW15	30S/11E-18N2	30S/11E-18N1
FW16	30S/11E-18L11	30S/11E-18L3
FW17	30S/11E-18L12	30S/11E-18L4
FW19	30S/11E-18J7	30S/11E-18J6
FW21	30S/11E-8N4	30S/11E-8N2

Los Osos Basin Plan
Monitoring Well Network
Upper Aquifer Group

Program ID	State Well Number	Name/Location	Basin Area	Coordinates			Well Type	Current Well Owner	Well Data			Aquifer				
				Latitude	Longitude	RP Elevation* (feet amsl)			Screened Interval (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Creek Valley Alluvium	Zone A/B	Zone C	Zone D	Zone E
UA1	30S/10E-11A1	Sandspit #1 West	Dunes and bay	35.3358	120.8638	16.01	MW	SLO CO.	150-160	160	2			x		
UA2	30S/10E-14B1	Sandspit #3 Shallow	Dunes and bay	35.3219	120.8682	23.90	MW	SLO CO.	190-200	200	1.5			x		
UA3	30S/10E-13F1	GSWC Skyline #1	Western	35.3165	120.8533	17.57	M	GSWC	90-195	206	14			x		
UA4	30S/10E-13L1	S&T Mutual #1	Western	35.3148	120.8531	40.31	M	S&T	100-141	141	8			x		
UA5	30S/11E-7N1	LOCSD 3rd St. Well	Central	35.3256	120.8401	10.66	M	LOCSD	56-84	80	8			x		
UA6	30S/11E-18L8	USGS Palisades OBS East 2"	Western	35.3149	120.8381	79.18	MW	SLO CO.	100-140	140	2			x		
UA7	30S/11E-18L7	USGS Palisades OBS West 2"	Western	35.3149	120.8381	79.16	MW	SLO CO.	180-220	220	2			x		
UA8	30S/11E-18K7	LOCSD 10th St. Observation West	Central	35.3130	120.8326	137.17	MW	LOCSD	200-220	220	2			x		
UA9	30S/11E-18K3	GSWC Los Olivos #3	Central	35.3133	120.8300	123.42	M	GSWC	148-202, 222-232	232	8			x		
UA10	30S/11E-18H1	LOCSD - 12th St.	Central	35.3161	120.8297	110.02	M	LOCSD	112-125, 145-159, 172-186, 216-231	232	10			x		
UA11	30S/11E-17D							PRIVATE								
UA12	30S/11E-17E9	So. Bay Blvd OBS shallow	Central	35.3158	120.8240	107.39	MW	LOCSD	184-194	204	2			x		
UA13	30S/11E-17E10	LOCSD South Bay upper	Central	35.3159	120.8239	107.81	M	LOCSD	170-210	220	8			x		
UA14	30S/11E-17P4							PRIVATE								
UA15	30S/11E-20B7							PRIVATE								
UA16	30S/11E-17L4							PRIVATE								
UA17	30S/11E-17E10							PRIVATE								
UA18	30S/11E-17F2							PRIVATE								
UA19	30S/11E-07Q_	LOCSD 8th Street - shallow	Central	35.3259	120.8341	26.80	M	LOCSD						x		

*NAVD 88 Datum	M = Municipal
	MW = Monitoring Well

FINAL DRAFT

Los Osos Basin Plan
Monitoring Well Network
Lower Aquifer Group

Program ID	State Well Number	Name/Location	Basin Area	Coordinates			Well Type	Well Owner	Well Data			Aquifer				
				Latitude	Longitude	RP Elevation* (feet amsl)			Screened Interval (feet bgs)	Well Depth (feet bgs)	Casing Diameter (inches)	Creek Valley Alluvium	Zone A/B	Zone C	Zone D	Zone E
LA1	30S/10E-2A1	Sandspit #2 North	Dunes and Bay	35.3530	120.8617	23.13	MW	SLO CO.	220-230	230	2					x
LA2	30S/10E-11A2	Sandspit #1 East	Dunes and Bay	35.3358	120.8638	16.07	MW	SLO CO.	234-244	244	2				x	
LA3	30S/10E-14B2	Sandspit #3 Deep	Dunes and Bay	35.3219	120.8682	23.89	MW	SLO CO.	270-280	280	2				x	
LA4	30S/10E-13M1	USGS Howard West	Western	35.3149	120.8597	42.70	MW	PRIVATE	477-537	820	6					x
LA5	30S/10E-13L7	S&T Mutual #4	Western	35.3146	120.8531	37.87	M	S&T	160-300	300	8					
LA6	30S/10E-13L4	GSWC Pecho #1	Western	35.3129	120.8522	70.02	M	GSWC	240-380	675	14				x	
LA7	30S/10E-13P2							PRIVATE								
LA8	30S/10E-13N	S&T Mutual #5	Western	35.3088	120.8565	141.36	M	S&T	260-340	350	8				x	
LA9	30S/10E-24C1	GSWC Cabrillo #1	Western	35.3077	120.8552	180.34	M	GSWC	250-500	508	10				x	
LA10	30S/10E-13J1	GSWC Rosina #1	Western	35.3145	120.8468	98.33	M	GSWC	290-406	409	10				x	x
LA11	30S/10E-12J1	Morro Bay Observation #5	Central	35.3299	120.8440	8.43	MW	SLO CO.	349-389	389	2					x
LA12	30S/11E-7Q3	LOCSD 8th St. Lower	Central	35.3259	120.8342	27.75	M	LOCSD	230-270	270	10				x	
LA13	30S/11E-18F2	LOCSD Ferrell #2	Central	35.3159	120.8358	103.57	MW	LOCSD	510-530	530	2.5					x
LA14	30S/11E-18L6	USGS Palisades OBS 6"	Western	35.3149	120.8381	79.52	MW	SLO CO.	551-591	591	2.5					x
LA15	30S/11E-18L2	LOCSD Palisades	Western	35.3136	120.8377	88.08	M	LOCSD	340-380	394	12				x	
LA16	30S/11E-18M1	Former CCW #5 - Broderson OBS	Western	35.3128	120.8430	109.53	MW	PRIVATE	469-509	509	2.5					x
LA17	30S/11E-24A2	USGS Broderson	Western	35.3074	120.8433	212.82	MW	SLO CO.	800-860 (collapsed 440-480)	860	6				x	x
LA18	30S/11E-18K8	10th St. Observation East	Central	35.3130	120.8325	137.13	MW	LOCSD	630-650	650	2					x
LA19	30S/11E-19H2	USGS Bayview Heights 6"	Central	35.3043	120.8266	257.35	MW	SLO CO.	280-380	740	6				x	
LA20	30S/11E-17N10	GSWC South Bay #1	Central	35.3111	120.8240	141.22	M	GSWC	225-295, 325-395, 485-695	715	12			x	x	x
LA21	30S/11E-17E7	So. Bay Blvd OBS deep #3	Central	35.3158	120.8240	107.22	MW	LOCSD	480-490, 500-510	520	2					x
LA22	30S/11E-17E8	So. Bay Blvd OBS middle #2	Central	35.3158	120.8240	107.27	MW	LOCSD	270-280, 370-380	390	2				x	
LA23	30S/11E-17C1							PRIVATE								
LA24	30S/11E-17J1	USGS Eto North - deep	Eastern	35.3142	120.8119	84.88	I	PRIVATE[1]	160-190, 245-260	260	6				x	x
LA25	30S/11E-20Aa							PRIVATE								
LA26	30S/11E-20G2	USGS Eto South	Eastern	35.3037	120.8131	102.41	I	PRIVATE[1]	300-360	370	6					x
LA27	30S/11E-16Nb							PRIVATE								
LA28	30S/11E-16Na							PRIVATE								
LA29	30S/11E-21E3							PRIVATE								
LA30	30S/11E-20H1							PRIVATE								
LA31	30S/11E-13M2							PRIVATE								
LA32	30S/11E-18K9	LOCSD 10th Street Production	Central	35.3103	120.8325	137.17	M	LOCSD	235-270, 350-49(	490	14			x	x	
LA33	30S/11E-17A1							PRIVATE								
LA34	30S/11E-8F	Los Osos Landfill MW-11	Eastern	35.3201	120.8052	26.15	MW	SLO CO.	37.5-47.5	47.5					x	
LA35	30S/11E-21Bb	LOWRF South Well	Eastern	35.3076	120.7993	86.8	Ind	SLO CO.	180-230	230						x
LA36	30S/11E-21Ja							PRIVATE								
LA37	30S/11E-21B1	Andre Windmill Well	Eastern	35.3069	120.7976	81.61	MW	SLO CO.			6					x
LA38	30S/11E-21E							PRIVATE								
LA39	30S/11E-18K_	Los Olivos #5	Central			123.17	M	GSWC	335-365, 385-450	470	12				x	
LA40	30S/10E-13Ba	Zone E Well	Western	35.31966	120.8478	11.47	MW	LOCSD	390-410	490	2.5					x
LA41	30S/10E-13Bb	Zone D Well	Western	35.31966	120.8478	11.46	MW	LOCSD	310-330	350	2.5				x	
LA42	30S/11E-13Ja	Skyline 1a (North)	Western	35.31588	120.8431	52.46	MW	LOCSD	436-476	486	2.5					x
LA43	30S/11E-13Jb	Skyline 1b (South)	Western	35.31580	120.8431	51.98	MW	LOCSD	328-368	368	2.5				x	
LA44	30S/11E-18R_	LOCSD Site E	Central	35.30896	120.8268	177.33	M	LOCSD	315-355, 385-485, 530-680	700	12			x	x	x

[1] LA24 amd LA26 are former USGS monitoring wells (information in public domain)

*NAVD 88 Datum	M = Municipal
	MW = Monitoring Well
	Ind = Industrial Well
	I = Irrigation

FINAL DRAFT

Los Osos Basin Plan
Monitoring Well Network 2025
FIRST WATER

Program Well ID	Well Owner	Basin Plan Monitoring Code	County Water Level Program	LOWRF Groundwater Monitoring Program[1]	**2025 Basin Plan Monitoring Program[2]**
FW1	PRIVATE	L			(no access)
FW2	LOCSD	L, G		L, G	**L**
FW3	LOCSD	L		L	**L**
FW4	LOCSD	L		L	**L**
FW5	LOCSD	L		L	**L, G, CEC**
FW6	LOCSD	TL, G, CEC		G	**TL, G, CEC**
FW7	LOCSD	L			(no access)
FW8	LOCSD	L		L	**L**
FW9	LOCSD	L		L	**L**
FW10	LOCSD	TL, G		G	**TL, G**
FW11	LOCSD	L		L	**L**
FW12	LOCSD	L		L	**L**
FW13	LOCSD	L		L	**L**
FW14	PRIVATE	L		L	(no access)
FW15	LOCSD	L, G		L,G	**L**
FW16	LOCSD	L		L	**L**
FW17	LOCSD	L, G		L,G	**L**
FW18	SLCUSD	L			**L**
FW19	LOCSD	L		L	**L**
FW20	LOCSD	L, G		L, G	**L**
FW21	LOCSD	L		L	**L**
FW22	PRIVATE	L, G	L	L, G	
FW23	PRIVATE	L	L	L	
FW24	PRIVATE	L	L		
FW25	PRIVATE	L	L		
FW26	PRIVATE	L			**L**
FW27	PRIVATE	TL			**TL**
FW28	PRIVATE	L, G	L		**G**
FW29	PRIVATE	(added in 2015)	L		
FW30	PRIVATE	(added in 2015)	L		
FW31	SLO CO.	(added in 2015)			**L**
FW32	PRIVATE	(added in 2017)			**L**
FW33	PRIVATE	(added in 2018)			**L**

L = WATER LEVEL
G = GENERAL MINERAL
CEC = CONSTITUENTS OF EMERGING CONCERN
TL = TRANSDUCER WATER LEVEL

LOCSD = Los Osos Community Services District
SLCUSD = San Luis Coastal Unified School District
SLO CO. = San Luis Obispo County

NOTES:
1 - Summer and winter monitoring schedule
2 - Spring and Fall water levels, water quality in Fall only

FINAL DRAFT

Los Osos Basin Plan
Monitoring Well Network 2025
UPPER AQUIFER

Program Well ID	Well Owner	Basin Plan Monitoring Code	County Water Level Program	LOWRF Groundwater Monitoring Program[1]	**2025 Basin Plan Monitoring Program[2]**
UA1	SLO CO.	L	L		**L, G, TL**
UA2	SLO CO.	L	L		**L, G, TL**
UA3	GSWC	L, G			**L, G**
UA4	S&T	TL			**TL**
UA5	LOCSD	L		L	**L**
UA6	SLO CO.	L	L		
UA7	SLO CO.	L	L		
UA8	LOCSD	L			**L**
UA9	GSWC	L, G			**L, G**
UA10	LOCSD	TL			**TL**
UA11	PRIVATE	L			(no access)
UA12	LOCSD	L		L	**L**
UA13	LOCSD	L, G			**L**
UA14	PRIVATE	L	L		
UA15	PRIVATE	L	L		
UA16	PRIVATE	(added in 2015)	L		
UA17	PRIVATE	(added in 2015)	L		
UA18	PRIVATE	(added in 2015)	L		
UA19	LOCSD	(added in 2019)			**L**

L = WATER LEVEL
G = GENERAL MINERAL
TL = TRANSDUCER WATER LEVEL

LOCSD = Los Osos Community Services District
SLO CO. = San Luis Obispo County
GSWC = Golden State Water Company
S&T = S&T Mutual Water Company

NOTES:
1 - Summer and winter monitoring schedule
2 - Spring and Fall water levels, water quality in Fall only

FINAL DRAFT

Los Osos Basin Plan
Monitoring Well Network 2025
LOWER AQUIFER

Program Well ID	Well Owner	Basin Plan Monitoring Code	County Water Level Program	2025 Basin Plan Monitoring Program[1]
LA1	SLO CO.	L	L	**L**
LA2	SLO CO.	L	L	**L, G, TL**
LA3	SLO CO.	L	L	**L, G, TL**
LA4	PRIVATE	L, GL		**L**
LA5	S&T	L	L	
LA6	GSWC	L, G	L	**TL**
LA7	PRIVATE	TL		(no access)
LA8	S&T	L, G		**L , G**
LA9	GSWC	L		**L , G**
LA10	GSWC	L, G		**L , G**
LA11	SLO CO.	L, G		**TL, L, G**
LA12	LOCSD	L, G		**L , G**
LA13	LOCSD	TL		**TL, G**
LA14	SLO CO.	L, GL	L	**L, TL, G**
LA15	LOCSD	L, G		**L , G**
LA16	PRIVATE	L	L	**L, TL, G**
LA17	SLO CO.	L	L	
LA18	LOCSD	L, G		**L , G**
LA19	SLO CO.	L	L	**TL**
LA20	GSWC	L, G		**L , G**
LA21	LOCSD	L	L	
LA22	LOCSD	L	L	**G**
LA23	PRIVATE	L, G		no access
LA24	PRIVATE	L	L	
LA25	PRIVATE	L		**L**
LA26	PRIVATE	L	L	
LA27	PRIVATE	TL		**L**
LA28	PRIVATE	L, G		**L**
LA29	PRIVATE	L	L	
LA30	PRIVATE	L, G		**L , G**
LA31	PRIVATE	(added in 2015)	L	**G**
LA32	LOCSD	(added in 2015)	L	**G**
LA33	PRIVATE	(added in 2015)	L	
LA34	SLO CO.	(added in 2015)	L	
LA35	SLO CO.	(added in 2015)		**L**
LA36	PRIVATE	(added in 2015)		no access
LA37	SLO CO.	(added in 2017)		**TL**
LA38	PRIVATE	(added in 2017)		**L**
LA39	GSWC	(added in 2019)		**L , G**
LA40	LOCSD	(added in 2019)		**L, TL , G**
LA41	LOCSD	(added in 2019)		**L, TL , G**
LA42	LOCSD	(added in 2023)		**L, TL , G**
LA43	LOCSD	(added in 2023)		**L, TL , G**
LA44	LOCSD	(added in 2024)		**L**

L = WATER LEVEL **LOCSD = Los Osos Community Services District**
G = GENERAL MINERAL **SLO CO. = San Luis Obispo County**
GL = GEOPHYSICAL LOG (triennial) **GSWC = Golden State Water Company**
TL = TRANSDUCER WATER LEVEL **S&T = S&T Mutual Water Company**

1 - Water level and water quality both Spring and Fall except LA2 and LA3 - Fall only

FINAL DRAFT

APPENDIX C

Field Logs and Laboratory Analytical Reports for 2025 BMC Monitoring

Note: There are no Groundwater Monitoring Field Logs for Wells LA9, LA10, LA20, UA9, and UA3; These wells were sampled by owner (GSWC).

Spring 2025 Field Logs and Analytical Results

Groundwater Monitoring Field Log

Date: 4/1/2025
Operator: A. Burke and G. Doolin
Well number and location: 30S/10E-13N (LA 8)
Site/wellhead conditions: Site secure. The well was running for roughly 10 minutes.

Static water depth (feet): 133.83 feet on 4/25/25
Well depth (feet): 350
Water column (feet): 216.17
Casing diameter (inches): 8
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 11:57 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:57	Flush Line	422.9	8.25	18.1	Clear, colorless, odorless
11:59	Flush Line	421.9	7.97	18.3	Clear, colorless, odorless
12:00	Flush Line	421.3	7.89	18.2	Clear, colorless, odorless
12:02	Flush Line	421.5	7.85	18.4	Clear, colorless, odorless
					Sampled at 12:03

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/2/2025
Operator: A. Burke and G. Doolin
Well number and location: 30S/10E-12J1 (LA 11)
Site/wellhead conditions: Sunny with a slight breeze. Site secure.

Static water depth (feet): 3.14
Well depth (feet): 389
Water column (feet): 385.86
Casing diameter (inches): 2
Minimum purge volume (gal) 190
Pump setting (feet): 25
Time begin purge: 9:21 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:21	0.5	1373	8.01	17.4	Slightly cloudy, colorless, slight sulfur odor
9:24	5.0	1370	7.89	18.0	Slightly cloudy, colorless, slight sulfur odor
9:26	10.0	1371	7.81	18.3	Clear, colorless, slight sulfur odor
9:30	20.0	1380	7.70	18.6	Clear, colorless, slight sulfur odor
9:38	40.0	1365	7.76	19.2	Clear, colorless, slight sulfur odor
9:46	60.0	1723	7.62	20.0	Slightly cloudy, colorless, slight sulfur odor
9:54	80.0	1817	7.52	20.5	Slightly cloudy, colorless, slight sulfur odor
10:02	100.0	1799	7.58	20.1	Clear, colorless, odorless
10:10	120.0	1739	7.77	20.1	Clear, colorless, odorless
10:18	140.0	1750	7.85	20.3	Clear, colorless, odorless
10:26	160.0	1741	7.62	20.4	Clear, colorless, odorless
10:34	180.0	1728	7.55	20.5	Clear, colorless, odorless
10:36	185.0	1717	7.60	20.5	Clear, colorless, odorless
10:38	190.0	1727	7.64	20.5	Clear, colorless, odorless
					Sampled at 10:40 am

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/1/2025
Operator: A. Burke and G. Doolin
Well number and location: 30S/11E-7Q3 (LA 12)
Site/wellhead conditions: Well started pumping around 8:00 AM. Site secure.

Static water depth (feet): 25.8 feet on 4/15/25
Well depth (feet): 270
Water column (feet): 244.2
Casing diameter (inches): 10
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 8:52 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
8:52	Flush Line	801.2	8.42	20.5	Clear, colorless, odorless
8:55	Flush Line	776.1	8.09	20.6	Clear, colorless, odorless
8:57	Flush Line	771.9	7.95	20.7	Clear, colorless, odorless
8:58	Flush Line	771.1	7.87	20.8	Clear, colorless, odorless
9:00	Flush Line	770.4	7.83	20.8	Clear, colorless, odorless
9:02	Flush Line	772.0	7.78	20.7	Clear, colorless, odorless
					Sampled at 9:03

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/10/2025
Operator:	A. Burke & G. Doolin
Well number and location:	30S/11E-18F2 (LA 13)
Site/wellhead conditions	Foggy and cold. Site secure.

Static water depth (feet):	98.68
Well depth (feet):	530
Water column (feet):	431.32
Casing diameter (inches):	2.5
Minimum purge volume (gal)	330
Pump setting (feet):	120
Time begin purge:	9:15 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:15	0.5	552.4	8.61	16.9	Clear, colorless, slight sulfur odor
9:19	5.0	544.3	8.31	19.2	Clear, colorless, slight sulfur odor
9:22	10.0	550.1	8.20	19.3	Clear, colorless, slight sulfur odor
9:25	15.0	549.0	8.13	19.4	Clear, colorless, slight sulfur odor
9:29	20.0	547.1	8.15	19.6	Clear, colorless, slight sulfur odor
9:44	40.0	542.4	8.15	20.0	Clear, colorless, slight sulfur odor
10:04	80.0	520.9	8.24	21.0	Clear, colorless, slight sulfur odor
10:24	120.0	534.3	8.32	21.6	Clear, colorless, slight sulfur odor
10:54	180.0	562.7	8.28	21.8	Clear, colorless, slight sulfur odor
11:24	240.0	568.3	8.10	21.9	Clear, colorless, slight sulfur odor
11:44	280.0	569.9	8.05	22.1	Clear, colorless, slight sulfur odor
11:54	300.0	569.8	7.98	22.1	Clear, colorless, slight sulfur odor
12:04	320.0	572.4	7.98	22.1	Clear, colorless, slight sulfur odor
12:07	325.0	573.4	8.01	22.1	Clear, colorless, slight sulfur odor
12:10	330.0	573.2	7.99	22.1	Clear, colorless, slight sulfur odor
					Sampled at 12:11

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/22/2025
Operator: G. Doolin & A. Burke
Well number and location: 18L6 (LA14)
Site/wellhead conditions: Cloudy and cool. Site secure.

Static water depth (feet): 73.39
Well depth (feet): 591
Water column (feet): 517.61
Casing diameter (inches): 2.5
Minimum purge volume (gal): 400
Pump setting (feet): 105
Time begin purge: 9:12 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:13	0.5	517.5	9.10	16.8	Clear, colorless, slight sulfur odor
9:15	5.0	511.2	8.71	18.2	Clear, colorless, slight sulfur odor
9:17	10.0	511.5	8.48	18.6	Clear, colorless, slight sulfur odor
9:22	20.0	514.0	8.28	19.0	Clear, colorless, slight sulfur odor
9:32	40.0	526.1	7.87	19.9	Clear, colorless, odorless
9:52	80.0	797.0	7.56	21.0	Clear, colorless, slight sulfur odor
10:12	120.0	847.3	7.55	21.7	Clear, colorless, odorless
10:42	180.0	803.9	7.60	21.7	Clear, colorless, odorless
11:12	240.0	796.8	7.77	21.6	Clear, colorless, odorless
11:32	280.0	798.8	7.61	22.0	Clear, colorless, odorless
11:52	320.0	796.9	7.57	22.2	Clear, colorless, odorless
12:12	360.0	796.5	7.56	22.1	Clear, colorless, odorless
12:22	380.0	799.5	7.54	22.2	Clear, colorless, odorless
12:27	390.0	802.4	7.56	22.2	Clear, colorless, odorless
12:30	395.0	802.9	7.56	22.3	Clear, colorless, odorless
12:33	400.0	803.2	7.61	21.9	Clear, colorless, odorless
					Sampled at 12:35

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/16/2025
Operator:	A. Burke and G. Doolin
Well number and location:	30S/11W-18L2 (LA 15)
Site/wellhead conditions	Cloudy and cool. Well pumping since 10:30 AM. Site secure.

Static water depth (feet):	88.5 feet on 4/15/25
Well depth (feet):	394
Water column (feet):	305.5
Casing diameter (inches):	12
Minimum purge volume (gal)	--
Pump setting (feet):	Flush Line
Time begin purge:	14:38 PM

Time	Gallons	EC (μS)	pH	Temp. (°C)	Comments*
14:38	Flush Line	929	7.46	20.6	Clear, colorless, odorless
14:39	Flush Line	924	7.42	20.5	Clear, colorless, odorless
14:41	Flush Line	924	7.41	20.4	Clear, colorless, odorless
14:43	Flush Line	924	7.39	20.3	Clear, colorless, odorless
					Sampled at 14:44

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/21/2025
Operator:	G. Doolin & A. Burke
Well number and location:	18M1 (LA16)
Site/wellhead conditions	Cloudy and cool. Site secure.

Static water depth (feet):	105.26
Well depth (feet):	509
Water column (feet):	403.74
Casing diameter (inches):	2.5
Minimum purge volume (gal)	310
Pump setting (feet):	135
Time begin purge:	9:43 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:44	0.5	710	7.60	17.1	Clear, colorless, odorless
9:48	5.0	693	7.36	18.6	Clear, colorless, odorless
9:50	10.0	696	7.22	18.8	Clear, colorless, odorless
9:56	20.0	697	7.13	18.5	Clear, colorless, odorless
10:08	40.0	665	7.14	18.3	Clear, colorless, odorless
10:20	60.0	578	7.36	19.4	Clear, colorless, odorless
10:32	80.0	681	7.57	20.1	Clear, colorless, odorless
10:44	100.0	765	7.64	20.5	Clear, colorless, odorless
11:08	140.0	761	7.59	20.6	Clear, colorless, odorless
11:32	180.0	760	7.57	20.5	Clear, colorless, odorless
11:56	220.0	752	7.58	20.9	Clear, colorless, odorless
12:20	260.0	746	7.79	21.0	Clear, colorless, odorless
12:32	280.0	745	7.81	20.8	Clear, colorless, odorless
12:38	290.0	746	7.68	20.9	Clear, colorless, odorless
12:44	300.0	749	7.62	21.1	Clear, colorless, odorless
12:47	305.0	747	7.59	21.0	Clear, colorless, odorless
12:50	310.0	751	7.59	21.0	Clear, colorless, odorless
					Sampled at 12:52

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/3/2025
Operator:	A. Burke and G. Doolin
Well number and location:	30S/11E-18K8 (LA 18)
Site/wellhead conditions	Warm and sunny with some wind. Site secure.

Static water depth (feet):	131.46
Well depth (feet):	650
Water column (feet):	518.54
Casing diameter (inches):	2
Minimum purge volume (gal)	255
Pump setting (feet):	150
Time begin purge:	9:29 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:31	0.5	551.0	8.80	19.4	Clear, colorless, odorless
9:38	5.0	523.6	7.93	22.0	Clear, colorless, odorless
9:54	15.0	524.0	7.60	22.2	Clear, colorless, odorless
10:02	20.0	529.6	7.25	22.2	Clear, colorless, odorless
11:04	30.0	533.3	7.54	23.3	Clear, colorless, odorless
11:32	50.0	540.2	7.27	21.3	Clear, colorless, odorless
11:40	60.0	562.1	7.26	21.4	Clear, colorless, odorless
11:46	70.0	563.2	7.29	21.4	Clear, colorless, odorless
11:54	80.0	591.6	7.12	21.9	Clear, colorless, odorless
11:57	85.0	600.0	7.17	21.9	Clear, colorless, odorless
12:07	100.0	632.6	7.21	21.9	Clear, colorless, odorless
12:35	140.0	630.7	7.76	22.5	Clear, colorless, odorless
13:02	180.0	629.5	7.55	22.5	Clear, colorless, odorless
13:26	220.0	623.8	7.71	22.5	Clear, colorless, odorless
13:38	240.0	621.0	7.60	22.3	Clear, colorless, odorless
13:44	250.0	619.6	7.58	22.4	Clear, colorless, odorless
13:47	255.0	615.4	7.66	22.3	Clear, colorless, odorless
					Sampled at 13:47

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/16/2025
Operator:	A. Burke and G. Doolin
Well number and location:	30S/11E-17E8 (LA 22)
Site/wellhead conditions	Warm and cloudy. Site secure.

Static water depth (feet):	132.51
Well depth (feet):	390
Water column (feet):	257.49
Casing diameter (inches):	2
Minimum purge volume (gal)	130
Pump setting (feet):	160
Time begin purge:	11:13 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:13	0.5	524	8.17	18.3	Clear, colorless, odorless
11:17	5.0	536	7.97	19.4	Clear, colorless, odorless
11:20	10.0	547	7.82	19.5	Clear, colorless, odorless
11:28	20.0	520	7.70	19.7	Clear, colorless, odorless
11:44	40.0	483	7.59	19.9	Clear, colorless, odorless
12:00	60.0	482	7.49	19.9	Clear, colorless, odorless
12:16	80.0	485	7.45	20.0	Clear, colorless, odorless
12:32	100.0	483	7.41	20.0	Clear, colorless, odorless
12:40	110.0	485	7.41	20.1	Clear, colorless, odorless
12:48	120.0	486	7.41	20.0	Clear, colorless, odorless
12:52	125.0	486	7.41	20.0	Clear, colorless, odorless
12:56	130.0	487	7.43	20.1	Clear, colorless, odorless
					Sampled at 12:56

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/10/2025
Operator: A. Burke and G. Doolin
Well number and location: 30S11E-20H1 (LA 30)
Site/wellhead conditions: Sunny with a slight breeze. Site secure.

Static water depth (feet): 12.63
Well depth (feet): 140
Water column (feet): 127.37
Casing diameter (inches): 6
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 12:56 PM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
12:56	0.5	812.7	8.10	32.6	Clear, colorless, odorless
12:58	6.0	811.9	8.09	19.2	Clear, colorless, odorless
12:59	10.0	812.9	8.05	18.2	Clear, colorless, odorless
13:00	15.0	813.8	8.00	18.2	Clear, colorless, odorless
13:01	19.0	811.8	7.95	18.3	Clear, colorless, odorless
13:02	22.0	811.9	7.91	18.2	Clear, colorless, odorless
13:03	25.0	810.5	7.89	18.1	Clear, colorless, odorless
					Sampled at 13:05

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/17/2025
Operator:	G. Doolin
Well number and location:	30S/10E-13M2 (LA 31)
Site/wellhead conditions	Sunny and warm. Well run yesterday. Site secure.

Static water depth (feet):	36.01
Well depth (feet):	227
Water column (feet):	190.99
Casing diameter (inches):	8
Minimum purge volume (gal)	--
Pump setting (feet):	Flush Line
Time begin purge:	9:08 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:08	5.0	1184	8.27	16.0	Clear, colorless, odorless
9:11	15.0	1171	8.12	15.7	Pump kicks on. Clear, colorless, odorless
9:12	20.0	1223	8.05	16.2	Clear, colorless, odorless
9:13	25.0	1213	8.03	16.3	Pump kicks on. Clear, colorless, odorless
9:14	30.0	1303	8.00	17.1	Clear, colorless, odorless
9:15	35.0	1290	7.95	17.1	Clear, colorless, odorless
9:17	40.0	1287	7.90	17.0	Clear, colorless, odorless
9:18	45.0	1279	7.86	17.1	Clear, colorless, odorless
9:19	50.0	1330	7.82	18.1	Pump kicks on, Clear, colorless, odorless
9:20	55.0	1315	7.78	17.8	Clear, colorless, odorless
9:21	60.0	1306	7.75	17.8	Clear, colorless, odorless
					Sampled at 9:23

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/1/2025
Operator:	A. Burke and G. Doolin
Well number and location:	30S/11E - 18K9 (LA 32)
Site/wellhead conditions	Cloudy and site secure. Well pumping since 8:00 AM.

Static water depth (feet):	145.9 feet on 4/15/25
Well depth (feet):	490
Water column (feet):	344.1
Casing diameter (inches):	14
Minimum purge volume (gal)	--
Pump setting (feet):	Flush Line
Time begin purge:	9:17 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:17	Flush Line	461.6	8.16	19.2	Clear, colorless, odorless
9:19	Flush Line	462.5	7.87	20.5	Clear, colorless, odorless
9:21	Flush Line	465.9	7.80	20.5	Clear, colorless, odorless
9:22	Flush Line	465.4	7.75	20.6	Clear, colorless, odorless
9:23	Flush Line	466.0	7.71	20.7	Clear, colorless, odorless
					Sampled at 9:25

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	4/7/2025
Operator:	A. Burke and G. Doolin
Well number and location:	30S/10E-13Ba (LA 40)
Site/wellhead conditions	Sunny and warm. Water bailed out of monument. Site secure.

Static water depth (feet):	7.00
Well depth (feet):	490
Water column (feet):	483
Casing diameter (inches):	2.5
Minimum purge volume (gal)	370
Pump setting (feet):	150
Time begin purge:	9:55 AM

Time	Gallons	EC (mS)	pH	Temp. (°C)	Comments*
9:55	0.5	6.77	8.23	18.0	Slightly cloudy, brown, odorless
9:57	5.0	6.70	8.05	18.7	Slightly cloudy, brown, odorless
10:00	10.0	6.69	7.85	18.8	Slightly cloudy, brown, odorless
10:05	20.0	6.69	7.65	19.0	Slightly cloudy, brown, odorless
10:23	40.0	6.54	7.44	20.1	Clear, colorless, odorless
10:51	60.0	6.30	7.42	20.9	Clear, colorless, odorless
11:47	100.0	5.60	7.52	20.9	Clear, colorless, odorless
12:35	140.0	6.68	7.41	21.3	Clear, colorless, odorless
13:23	180.0	7.03	7.38	19.7	Clear, colorless, odorless
13:48	190.0	6.98	7.59	20.7	Clear, colorless, odorless
13:53	195.0	7.00	7.53	20.7	Clear, colorless, odorless
13:59	200.0	7.10	7.40	21.3	Clear, colorless, odorless
14:05	205.0	7.10	7.43	21.3	Clear, colorless, odorless
14:11	210.0	7.14	7.41	21.2	Clear, colorless, odorless
					Sampled at 14:12

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/9/2025
Operator: A. Burke and G. Doolin
Well number and location: 30S/10E-13Bb (LA 41)
Site/wellhead conditions: Sunny and cool with a slight breeze. Site secure.

Static water depth (feet): 5.57
Well depth (feet): 350
Water column (feet): 344.43
Casing diameter (inches): 2.5
Minimum purge volume (gal): 265
Pump setting (feet): 150
Time begin purge: 9:25 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:25	0.5	673.7	8.51	18.4	Clear, colorless, odorless
9:30	5.0	675.4	7.96	18.6	Clear, colorless, odorless
9:35	10.0	674.2	7.76	18.9	Clear, colorless, odorless
9:41	20.0	669.8	7.67	18.9	Clear, colorless, odorless
9:59	40.0	665.8	7.45	19.8	Clear, colorless, odorless
10:21	60.0	653.6	7.45	20.7	Clear, colorless, odorless
10:43	80.0	653.3	7.45	20.8	Clear, colorless, odorless
11:03	100.0	650.9	7.47	20.9	Clear, colorless, odorless
11:43	140.0	656.6	7.43	20.9	Clear, colorless, odorless
12:23	180.0	660.7	7.43	21.0	Clear, colorless, odorless
13:07	220.0	658.8	7.49	21.0	Clear, colorless, odorless
13:27	240.0	663.9	7.44	21.1	Clear, colorless, odorless
13:37	250.0	668.5	7.41	20.5	Clear, colorless, odorless
13:47	260.0	664.6	7.41	21.1	Clear, colorless, odorless
13:52	265.0	663.3	7.41	21.4	Clear, colorless, odorless
					Sampled at 13:54

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/14/2025
Operator: I. Pitsillides and G. Doolin
Well number and location: 30S/10E-13Ja (LA 42) Skyline Zone E
Site/wellhead conditions: Cloudy and cool. Site secure.

Static water depth (feet): 48.05
Well depth (feet): 486
Water column (feet): 437.95
Casing diameter (inches): 2
Minimum purge volume (gal): 215
Pump setting (feet): 80
Time begin purge: 9:33 AM

Time	Gallons	EC (mS)	pH	Temp. (°C)	Comments*
9:34	1.0	3.60	8.48	16.9	Clear, colorless, slight sulfur odor
9:35	5.0	3.57	8.21	17.6	Clear, colorless, slight sulfur odor
9:36	10.0	3.52	7.99	18.2	Clear, colorless, slight sulfur odor
9:40	20.0	3.45	7.94	18.1	Clear, colorless, slight sulfur odor
9:52	40.0	2.87	7.66	19.6	Clear, colorless, slight sulfur odor
10:08	80.0	3.27	7.75	20.4	Clear, colorless, odorless
10:24	120.0	4.91	7.40	21.1	Clear, colorless, odorless
10:40	160.0	4.96	7.60	21.0	Clear, colorless, odorless
10:48	180.0	5.00	7.43	21.4	Clear, colorless, odorless
10:56	200.0	4.96	7.50	21.1	Clear, colorless, odorless
10:58	205.0	5.01	7.51	21.2	Clear, colorless, odorless
11:00	210.0	5.02	7.51	21.2	Clear, colorless, odorless
11:02	215.0	5.00	7.51	21.5	Clear, colorless, odorless
					Sampled at 11:04

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 4/14/2025
Operator: I. Pitsillides and G. Doolin
Well number and location: 30S/10E-13Jb (LA 43) Skyline Zone D
Site/wellhead conditions: Cloudy and cool. Site secure.

Static water depth (feet): 48.27
Well depth (feet): 360
Water column (feet): 311.73
Casing diameter (inches): 2
Minimum purge volume (gal): 155
Pump setting (feet): 80
Time begin purge: 11:13 AM

Time	Gallons	EC (μS)	pH	Temp. (°C)	Comments*
11:13	0.5	676.9	7.96	17.1	Clear, colorless, odorless
11:14	5.0	636.4	7.87	17.4	Clear, colorless, slight sulfur odor
11:16	10.0	634.7	7.81	17.9	Clear, colorless, slight sulfur odor
11:20	20.0	629.5	7.70	18.6	Clear, colorless, slight sulfur odor
11:28	40.0	631.3	7.56	19.6	Clear, colorless, odorless
11:37	60.0	641.9	7.48	20.3	Clear, colorless, odorless
11:44	80.0	646.4	7.45	20.3	Clear, colorless, odorless
11:52	100.0	646.2	7.37	20.2	Clear, colorless, odorless
12:00	120.0	647.5	7.39	20.4	Clear, colorless, odorless
12:08	140.0	648.9	7.28	20.3	Clear, colorless, odorless
12:10	145.0	646.6	7.40	20.5	Clear, colorless, odorless
12:12	150.0	649.2	7.45	20.4	Clear, colorless, odorless
12:14	155.0	646.5	7.47	20.4	Clear, colorless, odorless
					Sampled at 12:15

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 14, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA8 LA8
Project : Los Osos BMC Monitoring

Lab No. : CC 2581126-003
Customer No. : 8000514

Sampled On : April 1, 2025 at 12:03
Sampled By : Addison Burke
Received On : April 1, 2025 at 13:57
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	108	2.5	mg/L				04/03/2025	09:00	ac	2340B	04/03/2025	15:47	ac
Calcium	17	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Magnesium	16	1	mg/L		1	l	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Potassium	2	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Sodium	40	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Total Cations	4.0	1	meq/L				04/03/2025	09:00	ac	Calc.	04/03/2025	15:47	ac
Boron	ND	0.1	mg/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Copper	ND	10	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Iron	ND	30	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Manganese	ND	10	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
Zinc	ND	20	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:47	ac
SAR	1.7		--				04/03/2025	09:00	ac	Calc.	04/03/2025	15:47	ac
Total Alkalinity (as CaCO3)	50	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/09/2025	04:37	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/09/2025	04:37	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/09/2025	04:37	amm
Bicarbonate as HCO3	60	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/09/2025	04:37	amm
Sulfate	15.5	0.5	mg/L		1		04/08/2025	11:37	ldm	EPA 300.0	04/09/2025	03:48	sta
Chloride	88	1	mg/L		1		04/08/2025	11:37	ldm	EPA 300.0	04/09/2025	03:48	sta
Nitrate as NO3	30.4	0.4	mg/L		1		04/02/2025	12:58	mm1	SM 4500-NO3 F	04/02/2025	14:13	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/02/2025	12:58	mm1	SM 4500-NO3 F	04/02/2025	14:11	mm1
Nitrate + Nitrite as N	6.9	0.4	mg/L		1		04/02/2025	12:58	mm1	SM 4500-NO3 F	04/02/2025	14:13	mm1
Fluoride	ND	0.1	mg/L		1	U	04/08/2025	11:37	ldm	EPA 300.0	04/09/2025	03:48	sta
Total Anions	4.3	10	meq/L				04/08/2025	11:37	ldm	Calc.	04/09/2025	03:48	sta
pH	7.9	---	units		1		04/01/2025	12:03	ab	SM 4500-H+B	04/01/2025	12:03	ab
Specific Conductance	452	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/09/2025	04:37	amm
Total Dissolved Solids	270	20	mg/L		1		04/03/2025	13:00	ctl	SM 2540 C	04/04/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/02/2025	19:19	mct	SM 5540 C	04/02/2025	19:53	mct
Aggressiveness Index	11.2	10	---				04/03/2025	09:00	ac	Calc.	04/03/2025	15:47	ac
Langelier Index (20°C)	-0.6	20	---				04/03/2025	09:00	ac	Calc.	04/03/2025	15:47	ac
Nitrate Nitrogen	6.9	0.4	mg/L		1		04/02/2025	12:58	mm1	SM 4500-NO3 F	04/02/2025	14:13	mm1

DQF Flags Definition:
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 6 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 14, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA8 LA8
Project : Los Osos BMC Monitoring

Lab No. : CC 2581126-003
Customer No. : 8000514

Sampled On : April 1, 2025 at 12:03
Sampled By : Addison Burke
Received On : April 1, 2025 at 13:57
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.85		units		04/01/2025 12:03	4500HB	04/01/2025 12:03

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 24C1 (LA9 - Cabrillo) LA9
Project : Spring BMC GSWC

Lab No. : CC 2581158-001
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:30
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	131	2.5	mg/L				04/04/2025	14:00	ac	2340B	04/04/2025	19:34	ac
Calcium	21	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Magnesium	19	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Potassium	2	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Sodium	48	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Total Cations	4.8	1	meq/L				04/04/2025	14:00	ac	Calc.	04/04/2025	19:34	ac
Boron	ND	0.1	mg/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Copper	ND	10	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Iron	ND	30	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Manganese	ND	10	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
Zinc	ND	20	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:34	ac
SAR	1.8		--				04/04/2025	14:00	ac	Calc.	04/04/2025	19:34	ac
Total Alkalinity (as CaCO3)	60	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:02	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:02	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:02	amm
Bicarbonate as HCO3	70	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:02	amm
Sulfate	19.1	0.5	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	02:27	ldm
Chloride	100	2*	mg/L		2		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	09:45	ldm
Nitrate as NO3	31.0	0.4	mg/L		1		04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:01	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	15:59	mm1
Nitrate + Nitrite as N	7.0	0.4	mg/L		1		04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:01	mm1
Fluoride	ND	0.1	mg/L		1	U	04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	02:27	ldm
Total Anions	4.9	10	meq/L				04/08/2025	17:14	ldm	Calc.	04/09/2025	09:45	ldm
pH	7.6	---	units		1		04/02/2025	10:30	jd	SM 4500-H+B	04/02/2025	10:30	jd
Specific Conductance	549	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:02	amm
Total Dissolved Solids	350	20	mg/L		1		04/07/2025	10:30	ctl	SM 2540 C	04/08/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/03/2025	21:06	amm	SM 5540 C	04/03/2025	21:18	amm
Aggressiveness Index	11.1	10	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:34	ac
Langelier Index (20°C)	-0.7	20	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:34	ac
Nitrate Nitrogen	7.0	0.4	mg/L		1		04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:01	mm1

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 24C1 (LA9 - Cabrillo) LA9
Project : Spring BMC GSWC

Lab No. : CC 2581158-001
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:30
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.60		units		04/02/2025 10:30	4500HB	04/02/2025 10:30
Conductivity	691		umhos/cm		04/02/2025 10:30	2510B	04/02/2025 10:30
Temperature	68		°F		04/02/2025 10:30	2550B	04/02/2025 10:30

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 3 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13J1 (LA10 - Rosina) LA10
Project : Spring BMC GSWC

Lab No. : CC 2581158-002
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:45
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	312	2.5	mg/L				04/04/2025	14:00	ac	2340B	04/04/2025	19:40	ac
Calcium	51	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Magnesium	45	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Potassium	2	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Sodium	33	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Total Cations	7.7	1	meq/L				04/04/2025	14:00	ac	Calc.	04/04/2025	19:40	ac
Boron	ND	0.1	mg/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Copper	ND	10	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Iron	280	30	ug/L		1	l	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Manganese	ND	10	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
Zinc	70	20	ug/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:40	ac
SAR	0.8		--				04/04/2025	14:00	ac	Calc.	04/04/2025	19:40	ac
Total Alkalinity (as CaCO3)	70	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:33	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:33	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:33	amm
Bicarbonate as HCO3	80	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:33	amm
Sulfate	14.2	0.5	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	01:28	ldm
Chloride	210	5*	mg/L		5		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	09:25	ldm
Nitrate as NO3	9.9	0.4	mg/L		1		04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:04	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:02	mm1
Nitrate + Nitrite as N	2.2	0.4	mg/L		1		04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:04	mm1
Fluoride	ND	0.1	mg/L		1	U	04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	01:28	ldm
Total Anions	7.7	10	meq/L				04/08/2025	17:14	ldm	Calc.	04/09/2025	09:25	ldm
pH	7.6	---	units		1		04/02/2025	10:45	jd	SM 4500-H+B	04/02/2025	10:45	jd
Specific Conductance	894	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:33	amm
Total Dissolved Solids	750	20	mg/L		1		04/08/2025	13:00	ctl	SM 2540 C	04/09/2025	10:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/03/2025	21:06	amm	SM 5540 C	04/03/2025	21:18	amm
Aggressiveness Index	11.6	10	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:40	ac
Langelier Index (20°C)	-0.3	20	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:40	ac
Nitrate Nitrogen	2.2	0.4	mg/L		1		04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	16:04	mm1

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 4 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13J1 (LA10 - Rosina) LA10
Project : Spring BMC GSWC

Lab No. : CC 2581158-002
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:45
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.58		units		04/02/2025 10:45	4500HB	04/02/2025 10:45
Conductivity	928		umhos/cm		04/02/2025 10:45	2510B	04/02/2025 10:45
Temperature	69		°F		04/02/2025 10:45	2550B	04/02/2025 10:45

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 5 of 12

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA11 LA11
Project : Los Osos BMC Monitoring

Lab No. : CC 2581157-001
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:40
Sampled By : Addison Burke
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	754	2.5	mg/L				04/04/2025	14:00	ac	2340B	04/04/2025	20:20	ac
Calcium	106	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Magnesium	119	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Potassium	5	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Sodium	94	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Total Cations	19.3	1	meq/L				04/04/2025	14:00	ac	Calc.	04/04/2025	20:20	ac
Boron	0.2	0.1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Copper	ND	10	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Iron	290	30	ug/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Manganese	60	10	ug/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
Zinc	ND	20	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:20	ac
SAR	1.5		--				04/04/2025	14:00	ac	Calc.	04/04/2025	20:20	ac
Total Alkalinity (as CaCO3)	280	10	mg/L		1		04/06/2025	18:25	amm	SM 4500-H+B	04/07/2025	04:48	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/06/2025	18:25	amm	SM 4500-H+B	04/07/2025	04:48	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/06/2025	18:25	amm	SM 4500-H+B	04/07/2025	04:48	amm
Bicarbonate as HCO3	340	10	mg/L		1		04/06/2025	18:25	amm	SM 4500-H+B	04/07/2025	04:48	amm
Sulfate	193	0.5	mg/L		1		04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	15:59	ldm
Chloride	430	9*	mg/L		9	l	04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	22:55	ldm
Nitrate as NO3	0.4	0.4	mg/L		1	J	04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	15:59	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	15:57	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	15:59	mm1
Fluoride	ND	0.1	mg/L		1	U	04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	15:59	ldm
Total Anions	21.7	10	meq/L				04/07/2025	08:59	ldm	Calc.	04/07/2025	22:55	ldm
pH	7.6	---	units		1		04/02/2025	10:40	ab	SM 4500-H+B	04/02/2025	10:40	ab
Specific Conductance	2060	1	umhos/cm		1		04/06/2025	18:25	amm	SM 4500-H+B	04/07/2025	04:48	amm
Total Dissolved Solids	1240	20	mg/L		1		04/04/2025	14:00	ctl	SM 2540 C	04/07/2025	11:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/03/2025	21:06	amm	SM 5540 C	04/03/2025	21:18	amm
Aggressiveness Index	12.5	10	---				04/04/2025	14:00	ac	Calc.	04/04/2025	20:20	ac
Langelier Index (20°C)	0.6	20	---				04/04/2025	14:00	ac	Calc.	04/04/2025	20:20	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/03/2025	13:58	mm1	SM 4500-NO3 F	04/03/2025	15:59	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- l The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA11 LA11
Project : Los Osos BMC Monitoring

Lab No. : CC 2581157-001
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:40
Sampled By : Addison Burke
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.64		units		04/02/2025 10:40	4500HB	04/02/2025 10:40

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 14, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA12 LA12
Project : Los Osos BMC Monitoring

Lab No. : CC 2581126-001
Customer No. : 8000514

Sampled On : April 1, 2025 at 09:03
Sampled By : Addison Burke
Received On : April 1, 2025 at 13:57
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	305	2.5	mg/L				04/03/2025	09:00	ac	2340B	04/03/2025	15:34	ac
Calcium	48	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Magnesium	45	1	mg/L		1	l	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Potassium	2	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Sodium	55	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Total Cations	8.5	1	meq/L				04/03/2025	09:00	ac	Calc.	04/03/2025	15:34	ac
Boron	0.2	0.1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Copper	ND	10	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Iron	70	30	ug/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Manganese	60	10	ug/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
Zinc	ND	20	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:34	ac
SAR	1.4		--				04/03/2025	09:00	ac	Calc.	04/03/2025	15:34	ac
Total Alkalinity (as CaCO3)	260	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	17:51	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	17:51	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	17:51	amm
Bicarbonate as HCO3	320	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	17:51	amm
Sulfate	56.3	0.5	mg/L		1		04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	18:50	ldm
Chloride	98	2*	mg/L		2	l	04/07/2025	08:59	ldm	EPA 300.0	04/08/2025	00:48	ldm
Nitrate as NO3	ND	0.4	mg/L		1	Uh	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	19:30	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	19:28	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	Jh	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	19:30	mm1
Fluoride	ND	0.1	mg/L		1	U	04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	18:50	ldm
Total Anions	9.2	10	meq/L				04/07/2025	08:59	ldm	Calc.	04/08/2025	00:48	ldm
pH	7.8	---	units		1		04/01/2025	09:03	ab	SM 4500-H+B	04/01/2025	09:03	ab
Specific Conductance	848	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	17:51	amm
Total Dissolved Solids	470	20	mg/L		1		04/03/2025	13:00	ctl	SM 2540 C	04/04/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/02/2025	19:19	mct	SM 5540 C	04/02/2025	19:53	mct
Aggressiveness Index	12.3	10	---				04/03/2025	09:00	ac	Calc.	04/03/2025	15:34	ac
Langelier Index (20°C)	0.4	20	---				04/03/2025	09:00	ac	Calc.	04/03/2025	15:34	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	Uh	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	19:30	mm1

DQF Flags Definition:
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.
h The MS/MSD did not meet QC criteria.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 14, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA12 LA12
Project : Los Osos BMC Monitoring

Lab No. : CC 2581126-001
Customer No. : 8000514

Sampled On : April 1, 2025 at 09:03
Sampled By : Addison Burke
Received On : April 1, 2025 at 13:57
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.78		units		04/01/2025 09:03	4500HB	04/01/2025 09:03

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 3 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 25, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18F2 (LA13) LA13
Project : Los Osos BMC Monitoring

Lab No. : CC 2581263-001
Customer No. : 8000514

Sampled On : April 10, 2025 at 12:11
Sampled By : Addison Burke
Received On : April 10, 2025 at 13:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	224	2.5	mg/L				04/14/2025	10:00	ac	2340B	04/14/2025	16:36	ac
Calcium	32	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Magnesium	35	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Potassium	2	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Sodium	47	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Total Cations	6.6	1	meq/L				04/14/2025	10:00	ac	Calc.	04/14/2025	16:36	ac
Boron	0.1	0.1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Copper	ND	10	ug/L		1	U	04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Iron	310	30	ug/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Manganese	190	10	ug/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
Zinc	ND	20	ug/L		1	U	04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:36	ac
SAR	1.4		--				04/14/2025	10:00	ac	Calc.	04/14/2025	16:36	ac
Total Alkalinity (as CaCO3)	250	10	mg/L		1		04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:34	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:34	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:34	amm
Bicarbonate as HCO3	310	10	mg/L		1		04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:34	amm
Sulfate	28.3	0.5	mg/L		1	h	04/18/2025	09:43	ldm	EPA 300.0	04/18/2025	15:40	ldm
Chloride	42	1	mg/L		1	h	04/18/2025	09:43	ldm	EPA 300.0	04/18/2025	15:40	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:41	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:40	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:41	mm1
Fluoride	0.1	0.1	mg/L		1	h	04/18/2025	09:43	ldm	EPA 300.0	04/18/2025	15:40	ldm
Total Anions	6.9	10	meq/L				04/18/2025	09:43	ldm	Calc.	04/18/2025	15:40	ldm
pH	8.0	---	units		1		04/10/2025	12:11	ab	SM 4500-H+B	04/10/2025	12:11	ab
Specific Conductance	625	1	umhos/cm		1		04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:34	amm
Total Dissolved Solids	350	20	mg/L		1		04/14/2025	10:15	ctl	SM 2540 C	04/15/2025	11:45	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/11/2025	19:26	mct	SM 5540 C	04/11/2025	19:33	mct
Aggressiveness Index	12.3	10	---				04/14/2025	10:00	ac	Calc.	04/14/2025	16:36	ac
Langelier Index (20°C)	0.5	20	---				04/14/2025	10:00	ac	Calc.	04/14/2025	16:36	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:41	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- h The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 25, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18F2 (LA13) LA13
Project : Los Osos BMC Monitoring

Lab No. : CC 2581263-001
Customer No. : 8000514

Sampled On : April 10, 2025 at 12:11
Sampled By : Addison Burke
Received On : April 10, 2025 at 13:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.99		units		04/10/2025 12:11	4500HB	04/10/2025 12:11

ND=Non-Detected, RL=Reporting Level.

Page 3 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 9, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18L6 (LA14) LA14
Project : Los Osos BMC Monitoring

Lab No. : CC 2581392-001
Customer No. : 8000514

Sampled On : April 22, 2025 at 12:35
Sampled By : Addison Burke
Received On : April 22, 2025 at 14:37
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	382	2.5	mg/L				04/24/2025	10:00	ac	2340B	04/24/2025	15:38	ac
Calcium	69	1	mg/L		1		04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Magnesium	51	1	mg/L		1		04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Potassium	2	1	mg/L		1		04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Sodium	34	1	mg/L		1		04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Total Cations	9.2	1	meq/L				04/24/2025	10:00	ac	Calc.	04/24/2025	15:38	ac
Boron	ND	0.1	mg/L		1	U	04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Copper	ND	10	ug/L		1	U	04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Iron	ND	30	ug/L		1	U	04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Manganese	50	10	ug/L		1		04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
Zinc	ND	20	ug/L		1	U	04/24/2025	10:00	ac	EPA 200.7	04/24/2025	15:38	ac
SAR	0.8		--				04/24/2025	10:00	ac	Calc.	04/24/2025	15:38	ac
Total Alkalinity (as CaCO3)	290	10	mg/L		1		04/24/2025	17:20	amm	SM 4500-H+B	04/24/2025	23:20	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/24/2025	17:20	amm	SM 4500-H+B	04/24/2025	23:20	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/24/2025	17:20	amm	SM 4500-H+B	04/24/2025	23:20	amm
Bicarbonate as HCO3	350	10	mg/L		1		04/24/2025	17:20	amm	SM 4500-H+B	04/24/2025	23:20	amm
Sulfate	92.1	0.5	mg/L		1		04/25/2025	08:33	ldm	EPA 300.0	04/25/2025	20:40	ldm
Chloride	84	1	mg/L		1		04/25/2025	08:33	ldm	EPA 300.0	04/25/2025	20:40	ldm
Nitrate as NO3	0.5	0.4	mg/L		1	J	04/23/2025	14:30	mm1	SM 4500-NO3 F	04/23/2025	15:49	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/23/2025	14:30	mm1	SM 4500-NO3 F	04/23/2025	15:47	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/23/2025	14:30	mm1	SM 4500-NO3 F	04/23/2025	15:49	mm1
Fluoride	0.1	0.1	mg/L		1		04/25/2025	08:33	ldm	EPA 300.0	04/25/2025	20:40	ldm
Total Anions	10.0	10	meq/L				04/25/2025	08:33	ldm	Calc.	04/25/2025	20:40	ldm
pH	7.6	---	units		1		04/22/2025	12:35	ab	SM 4500-H+B	04/22/2025	12:35	ab
Specific Conductance	893	1	umhos/cm		1		04/24/2025	17:20	amm	SM 4500-H+B	04/24/2025	23:20	amm
Total Dissolved Solids	530	20	mg/L		1		04/24/2025	13:00	ctl	SM 2540 C	04/25/2025	11:45	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/23/2025	15:40	mct	SM 5540 C	04/23/2025	15:45	mct
Aggressiveness Index	12.3	10	---				04/24/2025	10:00	ac	Calc.	04/24/2025	15:38	ac
Langelier Index (20°C)	0.4	20	---				04/24/2025	10:00	ac	Calc.	04/24/2025	15:38	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/23/2025	14:30	mm1	SM 4500-NO3 F	04/23/2025	15:49	mm1

DQF Flags Definition:
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 9, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18L6 (LA14) LA14
Project : Los Osos BMC Monitoring

Lab No. : CC 2581392-001
Customer No. : 8000514

Sampled On : April 22, 2025 at 12:35
Sampled By : Addison Burke
Received On : April 22, 2025 at 14:37
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.61		units		04/22/2025 12:35	4500HB	04/22/2025 12:35

ND=Non-Detected, RL=Reporting Level.

Page 3 of 6

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18L2 (LA15) LA15
Project : Los Osos BMC Monitoring

Lab No. : CC 2581336-002
Customer No. : 8000514

Sampled On : April 16, 2025 at 14:44
Sampled By : Addison Burke
Received On : April 16, 2025 at 15:18
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	326	2.5	mg/L				04/18/2025	13:00	ac	2340B	04/18/2025	16:02	ac
Calcium	53	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Magnesium	47	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Potassium	2	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Sodium	39	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Total Cations	8.3	1	meq/L				04/18/2025	13:00	ac	Calc.	04/18/2025	16:02	ac
Boron	ND	0.1	mg/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Copper	ND	10	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Iron	ND	30	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Manganese	ND	10	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
Zinc	ND	20	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	16:02	ac
SAR	0.9		--				04/18/2025	13:00	ac	Calc.	04/18/2025	16:02	ac
Total Alkalinity (as CaCO3)	210	10	mg/L		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:33	sta
Hydroxide as OH	ND	10	mg/L		1	U	04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:33	sta
Carbonate as CO3	ND	10	mg/L		1	U	04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:33	sta
Bicarbonate as HCO3	260	10	mg/L		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:33	sta
Sulfate	34.7	0.5	mg/L		1		04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	07:44	ldm
Chloride	160	3*	mg/L		3		04/24/2025	13:13	ldm	EPA 300.0	04/26/2025	13:00	ldm
Nitrate as NO3	3.1	0.4	mg/L		1		04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:27	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:25	mm1
Nitrate + Nitrite as N	0.7	0.4	mg/L		1		04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:27	mm1
Fluoride	ND	0.1	mg/L		1	U	04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	07:44	ldm
Total Anions	9.5	10	meq/L				04/24/2025	13:13	ldm	Calc.	04/26/2025	13:00	ldm
pH	7.4	---	units		1		04/16/2025	14:44	ab	SM 4500-H+B	04/16/2025	14:44	ab
Specific Conductance	913	1	umhos/cm		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:33	sta
Total Dissolved Solids	560	20	mg/L		1	I	04/21/2025	10:00	ctl	SM 2540 C	04/22/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/17/2025	18:17	mct	SM 5540 C	04/17/2025	18:30	mct
Aggressiveness Index	11.8	10	---				04/18/2025	13:00	ac	Calc.	04/18/2025	16:02	ac
Langelier Index (20°C)	-0.03	20	---				04/18/2025	13:00	ac	Calc.	04/18/2025	16:02	ac
Nitrate Nitrogen	0.7	0.4	mg/L		1		04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:27	mm1

DQF Flags Definition:
U Constituent results were non-detect.
I The RPD for the laboratory duplicate exceeded laboratory criteria.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18L2 (LA15) LA15
Project : Los Osos BMC Monitoring

Lab No. : CC 2581336-002
Customer No. : 8000514

Sampled On : April 16, 2025 at 14:44
Sampled By : Addison Burke
Received On : April 16, 2025 at 15:18
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.39		units		04/16/2025 14:44	4500HB	04/16/2025 14:44

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 5 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 9, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18M1 (LA16) LA16
Project : Los Osos BMC Monitoring

Lab No. : CC 2581364-001
Customer No. : 8000514

Sampled On : April 21, 2025 at 12:52
Sampled By : Addison Burke
Received On : April 21, 2025 at 14:44
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	237	2.5	mg/L				04/23/2025	10:00	ac	2340B	04/23/2025	15:51	ac
Calcium	39	1	mg/L		1		04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Magnesium	34	1	mg/L		1		04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Potassium	2	1	mg/L		1		04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Sodium	40	1	mg/L		1		04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Total Cations	6.5	1	meq/L				04/23/2025	10:00	ac	Calc.	04/23/2025	15:51	ac
Boron	ND	0.1	mg/L		1	U	04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Copper	ND	10	ug/L		1	U	04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Iron	840	30	ug/L		1		04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Manganese	870	10	ug/L		1		04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
Zinc	ND	20	ug/L		1	U	04/23/2025	10:00	ac	EPA 200.7	04/23/2025	15:51	ac
SAR	1.1		--				04/23/2025	10:00	ac	Calc.	04/23/2025	15:51	ac
Total Alkalinity (as CaCO3)	150	10	mg/L		1		04/23/2025	17:48	amm	SM 4500-H+B	04/23/2025	19:22	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/23/2025	17:48	amm	SM 4500-H+B	04/23/2025	19:22	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/23/2025	17:48	amm	SM 4500-H+B	04/23/2025	19:22	amm
Bicarbonate as HCO3	190	10	mg/L		1		04/23/2025	17:48	amm	SM 4500-H+B	04/23/2025	19:22	amm
Sulfate	25.7	0.5	mg/L		1		04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	04:54	ldm
Chloride	140	3*	mg/L		3		04/24/2025	13:13	ldm	EPA 300.0	04/26/2025	11:45	ldm
Nitrate as NO3	0.6	0.4	mg/L		1	J	04/22/2025	14:15	mm1	SM 4500-NO3 F	04/22/2025	19:01	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/22/2025	14:15	mm1	SM 4500-NO3 F	04/22/2025	18:59	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/22/2025	14:15	mm1	SM 4500-NO3 F	04/22/2025	19:01	mm1
Fluoride	ND	0.1	mg/L		1	U	04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	04:54	ldm
Total Anions	7.6	10	meq/L				04/24/2025	13:13	ldm	Calc.	04/26/2025	11:45	ldm
pH	7.6	---	units		1		04/21/2025	12:52	ab	SM 4500-H+B	04/21/2025	12:52	ab
Specific Conductance	732	1	umhos/cm		1		04/23/2025	17:48	amm	SM 4500-H+B	04/23/2025	19:22	amm
Total Dissolved Solids	400	20	mg/L		1		04/23/2025	13:30	ctl	SM 2540 C	04/24/2025	11:45	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/22/2025	17:22	mct	SM 5540 C	04/22/2025	17:31	mct
Aggressiveness Index	11.8	10	---				04/23/2025	10:00	ac	Calc.	04/23/2025	15:51	ac
Langelier Index (20°C)	-0.09	20	---				04/23/2025	10:00	ac	Calc.	04/23/2025	15:51	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/22/2025	14:15	mm1	SM 4500-NO3 F	04/22/2025	19:01	mm1

DQF Flags Definition:
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 6

May 9, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18M1 (LA16) LA16
Project : Los Osos BMC Monitoring

Lab No. : CC 2581364-001
Customer No. : 8000514

Sampled On : April 21, 2025 at 12:52
Sampled By : Addison Burke
Received On : April 21, 2025 at 14:44
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.59		units		04/21/2025 12:52	4500HB	04/21/2025 12:52

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 17, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K8 (LA18) LA18
Project : Los Osos BMC Monitoring

Lab No. : CC 2581175-001
Customer No. : 8000514

Sampled On : April 3, 2025 at 13:47
Sampled By : Addison Burke
Received On : April 3, 2025 at 15:24
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	265	2.5	mg/L				04/04/2025	14:00	ac	2340B	04/04/2025	20:00	ac
Calcium	55	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Magnesium	31	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Potassium	2	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Sodium	35	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Total Cations	6.9	1	meq/L				04/04/2025	14:00	ac	Calc.	04/04/2025	20:00	ac
Boron	ND	0.1	mg/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Copper	ND	10	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Iron	ND	30	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Manganese	40	10	ug/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
Zinc	ND	20	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	20:00	ac
SAR	0.9		--				04/04/2025	14:00	ac	Calc.	04/04/2025	20:00	ac
Total Alkalinity (as CaCO3)	220	10	mg/L		1		04/09/2025	11:04	amm	SM 4500-H+B	04/10/2025	00:19	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/09/2025	11:04	amm	SM 4500-H+B	04/10/2025	00:19	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/09/2025	11:04	amm	SM 4500-H+B	04/10/2025	00:19	amm
Bicarbonate as HCO3	270	10	mg/L		1		04/09/2025	11:04	amm	SM 4500-H+B	04/10/2025	00:19	amm
Sulfate	60.9	0.5	mg/L		1		04/09/2025	14:18	ldm	EPA 300.0	04/10/2025	02:10	sta
Chloride	64	1	mg/L		1		04/09/2025	14:18	ldm	EPA 300.0	04/10/2025	02:10	sta
Nitrate as NO3	1.0	0.4	mg/L		1	J	04/04/2025	12:15	mm1	SM 4500-NO3 F	04/04/2025	14:31	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/04/2025	12:15	mm1	SM 4500-NO3 F	04/04/2025	14:29	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/04/2025	12:15	mm1	SM 4500-NO3 F	04/04/2025	14:31	mm1
Fluoride	0.3	0.1	mg/L		1	h	04/09/2025	14:18	ldm	EPA 300.0	04/10/2025	02:10	sta
Total Anions	7.5	10	meq/L				04/09/2025	14:18	ldm	Calc.	04/10/2025	02:10	sta
pH	7.7	---	units		1		04/03/2025	13:47	ab	SM 4500-H+B	04/03/2025	13:47	ab
Specific Conductance	667	1	umhos/cm		1		04/09/2025	11:04	amm	SM 4500-H+B	04/10/2025	00:19	amm
Total Dissolved Solids	420	20	mg/L		1		04/08/2025	13:00	ctl	SM 2540 C	04/09/2025	10:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/04/2025	18:20	mct	SM 5540 C	04/04/2025	18:23	mct
Aggressiveness Index	12.2	10	---				04/04/2025	14:00	ac	Calc.	04/04/2025	20:00	ac
Langelier Index (20°C)	0.3	20	---				04/04/2025	14:00	ac	Calc.	04/04/2025	20:00	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/04/2025	12:15	mm1	SM 4500-NO3 F	04/04/2025	14:31	mm1

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
h The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 17, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K8 (LA18) LA18
Project : Los Osos BMC Monitoring

Lab No. : CC 2581175-001
Customer No. : 8000514

Sampled On : April 3, 2025 at 13:47
Sampled By : Addison Burke
Received On : April 3, 2025 at 15:24
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.66		units		04/03/2025 13:47	4500HB	04/03/2025 13:47

ND=Non-Detected, RL=Reporting Level.

Page 3 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 17N10 (LA20 - South Bay #1) LA20
Project : Spring BMC GSWC

Lab No. : CC 2581158-003
Customer No. : 8000514

Sampled On : April 2, 2025 at 08:30
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	223	2.5	mg/L				04/04/2025	14:00	ac	2340B	04/04/2025	19:47	ac
Calcium	35	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Magnesium	33	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Potassium	2	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Sodium	39	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Total Cations	6.2	1	meq/L				04/04/2025	14:00	ac	Calc.	04/04/2025	19:47	ac
Boron	0.1	0.1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Copper	ND	10	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Iron	ND	30	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Manganese	200	10	ug/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
Zinc	ND	20	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:47	ac
SAR	1.1		--				04/04/2025	14:00	ac	Calc.	04/04/2025	19:47	ac
Total Alkalinity (as CaCO3)	230	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:42	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:42	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:42	amm
Bicarbonate as HCO3	270	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:42	amm
Sulfate	26.4	0.5	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	01:48	ldm
Chloride	44	1	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	01:48	ldm
Nitrate as NO3	6.2	0.4	mg/L		1		04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:21	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:19	mm1
Nitrate + Nitrite as N	1.4	0.4	mg/L		1		04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:21	mm1
Fluoride	0.2	0.1	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	01:48	ldm
Total Anions	6.3	10	meq/L				04/08/2025	17:14	ldm	Calc.	04/09/2025	01:48	ldm
pH	7.5	---	units		1		04/02/2025	08:30	jd	SM 4500-H+B	04/02/2025	08:30	jd
Specific Conductance	593	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:42	amm
Total Dissolved Solids	310	20	mg/L		1		04/07/2025	10:30	ctl	SM 2540 C	04/08/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/03/2025	21:06	amm	SM 5540 C	04/03/2025	21:18	amm
Aggressiveness Index	11.8	10	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:47	ac
Langelier Index (20°C)	-0.04	20	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:47	ac
Nitrate Nitrogen	1.4	0.4	mg/L		1		04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:21	mm1

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 6 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 17N10 (LA20 - South Bay #1) LA20
Project : Spring BMC GSWC

Lab No. : CC 2581158-003
Customer No. : 8000514

Sampled On : April 2, 2025 at 08:30
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.50		units		04/02/2025 08:30	4500HB	04/02/2025 08:30
Conductivity	604		umhos/cm		04/02/2025 08:30	2510B	04/02/2025 08:30
Temperature	66		°F		04/02/2025 08:30	2550B	04/02/2025 08:30

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 7 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 17E8 (LA22) LA22
Project : Los Osos BMC Monitoring

Lab No. : CC 2581336-001
Customer No. : 8000514

Sampled On : April 16, 2025 at 12:56
Sampled By : Addison Burke
Received On : April 16, 2025 at 15:18
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	161	2.5	mg/L				04/18/2025	13:00	ac	2340B	04/18/2025	15:56	ac
Calcium	25	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Magnesium	24	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Potassium	1	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Sodium	28	1	mg/L		1		04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Total Cations	4.5	1	meq/L				04/18/2025	13:00	ac	Calc.	04/18/2025	15:56	ac
Boron	ND	0.1	mg/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Copper	ND	10	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Iron	ND	30	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Manganese	ND	10	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
Zinc	ND	20	ug/L		1	U	04/18/2025	13:00	ac	EPA 200.7	04/18/2025	15:56	ac
SAR	1		--				04/18/2025	13:00	ac	Calc.	04/18/2025	15:56	ac
Total Alkalinity (as CaCO3)	140	10	mg/L		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:04	sta
Hydroxide as OH	ND	10	mg/L		1	U	04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:04	sta
Carbonate as CO3	ND	10	mg/L		1	U	04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:04	sta
Bicarbonate as HCO3	170	10	mg/L		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:04	sta
Sulfate	15.2	0.5	mg/L		1		04/23/2025	15:03	ldm	EPA 300.0	04/23/2025	20:20	ldm
Chloride	47	1	mg/L		1	b	04/23/2025	15:03	ldm	EPA 300.0	04/23/2025	20:20	ldm
Nitrate as NO3	26.4	0.4	mg/L		1		04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:24	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:22	mm1
Nitrate + Nitrite as N	6.0	0.4	mg/L		1		04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:24	mm1
Fluoride	ND	0.1	mg/L		1	U	04/23/2025	15:03	ldm	EPA 300.0	04/23/2025	20:20	ldm
Total Anions	4.9	10	meq/L				04/23/2025	15:03	ldm	Calc.	04/23/2025	20:20	ldm
pH	7.4	---	units		1		04/16/2025	12:56	ab	SM 4500-H+B	04/16/2025	12:56	ab
Specific Conductance	473	1	umhos/cm		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	18:04	sta
Total Dissolved Solids	280	20	mg/L		1	I	04/21/2025	10:00	ctl	SM 2540 C	04/22/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/17/2025	18:17	mct	SM 5540 C	04/17/2025	18:30	mct
Aggressiveness Index	11.3	10	---				04/18/2025	13:00	ac	Calc.	04/18/2025	15:56	ac
Langelier Index (20°C)	-0.5	20	---				04/18/2025	13:00	ac	Calc.	04/18/2025	15:56	ac
Nitrate Nitrogen	6.0	0.4	mg/L		1		04/17/2025	13:42	mm1	SM 4500-NO3 F	04/17/2025	14:24	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL
I The RPD for the laboratory duplicate exceeded laboratory criteria.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 17E8 (LA22) LA22
Project : Los Osos BMC Monitoring

Lab No. : CC 2581336-001
Customer No. : 8000514

Sampled On : April 16, 2025 at 12:56
Sampled By : Addison Burke
Received On : April 16, 2025 at 15:18
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.43		units		04/16/2025 12:56	4500HB	04/16/2025 12:56

ND=Non-Detected, RL=Reporting Level.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 25, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 20H1 (LA30) LA30
Project : Los Osos BMC Monitoring

Lab No. : CC 2581263-002
Customer No. : 8000514

Sampled On : April 10, 2025 at 13:05
Sampled By : Addison Burke
Received On : April 10, 2025 at 13:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	408	2.5	mg/L				04/14/2025	10:00	ac	2340B	04/14/2025	16:42	ac
Calcium	68	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Magnesium	58	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Potassium	1	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Sodium	39	1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Total Cations	9.9	1	meq/L				04/14/2025	10:00	ac	Calc.	04/14/2025	16:42	ac
Boron	0.1	0.1	mg/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Copper	ND	10	ug/L		1	U	04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Iron	540	30	ug/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Manganese	200	10	ug/L		1		04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
Zinc	ND	20	ug/L		1	U	04/14/2025	10:00	ac	EPA 200.7	04/14/2025	16:42	ac
SAR	0.8		--				04/14/2025	10:00	ac	Calc.	04/14/2025	16:42	ac
Total Alkalinity (as CaCO3)	340	10	mg/L		1		04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:23	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:23	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:23	amm
Bicarbonate as HCO3	410	10	mg/L		1		04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:23	amm
Sulfate	87.3	0.5	mg/L		1		04/22/2025	10:29	ldm	EPA 300.0	04/22/2025	16:23	ldm
Chloride	58	1	mg/L		1	b	04/22/2025	10:29	ldm	EPA 300.0	04/22/2025	16:23	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:44	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:42	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:44	mm1
Fluoride	0.3	0.1	mg/L		1		04/22/2025	10:29	ldm	EPA 300.0	04/22/2025	16:23	ldm
Total Anions	10.2	10	meq/L				04/22/2025	10:29	ldm	Calc.	04/22/2025	16:23	ldm
pH	7.9	---	units		1		04/10/2025	13:05	ab	SM 4500-H+B	04/10/2025	13:05	ab
Specific Conductance	910	1	umhos/cm		1		04/14/2025	15:30	amm	SM 4500-H+B	04/14/2025	18:23	amm
Total Dissolved Solids	550	20	mg/L		1		04/14/2025	10:15	ctl	SM 2540 C	04/15/2025	11:45	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/11/2025	19:26	mct	SM 5540 C	04/11/2025	19:33	mct
Aggressiveness Index	12.7	10	---				04/14/2025	10:00	ac	Calc.	04/14/2025	16:42	ac
Langelier Index (20°C)	0.8	20	---				04/14/2025	10:00	ac	Calc.	04/14/2025	16:42	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/11/2025	12:45	mm1	SM 4500-NO3 F	04/11/2025	14:44	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 4 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 25, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 20H1 (LA30) LA30
Project : Los Osos BMC Monitoring

Lab No. : CC 2581263-002
Customer No. : 8000514

Sampled On : April 10, 2025 at 13:05
Sampled By : Addison Burke
Received On : April 10, 2025 at 13:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.89		units		04/10/2025 13:05	4500HB	04/10/2025 13:05

ND=Non-Detected, RL=Reporting Level.

Page 5 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 9, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13M2 (LA31) LA31
Project : Los Osos BMC Monitoring

Lab No. : CC 2581340-001
Customer No. : 8000514

Sampled On : April 17, 2025 at 09:23
Sampled By : Gracie Doolin
Received On : April 17, 2025 at 10:15
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	203	2.5	mg/L				04/21/2025	10:00	ac	2340B	04/21/2025	15:27	kas
Calcium	32	1	mg/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Magnesium	30	1	mg/L		1	l	04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Potassium	5	1	mg/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Sodium	136	1	mg/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Total Cations	10.1	1	meq/L				04/21/2025	10:00	ac	Calc.	04/21/2025	15:27	kas
Boron	0.1	0.1	mg/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Copper	60	10	ug/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Iron	470	30	ug/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Manganese	30	10	ug/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
Zinc	30	20	ug/L		1		04/21/2025	10:00	ac	EPA 200.7	04/21/2025	15:27	kas
SAR	4.1		--				04/21/2025	10:00	ac	Calc.	04/21/2025	15:27	kas
Total Alkalinity (as CaCO3)	70	10	mg/L		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	17:44	sta
Hydroxide as OH	ND	10	mg/L		1	U	04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	17:44	sta
Carbonate as CO3	ND	10	mg/L		1	U	04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	17:44	sta
Bicarbonate as HCO3	90	10	mg/L		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	17:44	sta
Sulfate	69.6	0.5	mg/L		1		05/01/2025	16:32	ldm	EPA 300.0	05/02/2025	01:48	ldm
Chloride	300	7*	mg/L		7	bl	05/01/2025	16:32	ldm	EPA 300.0	05/02/2025	09:05	ldm
Nitrate as NO3	4.3	0.4	mg/L		1		04/18/2025	13:45	mm1	SM 4500-NO3 F	04/18/2025	14:33	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/18/2025	13:45	mm1	SM 4500-NO3 F	04/18/2025	14:31	mm1
Nitrate + Nitrite as N	1.0	0.4	mg/L		1		04/18/2025	13:45	mm1	SM 4500-NO3 F	04/18/2025	14:33	mm1
Fluoride	ND	0.1	mg/L		1	U	05/01/2025	16:32	ldm	EPA 300.0	05/02/2025	01:48	ldm
Total Anions	11.5	10	meq/L				05/01/2025	16:32	ldm	Calc.	05/02/2025	09:05	ldm
pH	7.8	---	units		1		04/17/2025	09:23	gd	SM 4500-H+B	04/17/2025	09:23	gd
Specific Conductance	1290	1	umhos/cm		1		04/22/2025	14:02	amm	SM 4500-H+B	04/22/2025	17:44	sta
Total Dissolved Solids	750	20	mg/L		1		04/22/2025	13:00	ctl	SM 2540 C	04/23/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/18/2025	17:26	mct	SM 5540 C	04/18/2025	17:37	mct
Aggressiveness Index	11.5	10	---				04/21/2025	10:00	ac	Calc.	04/21/2025	15:27	kas
Langelier Index (20°C)	-0.3	20	---				04/21/2025	10:00	ac	Calc.	04/21/2025	15:27	kas
Nitrate Nitrogen	1.0	0.4	mg/L		1		04/18/2025	13:45	mm1	SM 4500-NO3 F	04/18/2025	14:33	mm1

DQF Flags Definition:
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 9, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13M2 (LA31) LA31
Project : Los Osos BMC Monitoring

Lab No. : CC 2581340-001
Customer No. : 8000514

Sampled On : April 17, 2025 at 09:23
Sampled By : Gracie Doolin
Received On : April 17, 2025 at 10:15
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.75		units		04/17/2025 09:23	4500HB	04/17/2025 09:23

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 3 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 14, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA32 LA32
Project : Los Osos BMC Monitoring

Lab No. : CC 2581126-002
Customer No. : 8000514

Sampled On : April 1, 2025 at 09:25
Sampled By : Addison Burke
Received On : April 1, 2025 at 13:57
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	178	2.5	mg/L				04/03/2025	09:00	ac	2340B	04/03/2025	15:41	ac
Calcium	27	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Magnesium	27	1	mg/L		1	l	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Potassium	1	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Sodium	33	1	mg/L		1		04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Total Cations	5.0	1	meq/L				04/03/2025	09:00	ac	Calc.	04/03/2025	15:41	ac
Boron	ND	0.1	mg/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Copper	ND	10	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Iron	ND	30	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Manganese	ND	10	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
Zinc	ND	20	ug/L		1	U	04/03/2025	09:00	ac	EPA 200.7	04/03/2025	15:41	ac
SAR	1.1		--				04/03/2025	09:00	ac	Calc.	04/03/2025	15:41	ac
Total Alkalinity (as CaCO3)	160	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:26	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:26	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:26	amm
Bicarbonate as HCO3	200	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:26	amm
Sulfate	24.0	0.5	mg/L		1		04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	17:34	ldm
Chloride	50	1	mg/L		1	l	04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	17:34	ldm
Nitrate as NO3	6.4	0.4	mg/L		1	h	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	18:56	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	18:53	mm1
Nitrate + Nitrite as N	1.4	0.4	mg/L		1	h	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	18:56	mm1
Fluoride	0.1	0.1	mg/L		1		04/07/2025	08:59	ldm	EPA 300.0	04/07/2025	17:34	ldm
Total Anions	5.3	10	meq/L				04/07/2025	08:59	ldm	Calc.	04/07/2025	17:34	ldm
pH	7.7	---	units		1		04/01/2025	09:25	ab	SM 4500-H+B	04/01/2025	09:25	ab
Specific Conductance	500	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	16:26	amm
Total Dissolved Solids	280	20	mg/L		1		04/03/2025	13:00	ctl	SM 2540 C	04/04/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/02/2025	19:19	mct	SM 5540 C	04/02/2025	19:53	mct
Aggressiveness Index	11.7	10	---				04/03/2025	09:00	ac	Calc.	04/03/2025	15:41	ac
Langelier Index (20°C)	-0.1	20	---				04/03/2025	09:00	ac	Calc.	04/03/2025	15:41	ac
Nitrate Nitrogen	1.4	0.4	mg/L		1	h	04/02/2025	16:00	mm1	SM 4500-NO3 F	04/02/2025	18:56	mm1

DQF Flags Definition:
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.
h The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 4 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 14, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA32 LA32
Project : Los Osos BMC Monitoring

Lab No. : CC 2581126-002
Customer No. : 8000514

Sampled On : April 1, 2025 at 09:25
Sampled By : Addison Burke
Received On : April 1, 2025 at 13:57
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.71		units		04/01/2025 09:25	4500HB	04/01/2025 09:25

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 5 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K__(LA39 - Los Olivos #5) LA39
Project : Spring BMC GSWC

Lab No. : CC 2581158-004
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:00
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	225	2.5	mg/L				04/04/2025	14:00	ac	2340B	04/04/2025	19:53	ac
Calcium	34	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Magnesium	34	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Potassium	2	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Sodium	41	1	mg/L		1		04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Total Cations	6.3	1	meq/L				04/04/2025	14:00	ac	Calc.	04/04/2025	19:53	ac
Boron	ND	0.1	mg/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Copper	ND	10	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Iron	ND	30	ug/L		1	Ul	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Manganese	ND	10	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
Zinc	ND	20	ug/L		1	U	04/04/2025	14:00	ac	EPA 200.7	04/04/2025	19:53	ac
SAR	1.2		--				04/04/2025	14:00	ac	Calc.	04/04/2025	19:53	ac
Total Alkalinity (as CaCO3)	240	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:52	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:52	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:52	amm
Bicarbonate as HCO3	300	10	mg/L		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:52	amm
Sulfate	30.5	0.5	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	02:08	ldm
Chloride	39	1	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	02:08	ldm
Nitrate as NO3	2.1	0.4	mg/L		1		04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:24	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:22	mm1
Nitrate + Nitrite as N	0.5	0.4	mg/L		1		04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:24	mm1
Fluoride	0.1	0.1	mg/L		1		04/08/2025	17:14	ldm	EPA 300.0	04/09/2025	02:08	ldm
Total Anions	6.7	10	meq/L				04/08/2025	17:14	ldm	Calc.	04/09/2025	02:08	ldm
pH	7.5	---	units		1		04/02/2025	10:00	jd	SM 4500-H+B	04/02/2025	10:00	jd
Specific Conductance	607	1	umhos/cm		1		04/08/2025	13:41	amm	SM 4500-H+B	04/08/2025	15:52	amm
Total Dissolved Solids	340	20	mg/L		1		04/07/2025	16:00	ctl	SM 2540 C	04/08/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/03/2025	21:06	amm	SM 5540 C	04/03/2025	21:18	amm
Aggressiveness Index	11.8	10	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:53	ac
Langelier Index (20°C)	-0.04	20	---				04/04/2025	14:00	ac	Calc.	04/04/2025	19:53	ac
Nitrate Nitrogen	0.5	0.4	mg/L		1		04/03/2025	16:15	mm1	SM 4500-NO3 F	04/03/2025	18:24	mm1

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 8 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 16, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K__(LA39 - Los Olivos #5) LA39
Project : Spring BMC GSWC

Lab No. : CC 2581158-004
Customer No. : 8000514

Sampled On : April 2, 2025 at 10:00
Sampled By : Jerome Dengate
Received On : April 2, 2025 at 13:58
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.50		units		04/02/2025 10:00	4500HB	04/02/2025 10:00
Conductivity	940		umhos/cm		04/02/2025 10:00	2510B	04/02/2025 10:00
Temperature	71		°F		04/02/2025 10:00	2550B	04/02/2025 10:00

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 9 of 12

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 21, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13 Ba (LA40) LA40
Project : Los Osos BMC Monitoring

Lab No. : CC 2581191-001
Customer No. : 8000514

Sampled On : April 7, 2025 at 14:12
Sampled By : Addison Burke
Received On : April 7, 2025 at 15:05
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	4160	12.5	mg/L				04/09/2025	08:00	ac	2340B	04/10/2025	13:37	ac
Calcium	693	5*	mg/L		5		04/09/2025	08:00	ac	EPA 200.7	04/10/2025	13:37	ac
Magnesium	590	5*	mg/L		5		04/09/2025	08:00	ac	EPA 200.7	04/10/2025	13:37	ac
Potassium	6	1	mg/L		1		04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
Sodium	211	1	mg/L		1	l	04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
Total Cations	92.5	5	meq/L				04/09/2025	08:00	ac	Calc.	04/10/2025	13:37	ac
Boron	ND	0.1	mg/L		1	U	04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
Copper	ND	10	ug/L		1	U	04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
Iron	50	30	ug/L		1		04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
Manganese	690	10	ug/L		1		04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
Zinc	30	20	ug/L		1		04/09/2025	08:00	ac	EPA 200.7	04/09/2025	19:13	ac
SAR	1.4		--				04/09/2025	08:00	ac	Calc.	04/10/2025	13:37	ac
Total Alkalinity (as CaCO3)	230	10	mg/L		1		04/09/2025	20:18	amm	SM 4500-H+B	04/10/2025	06:02	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/09/2025	20:18	amm	SM 4500-H+B	04/10/2025	06:02	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/09/2025	20:18	amm	SM 4500-H+B	04/10/2025	06:02	amm
Bicarbonate as HCO3	280	10	mg/L		1		04/09/2025	20:18	amm	SM 4500-H+B	04/10/2025	06:02	amm
Sulfate	249	3*	mg/L		5		04/14/2025	14:06	ldm	EPA 300.0	04/14/2025	23:38	ldm
Chloride	2700	65*	mg/L		70		04/14/2025	14:06	ldm	EPA 300.0	04/15/2025	06:16	ldm
Nitrate as NO3	0.4	0.4	mg/L		1	J	04/08/2025	13:00	mm1	SM 4500-NO3 F	04/08/2025	14:56	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/08/2025	13:00	mm1	SM 4500-NO3 F	04/08/2025	14:54	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/08/2025	13:00	mm1	SM 4500-NO3 F	04/08/2025	14:56	mm1
Fluoride	ND	0.5*	mg/L		5	U	04/14/2025	14:06	ldm	EPA 300.0	04/14/2025	23:38	ldm
Total Anions	85.9	65	meq/L				04/14/2025	14:06	ldm	Calc.	04/15/2025	06:16	ldm
pH	7.4	---	units		1		04/07/2025	14:12	ab	SM 4500-H+B	04/07/2025	14:12	ab
Specific Conductance	8830	1	umhos/cm		1		04/09/2025	20:18	amm	SM 4500-H+B	04/10/2025	06:02	amm
Total Dissolved Solids	9070	20	mg/L		1		04/09/2025	14:00	ctl	SM 2540 C	04/10/2025	10:45	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/08/2025	20:27	mct	SM 5540 C	04/08/2025	20:49	mct
Aggressiveness Index	13.0	10	---				04/09/2025	08:00	ac	Calc.	04/10/2025	13:37	ac
Langelier Index (20°C)	1	20	---				04/09/2025	08:00	ac	Calc.	04/10/2025	13:37	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/08/2025	13:00	mm1	SM 4500-NO3 F	04/08/2025	14:56	mm1

DQF Flags Definition:
l The MS/MSD did not meet QC criteria.
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 21, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13 Ba (LA40) LA40
Project : Los Osos BMC Monitoring

Lab No. : CC 2581191-001
Customer No. : 8000514

Sampled On : April 7, 2025 at 14:12
Sampled By : Addison Burke
Received On : April 7, 2025 at 15:05
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.41		units		04/07/2025 14:12	4500HB	04/07/2025 14:12

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

April 21, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Bb (LA41) LA41
Project : Los Osos BMC Monitoring

Lab No. : CC 2581244-001
Customer No. : 8000514

Sampled On : April 9, 2025 at 13:54
Sampled By : Addison Burke
Received On : April 9, 2025 at 14:53
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	274	2.5	mg/L				04/11/2025	12:00	ac	2340B	04/11/2025	15:50	ac
Calcium	49	1	mg/L		1		04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Magnesium	37	1	mg/L		1		04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Potassium	2	1	mg/L		1		04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Sodium	46	1	mg/L		1		04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Total Cations	7.5	1	meq/L				04/11/2025	12:00	ac	Calc.	04/11/2025	15:50	ac
Boron	ND	0.1	mg/L		1	U	04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Copper	ND	10	ug/L		1	U	04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Iron	70	30	ug/L		1		04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Manganese	110	10	ug/L		1		04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
Zinc	ND	20	ug/L		1	U	04/11/2025	12:00	ac	EPA 200.7	04/11/2025	15:50	ac
SAR	1.2		--				04/11/2025	12:00	ac	Calc.	04/11/2025	15:50	ac
Total Alkalinity (as CaCO3)	280	10	mg/L		1		04/13/2025	18:04	amm	SM 4500-H+B	04/14/2025	10:18	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/13/2025	18:04	amm	SM 4500-H+B	04/14/2025	10:18	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/13/2025	18:04	amm	SM 4500-H+B	04/14/2025	10:18	amm
Bicarbonate as HCO3	340	10	mg/L		1		04/13/2025	18:04	amm	SM 4500-H+B	04/14/2025	10:18	amm
Sulfate	48.4	0.5	mg/L		1		04/18/2025	12:40	ldm	EPA 300.0	04/19/2025	06:12	ldm
Chloride	52	1	mg/L		1		04/18/2025	12:40	ldm	EPA 300.0	04/19/2025	06:12	ldm
Nitrate as NO3	0.4	0.4	mg/L		1	J	04/10/2025	12:48	mm1	SM 4500-NO3 F	04/10/2025	14:11	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/10/2025	12:48	mm1	SM 4500-NO3 F	04/10/2025	14:09	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/10/2025	12:48	mm1	SM 4500-NO3 F	04/10/2025	14:11	mm1
Fluoride	ND	0.1	mg/L		1	J	04/18/2025	12:40	ldm	EPA 300.0	04/19/2025	06:12	ldm
Total Anions	8.1	10	meq/L				04/18/2025	12:40	ldm	Calc.	04/19/2025	06:12	ldm
pH	7.4	---	units		1		04/09/2025	13:54	ab	SM 4500-H+B	04/09/2025	13:54	ab
Specific Conductance	744	1	umhos/cm		1		04/13/2025	18:04	amm	SM 4500-H+B	04/14/2025	10:18	amm
Total Dissolved Solids	420	20	mg/L		1		04/14/2025	10:15	ctl	SM 2540 C	04/15/2025	11:45	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/10/2025	17:44	mct	SM 5540 C	04/10/2025	17:52	mct
Aggressiveness Index	11.9	10	---				04/11/2025	12:00	ac	Calc.	04/11/2025	15:50	ac
Langelier Index (20°C)	0.08	20	---				04/11/2025	12:00	ac	Calc.	04/11/2025	15:50	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/10/2025	12:48	mm1	SM 4500-NO3 F	04/10/2025	14:11	mm1

DQF Flags Definition:
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

April 21, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Bb (LA41) LA41
Project : Los Osos BMC Monitoring

Lab No. : CC 2581244-001
Customer No. : 8000514

Sampled On : April 9, 2025 at 13:54
Sampled By : Addison Burke
Received On : April 9, 2025 at 14:53
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.41		units		04/09/2025 13:54	4500HB	04/09/2025 13:54

ND=Non-Detected, RL=Reporting Level.

Page 3 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13J9 (LA42) LA42
Project : Los Osos BMC Monitoring

Lab No. : CC 2581296-001
Customer No. : 8000514

Sampled On : April 14, 2025 at 11:04
Sampled By : Gracie Doolin
Received On : April 14, 2025 at 13:45
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	2860	12.5	mg/L				04/16/2025	11:00	ac	2340B	04/17/2025	19:13	ac
Calcium	576	5*	mg/L		5		04/16/2025	11:00	ac	EPA 200.7	04/17/2025	19:13	ac
Magnesium	345	5*	mg/L		5		04/16/2025	11:00	ac	EPA 200.7	04/17/2025	19:13	ac
Potassium	5	1	mg/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
Sodium	96	1	mg/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
Total Cations	61.4	5	meq/L				04/16/2025	11:00	ac	Calc.	04/17/2025	19:13	ac
Boron	ND	0.1	mg/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
Copper	ND	10	ug/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
Iron	ND	30	ug/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
Manganese	120	10	ug/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
Zinc	ND	20	ug/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:37	ac
SAR	0.8		--				04/16/2025	11:00	ac	Calc.	04/17/2025	19:13	ac
Total Alkalinity (as CaCO3)	220	10	mg/L		1		04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	00:27	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	00:27	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	00:27	amm
Bicarbonate as HCO3	270	10	mg/L		1		04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	00:27	amm
Sulfate	166	5*	mg/L		10		04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	10:16	ldm
Chloride	2100	40*	mg/L		40		04/24/2025	13:13	ldm	EPA 300.0	04/26/2025	13:56	ldm
Nitrate as NO3	0.4	0.4	mg/L		1	J	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	14:58	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	14:56	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	14:58	mm1
Fluoride	ND	1*	mg/L		10	U	04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	10:16	ldm
Total Anions	67.1	40	meq/L				04/24/2025	13:13	ldm	Calc.	04/26/2025	13:56	ldm
pH	7.5	---	units		1		04/14/2025	11:04	gd	SM 4500-H+B	04/14/2025	11:04	gd
Specific Conductance	6090	1	umhos/cm		1		04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	00:27	amm
Total Dissolved Solids	5220	20	mg/L		1		04/16/2025	14:00	ctl	SM 2540 C	04/17/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/15/2025	17:57	mct	SM 5540 C	04/15/2025	18:11	mct
Aggressiveness Index	13.0	10	---				04/16/2025	11:00	ac	Calc.	04/17/2025	19:13	ac
Langelier Index (20°C)	1.0	20	---				04/16/2025	11:00	ac	Calc.	04/17/2025	19:13	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	14:58	mm1

DQF Flags Definition:
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13J9 (LA42) LA42
Project : Los Osos BMC Monitoring

Lab No. : CC 2581296-001
Customer No. : 8000514

Sampled On : April 14, 2025 at 11:04
Sampled By : Gracie Doolin
Received On : April 14, 2025 at 13:45
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.51		units		04/14/2025 11:04	4500HB	04/14/2025 11:04

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 3 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Jb (LA43) LA43
Project : Los Osos BMC Monitoring

Lab No. : CC 2581296-002
Customer No. : 8000514

Sampled On : April 14, 2025 at 12:15
Sampled By : Gracie Doolin
Received On : April 14, 2025 at 13:45
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	261	2.5	mg/L				04/16/2025	11:00	ac	2340B	04/16/2025	17:44	ac
Calcium	42	1	mg/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Magnesium	38	1	mg/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Potassium	2	1	mg/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Sodium	39	1	mg/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Total Cations	7.0	1	meq/L				04/16/2025	11:00	ac	Calc.	04/16/2025	17:44	ac
Boron	ND	0.1	mg/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Copper	ND	10	ug/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Iron	ND	30	ug/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Manganese	40	10	ug/L		1		04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
Zinc	ND	20	ug/L		1	U	04/16/2025	11:00	ac	EPA 200.7	04/16/2025	17:44	ac
SAR	1.0		--				04/16/2025	11:00	ac	Calc.	04/16/2025	17:44	ac
Total Alkalinity (as CaCO3)	270	10	mg/L		1		04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	01:46	amm
Hydroxide as OH	ND	10	mg/L		1	U	04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	01:46	amm
Carbonate as CO3	ND	10	mg/L		1	U	04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	01:46	amm
Bicarbonate as HCO3	330	10	mg/L		1		04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	01:46	amm
Sulfate	41.0	0.5	mg/L		1		04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	07:26	ldm
Chloride	55	1	mg/L		1		04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	07:26	ldm
Nitrate as NO3	0.4	0.4	mg/L		1	J	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	15:00	mm1
Nitrite as N	ND	0.2	mg/L		1	U	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	14:58	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	15:00	mm1
Fluoride	ND	0.1	mg/L		1	U	04/24/2025	13:13	ldm	EPA 300.0	04/25/2025	07:26	ldm
Total Anions	7.8	10	meq/L				04/24/2025	13:13	ldm	Calc.	04/25/2025	07:26	ldm
pH	7.5	---	units		1		04/14/2025	12:15	gd	SM 4500-H+B	04/14/2025	12:15	gd
Specific Conductance	712	1	umhos/cm		1		04/21/2025	12:39	amm	SM 4500-H+B	04/22/2025	01:46	amm
Total Dissolved Solids	390	20	mg/L		1		04/16/2025	14:00	ctl	SM 2540 C	04/17/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	04/15/2025	17:57	mct	SM 5540 C	04/15/2025	18:11	mct
Aggressiveness Index	12.0	10	---				04/16/2025	11:00	ac	Calc.	04/16/2025	17:44	ac
Langelier Index (20°C)	0.1	20	---				04/16/2025	11:00	ac	Calc.	04/16/2025	17:44	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	04/15/2025	14:40	mm1	SM 4500-NO3 F	04/15/2025	15:00	mm1

DQF Flags Definition:
U Constituent results were non-detect.
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

May 1, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Jb (LA43) LA43
Project : Los Osos BMC Monitoring

Lab No. : CC 2581296-002
Customer No. : 8000514

Sampled On : April 14, 2025 at 12:15
Sampled By : Gracie Doolin
Received On : April 14, 2025 at 13:45
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.47		units		04/14/2025 12:15	4500HB	04/14/2025 12:15

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 5 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

Fall 2025 Field Logs and Analytical Results

Groundwater Monitoring Field Log

Date: 10/15/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/10E-13Q2 (FW5)
Site/wellhead conditions: Cloudy and cool. Site secure.

Static water depth (feet): 79.43
Well depth (feet): 105
Water column (feet): 25.57
Casing diameter (inches): 2
Minimum purge volume (gal): 15
Pump setting (feet): 100
Time begin purge: 9:26 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:29	1.0	767.2	8.22	17.9	Cloudy, orange, odorless
9:33	5.0	772.7	7.88	18.2	Slightly cloudy, colorless, odorless
9:39	10.0	773.5	7.49	18.2	Clear, colorless, odorless
9:45	15.0	773.9	7.29	18.4	Clear, colorless, odorless
9:50	20.0	777.8	7.36	18.4	Clear, colorless, odorless
9:53	22.0	777.3	7.24	18.4	Clear, colorless, odorless
9:56	25.0	777.3	7.19	18.5	Clear, colorless, odorless
					Sampled at 9:57

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/15/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/10E-24A (FW6)
Site/wellhead conditions	Partly cloudy and cool. Site secure.

Static water depth (feet):	139.64
Well depth (feet):	164
Water column (feet):	24.36
Casing diameter (inches):	2
Minimum purge volume (gal)	12
Pump setting (feet):	160
Time begin purge:	11:22 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:27	1.0	834.1	7.15	19.4	Slightly cloudy, slightly yellow, odorless
11:50	5.0	858.2	7.47	20.4	Clear, colorless, odorless
11:54	7.0	864.0	7.28	20.0	Clear, colorless, odorless
11:58	10.0	858.2	7.07	20.1	Clear, colorless, odorless
12:02	12.0	860.5	7.18	19.9	Clear, colorless, odorless
12:05	14.0	861.6	7.15	20.0	Clear, colorless, odorless
					Sampled at 12:07

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/13/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/11E - 7Q1 (FW 10) LOCSD 8th Street - shallow
Site/wellhead conditions	Cloudy and warm. Site secure.

Static water depth (feet):	9.18
Well depth (feet):	75
Water column (feet):	65.82
Casing diameter (inches):	8
Minimum purge volume (gal)	520
Pump setting (feet):	60
Time begin purge:	11:35 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:36	1.0	394.0	10.18	19.4	Clear, slightly brown, odorless
11:38	5.0	386.6	9.73	18.9	Slightly cloudy, slightly brown, metallic odor
11:39	10.0	383.9	9.38	18.9	Slightly cloudy, slightly brown, metallic odor
11:41	15.0	381.4	9.07	19.0	Slightly cloudy, slightly brown, metallic odor
11:45	30.0	376.4	8.51	19.1	Clear, slightly brown, slight metallic odor
11:57	80.0	373.4	8.48	19.2	Clear, slightly brown, slight metallic odor
12:06	120.0	387.0	8.17	19.3	Clear, slightly brown, slight metallic odor
12:26	200.0	454.4	8.40	19.8	Clear, slightly brown, slight metallic odor
12:44	260.0	533.4	7.59	19.7	Slightly cloudy, slightly brown, slight metallic odor
13:08	340.0	558.4	7.36	19.7	Slightly cloudy, slightly brown, slight metallic odor
14:01	420.0	546.6	7.29	19.6	Clear, very slightly brown, odorless
14:19	480.0	542.6	7.17	19.5	Clear, colorless, odorless
14:25	500.0	556.1	7.08	19.5	Clear, colorless, odorless
14:28	510.0	546.4	7.03	19.5	Clear, colorless, odorless
14:29	515.0	541.8	7.11	19.4	Clear, colorless, odorless
14:31	520.0	553.9	7.15	19.6	Clear, colorless, odorless
14:32	525.0	546.1	7.13	19.4	Clear, colorless, odorless
14:33	530.0	544.1	7.13	19.3	Clear, colorless, odorless
					Sampled at 14:34

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/14/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11E-20M2 (FW28)
Site/wellhead conditions: Sunny and warm. Pump is running. Site secure.

Static water depth (feet): 31.34 Recovering
Well depth (feet): 102
Water column (feet): 71
Casing diameter (inches): --
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 1:40 PM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
13:40	Flush Line	829.1	8.04	17.1	Clear, slightly yellow, odorless
13:42	Flush Line	827.0	7.85	16.0	Clear, colorless, odorless
13:43	Flush Line	822.8	7.83	15.9	Clear, colorless, odorless
13:44	Flush Line	818.2	7.79	15.8	Clear, colorless, odorless
13:45	Flush Line	819.2	7.78	15.8	Clear, colorless, odorless
					Sampled at 13:46

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/1/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/10E-13N (LA 8)
Site/wellhead conditions: Sunny and warm. Site secure.

Static water depth (feet): 133.8 feet on 10/6/25
Well depth (feet): 350
Water column (feet): 216.2
Casing diameter (inches): 8
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 12:04 PM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
12:04	Flush Line	431.1	8.23	17.8	Clear, colorless, odorless
12:05	Flush Line	497.5	7.95	18.2	Clear, colorless, odorless
12:06	Flush Line	449.8	7.88	18.4	Clear, colorless, odorless
12:07	Flush Line	436.9	7.86	18.5	Clear, colorless, odorless
12:08	Flush Line	432.2	7.80	18.5	Clear, colorless, odorless
12:09	Flush Line	429.6	7.80	18.5	Clear, colorless, odorless
					Sampled at 12:10

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/2/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/10E-12J1 (LA 11)
Site/wellhead conditions: Partly cloudy and warm. Site secure.

Static water depth (feet): 2.25
Well depth (feet): 389
Water column (feet): 386.75
Casing diameter (inches): 2
Minimum purge volume (gal): 190
Pump setting (feet): 25
Time begin purge: 9:00 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:00	1.0	1365	8.41	18.4	Clear, colorless, sulfur odor
9:03	5.0	1364	8.18	18.2	Clear, colorless, sulfur odor
9:06	10.0	1353	8.03	18.5	Clear, colorless, sulfur odor
9:10	20.0	1349	8.06	18.9	Clear, colorless, sulfur odor
9:20	45.0	1322	8.03	19.8	Clear, colorless, sulfur odor
9:26	60.0	1673	7.73	20.3	Clear, colorless, slight sulfur odor
9:32	75.0	2.04 ms	7.64	20.6	Clear, colorless, slight sulfur odor
9:42	100.0	1856	7.61	20.7	Clear, colorless, odorless
9:50	120.0	1826	7.56	20.8	Clear, colorless, odorless
10:00	145.0	1928	7.53	20.9	Clear, colorless, odorless
10:10	170.0	1909	7.53	20.9	Clear, colorless, odorless
10:14	180.0	1782	7.54	20.9	Clear, colorless, odorless
10:16	185.0	1779	7.56	20.8	Clear, colorless, odorless
10:18	190.0	1780	7.60	20.9	Clear, colorless, odorless
					Sampled at 10:19

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/1/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/11E-7Q3 (LA 12)
Site/wellhead conditions	Foggy and cool. Pump has been running since 8:00 AM. Site secure.

Static water depth (feet):	26.3 feet on 10/15/25
Well depth (feet):	270
Water column (feet):	243.7
Casing diameter (inches):	10
Minimum purge volume (gal)	--
Pump setting (feet):	Flush Line
Time begin purge:	8:46 AM

Time	**Gallons**	**EC (µS)**	**pH**	**Temp. (°C)**	**Comments***
8:46	Flush Line	811.3	8.96	21.0	Clear, colorless, slight sulfur odor
8:48	Flush Line	790.9	7.90	20.9	Clear, colorless, slight sulfur odor
8:49	Flush Line	786.1	7.77	20.9	Clear, colorless, slight sulfur odor
8:50	Flush Line	783.7	7.72	20.9	Clear, colorless, slight sulfur odor
8:51	Flush Line	783.4	7.68	20.9	Clear, colorless, slight sulfur odor
8:52	Flush Line	783.1	7.66	20.9	Clear, colorless, slight sulfur odor
					Sampled at 8:53

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/8/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/11E-18F2 (LA 13)
Site/wellhead conditions	Sunny and warm. Site secure.

Static water depth (feet):	98.58
Well depth (feet):	530
Water column (feet):	431.42
Casing diameter (inches):	2.5
Minimum purge volume (gal)	330
Pump setting (feet):	120
Time begin purge:	9:11 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:12	1.0	563.8	8.65	19.2	Clear, colorless, slight sulfur odor
9:14	5.0	561.4	8.38	19.4	Clear, colorless, slight sulfur odor
9:17	10.0	560.6	8.28	19.8	Clear, colorless, slight sulfur odor
9:22	20.0	555.7	8.31	19.9	Clear, colorless, slight sulfur odor
9:30	40.0	553.4	8.06	20.5	Clear, colorless, slight sulfur odor
9:39	60.0	550.2	8.01	20.7	Clear, colorless, slight sulfur odor
9:57	100.0	544.6	8.01	22.2	Clear, colorless, slight sulfur odor
10:14	140.0	547.4	8.49	22.2	Clear, colorless, slight sulfur odor
10:32	180.0	554.1	8.35	22.3	Clear, colorless, slight sulfur odor
10:58	240.0	560.3	8.20	22.6	Clear, colorless, slight sulfur odor
11:16	280.0	568.2	8.44	22.6	Clear, colorless, slight sulfur odor
11:34	320.0	570.6	8.11	22.7	Clear, colorless, slight sulfur odor
11:36	325.0	569.8	8.11	22.7	Clear, colorless, slight sulfur odor
11:39	330.0	572.4	8.12	22.7	Clear, colorless, slight sulfur odor
					Sampled at 11:40

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/23/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11E-18L6 (LA14)
Site/wellhead conditions: Sunny and warm. Site secure.

Static water depth (feet): 72.25
Well depth (feet): 591
Water column (feet): 518.75
Casing diameter (inches): 2.5
Minimum purge volume (gal): 400
Pump setting (feet): 105
Time begin purge: 9:04 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:05	0.5	948.4	8.18	18.1	Clear, colorless, sulfur odor
9:06	5.0	990.0	7.89	18.5	Clear, colorless, sulfur odor
9:09	10.0	989.8	7.75	18.9	Clear, colorless, sulfur odor
9:13	20.0	985.4	7.80	19.4	Clear, colorless, sulfur odor
9:21	40.0	979.7	7.86	20.0	Clear, colorless, sulfur odor
9:37	80.0	989.2	7.97	21.2	Clear, colorless, sulfur odor
9:53	120.0	1109	7.53	22.1	Clear, colorless, sulfur odor
10:17	180.0	1004	7.54	22.2	Clear, colorless, sulfur odor
10:41	240.0	986.1	7.53	22.4	Clear, colorless, slight sulfur odor
10:57	280.0	983.9	7.51	22.5	Clear, colorless, slight sulfur odor
11:13	320.0	980.6	7.52	22.5	Clear, colorless, slight sulfur odor
11:29	360.0	978.3	7.52	22.6	Clear, colorless, slight sulfur odor
11:37	380.0	981.4	7.52	22.7	Clear, colorless, slight sulfur odor
11:41	390.0	981.1	7.51	22.7	Clear, colorless, slight sulfur odor
11:43	395.0	982.8	7.53	22.7	Clear, colorless, slight sulfur odor
11:45	400.0	981.5	7.53	22.7	Clear, colorless, slight sulfur odor
					Sampled at 11:47

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/2/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11W-18L2 (LA 15)
Site/wellhead conditions: Warm and sunny. Well has been running since 7:00 AM. Site secure.

Static water depth (feet): 86.6 feet on 10/15/25
Well depth (feet): 394
Water column (feet): 307.40
Casing diameter (inches): 12
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 11:12 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:12	Flush Line	877.4	8.05	20.9	Clear, colorless, odorless
11:14	Flush Line	872.9	7.89	20.7	Clear, colorless, odorless
11:15	Flush Line	873.6	7.81	20.6	Clear, colorless, odorless
11:16	Flush Line	873.0	7.78	20.6	Clear, colorless, odorless
					Sampled at 11:18

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/9/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11E-18M1 (LA16)
Site/wellhead conditions: Sunny and cool. Site secure.

Static water depth (feet): 104.91
Well depth (feet): 509
Water column (feet): 404.09
Casing diameter (inches): 2.5
Minimum purge volume (gal): 310
Pump setting (feet): 135
Time begin purge: 9:03 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:03	0.5	633.4	8.70	17.5	Clear, colorless, sulfur odor
9:06	5.0	567.0	8.48	18.8	Clear, colorless, sulfur odor
9:09	10.0	562.3	8.22	19.0	Clear, colorless, slight sulfur odor
9:14	20.0	561.6	8.11	18.9	Clear, colorless, slight sulfur odor
9:24	40.0	556.8	7.93	19.1	Clear, colorless, slight sulfur odor
9:34	60.0	552.7	7.69	19.9	Clear, colorless, slight sulfur odor
9:44	80.0	540.4	7.64	20.5	Clear, colorless, slight sulfur odor
9:54	100.0	667.9	7.60	20.9	Clear, colorless, slight sulfur odor
10:14	140.0	838.9	7.59	20.9	Clear, colorless, slight sulfur odor
10:34	180.0	959.4	7.58	21.1	Clear, colorless, slight sulfur odor
10:54	220.0	1051	7.61	21.6	Clear, colorless, slight sulfur odor
11:14	260.0	1116	7.54	21.7	Clear, colorless, slight sulfur odor
11:24	280.0	1145	7.58	21.6	Clear, colorless, slight sulfur odor
11:29	290.0	1158	7.52	21.5	Clear, colorless, slight sulfur odor
11:34	300.0	1171	7.54	21.4	Clear, colorless, slight sulfur odor
11:36	305.0	1174	7.55	21.4	Clear, colorless, very slight sulfur odor
11:39	310.0	1181	7.58	21.6	Clear, colorless, very slight sulfur odor
					Sampled at 11:40

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/6/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11E-18K8 (LA 18)
Site/wellhead conditions: Cloudy and cool. Site secure.

Static water depth (feet): 130.94
Well depth (feet): 650
Water column (feet): 519.06
Casing diameter (inches): 2
Minimum purge volume (gal): 255
Pump setting (feet): 155
Time begin purge: 9:43 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:45	1.0	543.5	8.86	19.8	Clear, colorless, odorless
9:48	5.0	531.3	8.27	20.6	Clear, colorless, odorless
9:51	10.0	534.1	8.01	20.5	Clear, colorless, odorless
9:55	15.0	533.0	7.78	20.5	Clear, colorless, odorless
10:05	30.0	532.7	7.13	20.8	Clear, colorless, odorless
10:19	50.0	533.6	7.03	21.3	Clear, colorless, odorless
10:33	70.0	533.1	6.86	21.7	Clear, colorless, odorless
10:54	100.0	619.3	6.86	22.0	Clear, colorless, odorless
11:15	130.0	627.0	7.27	22.2	Clear, colorless, odorless
11:43	170.0	624.1	7.43	22.4	Clear, colorless, odorless
12:04	200.0	625.3	7.50	23.0	Clear, colorless, odorless
12:18	220.0	622.3	7.50	23.0	Clear, colorless, odorless
12:32	240.0	619.9	7.52	23.0	Clear, colorless, odorless
12:35	245.0	617.1	7.54	22.6	Clear, colorless, odorless
12:39	250.0	614.9	7.60	22.6	Clear, colorless, odorless
12:42	255.0	615.8	7.58	22.8	Clear, colorless, odorless
					Sampled at 12:44

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/8/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11E-17E8 (LA 22)
Site/wellhead conditions: Warm and sunny with wind. Site secure.

Static water depth (feet): 135.01
Well depth (feet): 390
Water column (feet): 254.99
Casing diameter (inches): 2
Minimum purge volume (gal): 125
Pump setting (feet): 155
Time begin purge: 12:23 PM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
12:24	1.0	506.8	8.54	19.7	Clear, colorless, odorless
12:27	5.0	510.6	8.26	19.9	Clear, colorless, odorless
12:30	10.0	507.3	8.13	20.0	Clear, colorless, odorless
12:36	20.0	500.4	8.07	20.5	Clear, colorless, odorless
12:42	30.0	458.9	7.94	20.4	Clear, colorless, odorless
12:48	40.0	456.2	7.82	20.4	Clear, colorless, odorless
13:00	60.0	454.0	7.99	21.0	Clear, colorless, odorless
13:12	80.0	456.0	7.61	20.4	Clear, colorless, odorless
13:24	100.0	454.0	7.49	20.4	Clear, colorless, odorless
13:30	110.0	453.9	7.40	20.4	Clear, colorless, odorless
13:33	115.0	455.8	7.52	20.4	Clear, colorless, odorless
13:36	120.0	452.9	7.54	20.4	Clear, colorless, odorless
13:39	125.0	454.8	7.57	20.2	Clear, colorless, odorless
					Sampled at 13:40

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/2/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S11E-20H1 (LA 30)
Site/wellhead conditions: Sunny and warm. Site secure.

Static water depth (feet): 26.00
Well depth (feet): 140
Water column (feet): 114.00
Casing diameter (inches): 6
Minimum purge volume (gal) --
Pump setting (feet): Flush Line
Time begin purge: 12:57 PM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
12:57	1.0	829.6	7.87	26.3	Clear, colorless, odorless
12:58	7.0	825.2	7.76	20.9	Clear, colorless, odorless
13:00	17.0	826.9	7.72	18.8	Clear, colorless, odorless
13:01	25.0	830.0	7.69	19.0	Clear, colorless, odorless
13:02	30.0	828.1	7.67	19.0	Clear, colorless, odorless
					Sampled at 13:04

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/16/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/10E-13M2 (LA 31)
Site/wellhead conditions: Sunny and windy. Site secure.

Static water depth (feet): 36.68
Well depth (feet): 227
Water column (feet): 190.32
Casing diameter (inches): 8
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 1:35 PM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
13:35	Flush Line	881.6	7.70	21.5	Clear, colorless, soapy odor
13:37	Flush Line	871.5	7.63	21.8	Clear, colorless, odorless
13:38	Flush Line	881.6	7.62	21.7	Pump kicked on. Clear, colorless, odorless
13:39	Flush Line	812.1	7.71	19.4	Clear, colorless, odorless
13:40	Flush Line	789.5	7.71	19.3	Clear, colorless, odorless
13:41	Flush Line	679.7	7.71	19.5	Clear, colorless, odorless
13:42	Flush Line	1299	7.58	19.5	Clear, colorless, odorless
13:43	Flush Line	1429	7.65	19.4	Clear, colorless, odorless
13:44	Flush Line	1416	7.67	19.5	Clear, colorless, odorless
13:45	Flush Line	1396	7.67	19.5	Clear, colorless, odorless
13:46	Flush Line	1375	7.67	19.5	Clear, colorless, odorless
13:47	Flush Line	1376	7.66	19.5	Clear, colorless, odorless
					Sampled at 13:48

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/1/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/11E - 18K9 (LA 32)
Site/wellhead conditions: Foggy and cool. Well started running at 8:52 AM. Site secure.

Static water depth (feet): 141.6 feet on 10/15/25
Well depth (feet): 490
Water column (feet): 348.4
Casing diameter (inches): 14
Minimum purge volume (gal): --
Pump setting (feet): Flush Line
Time begin purge: 9:04 AM

Time	**Gallons**	**EC (µS)**	**pH**	**Temp. (°C)**	**Comments***
9:04	Flush Line	424.1	7.74	20.5	Clear, colorless, odorless
9:07	Flush Line	451.9	7.47	20.7	Clear, colorless, odorless
9:09	Flush Line	459.6	7.46	20.8	Clear, colorless, odorless
9:10	Flush Line	463.7	7.49	20.8	Clear, colorless, odorless
9:12	Flush Line	470.3	7.44	20.8	Clear, colorless, odorless
9:13	Flush Line	474.0	7.41	20.8	Clear, colorless, odorless
9:15	Flush Line	476.9	7.39	20.8	Clear, colorless, odorless
9:16	Flush Line	479.4	7.32	20.8	Clear, colorless, odorless
9:18	Flush Line	480.5	7.40	20.9	Clear, colorless, odorless
					Sampled at 9:20

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/20/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/10E-13Ba (LA 40)
Site/wellhead conditions	Cloudy and cool. Site secure.

Static water depth (feet):	6.77
Well depth (feet):	490
Water column (feet):	483.23
Casing diameter (inches):	2.5
Minimum purge volume (gal)	370
Pump setting (feet):	150
Time begin purge:	9:08 AM

Time	Gallons	EC (mS)	pH	Temp. (°C)	Comments*
9:09	1.0	7.73	7.56	18.0	Clear, colorless, slight sulfur odor
9:11	5.0	7.78	7.34	18.5	Clear, colorless, slight sulfur odor
9:13	10.0	7.81	7.25	18.5	Clear, colorless, slight sulfur odor
9:19	20.0	7.79	7.34	18.7	Clear, colorless, slight sulfur odor
9:35	40.0	7.53	7.57	19.6	Clear, colorless, slight sulfur odor
10:00	60.0	7.19	7.43	20.6	Clear, colorless, odorless
10:48	100.0	6.57	7.40	20.9	Clear, colorless, odorless
11:36	140.0	8.27	7.31	21.3	Clear, colorless, odorless
12:24	180.0	8.62	7.29	21.5	Clear, colorless, odorless
13:12	220.0	8.72	7.31	21.5	Clear, colorless, odorless
13:36	240.0	8.76	7.30	21.7	Clear, colorless, odorless
13:48	250.0	8.74	7.28	21.7	Clear, colorless, odorless
13:54	255.0	8.79	7.28	21.5	Clear, colorless, odorless
					Sampled at 13:55

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/21/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/10E-13Bb (LA 41)
Site/wellhead conditions	Foggy and cold. Site secure.

Static water depth (feet):	5.57
Well depth (feet):	350
Water column (feet):	344.43
Casing diameter (inches):	2.5
Minimum purge volume (gal)	265
Pump setting (feet):	150
Time begin purge:	8:57 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
8:57	1.0	838.4	8.70	17.9	Clear, colorless, sulfur odor
8:59	5.0	794.2	8.64	18.4	Clear, colorless, sulfur odor
9:01	10.0	793.3	8.35	18.5	Clear, colorless, sulfur odor
9:06	20.0	792.4	8.18	18.5	Clear, colorless, slight sulfur odor
9:23	40.0	792.6	8.01	19.5	Clear, colorless, slight sulfur odor
9:46	60.0	786.7	7.56	20.4	Clear, colorless, slight sulfur odor
10:10	80.0	789.8	7.44	20.7	Clear, colorless, slight sulfur odor
10:34	100.0	789.9	7.42	20.8	Clear, colorless, slight sulfur odor
11:22	140.0	795.5	7.44	20.8	Clear, colorless, slight sulfur odor
12:10	180.0	798.0	7.42	20.9	Clear, colorless, slight sulfur odor
12:58	220.0	800.8	7.41	20.9	Clear, colorless, slight sulfur odor
13:22	240.0	802.7	7.39	21.0	Clear, colorless, slight sulfur odor
13:34	250.0	805.7	7.36	21.0	Clear, colorless, slight sulfur odor
13:46	260.0	811.2	7.36	21.1	Clear, colorless, slight sulfur odor
13:52	265.0	810.6	7.43	21.0	Clear, colorless, slight sulfur odor
13:55	268.0	811.6	7.44	21.0	Clear, colorless, slight sulfur odor
					Sampled at 13:56

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/16/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/10E-13Ja (LA 42) Skyline Zone E
Site/wellhead conditions: Sunny and warm with wind. Site secure.

Static water depth (feet): 47.67
Well depth (feet): 486
Water column (feet): 438.33
Casing diameter (inches): 2.3
Minimum purge volume (gal): 285
Pump setting (feet): 80
Time begin purge: 9:50 AM

Time	Gallons	EC (mS)	pH	Temp. (°C)	Comments*
9:50	0.5	3.68	7.54	17.8	Clear, colorless, sulfur odor
9:52	5.0	3.73	7.43	17.8	Clear, colorless, sulfur odor
9:54	10.0	3.68	7.41	18.3	Clear, colorless, sulfur odor
9:57	20.0	3.62	7.50	18.6	Clear, colorless, slight sulfur odor
10:04	40.0	3.31	7.54	19.6	Clear, colorless, slight sulfur odor
10:32	120.0	5.14	7.51	22.0	Clear, colorless, odorless
10:46	160.0	5.27	7.30	22.0	Clear, colorless, odorless
10:53	180.0	5.28	7.30	21.8	Clear, colorless, odorless
11:00	200.0	5.28	7.23	22.0	Clear, colorless, odorless
11:07	220.0	5.29	7.23	22.0	Clear, colorless, odorless
11:14	240.0	5.29	7.32	22.2	Clear, colorless, odorless
11:21	260.0	5.30	7.27	22.1	Clear, colorless, odorless
11:24	270.0	5.30	7.29	22.3	Clear, colorless, odorless
11:28	280.0	5.27	7.43	22.3	Clear, colorless, odorless
11:30	285.0	5.28	7.42	22.1	Clear, colorless, odorless
					Sampled at 11:31

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/16/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/10E-13Jb (LA 43) Skyline Zone D
Site/wellhead conditions	Sunny and warm with a breeze. Site secure.

Static water depth (feet):	47.24
Well depth (feet):	360
Water column (feet):	312.76
Casing diameter (inches):	2.3
Minimum purge volume (gal)	205
Pump setting (feet):	80
Time begin purge:	11:47 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:47	0.5	709.0	7.94	20.0	Clear colorless, odorless
11:49	5.0	678.9	7.79	18.2	Clear colorless, odorless
11:51	10.0	674.8	7.68	18.6	Clear colorless, odorless
11:54	20.0	670.1	7.71	19.4	Clear colorless, odorless
12:01	40.0	669.6	7.49	19.8	Clear colorless, odorless
12:15	80.0	669.6	7.39	20.7	Clear, colorless, very slight sulfur odor
12:22	100.0	669.9	7.33	21.0	Clear, colorless, odorless
12:29	120.0	670.7	7.30	20.9	Clear, colorless, odorless
12:36	140.0	670.8	7.30	21.0	Clear, colorless, odorless
12:43	160.0	668.8	7.33	21.1	Clear, colorless, odorless
12:50	180.0	671.1	7.23	21.1	Clear, colorless, odorless
12:53	190.0	669.2	7.35	20.9	Clear, colorless, odorless
12:57	200.0	667.0	7.31	21.0	Clear, colorless, odorless
12:59	205.0	669.0	7.40	21.0	Clear, colorless, odorless
13:01	210.0	673.8	7.40	21.2	Clear, colorless, odorless
					Sampled at 13:02

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

October 31, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583615-001
Customer No. : 8000514

Sampled On : October 15, 2025 at 09:57
Sampled By : Addison Burke
Received On : October 15, 2025 at 13:52
Matrix : Ground Water

Description : 13Q2 (FW5) FW5
Project : Los Osos BMC Monitoring

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	181	2.5	mg/L				10/17/2025	13:20	ac	2340B	10/17/2025	17:31	ac
Calcium	33	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Magnesium	24	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Potassium	2	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Sodium	75	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Total Cations	6.9	1	meq/L				10/17/2025	13:20	ac	Calc.	10/17/2025	17:31	ac
Boron	0.2	0.1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Copper	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Iron	120	30	ug/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Manganese	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
Zinc	ND	20	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:31	ac
SAR	2.4		--				10/17/2025	13:20	ac	Calc.	10/17/2025	17:31	ac
Total Alkalinity (as CaCO3)	90	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/28/2025	00:07	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/28/2025	00:07	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/28/2025	00:07	amm
Bicarbonate as HCO3	110	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/28/2025	00:07	amm
Sulfate	49.4	0.5	mg/L		1	b	10/28/2025	08:16	ldm	EPA 300.0	10/28/2025	19:54	ldm
Chloride	160	3*	mg/L		3	b	10/28/2025	08:16	ldm	EPA 300.0	10/28/2025	23:26	ldm
Nitrate as NO3	24.6	0.4	mg/L		1		10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:30	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:29	mm1
Nitrate + Nitrite as N	5.6	0.4	mg/L		1		10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:30	mm1
Fluoride	ND	0.1	mg/L		1	U	10/28/2025	08:16	ldm	EPA 300.0	10/28/2025	19:54	ldm
Total Anions	7.7	10	meq/L				10/28/2025	08:16	ldm	Calc.	10/28/2025	23:26	ldm
pH	7.2	---	units		1		10/15/2025	09:57	ab	SM 4500-H+B	10/15/2025	09:57	ab
Specific Conductance	791	1	umhos/cm		1		10/27/2025	13:08	amm	SM 4500-H+B	10/28/2025	00:07	amm
Total Dissolved Solids	530	20	mg/L		1		10/17/2025	12:30	ctl	SM 2540 C	10/20/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/16/2025	19:20	mct	SM 5540 C	10/16/2025	19:37	mct
Aggressiveness Index	11.1	10	---				10/17/2025	13:20	ac	Calc.	10/17/2025	17:31	ac
Langelier Index (20°C)	-0.8	20	---				10/17/2025	13:20	ac	Calc.	10/17/2025	17:31	ac
Nitrate Nitrogen	5.6	0.4	mg/L		1		10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:30	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 8

October 31, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Q2 (FW5) FW5
Project : Los Osos BMC Monitoring

Lab No. : CC 2583615-001
Customer No. : 8000514

Sampled On : October 15, 2025 at 09:57
Sampled By : Addison Burke
Received On : October 15, 2025 at 13:52
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.19		units		10/15/2025 09:57	4500HB	10/15/2025 09:57

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 31, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 24A(FW6) FW6
Project : Los Osos BMC Monitoring

Lab No. : CC 2583615-002
Customer No. : 8000514

Sampled On : October 15, 2025 at 12:07
Sampled By : Addison Burke
Received On : October 15, 2025 at 13:52
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	156	2.5	mg/L				10/17/2025	13:20	ac	2340B	10/17/2025	17:37	ac
Calcium	28	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Magnesium	21	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Potassium	2	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Sodium	110	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Total Cations	8.0	1	meq/L				10/17/2025	13:20	ac	Calc.	10/17/2025	17:37	ac
Boron	0.2	0.1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Copper	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Iron	50	30	ug/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Manganese	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
Zinc	ND	20	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	17:37	ac
SAR	3.8		--				10/17/2025	13:20	ac	Calc.	10/17/2025	17:37	ac
Total Alkalinity (as CaCO3)	150	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	21:08	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	21:08	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	21:08	amm
Bicarbonate as HCO3	180	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	21:08	amm
Sulfate	54.0	0.5	mg/L		1	b	10/28/2025	08:16	ldm	EPA 300.0	10/28/2025	19:38	ldm
Chloride	160	3*	mg/L		3	b	10/28/2025	08:16	ldm	EPA 300.0	10/28/2025	23:11	ldm
Nitrate as NO3	13.4	0.4	mg/L		1		10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:32	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:31	mm1
Nitrate + Nitrite as N	3.0	0.4	mg/L		1		10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:32	mm1
Fluoride	ND	0.1	mg/L		1	U	10/28/2025	08:16	ldm	EPA 300.0	10/28/2025	19:38	ldm
Total Anions	8.8	10	meq/L				10/28/2025	08:16	ldm	Calc.	10/28/2025	23:11	ldm
pH	7.2	---	units		1		10/15/2025	12:07	ab	SM 4500-H+B	10/15/2025	12:07	ab
Specific Conductance	878	1	umhos/cm		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	21:08	amm
Total Dissolved Solids	500	20	mg/L		1		10/17/2025	12:30	ctl	SM 2540 C	10/20/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/16/2025	19:20	mct	SM 5540 C	10/16/2025	19:37	mct
Aggressiveness Index	11.2	10	---				10/17/2025	13:20	ac	Calc.	10/17/2025	17:37	ac
Langelier Index (20°C)	-0.6	20	---				10/17/2025	13:20	ac	Calc.	10/17/2025	17:37	ac
Nitrate Nitrogen	3.0	0.4	mg/L		1		10/16/2025	11:55	mm1	SM 4500-NO3 F	10/16/2025	13:32	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 4 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 31, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 24A(FW6) FW6
Project : Los Osos BMC Monitoring

Lab No. : CC 2583615-002
Customer No. : 8000514

Sampled On : October 15, 2025 at 12:07
Sampled By : Addison Burke
Received On : October 15, 2025 at 13:52
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.15		units		10/15/2025 12:07	4500HB	10/15/2025 12:07

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : FW10 (7Q1) FW10
Project : Los Osos BMC Monitoring

Lab No. : CC 2583570-001
Customer No. : 8000514

Sampled On : October 13, 2025 at 14:34
Sampled By : Addison Burke
Received On : October 13, 2025 at 15:20
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	129	2.5	mg/L				10/14/2025	13:00	ac	2340B	10/14/2025	22:14	ac
Calcium	22	1	mg/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Magnesium	18	1	mg/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Potassium	3	1	mg/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Sodium	55	1	mg/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Total Cations	5.0	1	meq/L				10/14/2025	13:00	ac	Calc.	10/14/2025	22:14	ac
Boron	0.2	0.1	mg/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Copper	ND	10	ug/L		1	U	10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Iron	1580	30	ug/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Manganese	210	10	ug/L		1		10/14/2025	13:00	ac	EPA 200.7	10/14/2025	22:14	ac
Zinc	ND	20	ug/L		1	U	10/15/2025	14:30	ac	EPA 200.7	10/15/2025	19:43	ac
SAR	2.1		--				10/14/2025	13:00	ac	Calc.	10/14/2025	22:14	ac
Total Alkalinity (as CaCO3)	80	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:14	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:14	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:14	amm
Bicarbonate as HCO3	100	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:14	amm
Sulfate	40.4	0.5	mg/L		1	hb	10/23/2025	09:59	ldm	EPA 300.0	10/23/2025	20:36	ldm
Chloride	63	1	mg/L		1	hb	10/23/2025	09:59	ldm	EPA 300.0	10/23/2025	20:36	ldm
Nitrate as NO3	59.6	0.4	mg/L		1		10/14/2025	12:00	mm1	SM 4500-NO3 F	10/14/2025	13:27	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/14/2025	12:00	mm1	SM 4500-NO3 F	10/14/2025	13:26	mm1
Nitrate + Nitrite as N	13.5	0.4	mg/L		1		10/14/2025	12:00	mm1	SM 4500-NO3 F	10/14/2025	13:27	mm1
Fluoride	ND	0.1	mg/L		1	Uh	10/23/2025	09:59	ldm	EPA 300.0	10/23/2025	20:36	ldm
Total Anions	5.2	10	meq/L				10/23/2025	09:59	ldm	Calc.	10/23/2025	20:36	ldm
pH	7.1	---	units		1		10/13/2025	14:34	ab	SM 4500-H+B	10/13/2025	14:34	ab
Specific Conductance	549	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:14	amm
Total Dissolved Solids	360	20	mg/L		1		10/15/2025	12:15	ctl	SM 2540 C	10/16/2025	11:20	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/14/2025	20:04	mct	SM 5540 C	10/14/2025	20:14	mct
Aggressiveness Index	10.7	10	---				10/14/2025	13:00	ac	Calc.	10/14/2025	22:14	ac
Langelier Index (20°C)	-1.1	20	---				10/14/2025	13:00	ac	Calc.	10/14/2025	22:14	ac
Nitrate Nitrogen	13.5	0.4	mg/L		1		10/14/2025	12:00	mm1	SM 4500-NO3 F	10/14/2025	13:27	mm1

DQF Flags Definition:
U Constituent results were non-detect.
h The MS/MSD did not meet QC criteria.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : FW10 (7Q1) FW10
Project : Los Osos BMC Monitoring

Lab No. : CC 2583570-001
Customer No. : 8000514

Sampled On : October 13, 2025 at 14:34
Sampled By : Addison Burke
Received On : October 13, 2025 at 15:20
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.13		units		10/13/2025 14:34	4500HB	10/13/2025 14:34

ND=Non-Detected, RL=Reporting Level.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : FW28 (20M2) FW28
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-004
Customer No. : 8000514

Sampled On : October 1, 2025 at 13:46
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	379	2.5	mg/L				10/03/2025	08:00	ac	2340B	10/03/2025	16:05	ac
Calcium	63	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Magnesium	54	1	mg/L		1	l	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Potassium	1	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Sodium	37	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Total Cations	9.2	1	meq/L				10/03/2025	08:00	ac	Calc.	10/03/2025	16:05	ac
Boron	0.1	0.1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Copper	ND	10	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Iron	60	30	ug/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Manganese	110	10	ug/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
Zinc	ND	20	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	16:05	ac
SAR	0.8		--				10/03/2025	08:00	ac	Calc.	10/03/2025	16:05	ac
Total Alkalinity (as CaCO3)	350	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	23:12	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	23:12	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	23:12	amm
Bicarbonate as HCO3	420	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	23:12	amm
Sulfate	58.5	0.5	mg/L		1	b	10/09/2025	13:20	ldm	EPA 300.0	10/09/2025	22:08	ldm
Chloride	57	1	mg/L		1	b	10/09/2025	13:20	ldm	EPA 300.0	10/09/2025	22:08	ldm
Nitrate as NO3	0.6	0.4	mg/L		1	J	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:04	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:02	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:04	mm1
Fluoride	0.3	0.1	mg/L		1		10/09/2025	13:20	ldm	EPA 300.0	10/09/2025	22:08	ldm
Total Anions	9.7	10	meq/L				10/09/2025	13:20	ldm	Calc.	10/09/2025	22:08	ldm
pH	7.8	---	units		1		10/01/2025	13:46	ab	SM 4500-H+B	10/01/2025	13:46	ab
Specific Conductance	878	1	umhos/cm		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	23:12	amm
Total Dissolved Solids	580	20	mg/L		1		10/06/2025	09:15	ctl	SM 2540 C	10/07/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/02/2025	18:05	mct	SM 5540 C	10/02/2025	18:24	mct
Aggressiveness Index	12.5	10	---				10/03/2025	08:00	ac	Calc.	10/03/2025	16:05	ac
Langelier Index (20°C)	0.7	20	---				10/03/2025	08:00	ac	Calc.	10/03/2025	16:05	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:04	mm1

DQF Flags Definition:
- l The MS/MSD did not meet QC criteria.
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : FW28 (20M2) FW28
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-004
Customer No. : 8000514

Sampled On : October 1, 2025 at 13:46
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.78		units		10/01/2025 13:46	4500HB	10/01/2025 13:46

ND=Non-Detected, RL=Reporting Level.

Page 9 of 13

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13F4 (UA3-Skyline)-GSWC UA3
Project : Fall BMC GSWC

Lab No. : CC 2583445-001
Customer No. : 8000514

Sampled On : October 6, 2025 at 09:00
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	118	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	19:54	ac
Calcium	21	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Magnesium	16	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Potassium	1	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Sodium	50	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Total Cations	4.6	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	19:54	ac
Boron	ND	0.1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Iron	ND	30	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Manganese	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
Zinc	ND	20	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:54	ac
SAR	2.0		--				10/07/2025	15:00	ac	Calc.	10/07/2025	19:54	ac
Total Alkalinity (as CaCO3)	60	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:58	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:58	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:58	amm
Bicarbonate as HCO3	80	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:58	amm
Sulfate	20.4	0.5	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	21:38	ldm
Chloride	76	1	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	21:38	ldm
Nitrate as NO3	70.3	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:09	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:07	mm1
Nitrate + Nitrite as N	15.9	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:09	mm1
Fluoride	ND	0.1	mg/L		1	Uhb	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	21:38	ldm
Total Anions	5.0	10	meq/L				10/14/2025	11:01	ldm	Calc.	10/14/2025	21:38	ldm
pH	6.7	---	units		1		10/06/2025	09:00	jd	SM 4500-H+B	10/06/2025	09:00	jd
Specific Conductance	539	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:58	amm
Total Dissolved Solids	350	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	10.2	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	19:54	ac
Langelier Index (20°C)	-1.6	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	19:54	ac
Nitrate Nitrogen	15.9	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:09	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- h The MS/MSD did not meet QC criteria.
- b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 3 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583445-001
Customer No. : 8000514

Sampled On : October 6, 2025 at 09:00
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Description : 13F4 (UA3-Skyline)-GSWC UA3
Project : Fall BMC GSWC

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	6.71		units		10/06/2025 09:00	4500HB	10/06/2025 09:00
Conductivity	0.743		umhos/cm		10/06/2025 09:00	2510B	10/06/2025 09:00
Temperature	17.1		°C		10/06/2025 09:00	2550B	10/06/2025 09:00

ND=Non-Detected, RL=Reporting Level.

Page 4 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K3 (UA9-Los Olivos #3)GSWC UA9
Project : Fall BMC GSWC

Lab No. : CC 2583445-002
Customer No. : 8000514

Sampled On : October 6, 2025 at 10:40
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	93.4	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	20:19	ac
Calcium	16	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Magnesium	13	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Potassium	ND	1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Sodium	28	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Total Cations	3.1	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	20:19	ac
Boron	ND	0.1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Iron	ND	30	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Manganese	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
Zinc	ND	20	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:19	ac
SAR	1.3		--				10/07/2025	15:00	ac	Calc.	10/07/2025	20:19	ac
Total Alkalinity (as CaCO3)	50	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	05:07	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	05:07	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	05:07	amm
Bicarbonate as HCO3	60	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	05:07	amm
Sulfate	6.2	0.5	mg/L		1	hb	10/14/2025	07:52	ldm	EPA 300.0	10/14/2025	23:21	ldm
Chloride	49	1	mg/L		1	hb	10/14/2025	07:52	ldm	EPA 300.0	10/14/2025	23:21	ldm
Nitrate as NO3	40.3	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:10	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:09	mm1
Nitrate + Nitrite as N	9.1	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:10	mm1
Fluoride	ND	0.1	mg/L		1	Uh	10/14/2025	07:52	ldm	EPA 300.0	10/14/2025	23:21	ldm
Total Anions	3.1	10	meq/L				10/14/2025	07:52	ldm	Calc.	10/14/2025	23:21	ldm
pH	6.8	---	units		1		10/06/2025	10:40	jd	SM 4500-H+B	10/06/2025	10:40	jd
Specific Conductance	354	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	05:07	amm
Total Dissolved Solids	270	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	10.1	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:19	ac
Langelier Index (20°C)	-1.7	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:19	ac
Nitrate Nitrogen	9.1	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:10	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- h The MS/MSD did not meet QC criteria.
- b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 5 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K3 (UA9-Los Olivos #3)GSWC UA9
Project : Fall BMC GSWC

Lab No. : CC 2583445-002
Customer No. : 8000514

Sampled On : October 6, 2025 at 10:40
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	6.76		units		10/06/2025 10:40	4500HB	10/06/2025 10:40
Conductivity	0.585		umhos/cm		10/06/2025 10:40	2510B	10/06/2025 10:40
Temperature	18.8		°C		10/06/2025 10:40	2550B	10/06/2025 10:40

ND=Non-Detected, RL=Reporting Level.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA8 (13N) LA8
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-003
Customer No. : 8000514

Sampled On : October 1, 2025 at 12:10
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	106	2.5	mg/L				10/03/2025	08:00	ac	2340B	10/03/2025	15:59	ac
Calcium	16	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Magnesium	16	1	mg/L		1	l	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Potassium	1	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Sodium	37	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Total Cations	3.8	1	meq/L				10/03/2025	08:00	ac	Calc.	10/03/2025	15:59	ac
Boron	ND	0.1	mg/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Copper	ND	10	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Iron	ND	30	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Manganese	ND	10	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
Zinc	ND	20	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:59	ac
SAR	1.6		--				10/03/2025	08:00	ac	Calc.	10/03/2025	15:59	ac
Total Alkalinity (as CaCO3)	50	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:52	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:52	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:52	amm
Bicarbonate as HCO3	60	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:52	amm
Sulfate	8.9	0.5	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:16	ldm
Chloride	84	1	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:16	ldm
Nitrate as NO3	29.5	0.4	mg/L		1		10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:02	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:00	mm1
Nitrate + Nitrite as N	6.7	0.4	mg/L		1		10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:02	mm1
Fluoride	ND	0.1	mg/L		1	J	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:16	ldm
Total Anions	4.0	10	meq/L				10/09/2025	09:47	ldm	Calc.	10/09/2025	20:16	ldm
pH	7.8	---	units		1		10/01/2025	12:10	ab	SM 4500-H+B	10/01/2025	12:10	ab
Specific Conductance	446	1	umhos/cm		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:52	amm
Total Dissolved Solids	330	20	mg/L		1		10/06/2025	09:15	ctl	SM 2540 C	10/07/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/02/2025	18:05	mct	SM 5540 C	10/02/2025	18:24	mct
Aggressiveness Index	11.1	10	---				10/03/2025	08:00	ac	Calc.	10/03/2025	15:59	ac
Langelier Index (20°C)	-0.7	20	---				10/03/2025	08:00	ac	Calc.	10/03/2025	15:59	ac
Nitrate Nitrogen	6.7	0.4	mg/L		1		10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:02	mm1

DQF Flags Definition:
- l The MS/MSD did not meet QC criteria.
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA8 (13N) LA8
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-003
Customer No. : 8000514

Sampled On : October 1, 2025 at 12:10
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.80		units		10/01/2025 12:10	4500HB	10/01/2025 12:10

ND=Non-Detected, RL=Reporting Level.

Page 7 of 13

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583445-003
Customer No. : 8000514

Sampled On : October 6, 2025 at 09:50
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Description : 24C1 (LA9-Cabrillo)-GSWC LA9
Project : Fall BMC GSWC

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	144	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	20:26	ac
Calcium	23	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Magnesium	21	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Potassium	2	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Sodium	51	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Total Cations	5.1	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	20:26	ac
Boron	ND	0.1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Iron	ND	30	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Manganese	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
Zinc	30	20	ug/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:26	ac
SAR	1.9		--				10/07/2025	15:00	ac	Calc.	10/07/2025	20:26	ac
Total Alkalinity (as CaCO3)	60	10	mg/L		1		10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	15:07	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	15:07	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	15:07	amm
Bicarbonate as HCO3	80	10	mg/L		1		10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	15:07	amm
Sulfate	19.9	0.5	mg/L		1		10/17/2025	08:35	ldm	EPA 300.0	10/17/2025	14:15	ldm
Chloride	120	2*	mg/L		2		10/17/2025	08:35	ldm	EPA 300.0	10/18/2025	05:29	ldm
Nitrate as NO3	29.1	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:12	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:11	mm1
Nitrate + Nitrite as N	6.6	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:12	mm1
Fluoride	ND	0.1	mg/L		1	U	10/17/2025	08:35	ldm	EPA 300.0	10/17/2025	14:15	ldm
Total Anions	5.6	10	meq/L				10/17/2025	08:35	ldm	Calc.	10/18/2025	05:29	ldm
pH	6.8	---	units		1		10/06/2025	09:50	jd	SM 4500-H+B	10/06/2025	09:50	jd
Specific Conductance	597	1	umhos/cm		1		10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	15:07	amm
Total Dissolved Solids	400	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	10.3	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:26	ac
Langelier Index (20°C)	-1.5	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:26	ac
Nitrate Nitrogen	6.6	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:12	mm1

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 24C1 (LA9-Cabrillo)-GSWC LA9
Project : Fall BMC GSWC

Lab No. : CC 2583445-003
Customer No. : 8000514

Sampled On : October 6, 2025 at 09:50
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	6.84		units		10/06/2025 09:50	4500HB	10/06/2025 09:50
Conductivity	0.784		umhos/cm		10/06/2025 09:50	2510B	10/06/2025 09:50
Temperature	17.8		°C		10/06/2025 09:50	2550B	10/06/2025 09:50

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 8 of 18

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13J1 (LA10-Rosina)-GSWC LA10
Project : Fall BMC GSWC

Lab No. : CC 2583445-004
Customer No. : 8000514

Sampled On : October 6, 2025 at 09:30
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	326	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	20:32	ac
Calcium	53	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Magnesium	47	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Potassium	2	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Sodium	36	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Total Cations	8.1	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	20:32	ac
Boron	ND	0.1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Iron	370	30	ug/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Manganese	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
Zinc	150	20	ug/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:32	ac
SAR	0.9		--				10/07/2025	15:00	ac	Calc.	10/07/2025	20:32	ac
Total Alkalinity (as CaCO3)	70	10	mg/L		1		10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	14:37	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	14:37	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	14:37	amm
Bicarbonate as HCO3	80	10	mg/L		1		10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	14:37	amm
Sulfate	15.0	0.5	mg/L		1		10/17/2025	08:35	ldm	EPA 300.0	10/17/2025	14:30	ldm
Chloride	240	5*	mg/L		5		10/17/2025	08:35	ldm	EPA 300.0	10/18/2025	05:45	ldm
Nitrate as NO3	13.6	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:14	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:13	mm1
Nitrate + Nitrite as N	3.1	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:14	mm1
Fluoride	ND	0.1	mg/L		1	U	10/17/2025	08:35	ldm	EPA 300.0	10/17/2025	14:30	ldm
Total Anions	8.6	10	meq/L				10/17/2025	08:35	ldm	Calc.	10/18/2025	05:45	ldm
pH	6.9	---	units		1		10/06/2025	09:30	jd	SM 4500-H+B	10/06/2025	09:30	jd
Specific Conductance	945	1	umhos/cm		1		10/19/2025	20:26	amm	SM 4500-H+B	10/20/2025	14:37	amm
Total Dissolved Solids	750	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	10.9	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:32	ac
Langelier Index (20°C)	-1.0	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:32	ac
Nitrate Nitrogen	3.1	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:14	mm1

DQF Flags Definition:
U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 9 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13J1 (LA10-Rosina)-GSWC LA10
Project : Fall BMC GSWC

Lab No. : CC 2583445-004
Customer No. : 8000514

Sampled On : October 6, 2025 at 09:30
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	6.86		units		10/06/2025 09:30	4500HB	10/06/2025 09:30
Conductivity	0.963		umhos/cm		10/06/2025 09:30	2510B	10/06/2025 09:30
Temperature	18.6		°C		10/06/2025 09:30	2550B	10/06/2025 09:30

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 10 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 11 (12J1) LA11
Project : Los Osos BMC Monitoring

Lab No. : CC 2583413-001
Customer No. : 8000514

Sampled On : October 2, 2025 at 10:19
Sampled By : Addison Burke
Received On : October 2, 2025 at 13:30
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	795	2.5	mg/L				10/06/2025	12:00	ac	2340B	10/06/2025	17:02	ac
Calcium	114	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Magnesium	124	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Potassium	5	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Sodium	97	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Total Cations	20.2	1	meq/L				10/06/2025	12:00	ac	Calc.	10/06/2025	17:02	ac
Boron	0.2	0.1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Copper	ND	10	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Iron	120	30	ug/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Manganese	60	10	ug/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
Zinc	ND	20	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:02	ac
SAR	1.5		--				10/06/2025	12:00	ac	Calc.	10/06/2025	17:02	ac
Total Alkalinity (as CaCO3)	270	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/07/2025	00:48	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/07/2025	00:48	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/07/2025	00:48	amm
Bicarbonate as HCO3	330	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/07/2025	00:48	amm
Sulfate	184	0.5	mg/L		1		10/10/2025	13:16	ldm	EPA 300.0	10/11/2025	00:48	ldm
Chloride	390	9*	mg/L		9		10/10/2025	13:16	ldm	EPA 300.0	10/11/2025	07:25	ldm
Nitrate as NO3	0.5	0.4	mg/L		1	J	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:34	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:32	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:34	mm1
Fluoride	0.1	0.1	mg/L		1	b	10/10/2025	13:16	ldm	EPA 300.0	10/11/2025	00:48	ldm
Total Anions	20.2	10	meq/L				10/10/2025	13:16	ldm	Calc.	10/11/2025	07:25	ldm
pH	7.6	---	units		1		10/02/2025	10:19	ab	SM 4500-H+B	10/02/2025	10:19	ab
Specific Conductance	2080	1	umhos/cm		1		10/06/2025	19:20	amm	SM 4500-H+B	10/07/2025	00:48	amm
Total Dissolved Solids	1480	20	mg/L		1		10/07/2025	09:30	ctl	SM 2540 C	10/08/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/03/2025	17:43	mct	SM 5540 C	10/03/2025	18:04	mct
Aggressiveness Index	12.5	10	---				10/06/2025	12:00	ac	Calc.	10/06/2025	17:02	ac
Langelier Index (20°C)	0.6	20	---				10/06/2025	12:00	ac	Calc.	10/06/2025	17:02	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:34	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
- b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 11 (12J1) LA11
Project : Los Osos BMC Monitoring

Lab No. : CC 2583413-001
Customer No. : 8000514

Sampled On : October 2, 2025 at 10:19
Sampled By : Addison Burke
Received On : October 2, 2025 at 13:30
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.60		units		10/02/2025 10:19	4500HB	10/02/2025 10:19

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 3 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA12 (7Q3) LA12
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-001
Customer No. : 8000514

Sampled On : October 1, 2025 at 08:53
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	302	2.5	mg/L				10/03/2025	08:00	ac	2340B	10/03/2025	15:46	ac
Calcium	47	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Magnesium	45	1	mg/L		1	l	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Potassium	2	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Sodium	52	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Total Cations	8.4	1	meq/L				10/03/2025	08:00	ac	Calc.	10/03/2025	15:46	ac
Boron	0.2	0.1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Copper	ND	10	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Iron	50	30	ug/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Manganese	50	10	ug/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
Zinc	ND	20	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:46	ac
SAR	1.3		--				10/03/2025	08:00	ac	Calc.	10/03/2025	15:46	ac
Total Alkalinity (as CaCO3)	250	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:42	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:42	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:42	amm
Bicarbonate as HCO3	310	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:42	amm
Sulfate	50.4	0.5	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:44	ldm
Chloride	98	1	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:44	ldm
Nitrate as NO3	1.6	0.4	mg/L		1	J	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	14:58	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	14:56	mm1
Nitrate + Nitrite as N	0.4	0.4	mg/L		1	J	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	14:58	mm1
Fluoride	ND	0.1	mg/L		1	J	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:44	ldm
Total Anions	8.9	10	meq/L				10/09/2025	09:47	ldm	Calc.	10/09/2025	20:44	ldm
pH	7.7	---	units		1		10/01/2025	08:53	ab	SM 4500-H+B	10/01/2025	08:53	ab
Specific Conductance	846	1	umhos/cm		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	22:42	amm
Total Dissolved Solids	560	20	mg/L		1		10/06/2025	09:15	ctl	SM 2540 C	10/07/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/02/2025	18:05	mct	SM 5540 C	10/02/2025	18:24	mct
Aggressiveness Index	12.2	10	---				10/03/2025	08:00	ac	Calc.	10/03/2025	15:46	ac
Langelier Index (20°C)	0.3	20	---				10/03/2025	08:00	ac	Calc.	10/03/2025	15:46	ac
Nitrate Nitrogen	0.4	0.4	mg/L		1	J	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	14:58	mm1

DQF Flags Definition:
- l The MS/MSD did not meet QC criteria.
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 13

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA12 (7Q3) LA12
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-001
Customer No. : 8000514

Sampled On : October 1, 2025 at 08:53
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.66		units		10/01/2025 08:53	4500HB	10/01/2025 08:53

ND=Non-Detected, RL=Reporting Level.

Page 3 of 13

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 27, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 13 (18F2) LA13
Project : Los Osos BMC Monitoring

Lab No. : CC 2583530-001
Customer No. : 8000514

Sampled On : October 8, 2025 at 11:40
Sampled By : Addison Burke
Received On : October 8, 2025 at 14:35
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	202	2.5	mg/L				10/13/2025	10:00	ac	2340B	10/13/2025	12:56	ac
Calcium	28	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Magnesium	32	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Potassium	2	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Sodium	52	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Total Cations	6.3	1	meq/L				10/13/2025	10:00	ac	Calc.	10/13/2025	12:56	ac
Boron	ND	0.1	mg/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Copper	ND	10	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Iron	100	30	ug/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Manganese	140	10	ug/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
Zinc	ND	20	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	12:56	ac
SAR	1.6		--				10/13/2025	10:00	ac	Calc.	10/13/2025	12:56	ac
Total Alkalinity (as CaCO3)	220	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:04	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:04	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:04	amm
Bicarbonate as HCO3	260	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:04	amm
Sulfate	29.1	0.5	mg/L		1	b	10/17/2025	10:19	ldm	EPA 300.0	10/17/2025	19:47	ldm
Chloride	57	1	mg/L		1	b	10/17/2025	10:19	ldm	EPA 300.0	10/17/2025	19:47	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:11	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:10	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:11	mm1
Fluoride	0.2	0.1	mg/L		1		10/17/2025	10:19	ldm	EPA 300.0	10/17/2025	19:47	ldm
Total Anions	6.5	10	meq/L				10/17/2025	10:19	ldm	Calc.	10/17/2025	19:47	ldm
pH	8.1	---	units		1		10/08/2025	11:40	ab	SM 4500-H+B	10/08/2025	11:40	ab
Specific Conductance	613	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	04:04	amm
Total Dissolved Solids	330	20	mg/L		1		10/13/2025	10:30	ctl	SM 2540 C	10/14/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/09/2025	19:09	mct	SM 5540 C	10/09/2025	19:18	mct
Aggressiveness Index	12.3	10	---				10/13/2025	10:00	ac	Calc.	10/13/2025	12:56	ac
Langelier Index (20°C)	0.4	20	---				10/13/2025	10:00	ac	Calc.	10/13/2025	12:56	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:11	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 27, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 13 (18F2) LA13
Project : Los Osos BMC Monitoring

Lab No. : CC 2583530-001
Customer No. : 8000514

Sampled On : October 8, 2025 at 11:40
Sampled By : Addison Burke
Received On : October 8, 2025 at 14:35
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	8.12		units		10/08/2025 11:40	4500HB	10/08/2025 11:40

ND=Non-Detected, RL=Reporting Level.

Page 3 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 7, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 14 (18L6) LA14
Project : Los Osos BMC Monitoring

Lab No. : CC 2583706-001
Customer No. : 8000514

Sampled On : October 23, 2025 at 11:47
Sampled By : Addison Burke
Received On : October 23, 2025 at 13:56
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	375	2.5	mg/L				10/24/2025	12:00	ac	2340B	10/25/2025	01:22	ac
Calcium	68	1	mg/L		1		10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Magnesium	50	1	mg/L		1		10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Potassium	2	1	mg/L		1		10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Sodium	35	1	mg/L		1		10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Total Cations	9.1	1	meq/L				10/24/2025	12:00	ac	Calc.	10/25/2025	01:22	ac
Boron	ND	0.1	mg/L		1	J	10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Copper	ND	10	ug/L		1	U	10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Iron	ND	30	ug/L		1	J	10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Manganese	30	10	ug/L		1		10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
Zinc	ND	20	ug/L		1	U	10/24/2025	12:00	ac	EPA 200.7	10/25/2025	01:22	ac
SAR	0.8		--				10/24/2025	12:00	ac	Calc.	10/25/2025	01:22	ac
Total Alkalinity (as CaCO3)	290	10	mg/L		1		10/29/2025	14:10	amm	SM 4500-H+B	10/30/2025	00:23	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/29/2025	14:10	amm	SM 4500-H+B	10/30/2025	00:23	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/29/2025	14:10	amm	SM 4500-H+B	10/30/2025	00:23	amm
Bicarbonate as HCO3	350	10	mg/L		1		10/29/2025	14:10	amm	SM 4500-H+B	10/30/2025	00:23	amm
Sulfate	91.2	0.5	mg/L		1	b	11/05/2025	08:22	ldm	EPA 300.0	11/05/2025	18:34	ldm
Chloride	82	1	mg/L		1	b	11/05/2025	08:22	ldm	EPA 300.0	11/05/2025	18:34	ldm
Nitrate as NO3	0.8	0.4	mg/L		1	J	10/24/2025	11:20	mm1	SM 4500-NO3 F	10/24/2025	12:45	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/24/2025	11:20	mm1	SM 4500-NO3 F	10/24/2025	12:44	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/24/2025	11:20	mm1	SM 4500-NO3 F	10/24/2025	12:45	mm1
Fluoride	0.1	0.1	mg/L		1		11/05/2025	08:22	ldm	EPA 300.0	11/05/2025	18:34	ldm
Total Anions	10	10	meq/L				11/05/2025	08:22	ldm	Calc.	11/05/2025	18:34	ldm
pH	7.5	---	units		1		10/23/2025	11:47	ab	SM 4500-H+B	10/23/2025	11:47	ab
Specific Conductance	892	1	umhos/cm		1		10/29/2025	14:10	amm	SM 4500-H+B	10/30/2025	00:23	amm
Total Dissolved Solids	580	20	mg/L		1		10/27/2025	10:30	ctl	SM 2540 C	10/28/2025	10:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/24/2025	18:55	mct	SM 5540 C	10/24/2025	19:30	mct
Aggressiveness Index	12.2	10	---				10/24/2025	12:00	ac	Calc.	10/25/2025	01:22	ac
Langelier Index (20°C)	0.3	20	---				10/24/2025	12:00	ac	Calc.	10/25/2025	01:22	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/24/2025	11:20	mm1	SM 4500-NO3 F	10/24/2025	12:45	mm1

DQF Flags Definition:
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 7, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 14 (18L6) LA14
Project : Los Osos BMC Monitoring

Lab No. : CC 2583706-001
Customer No. : 8000514

Sampled On : October 23, 2025 at 11:47
Sampled By : Addison Burke
Received On : October 23, 2025 at 13:56
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.53		units		10/23/2025 11:47	4500HB	10/23/2025 11:47

ND=Non-Detected, RL=Reporting Level.

Page 3 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 15 (18L2) LA15
Project : Los Osos BMC Monitoring

Lab No. : CC 2583413-002
Customer No. : 8000514

Sampled On : October 2, 2025 at 11:18
Sampled By : Addison Burke
Received On : October 2, 2025 at 13:30
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	405	2.5	mg/L				10/06/2025	12:00	ac	2340B	10/06/2025	17:09	ac
Calcium	65	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Magnesium	59	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Potassium	2	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Sodium	46	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Total Cations	10.2	1	meq/L				10/06/2025	12:00	ac	Calc.	10/06/2025	17:09	ac
Boron	ND	0.1	mg/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Copper	ND	10	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Iron	ND	30	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Manganese	ND	10	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
Zinc	ND	20	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:09	ac
SAR	1		--				10/06/2025	12:00	ac	Calc.	10/06/2025	17:09	ac
Total Alkalinity (as CaCO3)	190	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:18	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:18	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:18	amm
Bicarbonate as HCO3	240	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:18	amm
Sulfate	31.9	0.5	mg/L		1	b	10/09/2025	13:20	ldm	EPA 300.0	10/10/2025	00:08	ldm
Chloride	160	3*	mg/L		3	b	10/09/2025	13:20	ldm	EPA 300.0	10/10/2025	09:43	ldm
Nitrate as NO3	4.7	0.4	mg/L		1		10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:36	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:34	mm1
Nitrate + Nitrite as N	1.1	0.4	mg/L		1		10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:36	mm1
Fluoride	0.2	0.1	mg/L		1		10/09/2025	13:20	ldm	EPA 300.0	10/10/2025	00:08	ldm
Total Anions	9.2	10	meq/L				10/09/2025	13:20	ldm	Calc.	10/10/2025	09:43	ldm
pH	7.8	---	units		1		10/02/2025	11:18	ab	SM 4500-H+B	10/02/2025	11:18	ab
Specific Conductance	943	1	umhos/cm		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:18	amm
Total Dissolved Solids	590	20	mg/L		1		10/06/2025	09:15	ctl	SM 2540 C	10/07/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/03/2025	17:43	mct	SM 5540 C	10/03/2025	18:04	mct
Aggressiveness Index	12.3	10	---				10/06/2025	12:00	ac	Calc.	10/06/2025	17:09	ac
Langelier Index (20°C)	0.4	20	---				10/06/2025	12:00	ac	Calc.	10/06/2025	17:09	ac
Nitrate Nitrogen	1.1	0.4	mg/L		1		10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:36	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory 853 Corporation Street Santa Paula, CA 93060 TEL: (805)392-2000 CA ELAP Certification No. 1573
Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 CA ELAP Certification No. 1563
Office & Laboratory 563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 CA ELAP Certification No. 2670
Office & Laboratory 3442 Empresa Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 CA ELAP Certification No. 2775
Office & Laboratory 9411 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-9473 CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 15 (18L2) LA15
Project : Los Osos BMC Monitoring

Lab No. : CC 2583413-002
Customer No. : 8000514

Sampled On : October 2, 2025 at 11:18
Sampled By : Addison Burke
Received On : October 2, 2025 at 13:30
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.78		units		10/02/2025 11:18	4500HB	10/02/2025 11:18

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 5 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 27, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA16 (18M1) LA16
Project : Los Osos BMC Monitoring

Lab No. : CC 2583546-001
Customer No. : 8000514

Sampled On : October 9, 2025 at 11:40
Sampled By : Addison Burke
Received On : October 9, 2025 at 13:05
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	495	2.5	mg/L				10/13/2025	10:00	ac	2340B	10/13/2025	15:38	ac
Calcium	83	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Magnesium	70	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Potassium	3	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Sodium	49	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Total Cations	12.1	1	meq/L				10/13/2025	10:00	ac	Calc.	10/13/2025	15:38	ac
Boron	ND	0.1	mg/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Copper	ND	10	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Iron	1500	30	ug/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Manganese	840	10	ug/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
Zinc	ND	20	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	15:38	ac
SAR	1		--				10/13/2025	10:00	ac	Calc.	10/13/2025	15:38	ac
Total Alkalinity (as CaCO3)	170	10	mg/L		1		10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	02:04	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	02:04	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	02:04	amm
Bicarbonate as HCO3	200	10	mg/L		1		10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	02:04	amm
Sulfate	24.3	0.5	mg/L		1	b	10/22/2025	09:05	ldm	EPA 300.0	10/23/2025	01:20	ldm
Chloride	330	7*	mg/L		7	b	10/22/2025	09:05	ldm	EPA 300.0	10/23/2025	07:37	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	10/10/2025	12:10	mm1	SM 4500-NO3 F	10/10/2025	13:12	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/10/2025	12:10	mm1	SM 4500-NO3 F	10/10/2025	13:11	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/10/2025	12:10	mm1	SM 4500-NO3 F	10/10/2025	13:12	mm1
Fluoride	ND	0.1	mg/L		1	U	10/22/2025	09:05	ldm	EPA 300.0	10/23/2025	01:20	ldm
Total Anions	13.1	10	meq/L				10/22/2025	09:05	ldm	Calc.	10/23/2025	07:37	ldm
pH	7.6	---	units		1		10/09/2025	11:40	ab	SM 4500-H+B	10/09/2025	11:40	ab
Specific Conductance	1320	1	umhos/cm		1		10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	02:04	amm
Total Dissolved Solids	820	20	mg/L		1		10/13/2025	15:30	ctl	SM 2540 C	10/14/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/10/2025	18:12	mct	SM 5540 C	10/10/2025	18:16	mct
Aggressiveness Index	12.1	10	---				10/13/2025	10:00	ac	Calc.	10/13/2025	15:38	ac
Langelier Index (20°C)	0.3	20	---				10/13/2025	10:00	ac	Calc.	10/13/2025	15:38	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/10/2025	12:10	mm1	SM 4500-NO3 F	10/10/2025	13:12	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 27, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA16 (18M1) LA16
Project : Los Osos BMC Monitoring

Lab No. : CC 2583546-001
Customer No. : 8000514

Sampled On : October 9, 2025 at 11:40
Sampled By : Addison Burke
Received On : October 9, 2025 at 13:05
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.58		units		10/09/2025 11:40	4500HB	10/09/2025 11:40

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583446-001
Customer No. : 8000514

Sampled On : October 6, 2025 at 12:44
Sampled By : Addison Burke
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Description : LA18 (18K8) LA18
Project : Los Osos BMC Monitoring

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	254	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	19:34	ac
Calcium	54	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Magnesium	29	1	mg/L		1	l	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Potassium	2	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Sodium	35	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Total Cations	6.7	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	19:34	ac
Boron	ND	0.1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Iron	ND	30	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Manganese	30	10	ug/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
Zinc	ND	20	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	19:34	ac
SAR	1		--				10/07/2025	15:00	ac	Calc.	10/07/2025	19:34	ac
Total Alkalinity (as CaCO3)	210	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/15/2025	19:48	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/15/2025	19:48	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/15/2025	19:48	amm
Bicarbonate as HCO3	260	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/15/2025	19:48	amm
Sulfate	61.3	0.5	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	17:18	ldm
Chloride	49	1	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	17:18	ldm
Nitrate as NO3	0.8	0.4	mg/L		1	J	10/07/2025	12:40	mm1	SM 4500-NO3 F	10/07/2025	14:27	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	12:40	mm1	SM 4500-NO3 F	10/07/2025	14:59	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/07/2025	12:40	mm1	SM 4500-NO3 F	10/07/2025	14:27	mm1
Fluoride	0.2	0.1	mg/L		1	hb	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	17:18	ldm
Total Anions	6.9	10	meq/L				10/14/2025	11:01	ldm	Calc.	10/14/2025	17:18	ldm
pH	7.6	---	units		1		10/06/2025	12:44	ab	SM 4500-H+B	10/06/2025	12:44	ab
Specific Conductance	657	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/15/2025	19:48	amm
Total Dissolved Solids	440	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	12.1	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	19:34	ac
Langelier Index (20°C)	0.2	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	19:34	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/07/2025	12:40	mm1	SM 4500-NO3 F	10/07/2025	14:27	mm1

DQF Flags Definition:
- l The MS/MSD did not meet QC criteria.
- U Constituent results were non-detect.
- h The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
- b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 2 of 6

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA18 (18K8) LA18
Project : Los Osos BMC Monitoring

Lab No. : CC 2583446-001
Customer No. : 8000514

Sampled On : October 6, 2025 at 12:44
Sampled By : Addison Burke
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.58		units		10/06/2025 12:44	4500HB	10/06/2025 12:44

ND=Non-Detected, RL=Reporting Level.

Page 3 of 6

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 17N10 (LA20-South Bay #1) LA20
Project : Fall BMC GSWC

Lab No. : CC 2583445-005
Customer No. : 8000514

Sampled On : October 6, 2025 at 12:10
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	177	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	20:39	ac
Calcium	28	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Magnesium	26	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Potassium	2	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Sodium	33	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Total Cations	5.0	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	20:39	ac
Boron	0.1	0.1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Iron	ND	30	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Manganese	10	10	ug/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
Zinc	ND	20	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:39	ac
SAR	1.1		--				10/07/2025	15:00	ac	Calc.	10/07/2025	20:39	ac
Total Alkalinity (as CaCO3)	160	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	00:23	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	00:23	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	00:23	amm
Bicarbonate as HCO3	200	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	00:23	amm
Sulfate	21.5	0.5	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	19:58	ldm
Chloride	43	1	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	19:58	ldm
Nitrate as NO3	14.2	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:16	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:15	mm1
Nitrate + Nitrite as N	3.2	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:16	mm1
Fluoride	0.1	0.1	mg/L		1	hb	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	19:58	ldm
Total Anions	5.2	10	meq/L				10/14/2025	11:01	ldm	Calc.	10/14/2025	19:58	ldm
pH	7.2	---	units		1		10/06/2025	12:10	jd	SM 4500-H+B	10/06/2025	12:10	jd
Specific Conductance	505	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	00:23	amm
Total Dissolved Solids	350	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	11.2	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:39	ac
Langelier Index (20°C)	-0.6	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:39	ac
Nitrate Nitrogen	3.2	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:16	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- h The MS/MSD did not meet QC criteria.
- b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 11 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 17N10 (LA20-South Bay #1) LA20
Project : Fall BMC GSWC

Lab No. : CC 2583445-005
Customer No. : 8000514

Sampled On : October 6, 2025 at 12:10
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.24		units		10/06/2025 12:10	4500HB	10/06/2025 12:10
Conductivity	0.633		umhos/cm		10/06/2025 12:10	2510B	10/06/2025 12:10
Temperature	19.8		°C		10/06/2025 12:10	2550B	10/06/2025 12:10

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 12 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 27, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 22 (17E8) LA22
Project : Los Osos BMC Monitoring

Lab No. : CC 2583530-002
Customer No. : 8000514

Sampled On : October 8, 2025 at 13:40
Sampled By : Addison Burke
Received On : October 8, 2025 at 14:35
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	173	2.5	mg/L				10/13/2025	10:00	ac	2340B	10/13/2025	13:02	ac
Calcium	28	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Magnesium	25	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Potassium	2	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Sodium	30	1	mg/L		1		10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Total Cations	4.8	1	meq/L				10/13/2025	10:00	ac	Calc.	10/13/2025	13:02	ac
Boron	ND	0.1	mg/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Copper	ND	10	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Iron	ND	30	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Manganese	ND	10	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
Zinc	ND	20	ug/L		1	U	10/13/2025	10:00	ac	EPA 200.7	10/13/2025	13:02	ac
SAR	1		--				10/13/2025	10:00	ac	Calc.	10/13/2025	13:02	ac
Total Alkalinity (as CaCO3)	140	10	mg/L		1		10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	03:04	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	03:04	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	03:04	amm
Bicarbonate as HCO3	170	10	mg/L		1		10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	03:04	amm
Sulfate	14.0	0.5	mg/L		1	b	10/21/2025	09:40	ldm	EPA 300.0	10/21/2025	20:25	ldm
Chloride	48	1	mg/L		1	b	10/21/2025	09:40	ldm	EPA 300.0	10/21/2025	20:25	ldm
Nitrate as NO3	28.7	0.4	mg/L		1		10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:13	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:12	mm1
Nitrate + Nitrite as N	6.5	0.4	mg/L		1		10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:13	mm1
Fluoride	ND	0.1	mg/L		1	U	10/21/2025	09:40	ldm	EPA 300.0	10/21/2025	20:25	ldm
Total Anions	4.9	10	meq/L				10/21/2025	09:40	ldm	Calc.	10/21/2025	20:25	ldm
pH	7.6	---	units		1		10/08/2025	13:40	ab	SM 4500-H+B	10/08/2025	13:40	ab
Specific Conductance	473	1	umhos/cm		1		10/20/2025	22:53	amm	SM 4500-H+B	10/21/2025	03:04	amm
Total Dissolved Solids	280	20	mg/L		1		10/13/2025	10:30	ctl	SM 2540 C	10/14/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/09/2025	19:09	mct	SM 5540 C	10/09/2025	19:18	mct
Aggressiveness Index	11.6	10	---				10/13/2025	10:00	ac	Calc.	10/13/2025	13:02	ac
Langelier Index (20°C)	-0.2	20	---				10/13/2025	10:00	ac	Calc.	10/13/2025	13:02	ac
Nitrate Nitrogen	6.5	0.4	mg/L		1		10/09/2025	15:26	mm1	SM 4500-NO3 F	10/09/2025	17:13	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 4 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 27, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 22 (17E8) LA22
Project : Los Osos BMC Monitoring

Lab No. : CC 2583530-002
Customer No. : 8000514

Sampled On : October 8, 2025 at 13:40
Sampled By : Addison Burke
Received On : October 8, 2025 at 14:35
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.57		units		10/08/2025 13:40	4500HB	10/08/2025 13:40

ND=Non-Detected, RL=Reporting Level.

Page 5 of 8

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 30 (20H1) LA30
Project : Los Osos BMC Monitoring

Lab No. : CC 2583413-003
Customer No. : 8000514

Sampled On : October 2, 2025 at 13:04
Sampled By : Addison Burke
Received On : October 2, 2025 at 13:30
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	406	2.5	mg/L				10/06/2025	12:00	ac	2340B	10/06/2025	17:15	ac
Calcium	67	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Magnesium	58	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Potassium	1	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Sodium	39	1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Total Cations	9.8	1	meq/L				10/06/2025	12:00	ac	Calc.	10/06/2025	17:15	ac
Boron	0.1	0.1	mg/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Copper	ND	10	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Iron	400	30	ug/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Manganese	180	10	ug/L		1		10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
Zinc	ND	20	ug/L		1	U	10/06/2025	12:00	ac	EPA 200.7	10/06/2025	17:15	ac
SAR	0.8		--				10/06/2025	12:00	ac	Calc.	10/06/2025	17:15	ac
Total Alkalinity (as CaCO3)	340	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:07	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:07	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:07	amm
Bicarbonate as HCO3	410	10	mg/L		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:07	amm
Sulfate	76.8	0.5	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:30	ldm
Chloride	57	1	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:30	ldm
Nitrate as NO3	0.5	0.4	mg/L		1	J	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:38	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:36	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:38	mm1
Fluoride	0.3	0.1	mg/L		1		10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	20:30	ldm
Total Anions	9.9	10	meq/L				10/09/2025	09:47	ldm	Calc.	10/09/2025	20:30	ldm
pH	7.7	---	units		1		10/02/2025	13:04	ab	SM 4500-H+B	10/02/2025	13:04	ab
Specific Conductance	910	1	umhos/cm		1		10/06/2025	19:20	amm	SM 4500-H+B	10/06/2025	21:07	amm
Total Dissolved Solids	600	20	mg/L		1		10/06/2025	09:15	ctl	SM 2540 C	10/07/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/03/2025	17:43	mct	SM 5540 C	10/03/2025	18:04	mct
Aggressiveness Index	12.5	10	---				10/06/2025	12:00	ac	Calc.	10/06/2025	17:15	ac
Langelier Index (20°C)	0.6	20	---				10/06/2025	12:00	ac	Calc.	10/06/2025	17:15	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/03/2025	13:20	mm1	SM 4500-NO3 F	10/03/2025	14:38	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL
J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 6 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583413-003
Customer No. : 8000514

Sampled On : October 2, 2025 at 13:04
Sampled By : Addison Burke
Received On : October 2, 2025 at 13:30
Matrix : Ground Water

Description : LA 30 (20H1) LA30
Project : Los Osos BMC Monitoring

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.67		units		10/02/2025 13:04	4500HB	10/02/2025 13:04

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 7 of 11

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 12, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13M2 (LA31) LA31
Project : Los Osos BMC Monitoring

Lab No. : CC 2583628-003
Customer No. : 8000514

Sampled On : October 16, 2025 at 13:48
Sampled By : Addison Burke
Received On : October 16, 2025 at 14:29
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	223	2.5	mg/L				10/17/2025	13:20	ac	2340B	10/17/2025	20:20	ac
Calcium	35	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Magnesium	33	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Potassium	6	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Sodium	165	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Total Cations	11.8	1	meq/L				10/17/2025	13:20	ac	Calc.	10/17/2025	20:20	ac
Boron	0.1	0.1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Copper	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Iron	ND	30	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Manganese	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
Zinc	ND	20	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:20	ac
SAR	4.8		--				10/17/2025	13:20	ac	Calc.	10/17/2025	20:20	ac
Total Alkalinity (as CaCO3)	80	10	mg/L		1		10/21/2025	16:40	amm	SM 4500-H+B	10/21/2025	23:57	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/21/2025	16:40	amm	SM 4500-H+B	10/21/2025	23:57	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/21/2025	16:40	amm	SM 4500-H+B	10/21/2025	23:57	amm
Bicarbonate as HCO3	100	10	mg/L		1		10/21/2025	16:40	amm	SM 4500-H+B	10/21/2025	23:57	amm
Sulfate	73.9	0.5	mg/L		1	b	11/03/2025	10:32	ldm	EPA 300.0	11/03/2025	14:27	ldm
Chloride	390	8*	mg/L		8	b	11/03/2025	10:32	ldm	EPA 300.0	11/04/2025	03:43	ldm
Nitrate as NO3	4.0	0.4	mg/L		1		10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:13	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:12	mm1
Nitrate + Nitrite as N	0.9	0.4	mg/L		1		10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:13	mm1
Fluoride	ND	0.1	mg/L		1	U	11/03/2025	10:32	ldm	EPA 300.0	11/03/2025	14:27	ldm
Total Anions	14.2	10	meq/L				11/03/2025	10:32	ldm	Calc.	11/04/2025	03:43	ldm
pH	7.7	---	units		1		10/16/2025	13:48	ab	SM 4500-H+B	10/16/2025	13:48	ab
Specific Conductance	1470	1	umhos/cm		1		10/21/2025	16:40	amm	SM 4500-H+B	10/21/2025	23:57	amm
Total Dissolved Solids	900	20	mg/L		1		10/20/2025	11:00	ctl	SM 2540 C	10/21/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/17/2025	18:11	mct	SM 5540 C	10/17/2025	18:22	mct
Aggressiveness Index	11.5	10	---				10/17/2025	13:20	ac	Calc.	10/17/2025	20:20	ac
Langelier Index (20°C)	-0.4	20	---				10/17/2025	13:20	ac	Calc.	10/17/2025	20:20	ac
Nitrate Nitrogen	0.9	0.4	mg/L		1		10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:13	mm1

DQF Flags Definition:
U Constituent results were non-detect.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 6 of 10

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 12, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13M2 (LA31) LA31
Project : Los Osos BMC Monitoring

Lab No. : CC 2583628-003
Customer No. : 8000514

Sampled On : October 16, 2025 at 13:48
Sampled By : Addison Burke
Received On : October 16, 2025 at 14:29
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.66		units		10/16/2025 13:48	4500HB	10/16/2025 13:48

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA32 (18K9) LA32
Project : Los Osos BMC Monitoring

Lab No. : CC 2583394-002
Customer No. : 8000514

Sampled On : October 1, 2025 at 09:20
Sampled By : Addison Burke
Received On : October 1, 2025 at 14:23
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	178	2.5	mg/L				10/03/2025	08:00	ac	2340B	10/03/2025	15:52	ac
Calcium	27	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Magnesium	27	1	mg/L		1	l	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Potassium	1	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Sodium	31	1	mg/L		1		10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Total Cations	4.9	1	meq/L				10/03/2025	08:00	ac	Calc.	10/03/2025	15:52	ac
Boron	ND	0.1	mg/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Copper	ND	10	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Iron	ND	30	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Manganese	ND	10	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
Zinc	ND	20	ug/L		1	U	10/03/2025	08:00	ac	EPA 200.7	10/03/2025	15:52	ac
SAR	1.0		--				10/03/2025	08:00	ac	Calc.	10/03/2025	15:52	ac
Total Alkalinity (as CaCO3)	160	10	mg/L		1		10/05/2025	20:25	amm	SM 4500-H+B	10/06/2025	09:16	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/05/2025	20:25	amm	SM 4500-H+B	10/06/2025	09:16	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/05/2025	20:25	amm	SM 4500-H+B	10/06/2025	09:16	amm
Bicarbonate as HCO3	200	10	mg/L		1		10/05/2025	20:25	amm	SM 4500-H+B	10/06/2025	09:16	amm
Sulfate	18.9	0.5	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	19:33	ldm
Chloride	52	1	mg/L		1	b	10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	19:33	ldm
Nitrate as NO3	6.2	0.4	mg/L		1		10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:00	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	14:58	mm1
Nitrate + Nitrite as N	1.4	0.4	mg/L		1		10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:00	mm1
Fluoride	0.2	0.1	mg/L		1		10/09/2025	09:47	ldm	EPA 300.0	10/09/2025	19:33	ldm
Total Anions	5.2	10	meq/L				10/09/2025	09:47	ldm	Calc.	10/09/2025	19:33	ldm
pH	7.4	---	units		1		10/01/2025	09:20	ab	SM 4500-H+B	10/01/2025	09:20	ab
Specific Conductance	507	1	umhos/cm		1		10/05/2025	20:25	amm	SM 4500-H+B	10/06/2025	09:16	amm
Total Dissolved Solids	320	20	mg/L		1		10/03/2025	16:45	ctl	SM 2540 C	10/06/2025	10:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/02/2025	18:05	mct	SM 5540 C	10/02/2025	18:24	mct
Aggressiveness Index	11.4	10	---				10/03/2025	08:00	ac	Calc.	10/03/2025	15:52	ac
Langelier Index (20°C)	-0.4	20	---				10/03/2025	08:00	ac	Calc.	10/03/2025	15:52	ac
Nitrate Nitrogen	1.4	0.4	mg/L		1		10/02/2025	13:50	mm1	SM 4500-NO3 F	10/02/2025	15:00	mm1

DQF Flags Definition:
- l The MS/MSD did not meet QC criteria.
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Page 4 of 13

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No.	: CC 2583394-002
Customer No.	: 8000514
Sampled On	: October 1, 2025 at 09:20
Sampled By	: Addison Burke
Received On	: October 1, 2025 at 14:23
Matrix	: Ground Water

Description : LA32 (18K9) LA32
Project : Los Osos BMC Monitoring

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.40		units		10/01/2025 09:20	4500HB	10/01/2025 09:20

ND=Non-Detected, RL=Reporting Level.

Page 5 of 13

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 18K__(LA39-Los Olivos #5) LA39
Project : Fall BMC GSWC

Lab No. : CC 2583445-006
Customer No. : 8000514

Sampled On : October 6, 2025 at 10:50
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	225	2.5	mg/L				10/07/2025	15:00	ac	2340B	10/07/2025	20:45	ac
Calcium	34	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Magnesium	34	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Potassium	1	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Sodium	40	1	mg/L		1		10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Total Cations	6.3	1	meq/L				10/07/2025	15:00	ac	Calc.	10/07/2025	20:45	ac
Boron	ND	0.1	mg/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Copper	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Iron	ND	30	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Manganese	ND	10	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
Zinc	ND	20	ug/L		1	U	10/07/2025	15:00	ac	EPA 200.7	10/07/2025	20:45	ac
SAR	1.2		--				10/07/2025	15:00	ac	Calc.	10/07/2025	20:45	ac
Total Alkalinity (as CaCO3)	240	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	01:20	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	01:20	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	01:20	amm
Bicarbonate as HCO3	290	10	mg/L		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	01:20	amm
Sulfate	29.4	0.5	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	20:18	ldm
Chloride	38	1	mg/L		1	h	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	20:18	ldm
Nitrate as NO3	2.0	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:18	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:17	mm1
Nitrate + Nitrite as N	0.5	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:18	mm1
Fluoride	0.1	0.1	mg/L		1	hb	10/14/2025	11:01	ldm	EPA 300.0	10/14/2025	20:18	ldm
Total Anions	6.5	10	meq/L				10/14/2025	11:01	ldm	Calc.	10/14/2025	20:18	ldm
pH	7.0	---	units		1		10/06/2025	10:50	jd	SM 4500-H+B	10/06/2025	10:50	jd
Specific Conductance	609	1	umhos/cm		1		10/15/2025	17:28	amm	SM 4500-H+B	10/16/2025	01:20	amm
Total Dissolved Solids	370	20	mg/L		1		10/09/2025	10:00	ctl	SM 2540 C	10/10/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/07/2025	20:24	mct	SM 5540 C	10/07/2025	20:40	mct
Aggressiveness Index	11.3	10	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:45	ac
Langelier Index (20°C)	-0.5	20	---				10/07/2025	15:00	ac	Calc.	10/07/2025	20:45	ac
Nitrate Nitrogen	0.5	0.4	mg/L		1		10/07/2025	14:02	mm1	SM 4500-NO3 F	10/07/2025	15:18	mm1

DQF Flags Definition:
U Constituent results were non-detect.
h The MS/MSD did not meet QC criteria.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 13 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

October 23, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583445-006
Customer No. : 8000514

Sampled On : October 6, 2025 at 10:50
Sampled By : Jerome Dengate
Received On : October 6, 2025 at 14:33
Matrix : Ground Water

Description : 18K__(LA39-Los Olivos #5) LA39
Project : Fall BMC GSWC

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.04		units		10/06/2025 10:50	4500HB	10/06/2025 10:50
Conductivity	0.792		umhos/cm		10/06/2025 10:50	2510B	10/06/2025 10:50
Temperature	20.3		°C		10/06/2025 10:50	2550B	10/06/2025 10:50

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 14 of 18

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 40 (13Ba) LA40
Project : Los Osos BMC Monitoring

Lab No. : CC 2583654-001
Customer No. : 8000514

Sampled On : October 20, 2025 at 13:55
Sampled By : Addison Burke
Received On : October 20, 2025 at 14:58
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	4310	12.5	mg/L				10/21/2025	13:00	ac	2340B	10/23/2025	11:42	ac
Calcium	736	5*	mg/L		5		10/21/2025	13:00	ac	EPA 200.7	10/23/2025	11:42	ac
Magnesium	601	5*	mg/L		5		10/21/2025	13:00	ac	EPA 200.7	10/23/2025	11:42	ac
Potassium	7	1	mg/L		1		10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
Sodium	219	1	mg/L		1	l	10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
Total Cations	95.9	5	meq/L				10/21/2025	13:00	ac	Calc.	10/23/2025	11:42	ac
Boron	ND	0.1	mg/L		1	U	10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
Copper	ND	10	ug/L		1	U	10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
Iron	50	30	ug/L		1		10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
Manganese	670	10	ug/L		1		10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
Zinc	ND	20	ug/L		1	U	10/21/2025	13:00	ac	EPA 200.7	10/22/2025	11:21	ac
SAR	1.5		--				10/21/2025	13:00	ac	Calc.	10/23/2025	11:42	ac
Total Alkalinity (as CaCO3)	220	10	mg/L		1		10/28/2025	18:06	amm	SM 4500-H+B	10/28/2025	21:23	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/28/2025	18:06	amm	SM 4500-H+B	10/28/2025	21:23	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/28/2025	18:06	amm	SM 4500-H+B	10/28/2025	21:23	amm
Bicarbonate as HCO3	270	10	mg/L		1		10/28/2025	18:06	amm	SM 4500-H+B	10/28/2025	21:23	amm
Sulfate	259	3*	mg/L		5	b	10/27/2025	09:10	ldm	EPA 300.0	10/27/2025	20:05	ldm
Chloride	3200	65*	mg/L		70	b	10/27/2025	09:10	ldm	EPA 300.0	10/28/2025	08:00	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	10/21/2025	12:55	mm1	SM 4500-NO3 F	10/21/2025	16:21	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/21/2025	12:55	mm1	SM 4500-NO3 F	10/21/2025	13:53	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/21/2025	12:55	mm1	SM 4500-NO3 F	10/21/2025	16:21	mm1
Fluoride	ND	0.5*	mg/L		5	U	10/27/2025	09:10	ldm	EPA 300.0	10/27/2025	20:05	ldm
Total Anions	100	65	meq/L				10/27/2025	09:10	ldm	Calc.	10/28/2025	08:00	ldm
pH	7.3	---	units		1		10/20/2025	13:55	ab	SM 4500-H+B	10/20/2025	13:55	ab
Specific Conductance	8990	1	umhos/cm		1		10/28/2025	18:06	amm	SM 4500-H+B	10/28/2025	21:23	amm
Total Dissolved Solids	8570	20	mg/L		1		10/22/2025	09:45	ctl	SM 2540 C	10/23/2025	11:30	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/21/2025	20:18	mct	SM 5540 C	10/21/2025	20:28	mct
Aggressiveness Index	12.9	10	---				10/21/2025	13:00	ac	Calc.	10/23/2025	11:42	ac
Langelier Index (20°C)	0.9	20	---				10/21/2025	13:00	ac	Calc.	10/23/2025	11:42	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/21/2025	12:55	mm1	SM 4500-NO3 F	10/21/2025	16:21	mm1

DQF Flags Definition:
- l The MS/MSD did not meet QC criteria.
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 6

October 30, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA 40 (13Ba) LA40
Project : Los Osos BMC Monitoring

Lab No. : CC 2583654-001
Customer No. : 8000514

Sampled On : October 20, 2025 at 13:55
Sampled By : Addison Burke
Received On : October 20, 2025 at 14:58
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.28		units		10/20/2025 13:55	4500HB	10/20/2025 13:55

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

November 7, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA41 (13Bb) LA41
Project : Los Osos BMC Monitoring

Lab No. : CC 2583683-001
Customer No. : 8000514

Sampled On : October 21, 2025 at 13:56
Sampled By : Addison Burke
Received On : October 21, 2025 at 14:52
Matrix : Ground Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	274	2.5	mg/L				10/23/2025	11:00	ac	2340B	10/23/2025	14:28	ac
Calcium	49	1	mg/L		1		10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Magnesium	37	1	mg/L		1		10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Potassium	2	1	mg/L		1		10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Sodium	44	1	mg/L		1		10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Total Cations	7.5	1	meq/L				10/23/2025	11:00	ac	Calc.	10/23/2025	14:28	ac
Boron	ND	0.1	mg/L		1	U	10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Copper	ND	10	ug/L		1	U	10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Iron	140	30	ug/L		1		10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Manganese	120	10	ug/L		1		10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
Zinc	ND	20	ug/L		1	U	10/23/2025	11:00	ac	EPA 200.7	10/23/2025	14:28	ac
SAR	1.2		--				10/23/2025	11:00	ac	Calc.	10/23/2025	14:28	ac
Total Alkalinity (as CaCO3)	280	10	mg/L		1		10/28/2025	18:06	amm	SM 4500-H+B	10/29/2025	03:30	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/28/2025	18:06	amm	SM 4500-H+B	10/29/2025	03:30	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/28/2025	18:06	amm	SM 4500-H+B	10/29/2025	03:30	amm
Bicarbonate as HCO3	340	10	mg/L		1		10/28/2025	18:06	amm	SM 4500-H+B	10/29/2025	03:30	amm
Sulfate	44.4	0.5	mg/L		1	b	10/30/2025	13:35	ldm	EPA 300.0	10/30/2025	21:16	ldm
Chloride	52	1	mg/L		1	b	10/30/2025	13:35	ldm	EPA 300.0	10/30/2025	21:16	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	10/22/2025	15:30	mm1	SM 4500-NO3 F	10/22/2025	16:23	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/22/2025	15:30	mm1	SM 4500-NO3 F	10/22/2025	16:21	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/22/2025	15:30	mm1	SM 4500-NO3 F	10/22/2025	16:23	mm1
Fluoride	ND	0.1	mg/L		1	J	10/30/2025	13:35	ldm	EPA 300.0	10/30/2025	21:16	ldm
Total Anions	8.0	10	meq/L				10/30/2025	13:35	ldm	Calc.	10/30/2025	21:16	ldm
pH	7.4	---	units		1		10/21/2025	13:56	ab	SM 4500-H+B	10/21/2025	13:56	ab
Specific Conductance	730	1	umhos/cm		1		10/28/2025	18:06	amm	SM 4500-H+B	10/29/2025	03:30	amm
Total Dissolved Solids	470	20	mg/L		1		10/23/2025	12:30	ctl	SM 2540 C	10/24/2025	11:00	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/22/2025	19:06	mct	SM 5540 C	10/22/2025	19:16	mct
Aggressiveness Index	11.9	10	---				10/23/2025	11:00	ac	Calc.	10/23/2025	14:28	ac
Langelier Index (20°C)	0.07	20	---				10/23/2025	11:00	ac	Calc.	10/23/2025	14:28	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/22/2025	15:30	mm1	SM 4500-NO3 F	10/22/2025	16:23	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- b The Blank was positive for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 7, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : LA41 (13Bb) LA41
Project : Los Osos BMC Monitoring

Lab No. : CC 2583683-001
Customer No. : 8000514

Sampled On : October 21, 2025 at 13:56
Sampled By : Addison Burke
Received On : October 21, 2025 at 14:52
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.44		units		10/21/2025 13:56	4500HB	10/21/2025 13:56

ND=Non-Detected, RL=Reporting Level.

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 12, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583628-001
Customer No. : 8000514

Sampled On : October 16, 2025 at 11:31
Sampled By : Addison Burke
Received On : October 16, 2025 at 14:29
Matrix : Ground Water

Description : 13Ja (LA42) LA42
Project : Los Osos BMC Monitoring

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	2370	4.1	mg/L				10/17/2025	13:20	ac	2340B	10/20/2025	12:03	ac
Calcium	564	5*	mg/L		5		10/17/2025	13:20	ac	EPA 200.7	10/20/2025	12:03	ac
Magnesium	234	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Potassium	5	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Sodium	96	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Total Cations	51.7	5	meq/L				10/17/2025	13:20	ac	Calc.	10/20/2025	12:03	ac
Boron	ND	0.1	mg/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Copper	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Iron	ND	30	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Manganese	80	10	ug/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
Zinc	ND	20	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:07	ac
SAR	0.9		--				10/17/2025	13:20	ac	Calc.	10/20/2025	12:03	ac
Total Alkalinity (as CaCO3)	210	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	16:44	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	16:44	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	16:44	amm
Bicarbonate as HCO3	260	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	16:44	amm
Sulfate	462	3*	mg/L		5	lb	10/24/2025	12:45	ldm	EPA 300.0	10/24/2025	23:51	ldm
Chloride	2000	35*	mg/L		40	lhb	10/24/2025	12:45	ldm	EPA 300.0	10/25/2025	09:58	ldm
Nitrate as NO3	0.6	0.4	mg/L		1	J	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:09	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:08	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	J	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:09	mm1
Fluoride	ND	0.5*	mg/L		5	Ul	10/24/2025	12:45	ldm	EPA 300.0	10/24/2025	23:51	ldm
Total Anions	70.3	35	meq/L				10/24/2025	12:45	ldm	Calc.	10/25/2025	09:58	ldm
pH	7.4	---	units		1		10/16/2025	11:31	ab	SM 4500-H+B	10/16/2025	11:31	ab
Specific Conductance	5980	1	umhos/cm		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	16:44	amm
Total Dissolved Solids	6710	20	mg/L		1		10/20/2025	11:00	ctl	SM 2540 C	10/21/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/17/2025	18:11	mct	SM 5540 C	10/17/2025	18:22	mct
Aggressiveness Index	12.9	10	---				10/17/2025	13:20	ac	Calc.	10/20/2025	12:03	ac
Langelier Index (20°C)	0.9	20	---				10/17/2025	13:20	ac	Calc.	10/20/2025	12:03	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:09	mm1

DQF Flags Definition:
- U Constituent results were non-detect.
- l The MS/MSD did not meet QC criteria.
- b The Blank was positive for constituent but less than the PQL
- h The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Page 2 of 10

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

November 12, 2025

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Ja (LA42) LA42
Project : Los Osos BMC Monitoring

Lab No. : CC 2583628-001
Customer No. : 8000514

Sampled On : October 16, 2025 at 11:31
Sampled By : Addison Burke
Received On : October 16, 2025 at 14:29
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.42		units		10/16/2025 11:31	4500HB	10/16/2025 11:31

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Page 3 of 10

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

January 9, 2026

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Lab No. : CC 2583628-002
Customer No. : 8000514

Sampled On : October 16, 2025 at 13:02
Sampled By : Addison Burke
Received On : October 16, 2025 at 14:29
Matrix : Ground Water

Description : 13Jb (LA43) LA43
Project : Los Osos BMC Monitoring

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
General Mineral							Date	Time	Who	Method	Date	Time	Who
Total Hardness as CaCO3	268	2.5	mg/L				10/17/2025	13:20	ac	2340B	10/17/2025	20:13	ac
Calcium	43	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Magnesium	39	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Potassium	2	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Sodium	40	1	mg/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Total Cations	7.1	---	meq/L				10/17/2025	13:20	ac	Calc.	10/17/2025	20:13	ac
Boron	ND	0.1	mg/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Copper	ND	10	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Iron	40	30	ug/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Manganese	30	10	ug/L		1		10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
Zinc	ND	20	ug/L		1	U	10/17/2025	13:20	ac	EPA 200.7	10/17/2025	20:13	ac
SAR	1.1		--				10/17/2025	13:20	ac	Calc.	10/17/2025	20:13	ac
Total Alkalinity (as CaCO3)	280	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	15:19	amm
Hydroxide as OH	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	15:19	amm
Carbonate as CO3	ND	10	mg/L		1	U	10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	15:19	amm
Bicarbonate as HCO3	340	10	mg/L		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	15:19	amm
Sulfate	37.0	0.5	mg/L		1	lb	10/24/2025	12:45	ldm	EPA 300.0	10/28/2025	06:27	ldm
Chloride	42	1	mg/L		1	lb	10/24/2025	12:45	ldm	EPA 300.0	10/28/2025	06:27	ldm
Nitrate as NO3	ND	0.4	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:11	mm1
Nitrite as N	ND	0.2	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:10	mm1
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:11	mm1
Fluoride	ND	0.1	mg/L		1	Ul	10/24/2025	12:45	ldm	EPA 300.0	10/24/2025	21:34	ldm
Total Anions	7.5	---	meq/L			lb	10/24/2025	12:45	ldm	Calc.	10/28/2025	06:27	ldm
pH	7.4	---	units		1		10/16/2025	13:02	ab	SM 4500-H+B	10/16/2025	13:02	ab
Specific Conductance	678	1	umhos/cm		1		10/27/2025	13:08	amm	SM 4500-H+B	10/27/2025	15:19	amm
Total Dissolved Solids	420	20	mg/L		1		10/20/2025	11:00	ctl	SM 2540 C	10/21/2025	11:15	ctl
MBAS (Screen)	Negative	0.1	mg/L		1	U	10/17/2025	18:11	mct	SM 5540 C	10/17/2025	18:22	mct
Aggressiveness Index	11.9	10	---				10/17/2025	13:20	ac	Calc.	10/17/2025	20:13	ac
Langelier Index (20°C)	0.02	20	---				10/17/2025	13:20	ac	Calc.	10/17/2025	20:13	ac
Nitrate Nitrogen	ND	0.4	mg/L		1	U	10/17/2025	11:30	mm1	SM 4500-NO3 F	10/17/2025	12:11	mm1

DQF Flags Definition:
U Constituent results were non-detect.
l The MS/MSD did not meet QC criteria.
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected, RL=Reporting Level * RL adjusted for dilution, Dil.=Dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

January 9, 2026

Cleath-Harris Geologists
Attn: Spencer Harris
75 Zaca Lane
Suite 110
San Luis Obispo, CA 93401

Description : 13Jb (LA43) LA43
Project : Los Osos BMC Monitoring

Lab No. : CC 2583628-002
Customer No. : 8000514

Sampled On : October 16, 2025 at 13:02
Sampled By : Addison Burke
Received On : October 16, 2025 at 14:29
Matrix : Ground Water

Sample Results - Field Test

Constituent	Result	RL	Units	Note	Sample Preparation	Sample Analysis	
Field Test					Date	Method	Date
pH (Field)	7.40		units		10/16/2025 13:02	4500HB	10/16/2025 13:02

ND=Non-Detected, RL=Reporting Level. * RL adjusted for dilution

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
CA ELAP Certification No. 1573

Office & Laboratory
2500 Stagecoach Road
Stockton, CA 95215
TEL: (209)942-0182
CA ELAP Certification No. 1563

Office & Laboratory
563 E. Lindo Avenue
Chico, CA 95926
TEL: (530)343-5818
CA ELAP Certification No. 2670

Office & Laboratory
3442 Empresa Drive, Suite D
San Luis Obispo, CA 93401
TEL: (805)783-2940
CA ELAP Certification No. 2775

Office & Laboratory
9411 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
CA ELAP Certification No. 2810

CEC Testing

FINAL DRAFT

Groundwater Monitoring Field Log

Date: 10/15/2025
Operator: G. Doolin and A. Burke
Well number and location: 30S/10E-13Q2 (FW5)
Site/wellhead conditions: Cloudy and cool - site secure.

Static water depth (feet): 79.43
Well depth (feet): 105
Water column (feet): 25.57
Casing diameter (inches): 2
Minimum purge volume (gal): 15
Pump setting (feet): 100
Time begin purge: 9:26 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
9:29	1.0	767.2	8.22	17.9	Cloudy, orange, odorless
9:33	5.0	772.7	7.88	18.2	Slightly cloudy, colorless, odorless
9:39	10.0	773.5	7.49	18.2	Clear, colorless, odorless
9:45	15.0	773.9	7.29	18.4	Clear, colorless, odorless
9:50	20.0	777.8	7.36	18.4	Clear, colorless, odorless
9:53	22.0	777.3	7.24	18.4	Clear, colorless, odorless
9:56	25.0	777.3	7.19	18.5	Clear, colorless, odorless
					Sampled at 9:57

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

Groundwater Monitoring Field Log

Date:	10/15/2025
Operator:	G. Doolin and A. Burke
Well number and location:	30S/10E-24A (FW6)
Site/wellhead conditions	Partly cloudy and cool - site secure.

Static water depth (feet):	139.64
Well depth (feet):	164
Water column (feet):	24.36
Casing diameter (inches):	2
Minimum purge volume (gal)	12
Pump setting (feet):	160
Time begin purge:	11:22 AM

Time	Gallons	EC (µS)	pH	Temp. (°C)	Comments*
11:27	1.0	834.1	7.15	19.4	Slightly cloudy, slightly yellow, odorless
11:50	5.0	858.2	7.47	20.4	Clear, colorless, odorless
11:54	7.0	864.0	7.28	20.0	Clear, colorless, odorless
11:58	10.0	858.2	7.07	20.1	Clear, colorless, odorless
12:02	12.0	860.5	7.18	19.9	Clear, colorless, odorless
12:05	14.0	861.6	7.15	20.0	Clear, colorless, odorless
					Sampled at 12:07

*Turbidity, color, odor, sheen, debris, etc.

FINAL DRAFT

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	5J16078	**Report Date:**	12/24/2025
		Received Date:	10/16/2025
Project:	LOS OSOS CEC MONITORING	**Turnaround Time:**	Normal
		Phones:	(805) 543-1413
		Fax:	
Attn:	Spencer Harris	**P.O. #:**	
Client:	Cleath-Harris Geologists, Inc. 75 Zaca Lane, Suite 110 San Luis Obispo, CA 93401	**Billing Code:**	

ELAP-CA #1132 ● EPA-UCMR #CA00211 ● LACSD #10143

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Results are related only to the items tested. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. The report may include analytes that are not currently accreditable by some state agencies or accrediting bodies. This analytical report must be reproduced in its entirety.

Dear Spencer Harris,

Enclosed are the analytical results for the samples submitted under the attached Chain of Custody document. All analyses adhered to the method criteria, except where noted in the case narrative, sample condition checklist, and/or data qualifiers.

Reviewed by:

Rahul R. Nair
Project Manager

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

FINAL DRAFT

Sample Condition

Temperature	1.80 C		
COC present	✓	COC completed properly	✓
COC matches sample labels	✓	Wet ice	✓
Blue ice		Sample(s) intact	✓
Sample(s) using proper containers	✓	Sample(s) have sufficient sample volume	✓
Sample(s) received within hold time	✓	Sample(s) labels have correct preservation	✓
Sample(s) have acceptable pH	✓	Sample(s) have acceptable Cl	✓

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
FW5 (13Q2)	G. DOOLIN	5J16078-01	Water	10/15/25 10:00	
FW6 (24A)	G. DOOLIN	5J16078-02	Water	10/15/25 12:10	

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING
Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Sample Results

Sample: FW5 (13Q2) — Sampled: 10/15/25 10:00 by G. DOOLIN

5J16078-01 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: EPA 350.1 — **Instr:** AA06						
Batch ID: W5J2312 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/29/25 15:38 — **Analyst:** YMT						
Ammonia as N	ND	0.10	mg/l	1	10/30/25	
Method: EPA 353.2 — **Instr:** AA01						
Batch ID: W5J1320 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/16/25 12:20 — **Analyst:** ATN						
Nitrate as N	**6.0**	0.20	mg/l	1	10/16/25 19:54	
Method: SM 2510B — **Instr:** AA02						
Batch ID: W5J1587 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/21/25 09:36 — **Analyst:** mes						
Specific Conductance (EC)	**790**	2.0	umhos/cm	1	10/21/25	
Method: SM 5310B — **Instr:** TOC02						
Batch ID: W5J2464 — **Preparation:** _NONE (TOC/TOX) — **Prepared:** 10/31/25 11:15 — **Analyst:** ajc						
Total Organic Carbon (TOC)	**0.77**	0.30	mg/l	1	11/04/25	
Method: SM 5910B — **Instr:** UVVIS04						
Batch ID: W5J1333 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/16/25 14:51 — **Analyst:** ism						
UV 254	**0.014**	0.009	1/cm	1	10/16/25 16:38	
Nitrosamines by isotopic dilution GC/MS CI Mode						
Method: EPA 1625M — **Instr:** GCMS09						
Batch ID: W5J1479 — **Preparation:** EPA 3535#SPE — **Prepared:** 10/20/25 08:24 — **Analyst:** mld						
N-Nitrosodimethylamine	ND	2.0	ng/l	1	10/20/25	
PPCPs - Isotope Dilution LCMSMS						
Method: EPA 1694M — **Instr:** LCMS07						
Batch ID: W5J1633 — **Preparation:** _NONE (LC) — **Prepared:** 10/21/25 11:31 — **Analyst:** rjr						
Caffeine	ND	4.0	ng/l	1	10/23/25	
DEET	ND	4.0	ng/l	1	10/23/25	
Surrogate(s)						
Caffeine-13C3	*92%* *Conc: 184*	*20-500*			*10/23/25*	
DEET-d7	*83%* *Conc: 16.7*	*20-500*			*10/23/25*	
Method: EPA 1694M — **Instr:** LCMS07						
Batch ID: W5J1635 — **Preparation:** _NONE (LC) — **Prepared:** 10/21/25 11:34 — **Analyst:** rjr						
Gemfibrozil	ND	4.0	ng/l	1	10/23/25	
Iopromide	ND	4.0	ng/l	1	10/23/25	
Triclosan	ND	8.0	ng/l	1	10/23/25	
Surrogate(s)						
Gemfibrozil-d6	*112%* *Conc: 112*	*20-500*			*10/23/25*	
Iopromide-d3	*88%* *Conc: 177*	*20-500*			*10/23/25*	
Triclosan-d3	*87%* *Conc: 350*	*20-500*			*10/23/25*	

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING

Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Sample Results

(Continued)

Sample: FW5 (13Q2) Sampled: 10/15/25 10:00 by G. DOOLIN

5J16078-01 (Water) (Continued)

PPCPs - Isotope Dilution LCMSMS (Continued)

Method: EPA 1694M **Instr:** LCMS07

Batch ID: W5J1637 **Preparation:** _NONE (LC) **Prepared:** 10/21/25 11:37 **Analyst:** rjr

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
17-b-Estradiol	ND		4.0	ng/l	1	10/25/25	
Surrogate(s)							
17-b-Estradiol-d3	*90%*	*Conc: 180*	*20-500*			*10/25/25*	

Sample Results

(Continued)

Sample: FW5 (13Q2) Sampled: 10/15/25 10:00 by G. DOOLIN

5J16078-01RE1 (Water)

PPCPs - Isotope Dilution LCMSMS

Method: EPA 1694M **Instr:** LCMS07

Batch ID: W5J1637 **Preparation:** _NONE (LC) **Prepared:** 10/21/25 11:37 **Analyst:** rjr

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Sucralose	**16000**		200	ng/l	10	10/27/25	M-06
Surrogate(s)							
Sucralose-d6	*91%*	*Conc: 908*	*20-500*			*10/27/25*	

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING
Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Sample Results

(Continued)

Sample: FW6 (24A) — Sampled: 10/15/25 12:10 by G. DOOLIN

5J16078-02 (Water)

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods						
Method: EPA 350.1 — **Instr:** AA06						
Batch ID: W5J2312 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/29/25 15:38 — **Analyst:** YMT						
Ammonia as N	ND	0.10	mg/l	1	10/30/25	
Method: EPA 353.2 — **Instr:** AA01						
Batch ID: W5J1320 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/16/25 12:20 — **Analyst:** ATN						
Nitrate as N	**3.2**	0.20	mg/l	1	10/16/25 19:55	
Method: SM 2510B — **Instr:** AA02						
Batch ID: W5J1587 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/21/25 09:36 — **Analyst:** mes						
Specific Conductance (EC)	**870**	2.0	umhos/cm	1	10/21/25	
Method: SM 5310B — **Instr:** TOC02						
Batch ID: W5K0158 — **Preparation:** _NONE (TOC/TOX) — **Prepared:** 11/04/25 11:05 — **Analyst:** ajc						
Total Organic Carbon (TOC)	**1.0**	0.30	mg/l	1	11/05/25	
Method: SM 5910B — **Instr:** UVVIS04						
Batch ID: W5J1333 — **Preparation:** _NONE (WETCHEM) — **Prepared:** 10/16/25 14:51 — **Analyst:** ism						
UV 254	**0.016**	0.009	1/cm	1	10/16/25 16:39	
Nitrosamines by isotopic dilution GC/MS CI Mode						
Method: EPA 1625M — **Instr:** GCMS09						
Batch ID: W5J1479 — **Preparation:** EPA 3535#SPE — **Prepared:** 10/20/25 08:24 — **Analyst:** mld						
N-Nitrosodimethylamine	ND	2.0	ng/l	1	10/20/25	
PPCPs - Isotope Dilution LCMSMS						
Method: EPA 1694M — **Instr:** LCMS07						
Batch ID: W5J1633 — **Preparation:** _NONE (LC) — **Prepared:** 10/21/25 11:31 — **Analyst:** rjr						
Caffeine	ND	4.0	ng/l	1	10/23/25	
DEET	ND	4.0	ng/l	1	10/23/25	
Surrogate(s)						
Caffeine-13C3	*89%* Conc: 178	*20-500*			*10/23/25*	
DEET-d7	*97%* Conc: 19.5	*20-500*			*10/23/25*	
Method: EPA 1694M — **Instr:** LCMS07						
Batch ID: W5J1635 — **Preparation:** _NONE (LC) — **Prepared:** 10/21/25 11:34 — **Analyst:** rjr						
Gemfibrozil	ND	4.0	ng/l	1	10/23/25	
Iopromide	ND	4.0	ng/l	1	10/23/25	
Triclosan	ND	8.0	ng/l	1	10/23/25	
Surrogate(s)						
Gemfibrozil-d6	*91%* Conc: 91.2	*20-500*			*10/23/25*	
Iopromide-d3	*90%* Conc: 180	*20-500*			*10/23/25*	
Triclosan-d3	*88%* Conc: 353	*20-500*			*10/23/25*	

FINAL DRAFT

Sample Results

(Continued)

Sample: FW6 (24A) Sampled: 10/15/25 12:10 by G. DOOLIN

5J16078-02 (Water) (Continued)

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Isotope Dilution LCMSMS (Continued)							
Method: EPA 1694M			**Instr:** LCMS07				
Batch ID: W5J1637	**Preparation:** _NONE (LC)		**Prepared:** 10/21/25 11:37				**Analyst:** rjr
17-b-Estradiol	ND		4.0	ng/l	1	10/25/25	
Surrogate(s)							
17-b-Estradiol-d3	*73%*	*Conc: 146*	*20-500*			*10/25/25*	

Sample Results

(Continued)

Sample: FW6 (24A) Sampled: 10/15/25 12:10 by G. DOOLIN

5J16078-02RE1 (Water)

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
PPCPs - Isotope Dilution LCMSMS							
Method: EPA 1694M			**Instr:** LCMS07				
Batch ID: W5J1637	**Preparation:** _NONE (LC)		**Prepared:** 10/21/25 11:37				**Analyst:** rjr
Sucralose	**11000**		200	ng/l	10	10/27/25	M-06
Surrogate(s)							
Sucralose-d6	*91%*	*Conc: 914*	*20-500*			*10/27/25*	

FINAL DRAFT

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING

Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5J1320 - EPA 353.2										
Blank (W5J1320-BLK1)			**Prepared & Analyzed: 10/16/25**							
Nitrate as N	ND	0.20	mg/l							
Blank (W5J1320-BLK2)			**Prepared & Analyzed: 10/16/25**							
Nitrate as N	ND	0.20	mg/l							
LCS (W5J1320-BS1)			**Prepared & Analyzed: 10/16/25**							
Nitrate as N	0.992	0.20	mg/l	1.00		99	90-110			
LCS (W5J1320-BS2)			**Prepared & Analyzed: 10/16/25**							
Nitrate as N	0.989	0.20	mg/l	1.00		99	90-110			
Matrix Spike (W5J1320-MS1)	**Source: 5J16040-01**		**Prepared & Analyzed: 10/16/25**							
Nitrate as N	9.05	0.20	mg/l	2.00	6.93	106	90-110			
Matrix Spike (W5J1320-MS2)	**Source: 5J16040-03**		**Prepared & Analyzed: 10/16/25**							
Nitrate as N	2.23	0.20	mg/l	2.00	0.249	99	90-110			
Matrix Spike Dup (W5J1320-MSD1)	**Source: 5J16040-01**		**Prepared & Analyzed: 10/16/25**							
Nitrate as N	9.04	0.20	mg/l	2.00	6.93	106	90-110	0.1	20	
Matrix Spike Dup (W5J1320-MSD2)	**Source: 5J16040-03**		**Prepared & Analyzed: 10/16/25**							
Nitrate as N	2.24	0.20	mg/l	2.00	0.249	100	90-110	0.4	20	
Batch: W5J1333 - SM 5910B										
Blank (W5J1333-BLK1)			**Prepared & Analyzed: 10/16/25**							
UV 254	ND	0.009	1/cm							
LCS (W5J1333-BS1)			**Prepared & Analyzed: 10/16/25**							
UV 254	0.086	0.009	1/cm	0.0880		98	90-110			
Duplicate (W5J1333-DUP1)	**Source: 5J15116-03**		**Prepared & Analyzed: 10/16/25**							
UV 254	0.125	0.009	1/cm		0.125			0	10	
Batch: W5J1587 - SM 2510B										
Blank (W5J1587-BLK1)			**Prepared & Analyzed: 10/21/25**							
Specific Conductance (EC)	ND	2.0	umhos/cm							
LCS (W5J1587-BS1)			**Prepared & Analyzed: 10/21/25**							
Specific Conductance (EC)	452	2.0	umhos/cm	445		102	95-105			
Duplicate (W5J1587-DUP1)	**Source: 5J17123-01**		**Prepared & Analyzed: 10/21/25**							
Specific Conductance (EC)	1840	6.0	umhos/cm		1820			1	5	
Batch: W5J2312 - EPA 350.1										
Blank (W5J2312-BLK1)			**Prepared: 10/29/25 Analyzed: 10/30/25**							
Ammonia as N	ND	0.10	mg/l							
Blank (W5J2312-BLK2)			**Prepared: 10/29/25 Analyzed: 10/30/25**							
Ammonia as N	ND	0.10	mg/l							
LCS (W5J2312-BS1)			**Prepared: 10/29/25 Analyzed: 10/30/25**							
Ammonia as N	0.255	0.10	mg/l	0.250		102	90-110			
LCS (W5J2312-BS2)			**Prepared: 10/29/25 Analyzed: 10/30/25**							

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

FINAL DRAFT

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING
Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Quality Control Results

(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5J2312 - EPA 350.1 (Continued)										
LCS (W5J2312-BS2)			**Prepared: 10/29/25**		**Analyzed: 10/30/25**					
Ammonia as N	0.254	0.10	mg/l	0.250		101	90-110			
Matrix Spike (W5J2312-MS1)	**Source: 5C10069-01**		**Prepared: 10/29/25**		**Analyzed: 10/30/25**					
Ammonia as N	0.346	0.10	mg/l	0.250	0.0958	100	90-110			
Matrix Spike (W5J2312-MS2)	**Source: 5J16078-01**		**Prepared: 10/29/25**		**Analyzed: 10/30/25**					
Ammonia as N	0.254	0.10	mg/l	0.250	ND	102	90-110			
Matrix Spike Dup (W5J2312-MSD1)	**Source: 5C10069-01**		**Prepared: 10/29/25**		**Analyzed: 10/30/25**					
Ammonia as N	0.347	0.10	mg/l	0.250	0.0958	101	90-110	0.5	15	
Matrix Spike Dup (W5J2312-MSD2)	**Source: 5J16078-01**		**Prepared: 10/29/25**		**Analyzed: 10/30/25**					
Ammonia as N	0.256	0.10	mg/l	0.250	ND	102	90-110	0.6	15	
Batch: W5J2464 - SM 5310B										
Blank (W5J2464-BLK1)			**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	ND	0.30	mg/l							
Blank (W5J2464-BLK2)			**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	ND	0.30	mg/l							QC-2
LCS (W5J2464-BS1)			**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	1.04	0.30	mg/l	1.00		104	90-110			
LCS (W5J2464-BS2)			**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	2.19	0.30	mg/l	2.00		110	90-110			QC-2
Matrix Spike (W5J2464-MS1)	**Source: 5J02003-02**		**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	5.25	0.30	mg/l	5.00	0.604	93	85-115			
Matrix Spike (W5J2464-MS2)	**Source: 5J15143-05**		**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	19.2	0.30	mg/l	5.00	14.6	92	85-115			
Matrix Spike Dup (W5J2464-MSD1)	**Source: 5J02003-02**		**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	5.47	0.30	mg/l	5.00	0.604	97	85-115	4	15	
Matrix Spike Dup (W5J2464-MSD2)	**Source: 5J15143-05**		**Prepared: 10/31/25**		**Analyzed: 11/04/25**					
Total Organic Carbon (TOC)	19.1	0.30	mg/l	5.00	14.6	90	85-115	0.4	15	
Batch: W5K0158 - SM 5310B										
Blank (W5K0158-BLK1)			**Prepared: 11/04/25**		**Analyzed: 11/05/25**					
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W5K0158-BS1)			**Prepared: 11/04/25**		**Analyzed: 11/05/25**					
Total Organic Carbon (TOC)	1.07	0.30	mg/l	1.00		107	90-110			
Matrix Spike (W5K0158-MS1)	**Source: 5C10069-02**		**Prepared: 11/04/25**		**Analyzed: 11/05/25**					
Total Organic Carbon (TOC)	9.53	0.30	mg/l	5.00	4.92	92	85-115			
Matrix Spike (W5K0158-MS2)	**Source: 5J17066-01**		**Prepared: 11/04/25**		**Analyzed: 11/05/25**					
Total Organic Carbon (TOC)	8.19	0.30	mg/l	5.00	3.39	96	85-115			
Matrix Spike Dup (W5K0158-MSD1)	**Source: 5C10069-02**		**Prepared: 11/04/25**		**Analyzed: 11/05/25**					
Total Organic Carbon (TOC)	9.86	0.30	mg/l	5.00	4.92	99	85-115	3	15	

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING
Project Manager: Spencer Harris
Reported: 12/24/2025 09:55

Quality Control Results
(Continued)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5K0158 - SM 5310B (Continued)										
Matrix Spike Dup (W5K0158-MSD2)	**Source: 5J17066-01**		**Prepared: 11/04/25**		**Analyzed: 11/05/25**					
Total Organic Carbon (TOC)	8.49	0.30	mg/l	5.00	3.39	102	85-115	4	15	

Quality Control Results
(Continued)

Nitrosamines by isotopic dilution GC/MS CI Mode

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5J1479 - EPA 1625M										
Blank (W5J1479-BLK1)				**Prepared & Analyzed: 10/20/25**						
N-Nitrosodimethylamine	ND	2.0	ng/l							
LCS (W5J1479-BS1)				**Prepared & Analyzed: 10/20/25**						
N-Nitrosodimethylamine	2.24	2.0	ng/l	2.00		112	50-150			
LCS Dup (W5J1479-BSD1)				**Prepared & Analyzed: 10/20/25**						
N-Nitrosodimethylamine	2.35	2.0	ng/l	2.00		117	50-150	5	50	

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING
Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Quality Control Results
(Continued)

PPCPs - Isotope Dilution LCMSMS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5J1633 - EPA 1694M										
Blank (W5J1633-BLK1)			**Prepared: 10/21/25**	**Analyzed: 10/22/25**						
Caffeine	ND	4.0	ng/l							
DEET	ND	4.0	ng/l							
Surrogate(s)										
Caffeine-13C3	*202*		*ng/l*	*200*		*101*	*20-500*			
DEET-d7	*19.1*		*ng/l*	*20.0*		*95*	*20-500*			
Blank (W5J1633-BLK2)			**Prepared: 10/21/25**	**Analyzed: 10/28/25**						
Caffeine	ND	4.0	ng/l							
DEET	ND	4.0	ng/l							
Metformin	ND	4.0	ng/l							QC-2
Surrogate(s)										
Caffeine-13C3	*0.00*		*ng/l*	*200*			*20-500*			
DEET-d7	*0.00*		*ng/l*	*20.0*			*20-500*			
LCS (W5J1633-BS1)			**Prepared: 10/21/25**	**Analyzed: 10/22/25**						
Caffeine	40.8	4.0	ng/l	40.0		102	50-150			
DEET	43.8	4.0	ng/l	40.0		110	50-150			
Surrogate(s)										
Caffeine-13C3	*187*		*ng/l*	*200*		*94*	*20-500*			
DEET-d7	*18.7*		*ng/l*	*20.0*		*94*	*20-500*			
LCS (W5J1633-BS2)			**Prepared: 10/21/25**	**Analyzed: 10/28/25**						
Caffeine	ND	4.0	ng/l	40.0			50-150			
DEET	ND	4.0	ng/l	40.0			50-150			
Metformin	35.1	4.0	ng/l	40.0		88	50-150			QC-2
Surrogate(s)										
Caffeine-13C3	*0.00*		*ng/l*	*200*			*20-500*			
DEET-d7	*0.00*		*ng/l*	*20.0*			*20-500*			
Matrix Spike (W5J1633-MS1)	**Source: 5J10023-01**		**Prepared: 10/21/25**	**Analyzed: 10/22/25**						
Caffeine	49.8	4.0	ng/l	40.0	ND	125	50-150			
DEET	54.6	4.0	ng/l	40.0	7.98	117	50-150			
Surrogate(s)										
Caffeine-13C3	*201*		*ng/l*	*200*		*100*	*20-500*			
DEET-d7	*20.5*		*ng/l*	*20.0*		*102*	*20-500*			
Matrix Spike Dup (W5J1633-MSD1)	**Source: 5J10023-01**		**Prepared: 10/21/25**	**Analyzed: 10/22/25**						
Caffeine	45.7	4.0	ng/l	40.0	ND	114	50-150	9	30	
DEET	53.1	4.0	ng/l	40.0	7.98	113	50-150	3	30	
Surrogate(s)										
Caffeine-13C3	*215*		*ng/l*	*200*		*108*	*20-500*			
DEET-d7	*21.4*		*ng/l*	*20.0*		*107*	*20-500*			
Batch: W5J1635 - EPA 1694M										
Blank (W5J1635-BLK1)			**Prepared: 10/21/25**	**Analyzed: 10/23/25**						
Gemfibrozil	ND	4.0	ng/l							

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

FINAL DRAFT

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING

Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Quality Control Results

(Continued)

PPCPs - Isotope Dilution LCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5J1635 - EPA 1694M (Continued)										
Blank (W5J1635-BLK1)			**Prepared: 10/21/25 Analyzed: 10/23/25**							
Iopromide	ND	4.0	ng/l							
Triclosan	ND	8.0	ng/l							
Surrogate(s)										
Gemfibrozil-d6	*117*		*ng/l*	*100*		*117*	*20-500*			
Iopromide-d3	*203*		*ng/l*	*200*		*101*	*20-500*			
Triclosan-d3	*323*		*ng/l*	*400*		*81*	*20-500*			
LCS (W5J1635-BS1)			**Prepared: 10/21/25 Analyzed: 10/23/25**							
Gemfibrozil	41.8	4.0	ng/l	40.0		105	50-150			
Iopromide	41.7	4.0	ng/l	40.0		104	50-150			
Triclosan	78.8	8.0	ng/l	80.0		99	50-150			
Surrogate(s)										
Gemfibrozil-d6	*104*		*ng/l*	*100*		*104*	*20-500*			
Iopromide-d3	*198*		*ng/l*	*200*		*99*	*20-500*			
Triclosan-d3	*403*		*ng/l*	*400*		*101*	*20-500*			
Matrix Spike (W5J1635-MS1)	**Source: 5J10023-01**		**Prepared: 10/21/25 Analyzed: 10/23/25**							
Gemfibrozil	38.8	4.0	ng/l	40.0	ND	97	50-150			
Iopromide	44.2	4.0	ng/l	40.0	ND	110	50-150			
Triclosan	77.4	8.0	ng/l	80.0	ND	97	50-150			
Surrogate(s)										
Gemfibrozil-d6	*115*		*ng/l*	*100*		*115*	*20-500*			
Iopromide-d3	*201*		*ng/l*	*200*		*100*	*20-500*			
Triclosan-d3	*452*		*ng/l*	*400*		*113*	*20-500*			
Matrix Spike Dup (W5J1635-MSD1)	**Source: 5J10023-01**		**Prepared: 10/21/25 Analyzed: 10/23/25**							
Gemfibrozil	41.0	4.0	ng/l	40.0	ND	103	50-150	6	30	
Iopromide	45.5	4.0	ng/l	40.0	ND	114	50-150	3	30	
Triclosan	81.4	8.0	ng/l	80.0	ND	102	50-150	5	30	
Surrogate(s)										
Gemfibrozil-d6	*115*		*ng/l*	*100*		*115*	*20-500*			
Iopromide-d3	*205*		*ng/l*	*200*		*102*	*20-500*			
Triclosan-d3	*485*		*ng/l*	*400*		*121*	*20-500*			
Batch: W5J1637 - EPA 1694M										
Blank (W5J1637-BLK1)			**Prepared: 10/21/25 Analyzed: 10/24/25**							
17-b-Estradiol	ND	4.0	ng/l							
Sucralose	ND	20	ng/l							
Surrogate(s)										
17-b-Estradiol-d3	*187*		*ng/l*	*200*		*93*	*20-500*			
Sucralose-d6	*1060*		*ng/l*	*1000*		*106*	*20-500*			
LCS (W5J1637-BS1)			**Prepared: 10/21/25 Analyzed: 10/24/25**							
17-b-Estradiol	41.5	4.0	ng/l	40.0		104	50-150			
Sucralose	209	20	ng/l	200		105	50-150			

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING

Project Manager: Spencer Harris

Reported: 12/24/2025 09:55

Quality Control Results

(Continued)

PPCPs - Isotope Dilution LCMSMS (Continued)

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W5J1637 - EPA 1694M (Continued)										
LCS (W5J1637-BS1)			**Prepared: 10/21/25**		**Analyzed: 10/24/25**					
Surrogate(s)										
17-b-Estradiol-d3	*205*		*ng/l*	*200*		*102*	*20-500*			
Sucralose-d6	*1020*		*ng/l*	*1000*		*102*	*20-500*			
Matrix Spike (W5J1637-MS1)	**Source: 5J10023-01**		**Prepared: 10/21/25**		**Analyzed: 10/24/25**					
17-b-Estradiol	40.4	4.0	ng/l	40.0	ND	101	50-150			
Sucralose	13900	20	ng/l	200	14900	NR	50-150			
Surrogate(s)										
17-b-Estradiol-d3	*206*		*ng/l*	*200*		*103*	*20-500*			
Sucralose-d6	*1580*		*ng/l*	*1000*		*158*	*20-500*			
Matrix Spike (W5J1637-MS2)	**Source: 5J10023-01RE1**		**Prepared: 10/21/25**		**Analyzed: 10/24/25**					
17-b-Estradiol	4360	400	ng/l	4000	ND	109	50-150			
Sucralose	84700	2000	ng/l	20000	61200	117	50-150			M-06
Surrogate(s)										
17-b-Estradiol-d3	*177*		*ng/l*	*200*		*89*	*20-500*			
Sucralose-d6	*1050*		*ng/l*	*1000*		*105*	*20-500*			
Matrix Spike Dup (W5J1637-MSD1)	**Source: 5J10023-01**		**Prepared: 10/21/25**		**Analyzed: 10/24/25**					
17-b-Estradiol	43.0	4.0	ng/l	40.0	ND	107	50-150	6	30	
Sucralose	14000	20	ng/l	200	14900	NR	50-150	1	30	
Surrogate(s)										
17-b-Estradiol-d3	*234*		*ng/l*	*200*		*117*	*20-500*			
Sucralose-d6	*1440*		*ng/l*	*1000*		*144*	*20-500*			
Matrix Spike Dup (W5J1637-MSD2)	**Source: 5J10023-01RE1**		**Prepared: 10/21/25**		**Analyzed: 10/24/25**					
17-b-Estradiol	4400	400	ng/l	4000	ND	110	50-150	0.9	30	
Sucralose	82600	2000	ng/l	20000	61200	107	50-150	2	30	M-06
Surrogate(s)										
17-b-Estradiol-d3	*199*		*ng/l*	*200*		*99*	*20-500*			
Sucralose-d6	*994*		*ng/l*	*1000*		*99*	*20-500*			

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

FINAL DRAFT

Notes and Definitions

Item	Definition
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation and/or analysis. The MDL and MRL were raised due to this dilution.
QC-2	This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
%REC	Percent Recovery
Dil	Dilution
MRL	Method Reporting Limit (MRL) is the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

FINAL DRAFT

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Cleath-Harris Geologists, Inc.
75 Zaca Lane, Suite 110
San Luis Obispo, CA 93401

Project Number: LOS OSOS CEC MONITORING

Project Manager: Spencer Harris

Reported:
12/24/2025 09:55

Analyses Accreditation Summary

Analyte	CAS #	Not By ELAP-CA	Not By NELAP OR	Not ANAB ISO 17025
EPA 1694M in Water				
Cotinine	486-56-6	●	●	●
Acetaminophen	103-90-2	●		●
Quinoline	91-22-5	●	●	●
Atenolol	29122-68-7	●	●	●
Amoxicillin	26787-78-0	●	●	●
Caffeine	58-08-2	●		●
Trimethoprim	738-70-5	●		●
Meprobamate	57-53-4	●		●
Sulfamethoxazole	723-46-6	●		●
TDCPP	13674-87-8	●	●	●
Carbamazepine	298-46-4	●		●
TCEP	115-96-8	●	●	●
DEET	134-62-3	●		●
Praziquantel	55268-74-1	●	●	●
Diazepam	439-14-5	●		●
TCPP	13674-84-5	●	●	●
Oxybenzone	131-57-7	●		●
Methadone	76-99-3	●		●
Fluoxetine	54910-89-3	●		●
Atorvastatin	134523-00-5	●	●	●
SM 5910B in Water				
UV 254			●	

This laboratory report may contain results for target analytes that are not currently certifiable by the California Environmental Laboratory Accreditation Program (ELAP). ELAP is the state agency that accredits environmental testing laboratories in California<https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html>. ELAP certification is required for laboratories that perform testing for regulatory purposes, such as drinking water, wastewater, hazardous waste, and ambient water<https://www.waterboards.ca.gov/drinking_water/certlic/labs/apply.html>. However, ELAP does not certify all analytes or methods that a laboratory may offer. Therefore, some of the target analytes in this report may not have been tested under ELAP-approved methods or quality control procedures. The results for these analytes are provided for informational purposes only and should not be used for regulatory compliance or decision making. Please contact the laboratory if you have any questions or concerns about the report.

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139
www.wecklabs.com

FINAL DRAFT

APPENDIX D

Field Methods

Groundwater Level Measurement Procedures for the
Los Osos Basin Plan Groundwater Monitoring Program

Introduction

This document establishes procedures for measuring and recording groundwater levels for the Los Osos Basin Plan (LOBP) Groundwater Monitoring Program, and describes various methods used for collecting meaningful groundwater data.

Static groundwater levels obtained for the LOBP Groundwater Monitoring Program are determined by measuring the distance to water in a non-pumping well from a reference point that has been referenced to sea level. Subtracting the distance to water from the elevation of the reference point determines groundwater surface elevations above or below sea level. This is represented by the following equation:

$$E_{GW} = E_{RP} - D$$

Where:

E_{GW} = Elevation of groundwater above mean sea level (feet)

E_{RP} = Elevation above sea level at reference point (feet)

D = Depth to water (feet)

References

Procedures for obtaining and reporting water level data for the LOBP Groundwater Monitoring Program are based on a review of the following documents.

- State of California, Department of Water Resources, 2010, *Groundwater Elevation Monitoring Guidelines*, prepared for use in the California Statewide Groundwater Elevation Monitoring (CASGEM) program, December. https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM
- State of California, Department of Water Resources, 2014, *Addendum to December 2010 Groundwater Elevation Monitoring Guidelines for the Department of Water Resources' California Statewide Groundwater Elevation Monitoring (CASGEM) Program,* October 2. https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM
- U.S. Geological Survey, 1977, *National Handbook of Recommended Methods for Water-Data Acquisition*, a Unites States contribution to the International Hydrological Program. https://pubs.usgs.gov/chapter11/
- U.S. Geological Survey, Office of Ground Water, 1997, *Ground Water Procedure Document 1, Water-level measurement using graduated steel tape, draft stand-alone procedure document.* http://pubs.usgs.gov/tm/1a1/pdf/GWPD1.pdf

- U.S. Geological Survey, Office of Ground Water, 1997, *Ground Water Procedure Document 4, Water-level measurement using an electric tape, draft stand-alone procedure document.* http://pubs.usgs.gov/tm/1a1/pdf/GWPD4.pdf
- U.S. Geological Survey, Office of Ground Water, 1997, *Ground Water Procedure Document 13, Water-level measurement using an air line, draft stand-alone procedure document.* http://pubs.usgs.gov/tm/1a1/pdf/GWPD13.pdf
- U.S. Geological Survey, 2001, *Introduction to Field Methods for Hydrologic and Environmental Studies*, Open-File Report 2001-50, 241 p. https://pubs.er.usgs.gov/publication/ofr0150

Well Information

Table 1 below lists important well information to be maintained in a well file or in a field notebook. Additional information that should be available to the person collecting water level data include a description of access to the property and the well, the presence and depth of cascading water, or downhole obstructions that could interfere with a sounding cable.

Table 1
Well File Information

Well Completion Report	Hydrologic Information	Additional Information to be Recorded
Well name	Map showing basin boundaries and wells	Township, Range, and ¼ ¼ Section
Well Owner	Name of groundwater basin	Latitude and Longitude (Decimal degrees)
Drilling Company	Description of aquifer	Assessor's Parcel Number
Location map or sketch	Confined, unconfined, or mixed aquifers	Description of well head and sounding access
Total depth	Pumping test data	Reference point elevations
Perforation interval	Hydrographs	Well use and pumping schedule if known
Casing diameter	Water quality data	Date monitoring began
Date of well completion	Property access instructions/codes	Land use

Reference Points and Reference Marks

Reference point (RP) elevations are the basis for determining groundwater elevations relative to sea level. The RP is generally that point on the well head that is the most convenient place to measure the water level in a well. In selecting an RP, an additional consideration is the ease of surveying either by Global Positioning System (GPS) or by leveling.

The RP must be clearly defined, well marked, and easily located. A description, sketch, and photograph of the point should be included in the well file. Additional Reference Marks (RMs) may be established near the wellhead on a permanent object. These additional RMs can serve as a benchmark by which the wellhead RP can be checked or re-surveyed if necessary. All RMs should be marked, sketched, photographed, and described in the well file.

All RPs for Groundwater Monitoring Program wells should be reported based on the same horizontal and vertical datum by a California licensed surveyor to the nearest tenth of one foot vertically, and the nearest one foot horizontally. The surveyor's report should be maintained in the project file.

In addition to the RP survey, the elevation of the ground surface adjacent to the well should also be measured and recorded in the well file. Because the ground surface adjacent to a well is rarely uniform, the average surface level should be estimated. This average ground surface elevation is referred to in the U.S.G.S. Procedural Document (GWPD-1, 1997) and DWR guidelines as the Land Surface Datum (LSD).

Water Level Data Collection

Prior to beginning the field work, the field technician should review each well file to determine which well owners require notification of the upcoming site visit, or which well pumps need to be turned off to allow for sufficient water level recovery. Because groundwater elevations are used to construct groundwater contour maps and to determine hydraulic gradients, the field technician should coordinate water level measurements to be collected within as short a period of time as practical. Any significant changes in groundwater conditions during monitoring events should be noted in the Annual Monitoring Report. For an individual well, the same measuring method and the same equipment should be used during each sampling event where practical.

A static water level should represent stable, non-pumping conditions at the well. When there is doubt about whether water levels in a well are continuing to recover following a pumping cycle, repeated measurements should be made. If an electric sounder is being used, it is possible to hold the sounder level at one point slightly above the known water level and wait for a signal that would indicate rising water. If applicable, the general schedule of pump operation should be determined and noted for active wells. If the well is capped but not vented, remove the cap and wait several minutes before measurement to allow water levels to equilibrate to atmospheric pressure.

When lowering a graduated steel tape (chalked tape) or electric tape in a well without a sounding tube in an equipped well, the tape should be played out slowly by hand to minimize the chance of the tape end becoming caught in a downhole obstruction. The tape should be held in such a way that any change in tension will be felt. When withdrawing a sounding tape, it should also be brought up slowly so that if an obstruction is encountered, tension can be relaxed so that the tape can be lowered again before attempting to withdraw it around the obstruction.

Despite all precautions, there is a small risk of measuring tapes becoming stuck in equipped wells without dedicated sounding tubes. If a tape becomes stuck, the equipment should be left on-site and re-checked after the well has gone through a few cycles of pumping, which can free the tape due to movement/vibration of the pump column. If the tape remains stuck, a pumping contractor will be needed to retrieve the equipment. A dedicated sounding tube may be installed by the pumping contractor at that time.

All water level measurements should be made to an accuracy of 0.01 feet. The field technician should make at least two measurements. If measurements of static levels do not agree to within 0.02 feet of each other, the technician should continue measurements until the reason for the disparity is determined, or the measurements are within 0.02 feet.

Record Keeping in the Field

The information recorded in the field is typically the only available reference for the conditions at the time of the monitoring event. During each monitoring event it is important to record any conditions at a well site and its vicinity that may affect groundwater levels, or the field technician's ability to obtain groundwater levels. Table 2 lists important information to record, however, additional information should be included when appropriate.

Table 2
Information Recorded at Each Well Site

Well name	Changes in land use	Presence of pump lubricating oil in well
Name and organization of field technician	Changes in RP	Cascading water
Date & time	Nearby wells in use	Equipment problems
Measurement method used	Weather conditions	Physical changes in wellhead
Sounder used	Recent pumping info	Comments
Reference Point Description	Measurement correction(s)	Well status

Measurement Techniques

Four standard methods of obtaining water levels are discussed below. The chosen method depends on site and downhole conditions, and the equipment limitations. In all monitoring situations, the procedures and equipment used should be documented in the field notes and in final reporting. Additional detail on methods of water level measurement is included in the reference documents.

<u>Graduated Steel Tape</u>
This method uses a graduated steel tape with a brass or stainless-steel weight attached to its end. The tape is graduated in feet. The approximate depth to water should be known prior to measurement.

- Estimate the anticipated static water level in the well from field conditions and historical information;
- Chalk the lower few feet of the tape by applying blue carpenter's chalk.
- Lower the tape to just below the estimated depth to water so that a few feet of the chalked portion of the tape is submerged. Be careful not to lower the tape beyond its chalked length.
- Hold the tape at the RP and record the tape position (this is the "hold" position and should be at an even foot);
- Withdraw the tape rapidly to the surface;

- Record the length of the wetted chalk mark on the graduated tape;
- Subtract the wetted chalk number from the "hold" position number and record this number in the "Depth to Water below RP" column;
- Perform a check by repeating the measurement using a different RP hold value;
- All data should be recorded to the nearest 0.01 foot;
- Disinfect the tape by wiping down the submerged portion of the tape with single-use, unscented disinfectant wipe, or let stand for one minute in a dilute chlorine bleach solution and dry with clean cloth.

The graduated steel tape is generally considered to be the most accurate method for measuring static water levels. Measuring water levels in wells with cascading water or with condensing water on the well casing causes potential errors, or can be impossible with a steel tape.

<u>Electric Tape</u>

An electric tape operates on the principle that an electric circuit is completed when two electrodes are submerged in water. Most electric tapes are mounted on a hand-cranked reel equipped with batteries and an ammeter, buzzer or light to indicate when the circuit is completed. Tapes are graduated in either one-foot intervals or in hundredths of feet depending on the manufacturer. Like graduated steel tapes, electric tapes are affixed with brass or stainless-steel weights.

- Check the circuitry of the tape before lowering the probe into the well by dipping the probe into water and observe if the ammeter needle or buzzer/light signals that the circuit is completed;
- Lower the probe slowly and carefully into the well until the signal indicates that the water surface has been reached;
- Place a finger or thumb on the tape at the RP when the water surface is reached;
- If the tape is graduated in one-foot intervals, partially withdraw the tape and measure the distance from the RP mark to the nearest one-foot mark to obtain the depth to water below the RP. If the tape is graduated in hundredths of a foot, simply record the depth at the RP mark as the depth to water below the RP;
- Make all readings using the same needle deflection point on the ammeter scale (if equipped) so that water levels will be consistent between measurements;
- Make check measurements until agreement shows the results to be reliable;
- All data should be recorded to the nearest 0.01 foot;
- Disinfect the tape by wiping down the submerged portion of the tape with single-use, unscented disinfectant wipe, or let stand for one minute in a dilute chlorine bleach solution and dry with clean cloth;
- Periodically check the tape for breaks in the insulation. Breaks can allow water to enter into the insulation creating electrical shorts that could result in false depth readings.

The electric tape may give slightly less accurate results than the graduated steel tape. Errors can result from signal "noise" in cascading water, breaks in the tape insulation, tape stretch, or missing tape at the location of a splice. All electric tapes should be calibrated semi-annually against a steel tape that is maintained in the office and used only for calibration.

Air Line

The air line method is usually used only in wells equipped with pumps. This method typically uses a 1/8 or 1/4-inch diameter, seamless copper tubing, brass tubing, stainless steel tubing, or galvanized pipe with a suitable pipe tee for connecting an altitude or pressure gage. Plastic (i.e. polyethylene) tubing may also be used, but is considered less desirable because it can develop leaks as it degrades. An air line must extend far enough below the water level that the lower end remains submerged during pumping of the well. The air line is connected to an altitude gage that reads directly in feet of water, or to a pressure gage that reads pressure in pounds per square inch (psi). The gage reading indicates the length of the submerged air line.

The formula for determining the depth to water below the RP is: $\mathbf{d = k - h}$ where d = depth to water; k = constant; and h = height of the water displaced from the air line. In wells where a pressure gage is used, h is equal to 2.31 ft/psi multiplied by the gage reading. The constant value for k is approximately equivalent to the length of the air line.

- Calibrate the air line by measuring an initial depth to water (d) below the RP with a graduated steel tape. Use a tire pump, air tank, or air compressor to pump compressed air into the air line until all the water is expelled from the line. When all the water is displaced from the line, record the stabilized gage reading (h). Add d to h to determine the constant value for k.
- To measure subsequent depths to water with the air line, expel all the water from the air line, subtract the gage reading (h) from the constant k, and record the result as depth to water (d) below the RP.

The air line method is not as accurate as a graduated steel tape or electric and is typically accurate to the nearest one foot at best. Errors can occur from leaky air lines, or when tubing becomes clogged with mineral deposits or bacterial growth. The air line method is not desirable for use in the Groundwater Monitoring Program.

Pressure Transducer

Electrical pressure transducers make it possible to collect frequent and long-term water level or pressure data from wells. These pressure-sensing devices, installed at a fixed depth in a well, sense the change in pressure against a membrane. The pressure changes occur in response to changes in the height of the water column in the well above the transducer membrane. To compensate for atmospheric changes, transducers may have vented cables or they can be used in conjunction with a barometric transducer that is installed in the same well or a nearby observation well above the water level.

Transducers are selected on the basis of expected water level fluctuation. The smallest range in water levels provides the greatest measurement resolution. Accuracy is generally 0.01 to 0.1 percent of the full-scale range.

FINAL DRAFT

Retrieving data in the field is typically accomplished by downloading data through a USB connection to a portable computer or data logger. A site visit to retrieve data should involve several steps designed to safeguard the stored data and the continued useful operation of the transducer:

- Inspect the wellhead and check that the transducer cable has not moved or slipped (the cable can be marked with a reference point that can be used to identify movement);
- Ensure that the instrument is operating properly;
- Measure and record the depth to water with a graduated steel or electric tape;
- Document the site visit, including all measurements and any problems;
- Retrieve the data and document the process;
- Review the retrieved data by viewing the file or plotting the original data;
- Recheck the operation of the transducer prior to disconnecting from the computer.

A field notebook with a checklist of steps and measurements should be used to record all field observations and the current data from the transducer. It provides a historical record of field activities. In the office, maintain a binder with field information similar to that recorded in the field notebook so that a general historical record is available and can be referred to before and after a field trip.

Quality Control

The field technician should compare water level measurements collected at each well with the available historical information to identify and resolve anomalous and potentially erroneous measurements prior to moving to the next well location. Pertinent information, such as insufficient recovery of a pumping well, proximity to a pumping well, falling water in the casing, and changes in the measurement method, sounding equipment, reference point, or groundwater conditions should be noted. Office review of field notes and measurements should also be performed by a second staff member.

Groundwater Sampling Procedures for the Los Osos Basin Plan Groundwater Monitoring Program

Introduction

This document establishes groundwater sampling procedures for the Los Osos Basin Plan (LOBP) Groundwater Monitoring Program. Groundwater sampling procedures facilitate obtaining a representative groundwater sample from an aquifer for water quality analysis. The water sampling procedures for general mineral and dissolved nitrogen sampling are presented below, along with special procedures for collecting samples for analyzing Constituents of Emerging Concern (CECs).

References

The procedures used for the LOBP Groundwater Monitoring Program have been developed through consideration of the constituents of analysis, well construction and type, and a review of the following references:

- U.S. Environmental Protection Agency, 1999, *Compendium of ERT Groundwater Sampling Procedures*, EPA/540/P-91/007, January 1999.
- Wilde, F. D., 2004, *Cleaning of Equipment for Water Sampling* (ver 2.0): U.S. Geological Survey Techniques of Water-Resources Investigations, Book 9, Chapter A3, revised April 2004. https://pubs.usgs.gov/publication/twri09A3
- Wilde, F. D., 2008, *Guidelines for Field-Measured Water Quality Properties* (ver. 2.0): U.S. Geological Survey Techniques of Water-Resources Investigations, Book 9, Chapter A6, Section 6, October 2008. http://water.usgs.gov/owq/FieldManual/Chapter6/6.0_contents.html

Well Information

Table 1 below lists important well information to be maintained in a well file or in a field notebook. Additional information that should be available to the person collecting groundwater samples include a description of access to the property and the well, the presence and depth of cascading water, or downhole obstructions that could interfere with sampling equipment.

Table 1
Well File Information

Well Completion Report	Hydrologic Information	Additional Information to be Recorded
Well name	Map showing basin boundaries and wells	Township, Range, and ¼ ¼ Section
Well Owner	Name of groundwater basin	Latitude and Longitude (Decimal degrees)
Drilling Company	Description of aquifer	Assessor's Parcel Number
Location map or sketch	Confined, unconfined, or mixed aquifers	Description of well head and sounding access
Total depth	Pumping test data	Reference point elevations
Perforation interval	Hydrographs	Well use and pumping schedule if known
Casing diameter	Water quality data	Date monitoring began
Date of well completion	Property access instructions/codes	Land use

Groundwater Sampling Procedures

<u>Non-equipped wells</u>

1) Calibrate field monitoring instruments each day prior to sampling;
2) Inspect wellhead condition and note any maintenance required (perform at earliest convenience);
3) Measure depth to static water (record to 0.01 inches) from surveyed reference point;
4) Install temporary purge pump to at least three feet below the water surface (deeper setting may be needed if water level draw down is too great);
5) Begin well purge, record flow rate;
6) Measure discharge water EC (measured to 10 µmhos/cm), pH (measured to 0.01 units), and temperature (measured to 0.1 degrees C) at regular intervals during well purging. Record time and gallons purged. Note discharge water color, odor, and turbidity (visual);
7) A minimum of three casing volumes of water should be removed during purging, or one borehole volume opposite perforated interval, whichever is greater*. In addition, a set of at least three consecutive field monitoring measurements with stable values should be recorded. For EC, stability within 5 percent of the first value in the set is sufficient (typically within 20-50 µmhos/cm). For pH, stability within 0.3 units is sufficient. For temperature, stability within 0.2 degrees C is sufficient;
8) Collect sample directly from discharge tube, note sample color, odor, turbidity (visual). Use only laboratory-provided containers. Wear powder-free nitrile gloves when collecting groundwater samples;
9) Place samples on-ice for transport to the laboratory;
10) Remove temporary pump and rinse with clean water;
11) Close well and secure well box lid;

*note: If well is pumped dry at the minimum pumping rate, the well may be allowed to recover and then sampled by bailer within 24 hours.

FINAL DRAFT

Equipped wells

The sampling port for an equipped well must be upstream of any water filtration or chemical feeds. Sample from the discharge line as close to the wellhead as possible. Sampling procedures for equipped wells will vary. For active wells (i.e. wells used daily), the need for purging three casing volumes is unnecessary. Flush supply line from well or holding tank to sampling port, and record one set of EC, pH, and temperature readings prior to sampling. For inactive wells, a field monitoring procedure similar to that described for non-equipped wells above is appropriate. Static water level measurements should also be taken before sampling. Water samples should always be transported on-ice to the laboratory.

Chain-of-Custody

The chain-of-custody and associated sample bottle labels are used to document sample identification, specify the analyses to be performed, and trace possession and handling of a sample from the time of collection through delivery to the analytical laboratory. The sampler should fill out the sample identification labels and affix them to the sample bottles prior to, or upon, sample collection. A chain-of-custody form should be filled out by the sampler and a signature and date/time of sample transfers are required for each relinquishing and receiving party between sample collection and laboratory delivery.

Groundwater Sampling Equipment Decontamination

Field equipment should be cleaned prior to the sampling event and between sampling locations. Sampling pumps and hand bailers should be brushed with a nylon-bristle brush using a solution of 0.1 to 0.2-percent (volume/volume) non-phosphate soap in municipal-source tap water. The equipment should then be triple-rinsed with deionized water. Purge the pump hose of well water between sampling locations by pumping deionized through the hose. Groundwater sampling equipment should be protected from contact with the ground, or other potentially contaminating materials, at all times.

Special procedures for sampling for CEC compounds from unequipped well:

1) A new, teflon-lined polyethylene discharge hose or bailer will be used at each unequipped well sampling location;
2) The sampling pump will be decontaminated prior to each well sampled: Decontamination will consist of brushing pump body, inlet screen, and submerged portion of power cable in a phosphate-free cleaning solution, followed by rinsing, pumping distilled water, and final rinse;

3) Personnel collecting the sample will use powder-free nitrile gloves and observe special precautions for testing as directed by the laboratory (such as no caffeinated drink consumption on day of sampling, standing downwind of sampling port during sample collection, double-bag sample bottles, etc.);
4) Equipment blanks of distilled water pumped through the sampling pump are recommended;
5) A clean water/travel blank of distilled water (from the same source used for pump decontamination) is recommended.

APPENDIX E

Chromium-6 and PFAS Concentrations

Table E1
Chromium-6, Maximum Reported at Purveyor Wells (µg/L)

Program Well ID	Name/Location	Date	Cr-VI (µg/L)
LA10	Rosina	01/14/2025	2.6
LA12	8th St Lower	05/12/2025	1.1
LA15	Palisades	11/04/2024	2.3
LA39	LO#5	07/01/2025	8.4
LA20	So. Bay #1	01/14/2025	2.6
LA44	Bay Oaks	01/26/2026	3.3
LA8	Well #5	11/26/2024	4.8
LA9	Cabrillo	01/14/2025	4.8
UA12	So. Bay Lower	05/12/2025	3.1
UA19	8th St Upper	11/12/2025	16.0
UA3	Skyline	01/14/2025	5.0
UA5	3rd St	11/04/2024	11.0
UA8	10th St	05/12/2025	7.5
UA9	LO#3	07/01/2025	5.7

California MCL = 10 µg/L

NOTE: The maximum detected concentrations are useful for screenng purposes but do not represent compliance determinations; running annual averages would be necessary.

Table E2
PFAS Compounds, Maximum Reported at Purveyor Wells (ng/L)

Program Well ID	Name/Location	Date	PFOA (ng/L)	PFOS (ng/L)	PFHxS (ng/l)	PFBS (ng/L)	PFNA (ng/L)	PFDA (ng/L)
LA12	8th St Lower	10/06/2025	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
LA15	Palisades	01/26/2026	19.0	29.0	27.0	9.7	< 2.0	< 2.0
LA39	LO#5	06/25/2024	< 2.0	< 2.0	4.3	< 2.0	< 2.0	< 2.0
LA20	So. Bay #1	Various[1]	2.1	< 2.0	2.2	< 2.0	< 2.0	< 2.0
LA44	Bay Oaks	03/24/2026	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
LA8	Well #5	02/01/2024	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
UA12	So. Bay Lower	10/07/2024	2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
UA13	So. Bay Upper	10/07/2024	16.0	11.0	7.9	18.0	< 2.0	< 2.0
UA19	8th St Upper	01/26/2026	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
UA4	Well #1	10/02/2024	< 1.8	< 1.8	2.0	2.2	< 1.8	< 1.8
UA5	3rd St	01/26/2026	2.4	< 2.0	2.2	< 2.0	< 2.0	< 2.0
UA8	10th St	01/26/2026	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
UA9	LO#3	Various[2]	9.4	2.3	21.0	6.4	< 2.0	< 2.0
Notification Level (NL): CA DDW, revised 10/29/2025 (PFOA, PFOS, PFHxS, PFBS).			4	4	3	500		
Response Level (RL): CA DDW, revised 10/29/2025 (PFOA, PFOS, PFHxS, PFBS).			10	40	10	5000		
MCL: U.S. EPA PFAS National Primary Drinking Water Regulation (NPDWR), effective 04/10/2024 (PFOA, PFOS, PFHxS, PFNA).			4	4	10		10	

Notes

1 - So. Bay #1 (LA20): PFOA: 09/26/2024; PFOS, PFHxS, PFBS, PFNA, PFDA: 12/05/2024

2 - LO#3 (UA9): PFBS: 02/14/2024; PFOS: 05/20/2025; PFOA, PFHxS: 11/04/2025; PFNA, PFDA: 11/20/2024

The maximum detected concentrations are useful for screenng purposes but do not represent compliance determinations; confirmation sampling and running annual averages would be necessary.

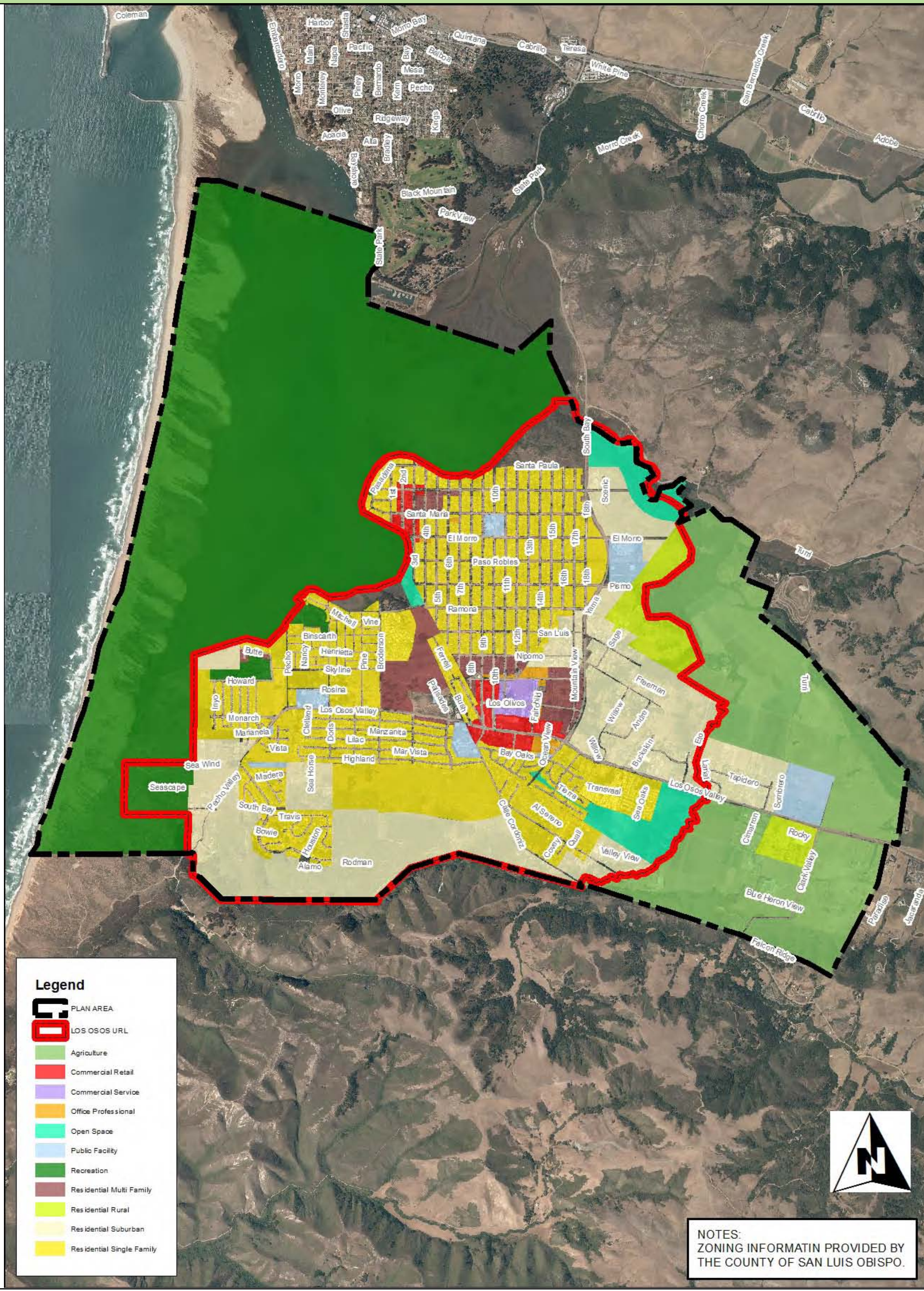
FINAL DRAFT

APPENDIX F

Land Use and Water Use Areas
(from LOBP)

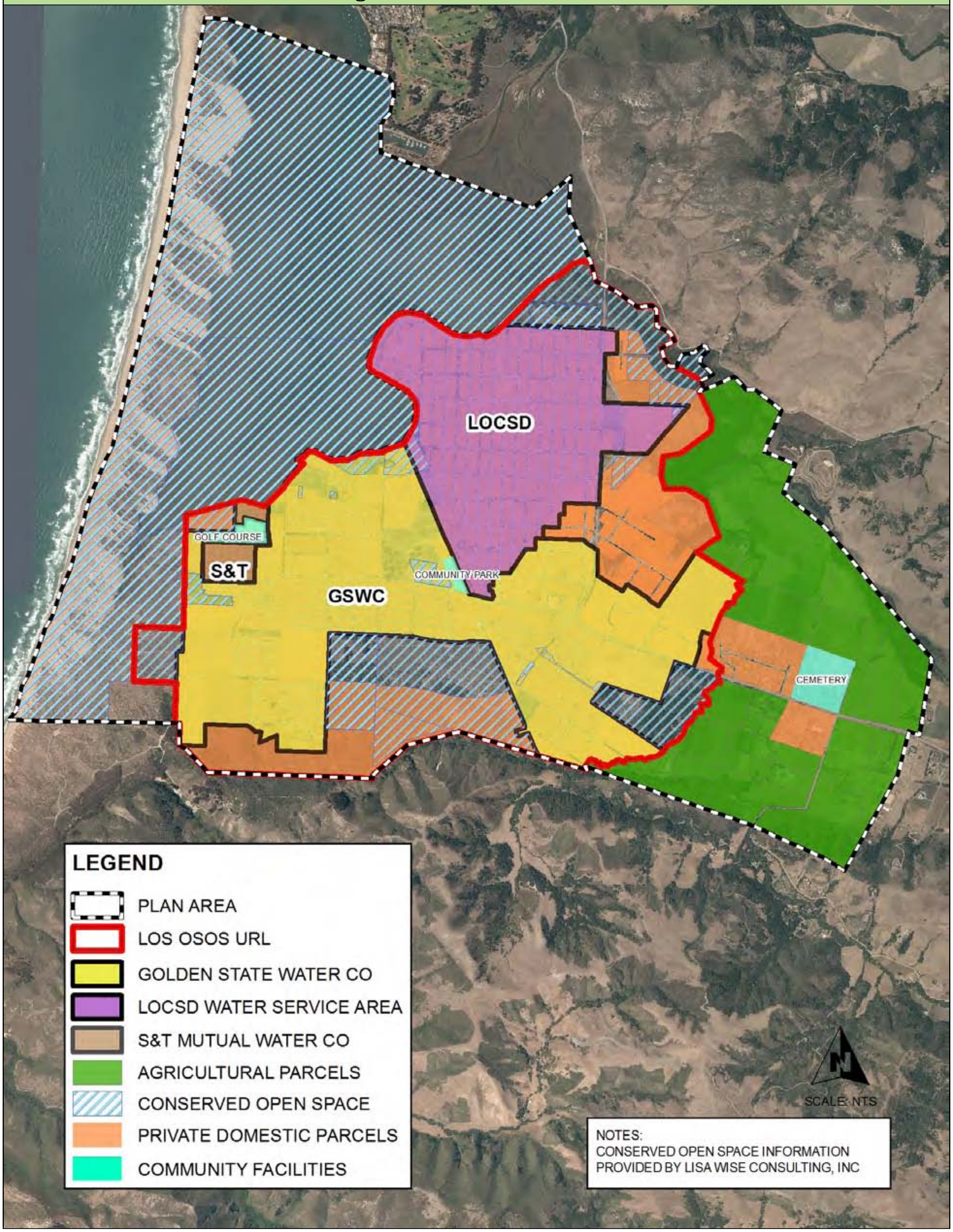
FINAL DRAFT

Figure 5. Land Uses in the Plan Area



FINAL DRAFT

Figure 10. Water Use Areas



APPENDIX G

2025 Agricultural and Community Turf Water Use Estimates

APPENDIX G1: Agriculture and Community Turf Applied Irrigation Water Estimate

Groundwater production estimates for agriculture and turf irrigation in 2025 were developed using a daily soil-moisture budget with local data input. Sources of data included:

- The 2025 land use survey by the County for estimating irrigated acreages.
- Daily rainfall from County rain gage 727 (former Los Osos Landfill).
- Daily reference evapotranspiration from the California Irrigated Management Information System (CIMIS) Station 160 (San Luis Obispo West - Chorro Valley) located in DWR Climate Zone 6, which is the same climate zone as the Los Osos Valley.
- Water holding capacity and rooting depths from UC Davis Cooperative Extension at http://UCManageDrought.ucdavis.edu
- Crop Coefficients (Kc) from prior work in the Los Osos basin.

The soil-moisture budget methodology used accounts for soil holding capacity, crop rooting depth, leaching fraction, irrigation efficiency, local precipitation, and local reference evapotranspiration. The following equation, modified from a general formula for irrigation water requirements, was used for the soil-moisture budget (Carollo, 2012, modified from Burt et al., 2002):

Applied Irrigation Water = (ETc - Pe) / (EF)

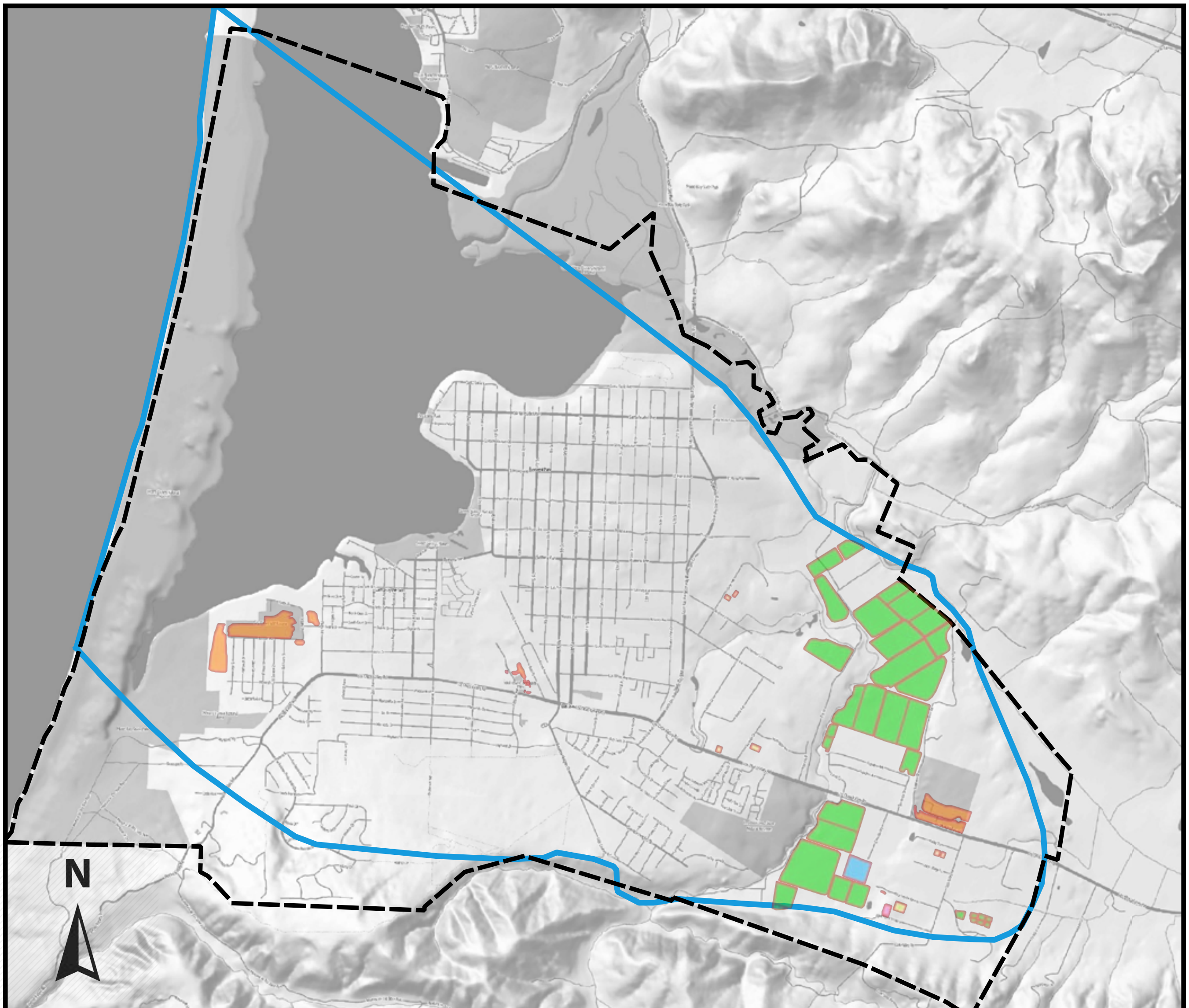
Where:

ETc [Crop evapotranspiration] = ETo [reference evapotranspiration] x Kc [crop coefficient]
Pe [effective precipitation] = rainfall stored in soil and available to crop
EF [efficiency factor] = (1-LF[leaching fraction]) x IE [irrigation efficiency]
Assumes no frost protection for crops in the Los Osos Creek Valley.

Irrigated Acreage

Crop data used in this annual report comes from a GIS geodatabase provided by LandIQ. This agricultural land-use dataset includes fields by crop type within the Basin and is separated into 16 categories, including some non-irrigated types such as urban, grain and hay, and fallow. The categories were then merged into the five main irrigated-crop categories: nursery, pasture, vegetable, vineyard, avocado and turf. Fields that were shown in the LandIQ dataset but were identified as likely being irrigated from bedrock wells outside the Basin were not included in the final crop acreages. 2025 crop acreages were then estimated using this updated dataset for use in soil moisture budget modeling. After review and comparison to crop datasets used in previous years from the County of San Luis Obispo, it was determined that the LandIQ dataset is accurate and can be directly compared with previous crop acreage estimates.

A land use survey map for 2025 is shown in Figure G-1. Tabulation of the irrigated acreages is presented in Table G-1.



Base Image: Stamen Terrain in Greyscale

0 2,000 4,000 6,000 8,000 ft

Scale: 1 inch ≈ 4,000 feet

Explanation

Crop Type

- Nursery
- Pasture
- Vegetable
- Vineyard
- Avocado

- LOBP Basin Boundary
- Adjudicated Plan Area

- Community Facilities with Turf Areas

Figure G1

2025 Crop Types
Los Osos Groundwater Basin

2025 Annual Report

Cleath-Harris Geologists

FINAL DRAFT

Table G-1
2025 County Crop Survey
Eastern Area

Crop Type	Acres
Nursery	3.4
Pasture[1]	6.5
Vineyards	0.9
Avocados	0.1
Vegetables	249.5
Total	260.4

[1]Sod farm listed as pasture in survey

Crop acreages listed in Table G-1 are in the Eastern Area (Los Osos Creek Valley and Cemetery Mesa). In addition, the turf areas for community facilities were calculated from areal images. Table G-2 presents these areas below.

Table G-2
Community Irrigated Turf Areas

Location	Acres
Memorial Park	12.5
Community Park	1.2
Sea Pines	24.0

Turf areas for schools, parks, cemeteries, and golf courses are generally classified in land use surveys as urban landscape, rather than given an agricultural designation. Turf grown for sod farms falls under an agricultural classification (pasture). For the purposes of the soil-moisture budget, the turf for community facilities and sod farms are considered as pasture.

Soil-Moisture Budget

The soil-moisture budget was constructed as a spreadsheet. Irrigation was applied as needed to offset soil moisture deficits after accounting for crop evapotranspiration, rainfall, rooting depths, and soil holding capacities.

As noted above:

Applied Irrigation Water = (**ETc - Pe**) / (**EF**)

Where:

ETc [Crop evapotranspiration] = ETo [reference evapotranspiration] x Kc [crop coefficient]

FINAL DRAFT

ETo: Reference evapotranspiration is imported from CIMIS Station 160 (San Luis Obispo West - Chorro Valley available on-line at: https://cimis.water.ca.gov/

Kc: The crop coefficient for turfgrass (Memorial Park, Golf Course, Community Park and the sod farm) is by definition 1, since the reference ETo crop is turfgrass. The crop coefficient for vegetables/row crops are based on prior investigations and summarized in Table G-3 below.

Table G-3
Crop Coefficients - Vegetables

Month	Kc
JAN	0.41
FEB	0.41
MAR	0.53
APR	0.51
MAY	0.73
JUN	0.86
JUL	0.83
AUG	0.76
SEP	0.71
OCT	0.56
NOV	0.46
DEC	0.34

Source: Yates & Williams (2003)

Pe [effective precipitation] = rainfall stored in soil and available to crop

Pe is accounted for in the daily soil moisture budget. An example of the moisture budget is presented at the end of this appendix.

The water holding capacity was estimated based on the typical soils present in the Los Osos Creek valley: Marimel silty clay loam, Marimel sandy clay loam, and Salinas silty clay loam. Using NRCS Soil Survey accessible here: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, and assuming a typical rooting depth of 2 feet, the resulting water holding capacity for the soil moisture budget calculations was estimated at 4 inches.

EF [efficiency factor] = (1-LF[leaching fraction]) x IE [irrigation efficiency]

The efficiency factor was substituted with a calibration factor of 92 percent. The purpose of the substitution was to reconcile the average annual irrigation requirement from a daily soil-moisture budget, prepared for 2006-2008, to the irrigation estimate from prior work, which was also based on the 2006-2008 period but used a different methodology (CHG, 2009b). The intent was to develop a methodology that provided variation in irrigation estimates from year to year based on both rainfall and acreages, but that was also consistent with historical estimates. Calibration factor development is shown in Table G-4.

Table G-4
Calibration of Soil Moisture Methodology to Prior 2006-2008 Estimate

Description	Units	Average 2006-2008	2017
Irrigation demand vegetables	inches	22.53	24.92[1]
Irrigation demand pasture	inches	37.24	41.27[2]
Calibration Factor[3]	factor	**0.92**	0.92
Applied irrigation vegetables	feet	2.04	2.26
Applied irrigation pasture	feet	3.37	3.74
Vegetables acreage[4]	acres	339	282.2
Vegetables applied water	acre-feet	692	637.8
Pasture acreage[4]	acres	18.3	8.7
Pasture applied water	acre-feet	61.7	32.5
TOTAL applied ag irrigation	acre-feet	**754**	670
TOTAL from CHG (2009b)	acre-feet	**750**	--

[1]From 2017 Annual Report Table F-3;
[2]From 2017 Annual Report Table F-4;
[3]Efficiency factor used to calibrate 2006-2008 total
[4]2006-2008 acreage from CHG, 2009b (excludes memorial park);
"--" = no value for this cell
2017 acreage from County GIS 2016 (1 vineyard and 1.8 nursery acres counted as 2.2 acres in vegetables, based on equivalent water demand conversion using 2012 County Master Water Plan Table A1 [Carollo, 2012]).

There is a reduction in irrigation water demand between 2006-2008 (750 AFY) and 2017 (670 AF) shown in Table G-4 due to a reduction in irrigated acreage. This reduction may have occurred between 2006-2008 and 2017, although it may also have been from changing the source for irrigated acreage estimates from aerial images (2006-2008 and subsequent years through 2016) to the County agricultural database (beginning in 2017). The County database is field checked with growers and is the appropriate data source.

Results of the soil-moisture budget method for estimating applied irrigation for agriculture and community facilities are included in tables below, and an example of the soil moisture is attached to the end of this appendix.

Tables G-5 and G-6 present irrigation demand as crop evapotranspiration for calendar years 2022 through 2025. The soil-moisture budget results show irrigation demand for vegetables was slightly less in 2025, compared to 2024. Total precipitation was similar in calendar years 2025 and 2024, however, evapotranspiration rates were lower in 2025. The monthly rainfall distribution throughout 2025 was more evenly distributed than 2024, which had a greater distribution of rain later into the growing season. There is limited water holding capacity in soils, and monthly rainfall distribution can have a greater effect on irrigation demand than total rainfall. The irrigation demand for turfgrass showed little to no change between 2024 and 2025.

Table G-5
Soil-Moisture Budget Results (Vegetables)

Year	Irrigation demand	ETo	ETc	Precip*
	(inches)			
2022	27.78	56.17	36.62	13.60
2023	20.66	46.54	30.02	29.05
2024	21.96	49.20	32.12	19.69
2025	19.70	48.55	31.49	19.52

*calendar year

Table G-6
Soil-Moisture Budget Results (Pasture/Turf)

Year	Irrigation Demand (ETaw)	ETo	ETc	Precip*
	(inches)			
2022	46.24	56.17	56.17	13.60
2023	33.27	46.54	46.54	29.05
2024	33.13	49.20	49.20	19.69
2025	33.50	48.55	48.55	19.52

*calendar year

Table G-7 summarizes the estimated applied irrigation for the various agricultural land uses. Due to the relatively minor acreages involved, nursery, vineyard and avocado acres were converted to equivalent acres in vegetables based on water demand estimates from the County Water Master Plan table A1 (Carollo, 2012). The estimated applied irrigation for calendar year 2025 is 470 acre-feet (a decrease of 40 acre-feet from 2024).

FINAL DRAFT

Table G-7
Applied Irrigation for Agriculture

Description	Units	2022	2023	2024	2025
Irrigation demand vegetables	inches	27.78[1]	20.66[1]	21.96[1]	19.70[1]
Irrigation demand pasture	inches	46.24[2]	33.27[2]	33.13[2]	33.50[2]
Irrigation Calibration Factor[3]	factor	0.92	0.92	0.92	0.92
Applied irrigation vegetables	feet	2.52	1.87	1.99	1.78
Applied irrigation pasture	feet	4.19	3.01	3.00	3.03
Vegetables acreage[4]	acres	256.9	252.4	243.9	254
Vegetables applied water	acre-feet	647.4	472.0	485.4	452.1
Pasture acreage[5]	acres	8.6	8.6	8.6	6.5
Pasture applied water	acre-feet	36	25.9	25.8	19.7
TOTAL applied agricultural irrigation (closest 10 acre-feet)	acre-feet	680	500	510	470

[1]From Table G-5;
[2]From Table G-6;
[3] From 2006-2009 calibration (Table G-4)
[4]2022-2025 acreage from LandIQ (nursery, vineyard and avocado acres counted as 4.5 acres in vegetables for 2025. Based on equivalent water demand conversion using 2012 County Master Water Plan Table A1 [Carollo, 2012]).
[5]From Table G-1

Table G-8 summarizes the estimated applied irrigation for community facilities. The total estimated water demand for community facilities in the 2025 calendar year was 116 acre-feet, which was met with 76 acre-feet of recycled water use and 40 acre-feet of groundwater production.

Table G-8
2025 Applied Irrigation for Community Facilities

Description	Units	Memorial Park	Sea Pines Golf*	Community Park	Total
Turf Area (from Table G-2)	acres	12.5	24	1.2	37.7
Applied Irrigation (from Table G-7)	feet	3.04	3.04	3.04	3.03
TOTAL Applied Irrigation	acre-feet	38	74	3.6	116

*added 1 acre-foot to match 74 acre-feet of reported recycled water delivered from LOWRF
** 116 acre-feet total applied irrigation – 76 acre-feet recycled water = 40 **acre-feet groundwater production**

Sample Calculations: Daily Soil-Moisture Budget

NOTE: Wilting point (maximum allowable deficit), irrigation efficiencies, leaching fraction, and specific growing season dates are collectively approximated with the Efficiency Factor (EF), which calibrates the soil-moisture budget results to the prior estimates for 2006-2008 (CHG, 2009b). The soil-moisture budget is a tool developed to assist basin management and is not an irrigation schedule.

[A], [B]: Day and month used for sample calculation: October 3, 2025
[C]: ETo = 0.16 inches
[D]: Kc = 0.56
[E]: ETc = ETo*Kc = 0.09 inches
[F]: Precipitation + Irrigation = **[N]** + **[M]** = 0.0 inches + 0.08 inches = 0.08 inches
[G]: Water Available from Soil Profile = WHC of active root zone (4 inches) + soil moisture deficit on October 2 (-3.99 inches) = 0.1 inches
[H]: ETc Met by Precipitation + Irrigation = **[E]** *OR* **[F],** whichever is smaller. **[F]** is smaller so **[H]** = 0.08 inches
[I]: ETc Met by Profile = **[G]** *OR* (**[E]** - **[H]**), whichever is smaller. Both are equal, so **[I]** = 0.01 inches
[J] Precip Available for Profile = **[F]** - **[H]** = 0.08 inches -0.08 inches = 0.0 inches
[K] Soil Moisture Deficit = whichever is greater between (a) -WHC (-4.0 inches) and (b) minimum of either (c) 0 inches or (d) October 2 Soil Moisture Deficit (-3.99 inches) - **[I] (**0.01 inches) + **[J]** (0.0 inches) = -4.00 inches.
[L] Monthly Deep Percolation and Runoff = whichever is greater between (a) 0 inches and (b) October 2 Soil Moisture Deficit (-3.99 inches) + **[J]** (0.0 inches) = -3.99 inches, therefore **[L]** = 0.0 inches
[M] Irrigation Demand = **[E]** - **[N]** - **[G]** if greater than zero, otherwise 0 inches. In this case [M]= 0.08 inches
[N] Precipitation = 0.0 inches

[A], [B]: Day and month used for sample calculation: October 23, 2025
[C]: ETo = 0.12 inches
[D]: Kc = 0.56
[E]: ETc = ETo*Kc = 0.07 inches
[F]: Precipitation + Irrigation = **[N]** + **[M]** = 0.0 inches + 0.0 inches = 0.0 inches
[G]: Water Available from Soil Profile = WHC of active root zone (4 inches) + soil moisture deficit on October 22 (-2.98 inches) = 1.02 inches
[H]: ETc Met by Precipitation + Irrigation = **[E]** *OR* **[F],** whichever is smaller. In this case **[F]** is smaller, so **[H]** = 0.0 inches
[I]: ETc Met by Profile = **[G]** *OR* (**[E]** - **[H]**), whichever is smaller. In this case **[E]** - **[H]** = 0.07 inches
[J] Precip Available for Profile = **[F]** - **[H]** = 0.0 inches - 0.0 inches = 0.0 inches
[K] Soil Moisture Deficit = whichever is greater between (a) -WHC (-4.0 inches) and (b) minimum of either (c) 0 inches or (d) October 22 Soil Moisture Deficit (-2.98 inches) - **[I] (**0.07 inches) + **[J]** (0.0 inches) = -3.05 inches. In this case (d) is less than (c) and greater than (a), therefore **[K]** = (d) = -3.05 inches
[L] Monthly Deep Percolation and Runoff = whichever is greater between (a) 0 inches and (b) October 22 Soil Moisture Deficit (-2.98 inches) + **[J]** (0.0inches) = -2.98 inches, therefore **[L]** = 0 inches
[M] Irrigation Demand = **[E]** (0.07 inches) - **[N]** (0.0 inches) - **[G]** (1.02 inches) if greater than zero, otherwise 0 inches. On this date **[M]** = 0.0 inches
[N] Precipitation = 0.0 inches

Water Holding Capacity (WHC) (in/ft)	2
Active Root Zone Depth (ft)	2.0
WHC of Active Root Zone (in)	4.0
Crop Coeficient (Kc)	Variable

highlighted rows used for sample calculation

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]
Day	Month	Refernce ET (ETo) CIMIS Sta. 160	Crop Coefficient (Kc)	Crop ET (ETc)	Precip. + Irrigation	Water Available from Soil Profile	ETc met by Precip + Irrig	ETc met by Profile	Precip Available for Profile	Soil Moisture Deficit	Monthly Deep Percolation and Runoff	Irrigation Demand	Precip Sta. 727
2025		(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)
1	October	0.15	0.56	0.08	0.00	0.14	0.00	0.08	0.00	-3.94	0.00	0.00	0.00
2		0.11	0.56	0.06	0.01	0.06	0.01	0.05	0.00	-3.99	0.00	0.00	0.01
3		0.16	0.56	0.09	0.08	0.01	0.08	0.01	0.00	-4.00	0.00	0.08	0.00
4		0.16	0.56	0.09	0.09	0.00	0.09	0.00	0.00	-4.00	0.00	0.09	0.00
5		0.14	0.56	0.08	0.08	0.00	0.08	0.00	0.00	-4.00	0.00	0.08	0.00
6		0.12	0.56	0.07	0.07	0.00	0.07	0.00	0.00	-4.00	0.00	0.06	0.01
7		0.06	0.56	0.03	0.03	0.00	0.03	0.00	0.00	-4.00	0.00	0.03	0.00
8		0.13	0.56	0.07	0.07	0.00	0.07	0.00	0.00	-4.00	0.00	0.07	0.00
9		0.15	0.56	0.08	0.08	0.00	0.08	0.00	0.00	-4.00	0.00	0.07	0.01
10		0.15	0.56	0.08	0.08	0.00	0.08	0.00	0.00	-4.00	0.00	0.07	0.01
11		0.16	0.56	0.09	0.09	0.00	0.09	0.00	0.00	-4.00	0.00	0.09	0.00
12		0.16	0.56	0.09	0.09	0.00	0.09	0.00	0.00	-4.00	0.00	0.09	0.00
13		0.10	0.56	0.06	1.06	0.00	0.06	0.00	1.00	-3.00	0.00	0.00	1.06
14		0.09	0.56	0.05	0.59	1.00	0.05	0.00	0.54	-2.46	0.00	0.00	0.59
15		0.12	0.56	0.07	0.00	1.54	0.00	0.07	0.00	-2.52	0.00	0.00	0.00
16		0.16	0.56	0.09	0.00	1.48	0.00	0.09	0.00	-2.61	0.00	0.00	0.00
17		0.17	0.56	0.10	0.00	1.39	0.00	0.10	0.00	-2.71	0.00	0.00	0.00
18		0.14	0.56	0.08	0.00	1.29	0.00	0.08	0.00	-2.79	0.00	0.00	0.00
19		0.10	0.56	0.06	0.02	1.21	0.02	0.04	0.00	-2.82	0.00	0.00	0.02
20		0.12	0.56	0.07	0.00	1.18	0.00	0.07	0.00	-2.89	0.00	0.00	0.00
21		0.09	0.56	0.05	0.01	1.11	0.01	0.04	0.00	-2.93	0.00	0.00	0.01
22		0.11	0.56	0.06	0.01	1.07	0.01	0.05	0.00	-2.98	0.00	0.00	0.01
23		0.12	0.56	0.07	0.00	1.02	0.00	0.07	0.00	-3.05	0.00	0.00	0.00
24		0.11	0.56	0.06	0.00	0.95	0.00	0.06	0.00	-3.11	0.00	0.00	0.00
25		0.08	0.56	0.04	0.01	0.89	0.01	0.03	0.00	-3.15	0.00	0.00	0.01
26		0.12	0.56	0.07	0.01	0.85	0.01	0.06	0.00	-3.20	0.00	0.00	0.01
27		0.13	0.56	0.07	0.00	0.80	0.00	0.07	0.00	-3.28	0.00	0.00	0.00
28		0.16	0.56	0.09	0.00	0.72	0.00	0.09	0.00	-3.37	0.00	0.00	0.00
29		0.14	0.56	0.08	0.00	0.63	0.00	0.08	0.00	-3.44	0.00	0.00	0.00
30		0.12	0.56	0.07	0.00	0.56	0.00	0.07	0.00	-3.51	0.00	0.00	0.00
31		0.08	0.56	0.04	0.00	0.49	0.00	0.04	0.00	-3.56	0.00	0.00	0.00

APPENDIX G2: Soil-Moisture Budget Tool

Introduction

Cleath-Harris Geologists (CHG) developed a soil-moisture budget tool (SMB Tool) to estimate agricultural irrigation water demand for the Basin. The SMB Tool scope of work included the following:

Soil-Moisture Budget Tool Application

- Using LandIQ cropping information in concert with OpenET satellite-based evapotranspiration (ET) datasets, compile the geospatial information on irrigated fields and daily evapotranspiration.
- Using the gridMET datasets, compile the geospatial information on daily rainfall.
- Using the Natural Resources Conservation Service (NRCS) Soils dataset and Land IQ cropping information, develop a geospatial reference for soil water holding capacities across the Basin.
- Using Sentinel-2 Normalized Difference Vegetation Index (NDVI) with weekly imaging, identify growing days for each crop and add early germination irrigation periods.
- Scale and process datasets through the SMB Tool, with output for evapotranspiration (consumptive use) of applied water (ETaw).
- Convert ETaw into estimated agricultural groundwater extractions using assumptions for irrigation efficiency and leaching fraction. Reservoir evaporation and frost protection are not applicable in Los Osos.
- Summarize the results.

This Appendix G2 describes the methodology used in the SMB Tool and summarizes the resulting estimated agricultural irrigation demand in calendar year 2025 for the Los Osos Groundwater Basin. The results are compared with the current methodology used the 2025 Annual Report.

Current Methodology

In Annual Reports prior to 2017, estimates of agricultural water demand were based on a 2006-2008 review of estimated cropped acreage and water duty factors from the County Master Water Plan (CHG, 2009b). Beginning in 2017, the methodology was upgraded to incorporate changes in annual crop acreage and the use of a soil-moisture budget for estimating effective precipitation. A calibration factor was applied reconciled the average annual irrigation requirement from a daily soil-moisture budget, prepared for 2006-2008, to the irrigation estimate from prior work, which was also based on the 2006-2008 period but used a different methodology. The intent was to develop a methodology that provided variation in irrigation estimates from year to year based on both rainfall and acreages, but that was also consistent with historical estimates. See Appendix G1 of 2025 Annual Report for additional details on the current methodology.

FINAL DRAFT

Soil Moisture Budget Tool Methodology

The SMB Tool combines OpenET (Melton et al., 2022) satellite-based remote sensing for crop evapotranspiration (ETc) estimates with USDA daily soil-moisture budget equations that account for effective rainfall (Pe). This combination of methodologies for estimating agricultural irrigation demand was recommended in a Technical Memorandum dated July 17, 2023 (CHG, 2023).

OpenET Methodology

Description from OpenET website: https://openetdata.org/methodologies/

OpenET provides satellite-based estimates of the total amount of water that is transferred from the land surface to the atmosphere through the process of evapotranspiration (ET). This is also referred to as 'actual ET', since it represents an estimate of the actual amount of ET that occurred over a specified time period. OpenET provides ET data from multiple satellite-driven models, and also calculates a single "ensemble value" from those models. The models currently included are shown in the table below. All of the models included in the OpenET ensemble have been used by government agencies with responsibility for water use reporting and management in the western U.S., and some models are widely used internationally. All models currently use Landsat satellite data to produce ET data at a spatial resolution of 30 meters by 30 meters (0.22 acres per pixel). Additional inputs include gridded weather variables such as solar radiation, air temperature, humidity, wind speed, and in some cases, precipitation.

The majority of the models that make up the OpenET ensemble are based on full or simplified implementations of the surface energy balance approach. This approach accounts for the energy used to transform liquid water in plants and soil into vapor that is released to the atmosphere. The surface energy balance approach relies on satellite measurements of surface temperature and surface reflectance combined with other key land surface and weather variables to estimate components of the energy balance—net radiation, sensible heat flux, ground heat flux, and latent heat flux, which is the energy consumed through ET.

Daily Soil-Moisture Budget Methodology

A water budget (or hydrologic budget) is a basic accounting of water entering and leaving a prescribed area over a defined time period, and in the SMB Tool is based on the following water balance equation[1]:

$ETc = Fg + P + \Delta SW - Dp - RO$

Where:

ETc = Crop evapotranspiration
Fg = Gross applied irrigation water
P = Total precipitation
ΔSW = change in soil-water content within the crop root zone
Dp = Deep percolation of precipitation
RO = Runoff

Key parameters with respect to estimating water holding capacity and ΔSW calculations include soil type[2], maximum allowable soil-water depletion (MAD)[3], and crop rooting depth[4]. Growing seasons for vegetables are established for crops on individual fields based on Sentinel-2 Normalized Difference Vegetation Index (NDVI) which uses weekly imaging to identify growing days for each crop. Due to relatively coarse resolution of the NDVI and to accommodate the germination period, the irrigation season was assumed to start three weeks before satellite imagery detected canopy growth.

The SMB Tool takes advantage of the satellite data sets by directly coupling the daily ETc with effective precipitation on a field-level scale as it varies spatially and temporally throughout the year. Daily spatially-gridded precipitation data from gridMET was coupled with daily ETc from the OpenET ensemble model.

1 USDA National Engineering Handbook Part 652, Section 652.0407 - Irrigation Guide, September 1997
2 Soil type and associated water holding capacity extracted from digital raster of the NRCS soil survey.
3 MAD estimates for crops (except grapes) are from USDA National Engineering Handbook Part 652 – Irrigation Guide, Table 3-3. The MAD for grapes is set at 70% to reflect deficit irrigation practices.
4 Crop rooting depths are from USDA National Engineering Handbook Part 652 – Irrigation Guide. The depths are for 80% of the roots and represent depths to which mature crops will extract available soil water from a deep, uniform, well-drained soil under average unrestricted conditions.

FINAL DRAFT

Applied Irrigation Water

The finals step in developing both consumptive use and applied water estimates for irrigation is based on the following relationships established in 1997 (Carollo, 2012 *after* Burt, 1997):

- Applied Irrigation Water = ETaw / EF
- ETaw = ETc – Pe
- EF = (1-LF) x IE

Where:

ETaw = Evapotranspiration of applied water (consumptive use)
ETc = Crop evapotranspiration]
Pe = Effective precipitation]
EF = efficiency factor
LF = leaching fraction; and
IE = irrigation efficiency

Using the satellite geospatial ETc, along with the distribution of precipitation and soil types, the SMB tool calculates Pe and ETaw using the water balance equation on a daily basis within the root zone of each crop in each of the irrigated fields in the Basin. The SMB tool is scripted with Python programming code.

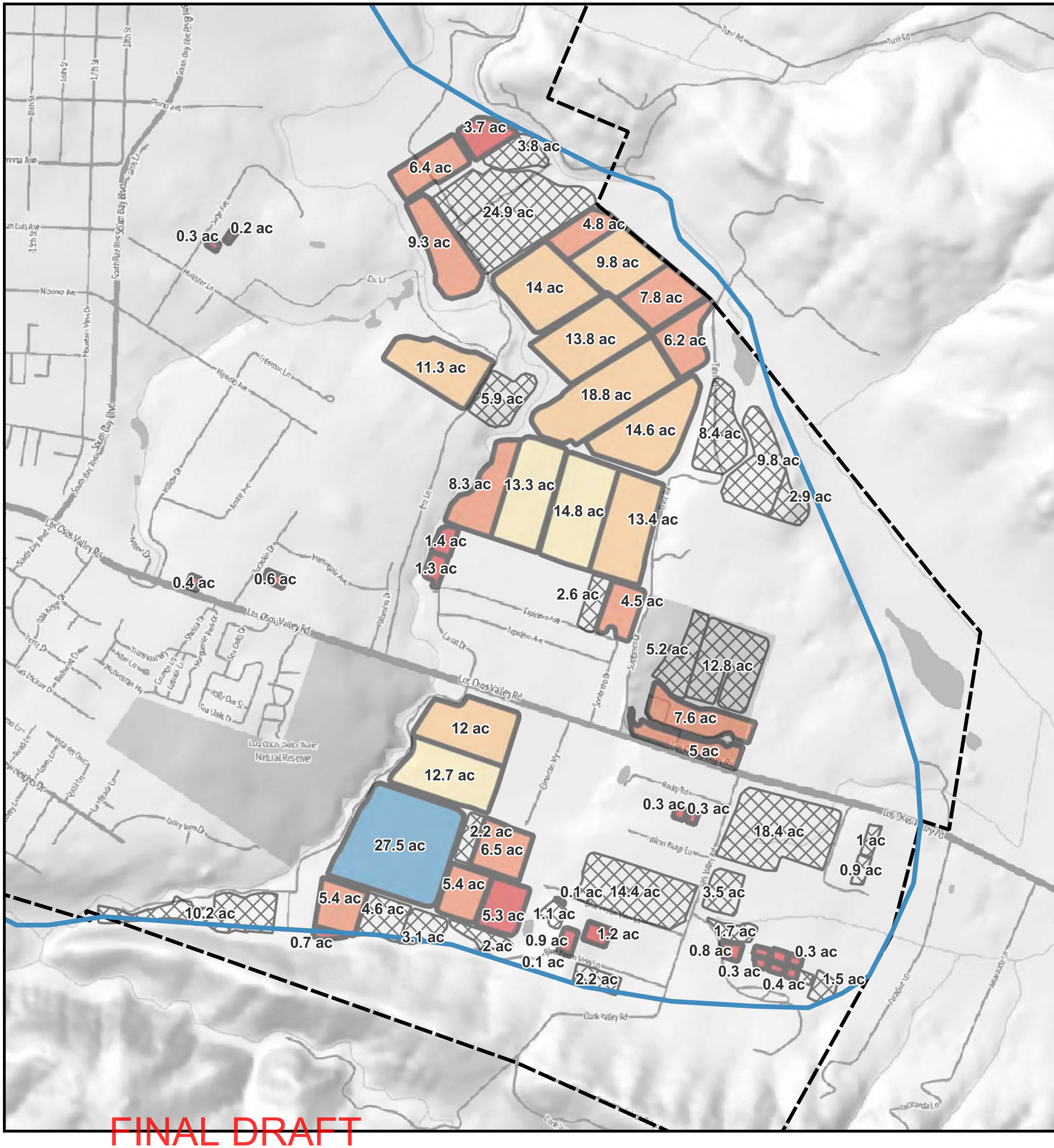
SMB Tool Results

Results of the SMB Tool are presented with respect to ETaw (consumptive use) and groundwater pumping estimates for crop irrigation in calendar year 2025.

ETaw Results

As previously indicated, ETaw is the difference between ETc and Pe, and corresponds to the consumptive use of water by the crops. The SMB tool calculates and compiles ETaw for each of the crop groups. A summary of the ETaw (consumptive use) results for each crop group is shown below in Table 1. Figure G2 shows calculated ETaw in 2025 for each field using ETc and precipitation data from OpenET/gridMET.

The community turf areas (golf course, community park, and memorial park) were included in the SMB Tool analysis and are reported as a separate group. Golf course demand is offset by recycled water deliveries and would need to be isolated for estimating golf course pumping.



Explanation

Los Osos Adjudicated Plan Area

Basin Boundary

CY2025 ETaw using SMB Tool (AFY)

- Non-irrigated
- 0 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- 25 - 30
- 30 - 35
- 35 - 40

Basemap: Stamen Terrain
ET data from OpenET Data Explorer
Ag field boundaries from LandIQ
(All crop types shown including non-irrigated fields)

0 1,500 3,000 ft

NORTH

Figure G2
ETaw CY2025

SMB Tool Ag Demand Analysis
Los Osos BMC

Los Osos Groundwater Basin

CLEATH-HARRIS GEOLOGISTS

Table 1 – Calendar Year 2025 SMB Tool Estimated Consumptive Use

Basic Crop Group	Irrigated Acreage	ET of Applied Water [AF]
Vegetable	249	268
Nursery*	3.4	4.6
Vinyard	0.9	0.7
Avocados	0.07	0.1
Pasture	6.5	6.9
Total Ag	**260**	**279**
Community Turf	37.7	62.5

*greenhouses – SMB Tool not used – see text

The OpenET data for nursery was not used, because in Los Osos these crops are grown indoors. Therefore, the ET of applied water was back-calculated from the average applied water duty for nursery in Water Planning Area 5 of the County Master Water Plan. The assumed efficiency of indoor irrigation is 85 percent.

Conversion to 2025 Agricultural Pumping

After accounting for effective precipitation using the SMB Tool, adjustments were performed for leaching fraction and irrigation efficiency. Applied irrigation volumes are estimated by scaling up the estimated irrigated crop ETaw volumes using an outdoor irrigation efficiency factor of 75 percent, which is average for sprinkler irrigation with excellent design and average management.[5] There are also drip systems and dual sprinkler/drip systems in operation that may increase efficiency, but the range for all systems with varying design and management is between 50-95 percent, so 75 percent is slightly above average. The pasture and community turf efficiency is based on sprinkler application and estimated at 65 percent, based on a published range between 50 and 85 percent (Carollo, 2012).

Applied water for leaching the accumulated salts in the soil profile are by definition part of deep percolation, therefore they do not increase crop ETc and are not captured by OpenET. Based on the standard Rhoades equation, with an average irrigation water salinity of 900 µS/cm (SNMP, 2018) and a soil salinity extract threshold of 1,800 µS/cm (e.g. cabbage), the minimum leaching fraction would be about 11 percent. In the County Master Water Plan, the leaching fraction for vegetables was estimated at 8-10 percent for inland areas, with no requirement at the coast due to increased rainfall.

5 Irrigation efficiencies were assigned based on County Master Water Plan (Carollo, 2012) estimates.

A review of the Los Osos Salt and Nutrient Management Plan (SLO County, 2018) work shows an evaporative enrichment factor of 3.4x for agricultural irrigation return flow, which indicates salt loading is occurring in the aquifers beneath the crops, and removing salts from the root zone would be essential for operations. The degree to which rainfall alone is sufficient to reset the soil salinity for multi-cropped vegetables in Los Osos is not documented and would vary with growing season. A working leaching factor of 10 percent (minimum) is assumed. As described by the applied irrigation water equation, the leaching factor is independent of the efficiency factor. This assumes system inefficiencies such as wind drift, canopy interception, non-uniform distribution, surface losses, system leaks, and scheduling errors do not provide the minimum deep percolation needed for salt removal. Turfgrass is assumed to require a five percent leching fraction, based on a higher soil salinity threshold (3,000-4,000 µS/cm) compared to vegetables.

The resulting applied water volumes are calculated for each crop type and summed by calendar year, which then represent estimated annual applied water use and agricultural groundwater pumping. The results of this analysis are presented in Table 2. The existing methodology results from Appendix G1 are included for comparison.

Table 2 – 2025 SMB Tool Estimated Agricultural GW Pumping

Basic Crop Group	Irrigated Acreage	Estimated Agricultural GW Pumping			
		SMB Tool [AF]	Water Duty Factor [AF/Acre]	Existing Method [AF]	Water Duty Factor [AF/Acre]
Vegetable	249	396	1.6	452	1.8
Nursery	3.4	5.4	1.6		
Vinyard	0.9	1	1.1		
Avocados	0.07	0.13	1.9		
Pasture	6.5	11	1.7	19.7	3.0
Total Ag	**260**	**414**	**Average: 1.6**	**470**	**Average: 1.8**
Community Turf	37.7	101	2.7	115	3.0

Average = Area-weighted average duty factor = [Total Agricultural Extractions] / [Total Irrigated Acreage]

Conclusions

The results for estimated agricultural pumping using the SMB Tool analysis are approximately 12 percent lower than the results using the current methodology. This is due primarily to adjustments for vegetable rotation and growing seasons, and to field-level accounting for effective precipitation. The overall approach is considered more robust than prior work, but as noted in the 2023 Technical Memorandum, field verification is recommended.

References

Burt, C.M., Mutziger, A., Howes, D.J., and Solomon, K.H., 2002, Evaporation from Irrigated Agricultural Land in California, January.

Carollo Engineers, 2012. San Luis Obispo County Master Water Plan. Prepared for San Luis Obispo County Flood Control and Water Conservation District, January 2012. https://www.slocounty.ca.gov/departments/public-works/services/plans-reports/master-water-report

CHG, 2023. Agricultural Water Demand Comparison, Los Osos Groundwater Basin, Los Osos, Technical Memormndum prepared for San Luis Obispo County Sustainability Department dated July 17, 2023. https://www.losososbmc.org/files/4b95ecccf/BMC+Agenda+Packet+01-28-26_Amended.pdf

County of San Luis Obispo, Public Works, 2018. Salt/Nutrient Management Plan for the Los Osos Groundwater Basin, prepared in association with Cleat-Harris Geologists, dated January 9. 2018. https://www.slocounty.ca.gov/departments/public-works/forms-documents/projects/lowwp/final-snmp

Melton, F.S., Huntington, J., Grimm, R., Herber, J., Anderson, M., Allen, R., Fisher, J.B., Kilic, A., Senay, G.B., Volk, J., Hassanpour, B., et al., 2022. OpenET: Filling a Critical Data Gap in Water Management for the Western United States. *Journal of the American Water Resources Association*, 58(6), pp. 971–994. https://doi.org/10.1111/1752-1688.12956

USDA National Engineering Handbook Part 652 - Irrigation Guide, September 1997. https://www.nrcs.usda.gov/sites/default/files/2023-01/7385.pdf

APPENDIX H

Precipitation and Streamflow Data

Note: Rainfall data for the last six months of 2025 were downloaded from the Station # 727 County Gage Site for report use; summary tables have not yet been published as of this report.

NOTE: Raw Data Compiled from County Website (wr.slocounty.org)

Daily Precipitation, Landfill # 727, 2025-2026

Day	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*
1	0.03	0.01			0.01	0.01						
2	0.01			0.01	0.01							
3		0.01			0.01							
4					0.01							
5					0.08							
6				0.01	0.01							
7												
8		0.01	0.02									
9		0.01		0.01	0.01							
10				0.01	0.02							
11		0.01			0.01							
12												
13	0.01			1.06	0.56	0.01						
14	0.01			0.59	0.05							
15			0.01		0.84	0.01						
16		0.01	0.01		0.55							
17		0.02			1.10							
18					0.01	0.02						
19				0.02								
20					0.47	0.01						
21	0.06			0.01		0.02						
22	0.03			0.01		0.01						
23			0.05		0.01	0.56						
24			0.51		0.01	2.04						
25				0.01		1.30						
26	0.02			0.01		0.24						
27												
28												
29					0.01							
30			0.01									
31	0.02					0.30						
Total	***0.19***	***0.08***	***0.61***	***1.75***	***3.78***	***4.53***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Cumu Total	***0.19***	***0.27***	***0.88***	***2.63***	***6.41***	***10.94***	***10.94***	***10.94***	***10.94***	***10.94***	***10.94***	***10.94***

NOT COMPILED

FINAL DRAFT

San Luis Obispo County Public Works

Recording Rain Station

MONTHLY PRECIPITATION REPORT

Station Name - Los Osos Landfill # 727

Station Location -

Latitude - 35° 19' 19"

Longitude - 120° 48' 03"

Description - Northeast Los Osos South of Turri Road

Water Years -

Beginning - 2005-2006

Ending - 2024-2025

Station Statistics -

Month	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Minimum	0.00	0.00	0.00	0.00	0.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00	6.81
Average	0.10	0.03	0.10	0.81	1.14	3.32	4.09	2.98	3.03	0.84	0.31	0.08	16.82
Maximum	1.93	0.20	0.64	6.22	3.74	11.46	10.96	7.65	8.03	3.70	2.64	1.10	34.74

Notes -

Earlier data may be available. Contact Public Works for more information.

San Luis Obispo County Public Works

Recording Rain Station

MONTHLY PRECIPITATION REPORT

Station Name and no. Los Osos Landfill # 727 *** All units are in inches ***

Water Year	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2024-2025	0.02	0.05	0.06	0.10	1.81	1.41	0.24	4.76	3.01	0.50	0.01	0.06	12.03
2023-2024	0.02	0.13	0.15	0.09	1.10	3.90	3.36	6.75	4.37	1.64	0.11	0.01	21.63
2022-2023	0.00	0.00	0.64	0.04	1.30	9.09	10.96	4.47	7.63	0.09	0.49	0.03	34.74
2021-2022	0.00	0.00	0.00	2.64	0.31	8.39	0.04	0.00	1.84	0.36	0.00	0.00	13.58
2020-2021	0.00	0.04	0.00	0.00	0.47	2.01	9.92	0.20	1.26	0.00	0.04	0.00	13.94
2019-2020	0.00	0.08	0.00	0.00	2.03	4.41	0.24	0.04	4.80	1.89	0.12	0.00	13.60
2018-2019	0.00	0.00	0.00	0.43	3.74	1.14	6.14	6.89	3.94	0.08	1.46	0.00	23.82
2017-2018	0.00	0.00	0.16	0.16	0.47	0.12	3.78	0.16	7.99	0.79	0.00	0.00	13.63
2016-2017	0.00	0.00	0.00	1.65	2.76	3.39	9.02	7.65	1.34	0.55	0.27	0.00	26.63
2015-2016	1.93	0.00	0.08	0.08	1.26	1.85	5.04	0.86	4.85	0.20	0.00	0.00	16.15
2014-2015	0.00	0.00	0.00	0.00	0.28	5.20	0.08	0.91	0.43	0.67	0.12	0.00	7.68
2013-2014	0.00	0.00	0.00	0.24	0.28	0.12	0.00	4.06	1.42	0.71	0.00	0.00	6.81
2012-2013	0.00	0.00	0.00	1.18	1.69	2.64	1.02	0.67	0.43	0.31	0.12	0.04	8.11
2011-2012	0.00	0.08	0.04	1.06	2.17	0.16	2.28	0.35	2.68	2.24	0.00	0.00	11.06
2010-2011	0.00	0.00	0.12	1.54	1.85	11.46	3.03	3.78	8.03	0.28	0.59	1.10	31.77
2009-2010	0.00	0.00	0.04	6.22	0.04	2.87	9.76	4.13	1.14	1.93	0.04	0.00	26.18
2008-2009	0.00	0.00	0.00	0.04	0.04	0.75	0.71	4.61	1.06	0.20	0.20	0.35	7.95
2007-2008	0.00	0.00	0.00	0.43	0.12	2.68	10.47	2.99	0.00	0.24	0.00	0.00	16.93
2006-2007	0.00	0.00	0.00	0.12	0.43	2.28	1.26	2.56	0.43	0.35	0.04	0.00	7.48
2005-2006	0.04	0.20	0.63	0.24	0.75	2.52	4.45	3.70	3.90	3.70	2.64	0.00	22.76

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2024-2025**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1				0.01						0.03			1
2			0.01		0.10			0.02	0.05			0.01	2
3						0.03		0.02					3
4			0.01			0.01		1.16					4
5			0.01			0.02		0.44	0.60			0.01	5
6								0.64	0.15				6
7								0.11		0.01			7
8	0.01			0.01					0.01	0.01			8
9													9
10				0.01									10
11					0.04			0.06					11
12						0.18		0.35	0.98				12
13		0.01	0.01	0.02				1.90	0.42				13
14				0.01		0.37		0.03	0.33	0.01			14
15		0.01			0.01	0.01							15
16				0.01									16
17		0.01						0.01	0.17				17
18		0.02											18
19													19
20	0.01						0.01						20
21													21
22						0.02							22
23				0.01	0.30	0.01							23
24			0.01			0.31		0.02					24
25					0.59		0.02						25
26				0.01	0.77		0.19			0.25			26
27			0.01			0.36	0.01		0.01	0.19			27
28						0.03	0.01					0.01	28
29						0.06						0.01	29
30									0.12		0.01	0.02	30
31				0.01					0.17				31

Total	0.02	0.05	0.06	0.10	1.81	1.41	0.24	4.76	3.01	0.50	0.01	0.06	
Cum. Total	0.02	0.07	0.13	0.23	2.04	3.45	3.69	8.45	11.46	11.96	11.97	12.03	

Season Total **12.03**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2023-2024**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1								0.98	0.43				**1**
2							0.32	0.11	0.84	0.01			**2**
3							0.15	0.23	0.13				**3**
4								2.03		0.26	0.07		**4**
5		0.01			0.01			0.40		0.28	0.01		**5**
6					0.02		0.07	0.14	0.47				**6**
7								0.41	0.01				**7**
8			0.01	0.01				0.01				0.01	**8**
9			0.02										**9**
10		0.03					0.01				0.01		**10**
11		0.05											**11**
12										0.01			**12**
13								0.01		0.53			**13**
14				0.01			0.01			0.53	0.01		**14**
15	0.01		0.01	0.02				0.17					**15**
16		0.01		0.01			0.01						**16**
17		0.01		0.01			0.04	0.38					**17**
18					1.04	0.26		0.68	0.01	0.01			**18**
19						0.84	0.53	1.18	0.01	0.01			**19**
20				0.02		1.36	0.72	0.01	0.01				**20**
21	0.01					0.13	0.06						**21**
22						0.01	0.56		0.01				**22**
23						0.01			0.34		0.01		**23**
24		0.01			0.01	0.01	0.04		0.07				**24**
25			0.01				0.01						**25**
26													**26**
27				0.01									**27**
28									0.05				**28**
29			0.08		0.01	0.33		0.01	1.72				**29**
30			0.02		0.01	0.94			0.27				**30**
31		0.01				0.01	0.83						**31**
Total	0.02	0.13	0.15	0.09	1.10	3.90	3.36	6.75	4.37	1.64	0.11	0.01	
Cum. Total	0.02	0.15	0.30	0.39	1.49	5.39	8.75	15.50	19.87	21.51	21.62	21.63	

Season Total **21.63**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2022-2023**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1					0.08	1.27			0.17				**1**
2						0.12	0.17				0.19		**2**
3						1.23	0.01				0.22		**3**
4						0.45	1.61	0.91			0.02		**4**
5						0.01	1.03	0.23	0.20				**5**
6				0.04	0.01	0.08	0.01					0.03	**6**
7					0.24	0.01	0.06						**7**
8					0.89		0.33						**8**
9					0.07	0.13	4.18		0.29	0.01			**9**
10			0.16			2.01	0.37		1.62				**10**
11						0.33		0.04		0.01			**11**
12						0.28			0.01				**12**
13							0.12		0.03				**13**
14							1.69		2.44				**14**
15					0.01		0.28		0.07		0.01		**15**
16							0.68				0.01		**16**
17							0.01				0.01		**17**
18			0.24			0.01			0.01				**18**
19			0.24				0.11		0.14				**19**
20						0.01			0.06				**20**
21									1.16				**21**
22								0.01	0.78				**22**
23								0.15	0.04	0.01	0.03		**23**
24								2.13					**24**
25								0.01					**25**
26								0.02		0.01			**26**
27						1.73		0.59		0.01			**27**
28								0.38	0.30 E	0.02			**28**
29							0.29		0.23				**29**
30						0.27	0.01		0.08	0.02			**30**
31						1.15							**31**
Total	0.00	0.00	0.64	0.04	1.30	9.09	10.96	4.47	7.63	0.09	0.49	0.03	
Cum. Total	0.00	0.00	0.64	0.68	1.98	11.07	22.03	26.50	34.13	34.22	34.71	34.74	

Note: E = Total for date estimated from other nearby gages

Season Total **34.74**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2021-2022**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1							*						1
2													2
3					0.04								3
4									0.04				4
5													5
6													6
7						0.04							7
8													8
9					0.24	0.16							9
10					0.04								10
11													11
12													12
13						2.95							13
14						1.18							14
15													15
16						0.28							16
17													17
18									0.04				18
19									0.04				19
20									0.04				20
21										0.36			21
22						0.63							22
23						1.69							23
24				0.16		0.12							24
25				2.48		0.55	0.04						25
26						0.08							26
27						0.24							27
28									1.68				28
29						0.47							29
30													30
31													31
Total	0.00	0.00	0.00	2.64	0.31	8.39	0.04	0.00	1.84	0.36	0.00	0.00	
Cum. Total	0.00	0.00	0.00	2.64	2.95	11.34	11.38	11.38	13.22	13.58	13.58	13.58	

Season Total **13.58**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2020-2021**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1													1
2													2
3													3
4													4
5							0.04						5
6													6
7													7
8													8
9									0.20				9
10									0.71				10
11									0.04				11
12						0.04		0.16	0.04				12
13		0.04			0.39	0.16							13
14													14
15								0.04	0.16				15
16													16
17						0.12					0.04		17
18					0.04								18
19					0.04				0.12				19
20													20
21													21
22							0.12						22
23							0.04						23
24							0.12						24
25													25
26						0.04	0.20						26
27						0.55	5.67						27
28						1.06	3.50						28
29							0.24						29
30													30
31						0.04							31
Total	0.00	0.04	0.00	0.00	0.47	2.01	9.92	0.20	1.26	0.00	0.04	0.00	
Cum. Total	0.00	0.04	0.04	0.04	0.51	2.52	12.44	12.64	13.90	13.90	13.94	13.94	

Season Total **13.94**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2019-2020**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1						0.35							1
2													2
3						0.12							3
4						0.75							4
5										1.34			5
6						0.08			0.20	0.04			6
7						0.08			0.16	0.16			7
8						0.16	0.04			0.04			8
9							0.12			0.31			9
10									1.42				10
11		0.08							0.35				11
12													12
13						0.04							13
14								0.04					14
15									0.51				15
16							0.04		0.98				16
17									0.04		0.08		17
18						0.04					0.04		18
19									0.04				19
20													20
21													21
22						1.42			0.39				22
23									0.35				23
24									0.08				24
25						1.02			0.28				25
26						0.20	0.04						26
27					1.04								27
28					0.47								28
29					0.04	0.12							29
30					0.47	0.04							30
31													31

Total	0.00	0.08	0.00	0.00	2.03	4.41	0.24	0.04	4.80	1.89	0.12	0.00	
Cum. Total	0.00	0.08	0.08	0.08	2.11	6.51	6.75	6.79	11.59	13.48	13.60	13.60	

Season Total **13.60**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2018-2019**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1								0.31	0.04				1
2								1.81	0.75				2
3				0.35				0.35	0.12				3
4				0.04		0.08		0.98					4
5						0.04	0.67	0.08	0.67				5
6						0.04	0.63		0.28		0.12		6
7									0.08				7
8								0.31					8
9							0.31	0.24	0.12				9
10								0.43	0.12				10
11							0.71						11
12							0.16						12
13								0.28					13
14							0.31	0.87					14
15							0.79	0.47					15
16						0.43	0.51	0.12		0.08	0.51		16
17						0.20	0.91	0.35					17
18											0.51		18
19							0.28		0.08		0.24		19
20									1.34				20
21					0.28			0.04	0.08		0.04		21
22													22
23					0.35				0.12				23
24					0.04	0.12							24
25					0.04	0.24							25
26											0.04		26
27								0.24	0.12				27
28				0.04	0.98				0.04				28
29					2.05								29
30													30
31							0.87						31
Total	0.00	0.00	0.00	0.43	3.74	1.14	6.14	6.89	3.94	0.08	1.46	0.00	
Cum. Total	0.00	0.00	0.00	0.43	4.17	5.31	11.46	18.35	22.28	22.36	23.82	23.82	

Season Total **23.82**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2017-2018**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1									0.82				1
2									0.16				2
3					0.03				0.24				3
4							0.19						4
5													5
6													6
7										0.40			7
8					0.04		1.42						8
9					0.12		1.77						9
10			0.08						0.51				10
11			0.08										11
12									0.04	0.04			12
13									0.35				13
14									0.28				14
15										0.04			15
16					0.04				0.35	0.19			16
17									0.08				17
18							0.08						18
19							0.08			0.12			19
20				0.12		0.12			0.48				20
21									2.16				21
22									2.48				22
23													23
24													24
25							0.24						25
26					0.16			0.16					26
27					0.08								27
28													28
29													29
30													30
31				0.04					0.04				31

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
Total	0.00	0.00	0.16	0.16	0.47	0.12	3.78	0.16	7.99	0.79	0.00	0.00	
Cum. Total	0.00	0.00	0.16	0.32	0.79	0.91	4.69	4.85	12.84	13.63	13.63	13.63	

Season Total **13.63**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2016-2017**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1													1
2								0.24					2
3								0.16					3
4							2.25						4
5							0.23	0.55	0.35				5
6								0.51					6
7							0.52	0.63		0.15	0.27		7
8						1.18	1.10	0.04		0.04			8
9						0.08	0.12	0.28					9
10						0.12	0.23	0.43					10
11							0.04	0.04					11
12							0.59						12
13										0.08			13
14										0.04			14
15				0.08		1.07							15
16				0.08		0.55		0.31					16
17				0.08				3.27		0.08			17
18							0.56	0.32		0.16			18
19							0.27	0.08					19
20					1.90		1.22	0.51					20
21					0.04		0.16	0.24	0.20				21
22							1.26		0.47				22
23						0.35	0.43						23
24							0.04		0.12				24
25									0.20				25
26					0.67			0.04					26
27				0.67	0.15								27
28				0.71									28
29													29
30				0.03		0.04							30
31													31

Total	0.00	0.00	0.00	1.65	2.76	3.39	9.02	7.65	1.34	0.55	0.27	0.00	
Cum. Total	0.00	0.00	0.00	1.65	4.41	7.80	16.82	24.47	25.81	26.36	26.63	26.63	

Season Total **26.63**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2015-2016**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1													1
2					0.59								2
3						0.04							3
4				0.04									4
5							1.02		1.54				5
6							0.75		0.35				6
7							0.23		1.06				7
8					0.23					0.08			8
9					0.04		0.04						9
10					0.04	0.04	0.08		0.04				10
11						0.39			1.22				11
12													12
13						0.08	0.04		0.36				13
14			0.08						0.20				14
15				0.04	0.28		0.04						15
16							0.08						16
17								0.67					17
18							0.28	0.19					18
19	1.69					0.51	0.86						19
20	0.24								0.04				20
21						0.28			0.04				21
22						0.47	0.16			0.12			22
23							0.08						23
24						0.04							24
25					0.08								25
26													26
27													27
28													28
29													29
30							0.27						30
31							1.11						31

Total	1.93	0.00	0.08	0.08	1.26	1.85	5.04	0.86	4.85	0.20	0.00	0.00	
Cum. Total	1.93	1.93	2.01	2.09	3.35	5.20	10.24	11.10	15.95	16.15	16.15	16.15	

Season Total **16.15**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2014-2015**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1									0.43				1
2						0.51							2
3													3
4						0.67							4
5						0.04							5
6								0.12					6
7								0.51					7
8					0.04			0.20					8
9													9
10								0.08					10
11					0.04	1.22							11
12						1.22							12
13					0.04								13
14											0.12		14
15						0.71				0.47			15
16						0.71							16
17						0.08							17
18						0.04							18
19					0.08								19
20													20
21													21
22					0.04								22
23													23
24													24
25										0.20			25
26													26
27							0.08						27
28													28
29					0.04								29
30													30
31													31
Total	0.00	0.00	0.00	0.00	0.28	5.20	0.08	0.91	0.43	0.67	0.12	0.00	
Cum. Total	0.00	0.00	0.00	0.00	0.28	5.47	5.55	6.46	6.89	7.56	7.68	7.68	

Season Total **7.68**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2013-2014**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1									0.59	0.24			1
2								0.87	0.20	0.28			2
3								0.04					3
4													4
5													5
6								0.31					6
7						0.12							7
8								0.04					8
9								0.04					9
10								0.08					10
11													11
12													12
13													13
14								0.04					14
15													15
16													16
17													17
18													18
19													19
20					0.20								20
21					0.08								21
22													22
23													23
24													24
25										0.16			25
26								0.87	0.04	0.04			26
27								0.28					27
28				0.24				1.50					28
29									0.16				29
30									0.04				30
31									0.39				31

Total	0.00	0.00	0.00	0.24	0.28	0.12	0.00	4.06	1.42	0.71	0.00	0.00	
Cum. Total	0.00	0.00	0.00	0.24	0.51	0.63	0.63	4.69	6.10	6.81	6.81	6.81	

Season Total **6.81**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2012-2013**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1						0.12				0.28			1
2						0.55							2
3													3
4										0.04			4
5							0.39						5
6							0.31				0.12		6
7									0.24				7
8								0.47	0.08				8
9					0.04								9
10				0.24									10
11				0.87									11
12						0.04							12
13													13
14									0.04				14
15						0.04							15
16					0.08	0.08							16
17					0.47	0.16							17
18					0.24								18
19								0.20					19
20													20
21				0.04									21
22						0.75							22
23						0.24							23
24							0.28					0.04	24
25						0.28	0.04						25
26						0.04							26
27													27
28					0.55								28
29					0.08	0.35							29
30				0.04	0.24				0.04				30
31									0.04				31
Total	0.00	0.00	0.00	1.18	1.69	2.64	1.02	0.67	0.43	0.31	0.12	0.04	
Cum. Total	0.00	0.00	0.00	1.18	2.87	5.51	6.54	7.20	7.64	7.95	8.07	8.11	

Season Total **8.11**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2011-2012**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1													1
2													2
3				0.08	0.04								3
4				0.04	0.28								4
5				0.91									5
6					0.28								6
7								0.04					7
8													8
9													9
10				0.04				0.04		0.55			10
11					0.31					0.16			11
12						0.16				0.28			12
13								0.08		1.02			13
14													14
15								0.08					15
16									0.12				16
17									1.46				17
18									0.12				18
19													19
20					1.26		0.20						20
21							0.87						21
22													22
23							1.22						23
24													24
25									0.63	0.20			25
26		0.04								0.04			26
27													27
28									0.16				28
29								0.12					29
30		0.04	0.04										30
31									0.20				31

Total	0.00	0.08	0.04	1.06	2.17	0.16	2.28	0.35	2.68	2.24	0.00	0.00	
Cum. Total	0.00	0.08	0.12	1.18	3.35	3.50	5.79	6.14	8.82	11.06	11.06	11.06	

Season Total **11.06**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2010-2011**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1							0.39						**1**
2							2.52		0.08				**2**
3													**3**
4			0.04			0.04			0.04			0.59	**4**
5				0.31		0.75						0.35	**5**
6				0.24	0.04				0.12			0.12	**6**
7					0.47								**7**
8													**8**
9						0.04							**9**
10					0.04								**10**
11									0.04				**11**
12													**12**
13						0.04							**13**
14								0.04					**14**
15						0.04					0.16		**15**
16								0.59	0.08		0.16		**16**
17			0.04	0.04		0.43		0.47			0.16		**17**
18				0.08		2.95		1.54	0.47		0.08		**18**
19					0.24	2.24		0.55	2.28				**19**
20			0.04		0.71	1.06		0.04	2.91				**20**
21				0.04	0.24	0.35			0.24	0.28			**21**
22				0.04		1.57			0.04				**22**
23				0.08	0.12				0.87				**23**
24				0.28					0.63				**24**
25						0.79		0.51	0.04				**25**
26								0.04	0.16				**26**
27													**27**
28						0.31			0.04				**28**
29				0.35		0.83					0.04	0.04	**29**
30				0.08									**30**
31							0.12						**31**

Total	0.00	0.00	0.12	1.54	1.85	11.46	3.03	3.78	8.03	0.28	0.59	1.10	
Cum. Total	0.00	0.00	0.12	1.65	3.50	14.96	17.99	21.77	29.80	30.08	30.67	31.77	

Season Total **31.77**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2009-2010**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1										0.04			1
2									0.08				2
3									0.43				3
4								0.08	0.04				4
5								0.51		0.31			5
6								0.39	0.20				6
7						0.47							7
8									0.04				8
9								0.63					9
10						0.75			0.04				10
11										0.98			11
12						1.22	0.51		0.08	0.08			12
13				5.43		0.04	0.31	0.04					13
14				0.79		0.04							14
15													15
16													16
17							0.55				0.04		17
18							1.14						18
19							0.91						19
20					0.04		2.36	0.04		0.51			20
21						0.16	2.01	0.12					21
22							1.22		0.04				22
23			0.04				0.04	0.04					23
24								0.39					24
25													25
26							0.59	1.42					26
27						0.08		0.47					27
28													28
29							0.08		0.04				29
30						0.12	0.04		0.04				30
31									0.12				31

Total	0.00	0.00	0.04	6.22	0.04	2.87	9.76	4.13	1.14	1.93	0.04	0.00	
Cum. Total	0.00	0.00	0.04	6.26	6.30	9.17	18.94	23.07	24.21	26.14	26.18	26.18	

Season Total **26.18**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION

(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2008-2009**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1					0.04						0.04		**1**
2							0.08		0.16		0.12		**2**
3									0.59				**3**
4				0.04					0.08				**4**
5											0.04	0.35	**5**
6								0.87					**6**
7										0.20			**7**
8													**8**
9								1.10					**9**
10													**10**
11								0.04					**11**
12								0.04					**12**
13								0.63					**13**
14								0.04					**14**
15													**15**
16						0.12							**16**
17								1.10					**17**
18													**18**
19													**19**
20													**20**
21						0.08							**21**
22						0.43		0.47	0.24				**22**
23							0.51	0.31					**23**
24							0.12						**24**
25						0.12							**25**
26													**26**
27													**27**
28													**28**
29													**29**
30													**30**
31													**31**

Total	0.00	0.00	0.00	0.04	0.04	0.75	0.71	4.61	1.06	0.20	0.20	0.35	
Cum. Total	0.00	0.00	0.00	0.04	0.08	0.83	1.54	6.14	7.20	7.40	7.60	7.95	

Season Total **7.95**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2007-2008**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1								0.08					1
2					0.04			0.24		0.20			2
3								1.02		0.04			3
4							3.66						4
5							0.20						5
6						0.24	0.39						6
7						0.08							7
8							0.08						8
9							0.04						9
10													10
11					0.08								11
12													12
13													13
14													14
15													15
16				0.28									16
17				0.08									17
18						2.24							18
19								0.20					19
20						0.12		0.16					20
21							0.08	0.08					21
22							2.32	0.12					22
23							1.06	0.87					23
24							0.87	0.24					24
25							0.31						25
26							0.63						26
27				0.08			0.67						27
28							0.08						28
29							0.04						29
30							0.04						30
31													31

Total	0.00	0.00	0.00	0.43	0.12	2.68	10.47	2.99	0.00	0.24	0.00	0.00	
Cum. Total	0.00	0.00	0.00	0.43	0.55	3.23	13.70	16.69	16.69	16.93	16.93	16.93	

Season Total **16.93**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

Station Name and no. **Los Osos Landfill # 727** Season **2006-2007**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1													1
2								0.04					2
3													3
4							0.12				0.04		4
5													5
6													6
7								0.20					7
8						0.39							8
9						0.94							9
10						0.31		0.71					10
11					0.08								11
12								0.04					12
13				0.08	0.20								13
14					0.08								14
15													15
16													16
17					0.04	0.04	0.04						17
18													18
19										0.04			19
20									0.28	0.24			20
21						0.04							21
22								0.87		0.08			22
23				0.04				0.12					23
24													24
25								0.08					25
26					0.04	0.43		0.16	0.08				26
27						0.12	0.83	0.20	0.08				27
28							0.20	0.16					28
29							0.08						29
30													30
31													31

Total	0.00	0.00	0.00	0.12	0.43	2.28	1.26	2.56	0.43	0.35	0.04	0.00	
Cum. Total	0.00	0.00	0.00	0.12	0.55	2.83	4.09	6.65	7.09	7.44	7.48	7.48	

Season Total **7.48**

FINAL DRAFT

San Luis Obispo County Public Works

DAILY PRECIPITATION
(inches)

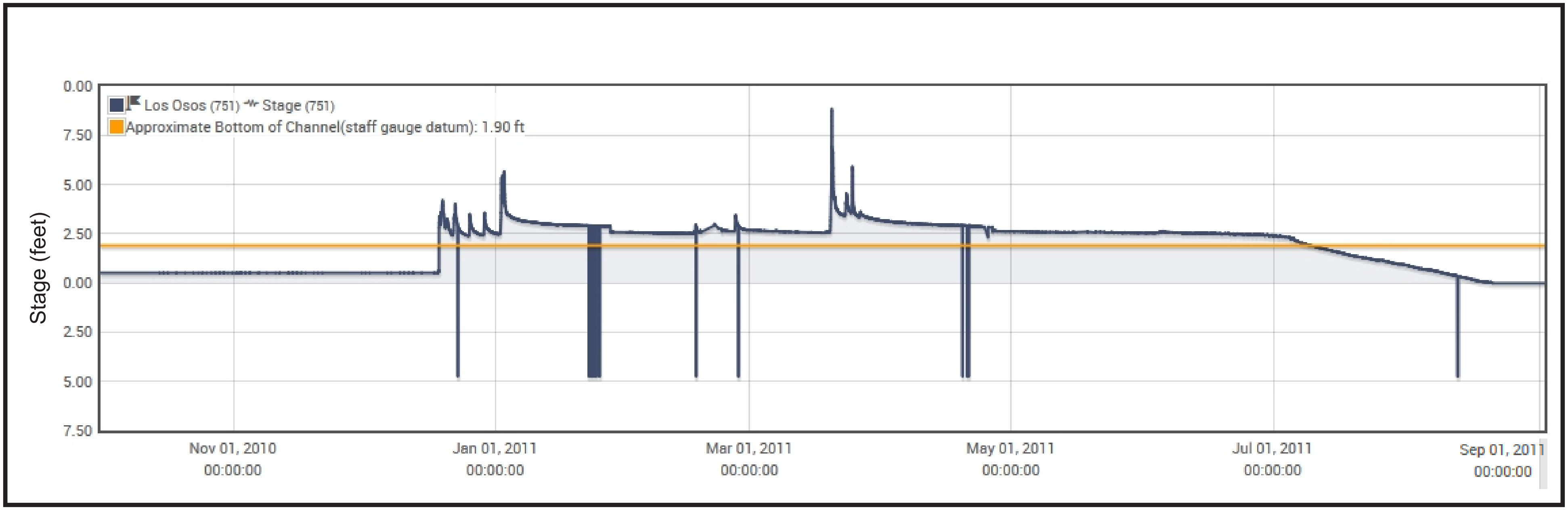
Station Name and no. **Los Osos Landfill # 727** Season **2005-2006**

Day	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Day
1							1.61						1
2			0.63			0.55	2.32			0.24			2
3								0.04		1.18			3
4										0.59			4
5										0.39			5
6													6
7										0.08			7
8						0.47							8
9					0.59				0.04				9
10									0.28	0.43			10
11		0.16			0.04				0.12				11
12		0.04							0.28				12
13													13
14	0.04						0.24		0.04	0.04			14
15													15
16										0.08			16
17				0.12					0.24	0.04			17
18						0.16	0.16	3.66					18
19													19
20				0.04					0.35				20
21						0.04			0.04		2.60		21
22						0.04					0.04		22
23						0.04							23
24													24
25					0.08	0.12			0.12				25
26				0.08		0.04	0.08			0.63			26
27									0.43				27
28						0.12			1.38				28
29									0.16				29
30					0.04		0.04						30
31						0.94			0.43				31

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
Total	0.04	0.20	0.63	0.24	0.75	2.52	4.45	3.70	3.90	3.70	2.64	0.00	
Cum. Total	0.04	0.24	0.87	1.10	1.85	4.37	8.82	12.52	16.42	20.12	22.76	22.76	

Season Total **22.76**

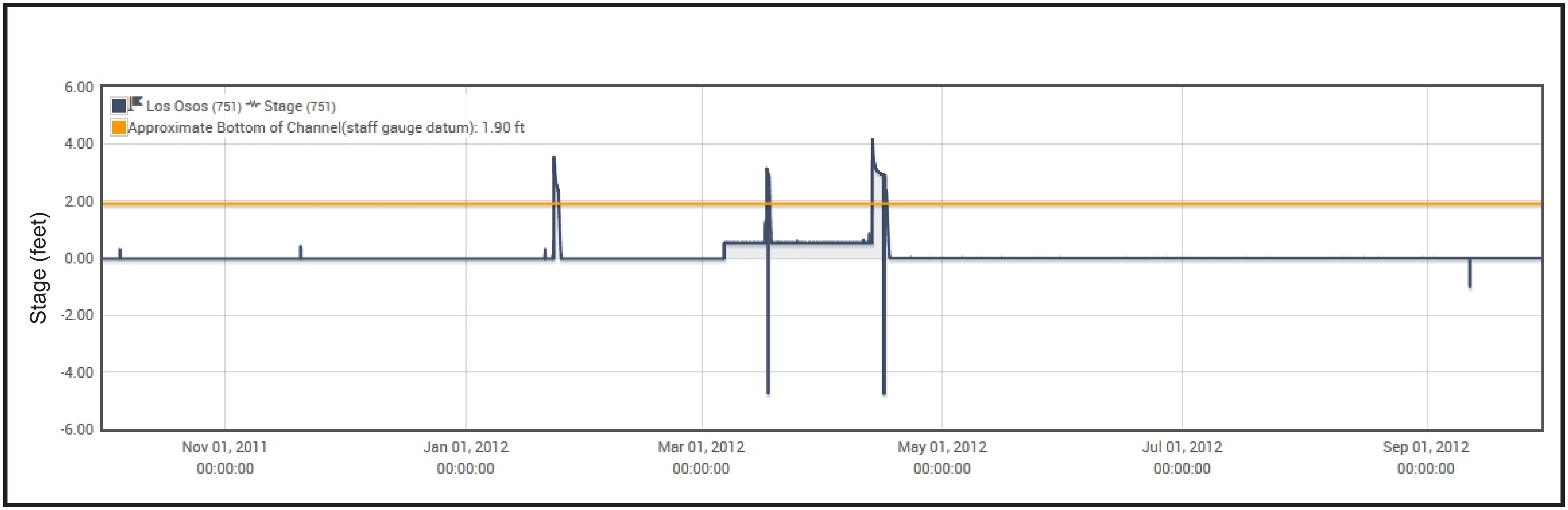
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H1
Stream Stage for 2011 Water Year
Los Osos Creek, Gage #751

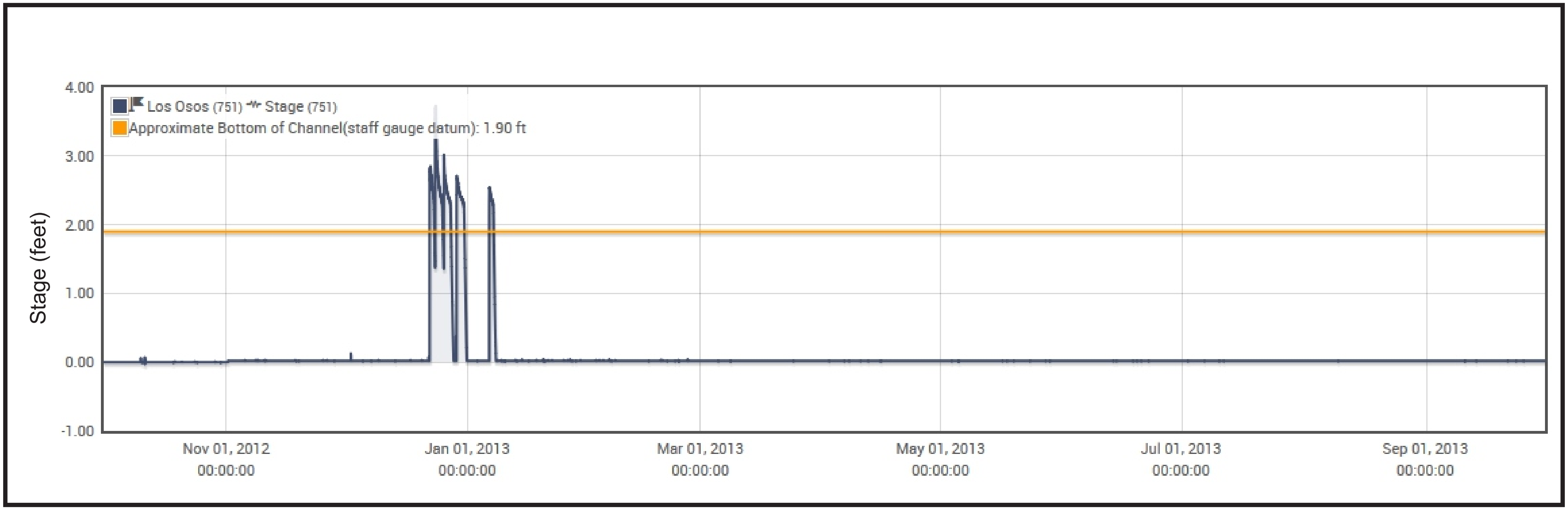
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H2
Stream Stage for 2012 Water Year
Los Osos Creek, Gage #751

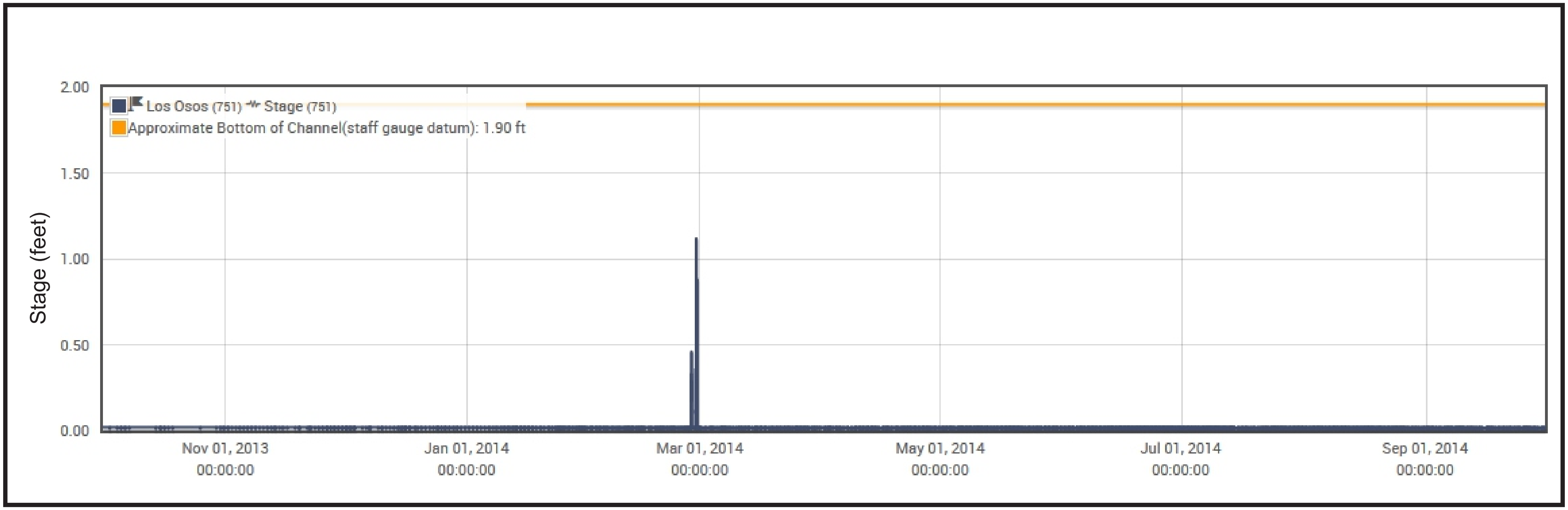
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H3
Stream Stage for 2013 Water Year
Los Osos Creek, Gage #751

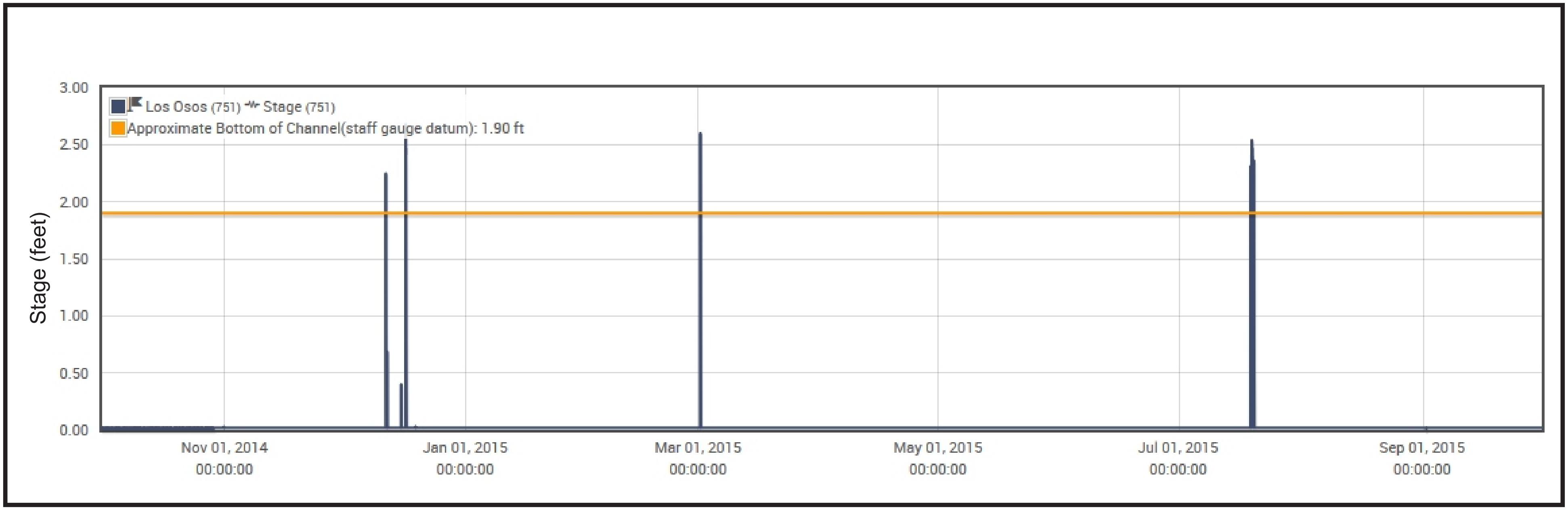
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H4
Stream Stage for 2014 Water Year
Los Osos Creek, Gage #751

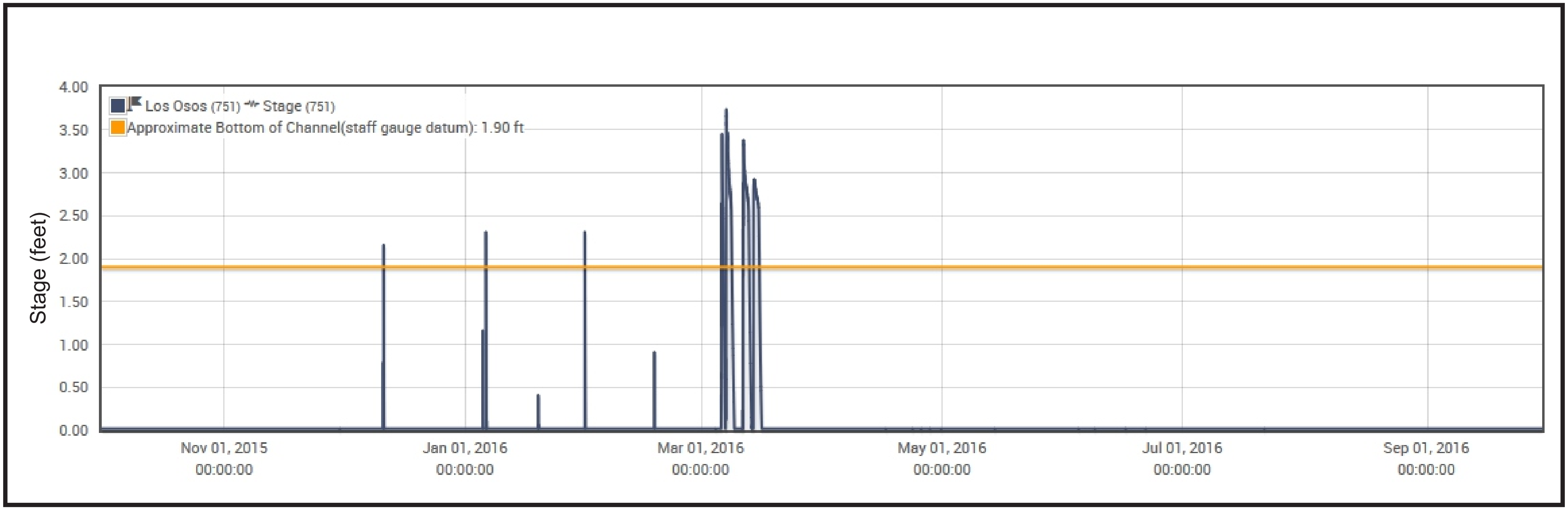
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H5
Stream Stage for 2015 Water Year
Los Osos Creek, Gage #751

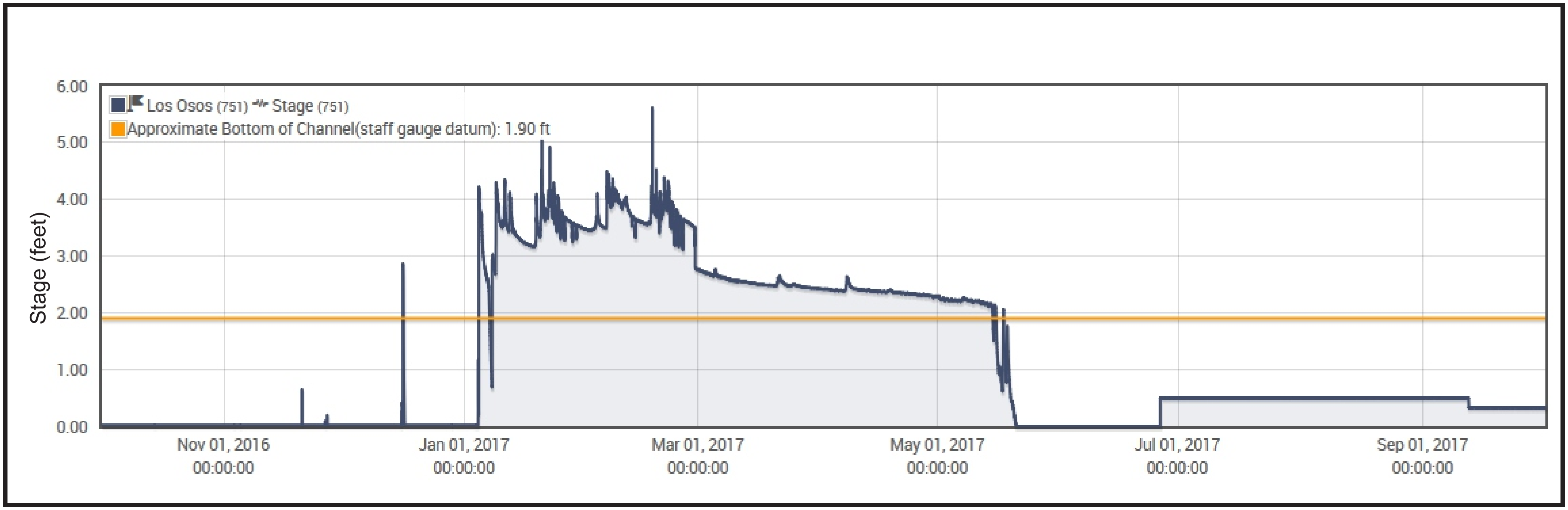
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H6
Stream Stage for 2016 Water Year
Los Osos Creek, Gage #751

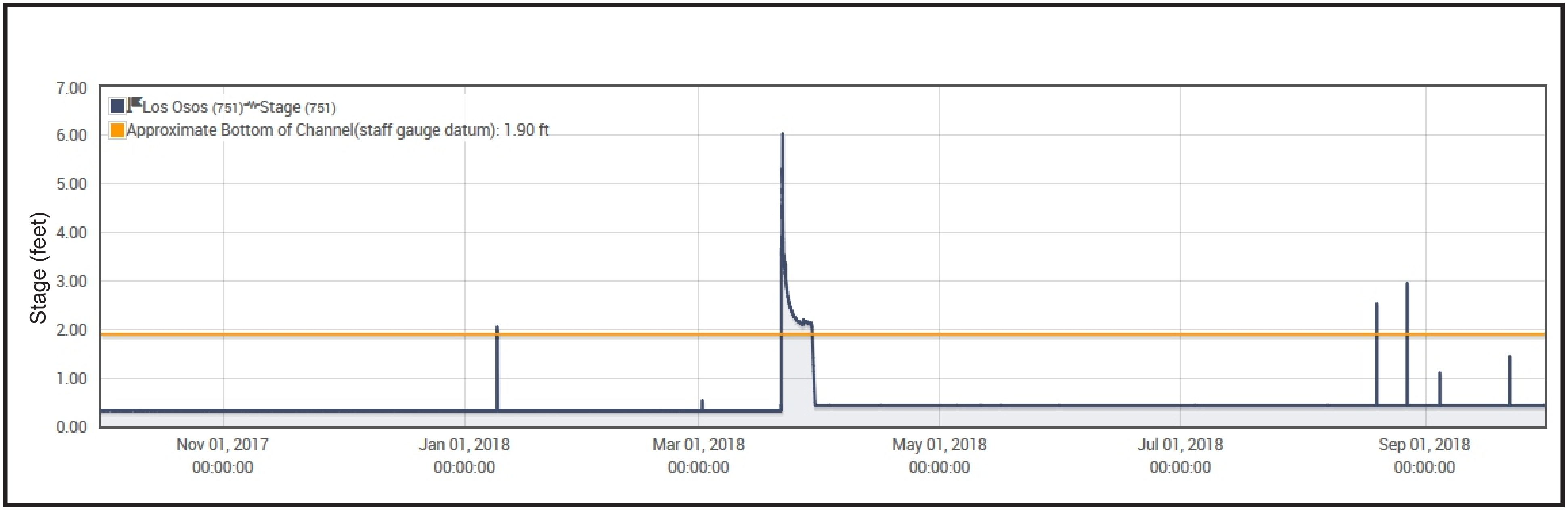
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H7
Stream Stage for 2017 Water Year
Los Osos Creek, Gage #751

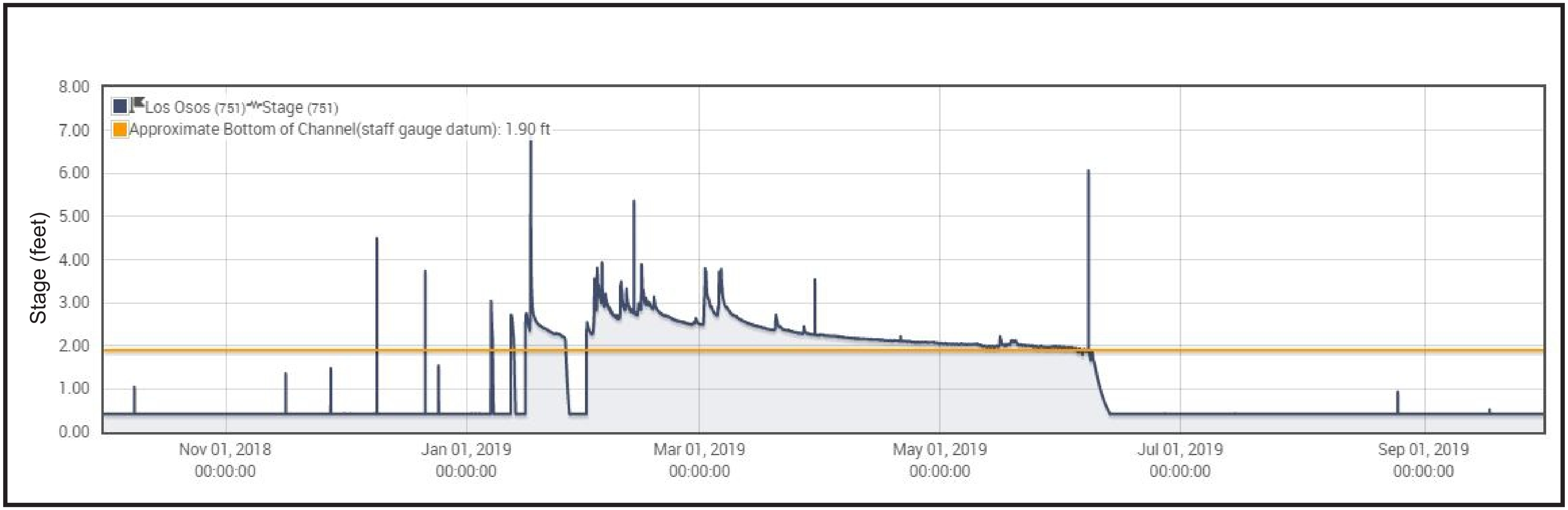
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H8
Stream Stage for 2018 Water Year
Los Osos Creek, Gage #751

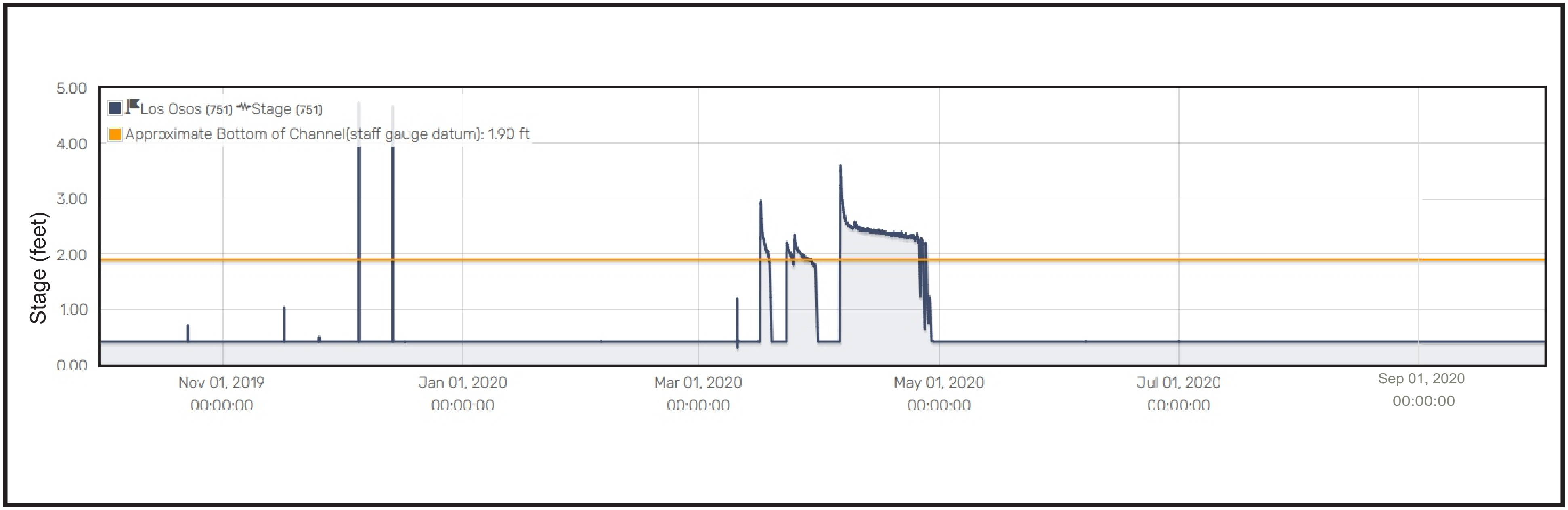
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H9
Stream Stage for 2019 Water Year
Los Osos Creek, Gage #751

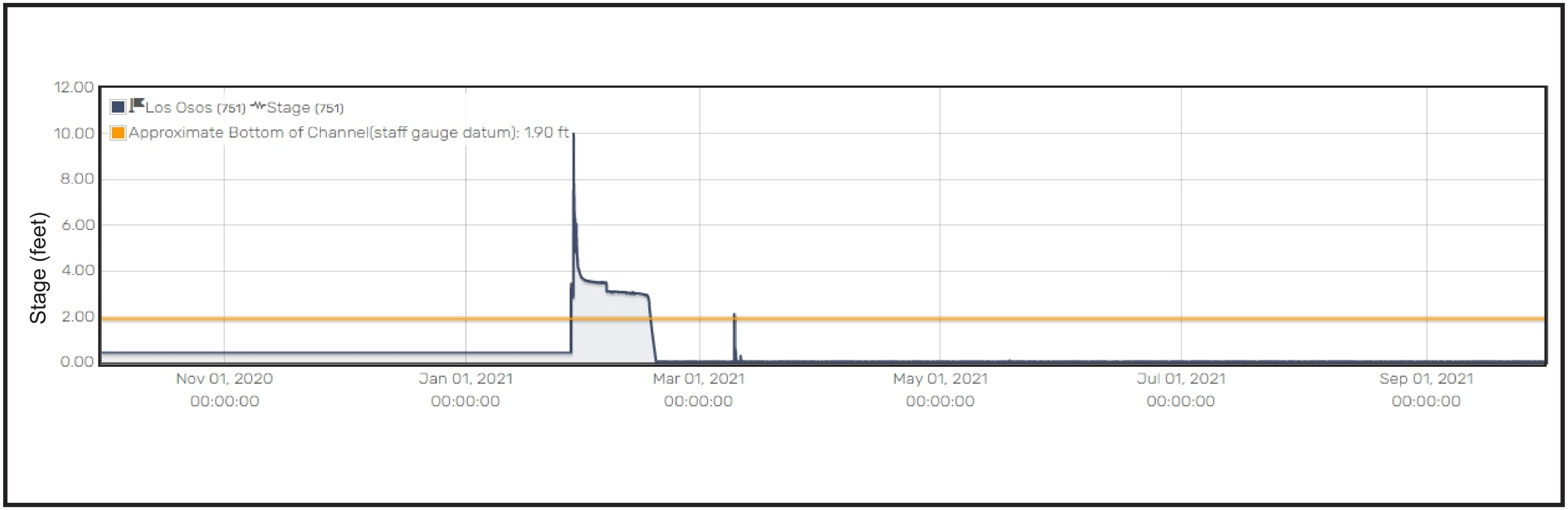
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H10
Stream Stage for 2020 Water Year
Los Osos Creek, Gage #751

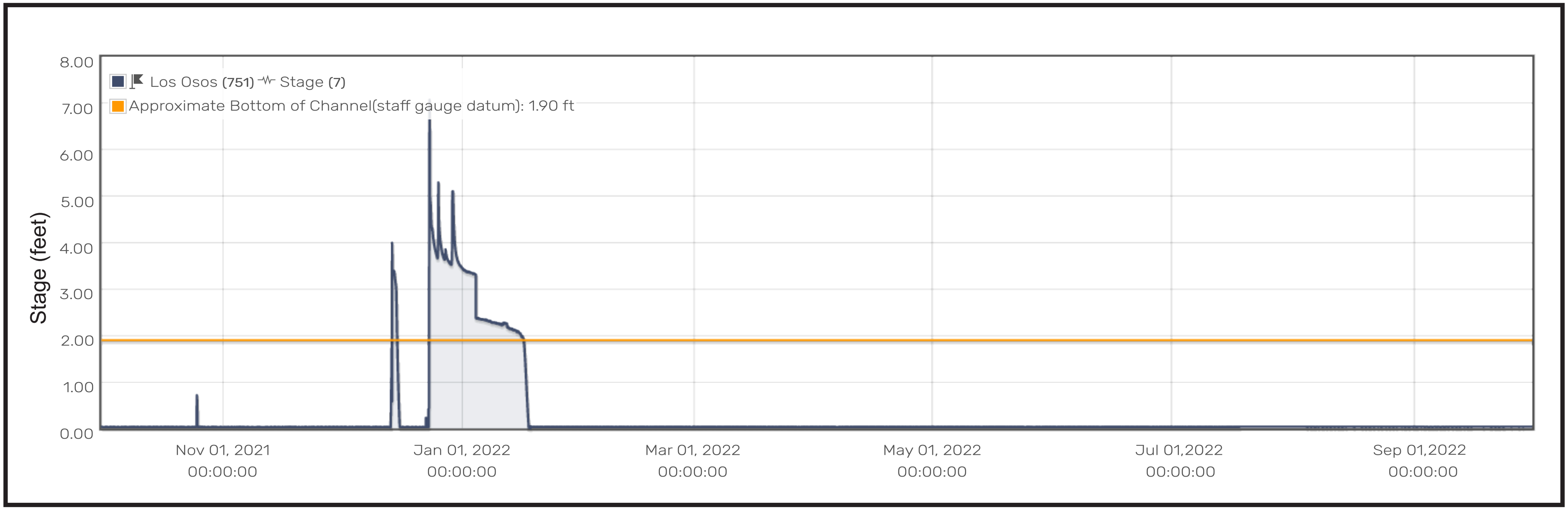
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H11
Stream Stage for 2021 Water Year
Los Osos Creek, Gage #751

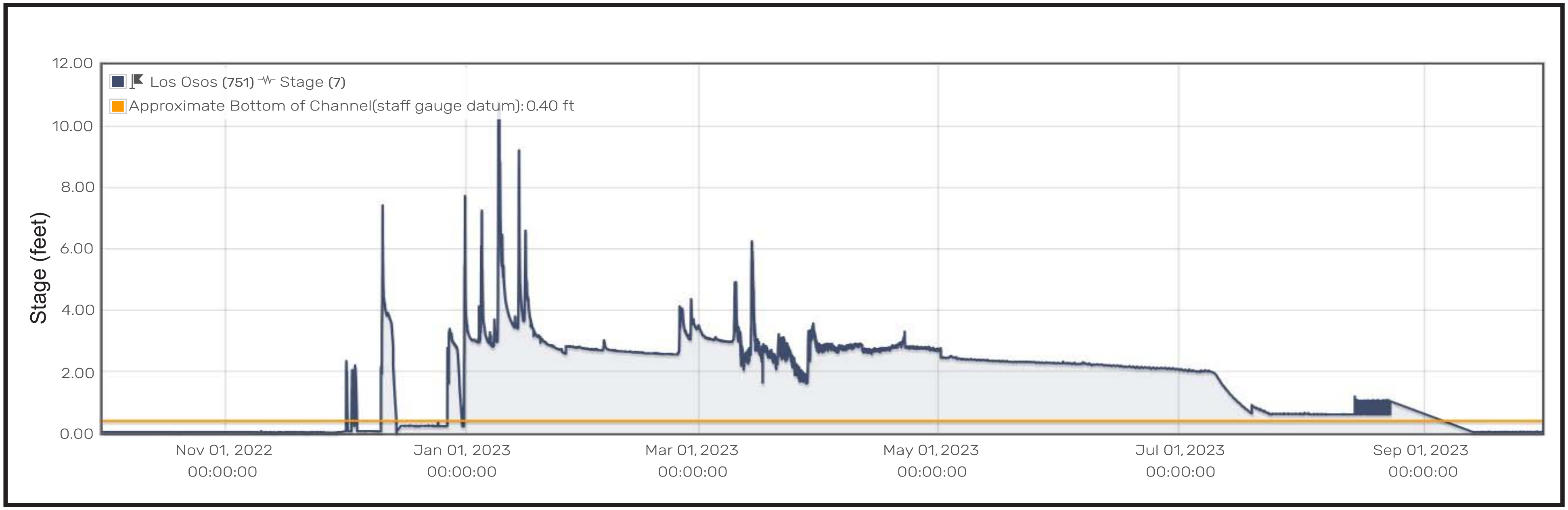
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H12
Stream Stage for 2022 Water Year
Los Osos Creek, Gage #751

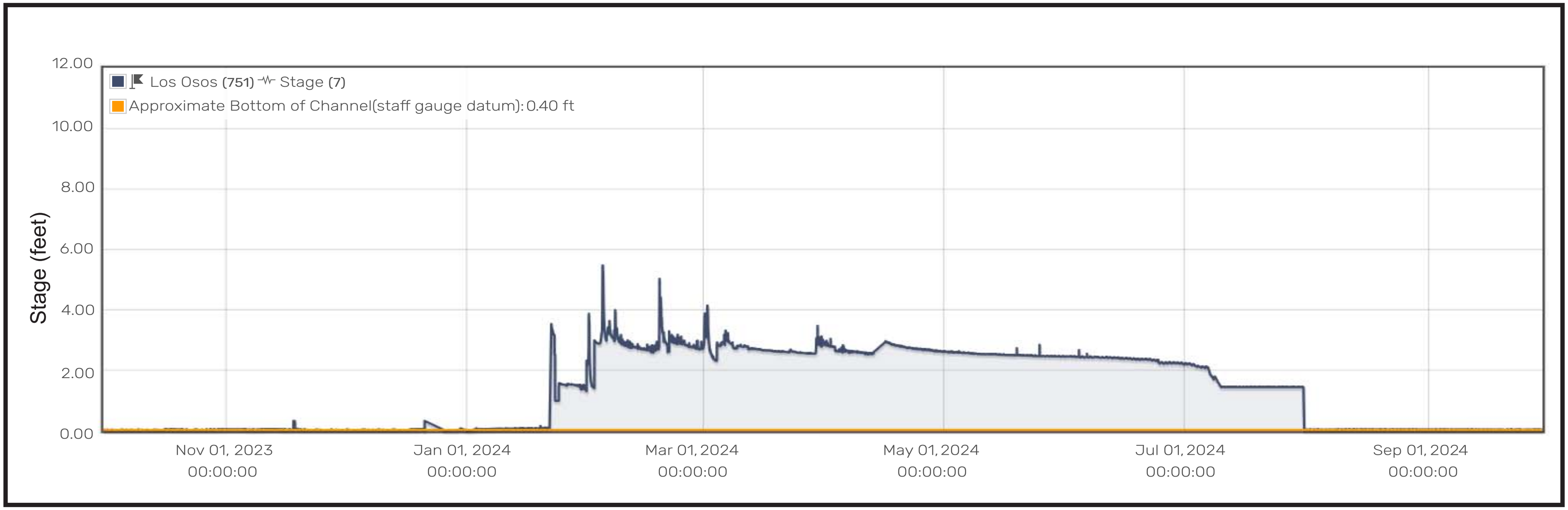
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H13
Stream Stage for 2023 Water Year
Los Osos Creek, Gage #751

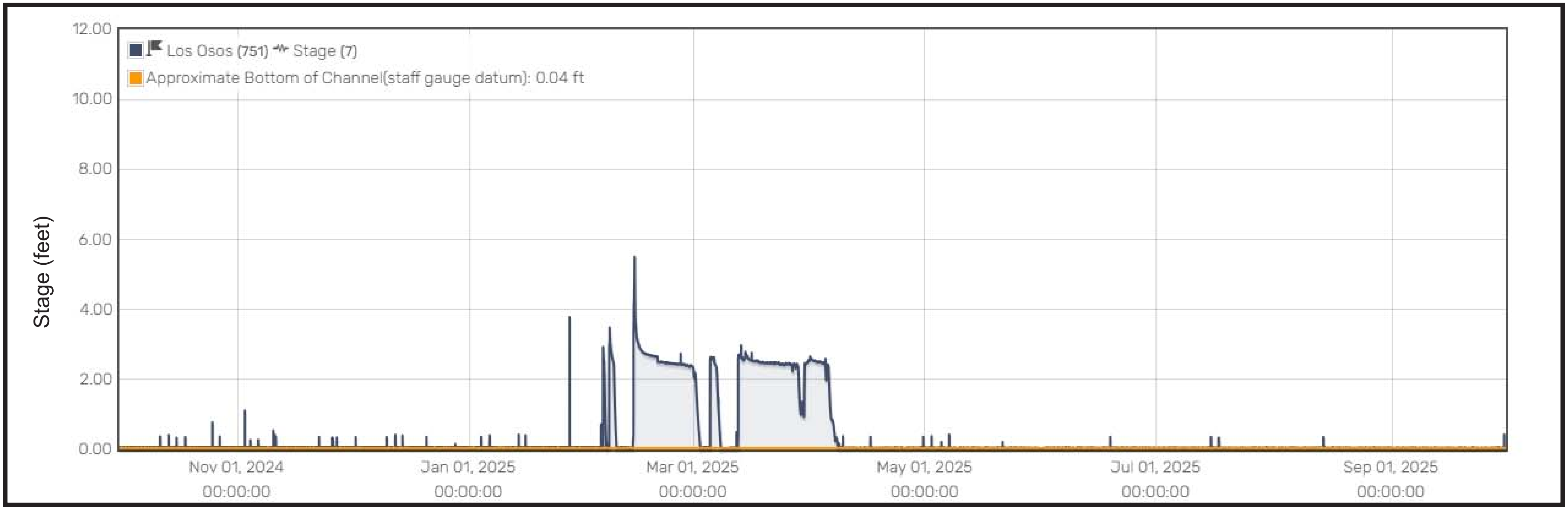
FINAL DRAFT



Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H14
Stream Stage for 2024 Water Year
Los Osos Creek, Gage #751

FINAL DRAFT



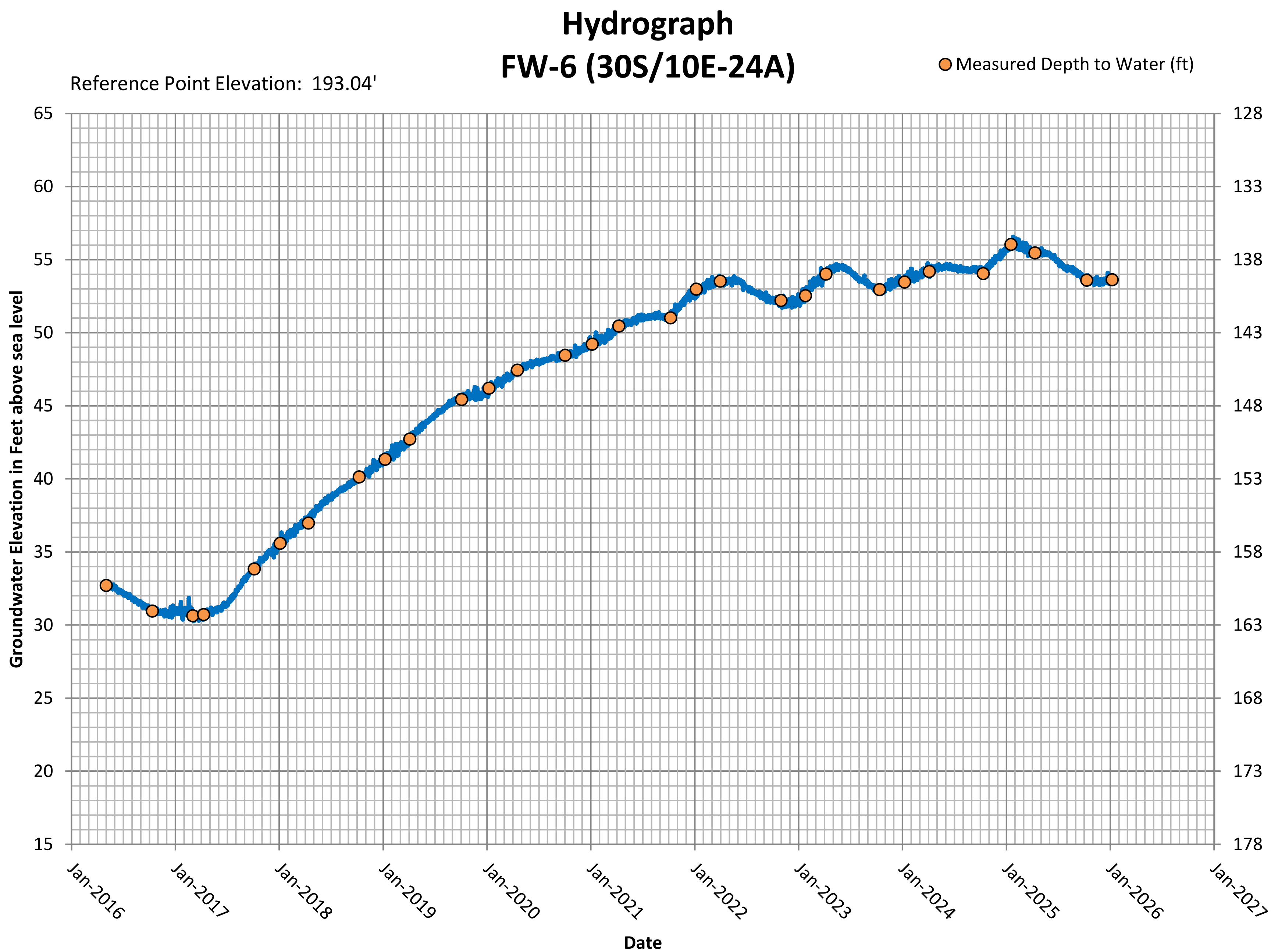
Source: County of San Luis Obispo Public Works Department, Stream Gage #751

Figure H15
Stream Stage for 2025 Water Year
Los Osos Creek, Gage #751

FINAL DRAFT

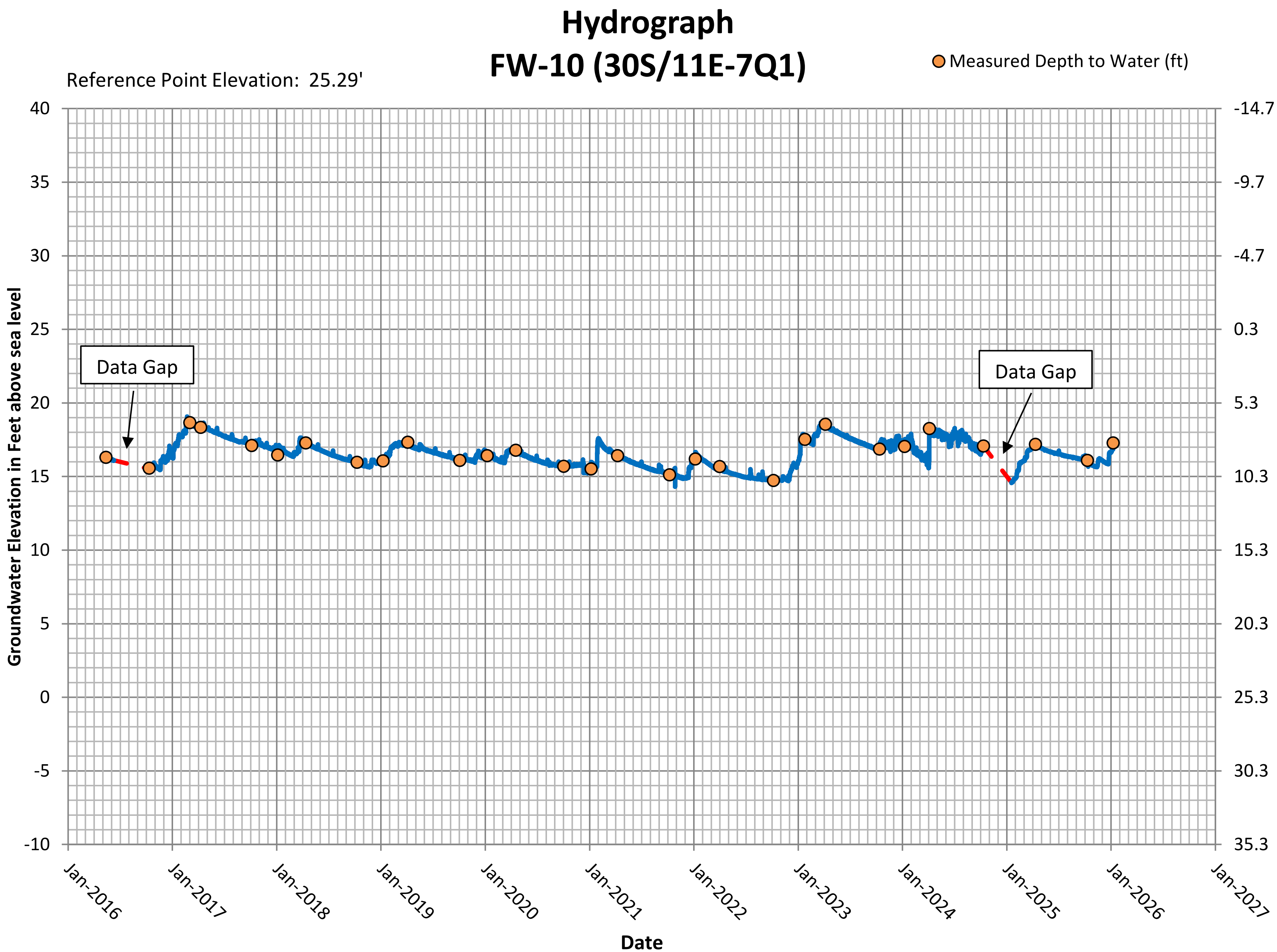
APPENDIX I

Transducer Hydrographs



Hydrograph
FW-6 (30S/10E-24A)
Measured Depth to Water (ft)
Reference Point Elevation: 193.04'
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
65
60
55
50
45
40
35
30
25
20
15
128
133
138
143
148
153
158
163
168
173
178
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Jan-2022
Jan-2023
Jan-2024
Jan-2025
Jan-2026
Jan-2027
Date

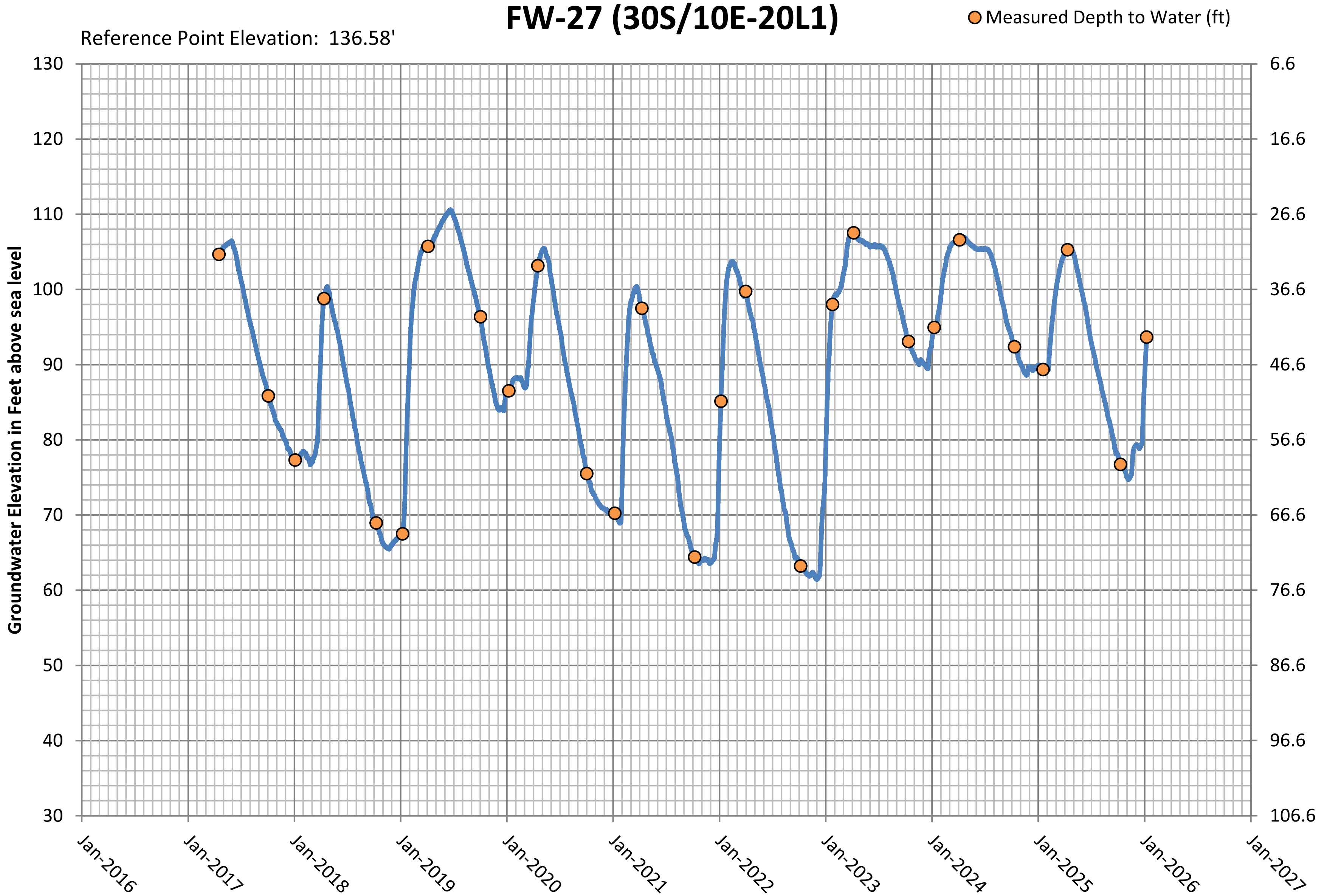
FINAL DRAFT



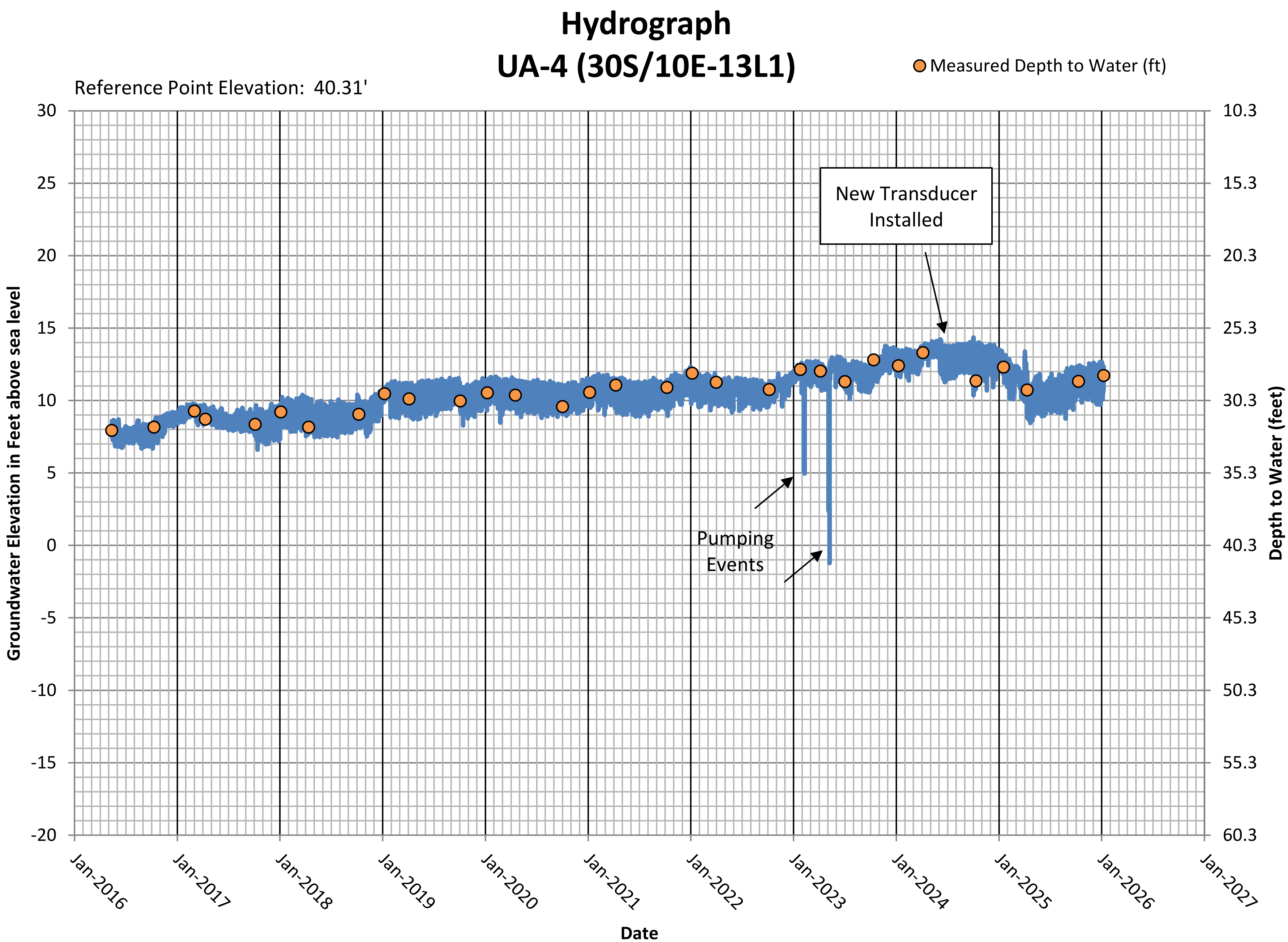
Hydrograph
FW-10 (30S/11E-7Q1)
Reference Point Elevation: 25.29'
Measured Depth to Water (ft)
Data Gap
Data Gap
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Date
40
35
30
25
20
15
10
5
0
-5
-10
-14.7
-9.7
-4.7
0.3
5.3
10.3
15.3
20.3
25.3
30.3
35.3
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Jan-2022
Jan-2023
Jan-2024
Jan-2025
Jan-2026
Jan-2027

FINAL DRAFT

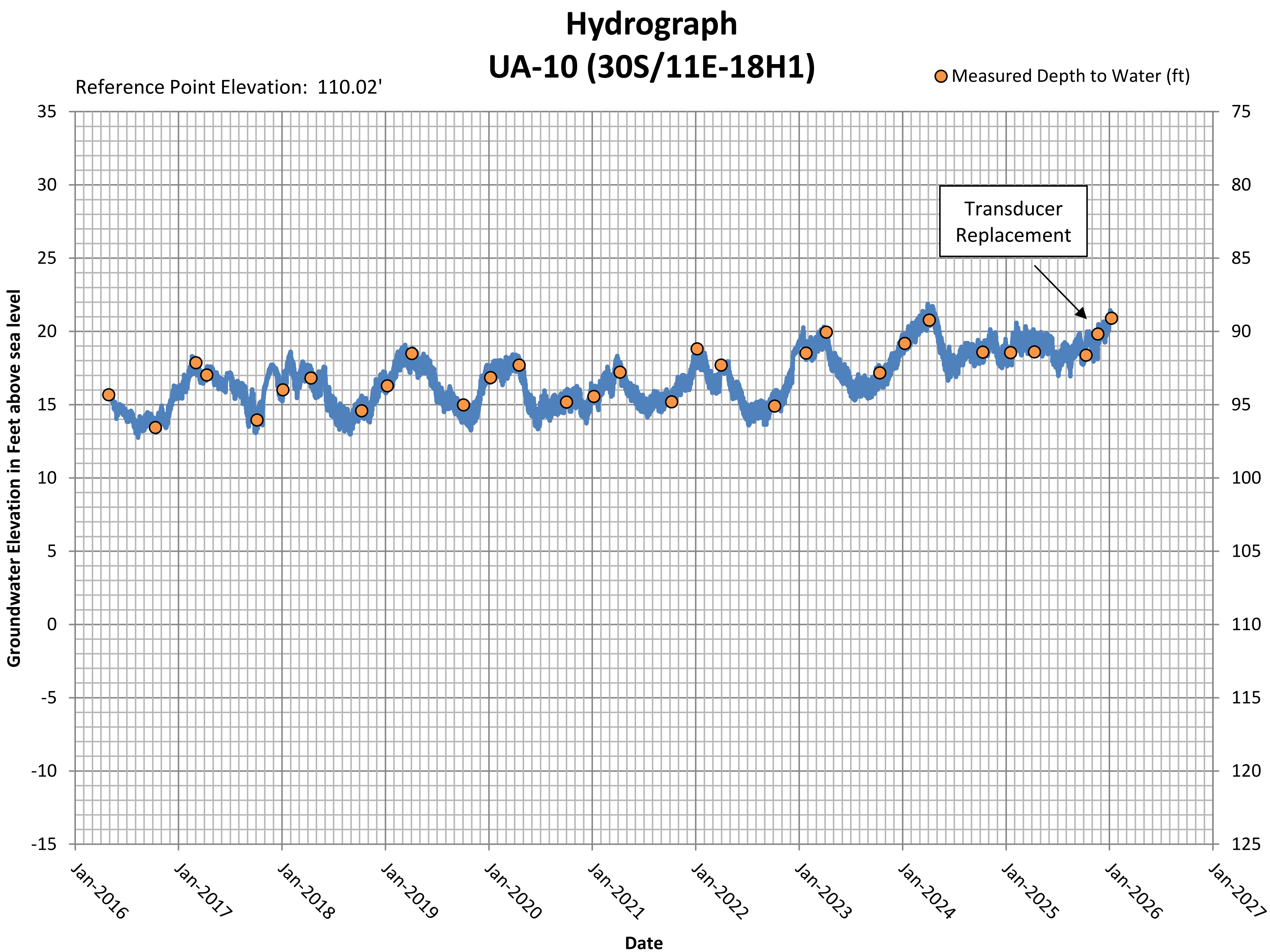
Hydrograph
FW-27 (30S/10E-20L1)



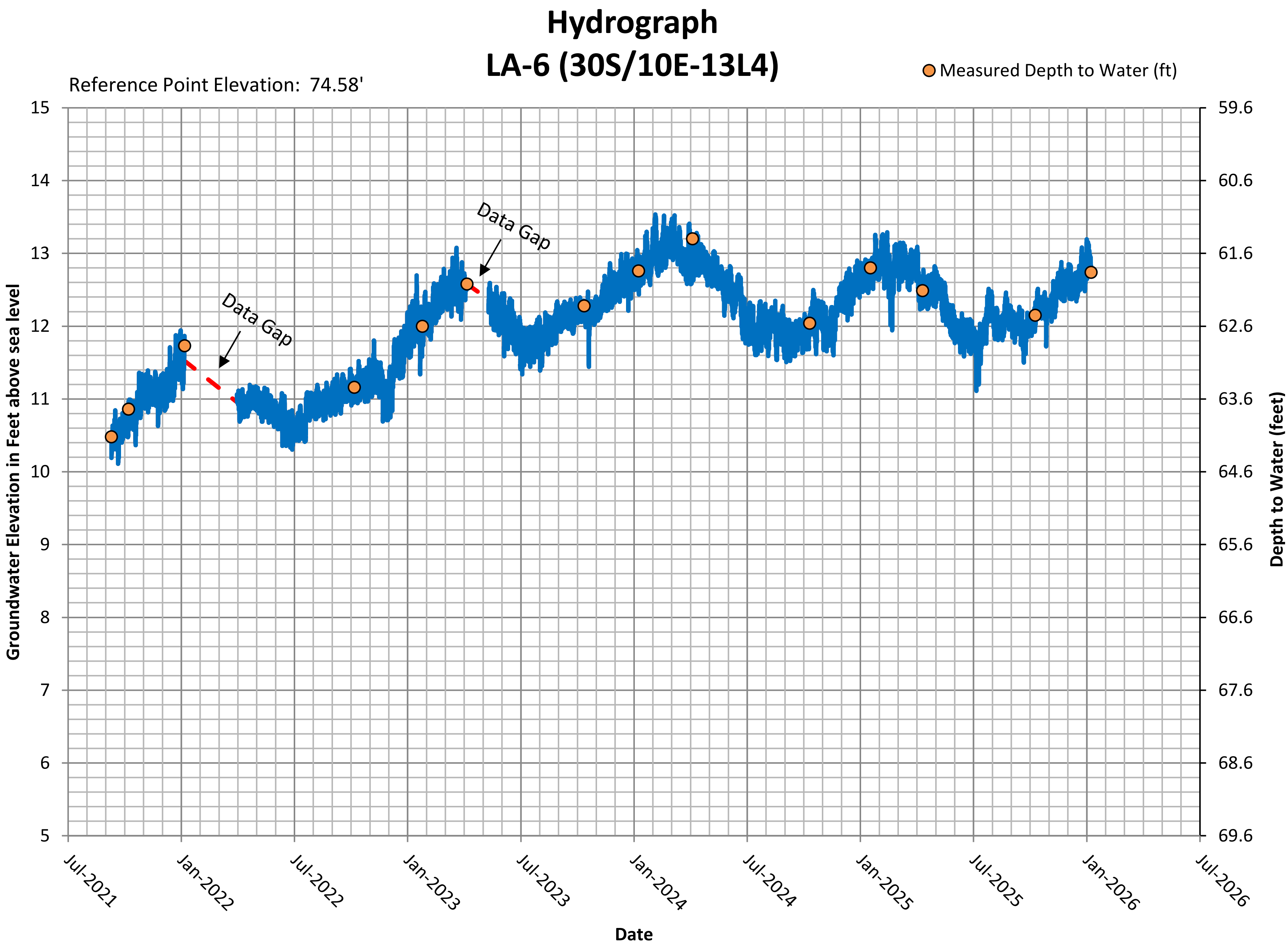
FINAL DRAFT


Hydrograph
UA-4 (30S/10E-13L1)
Measured Depth to Water (ft)
Reference Point Elevation: 40.31'
New Transducer Installed
Pumping Events
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Date
30
25
20
15
10
5
0
-5
-10
-15
-20
10.3
15.3
20.3
25.3
30.3
35.3
40.3
45.3
50.3
55.3
60.3
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Jan-2022
Jan-2023
Jan-2024
Jan-2025
Jan-2026
Jan-2027

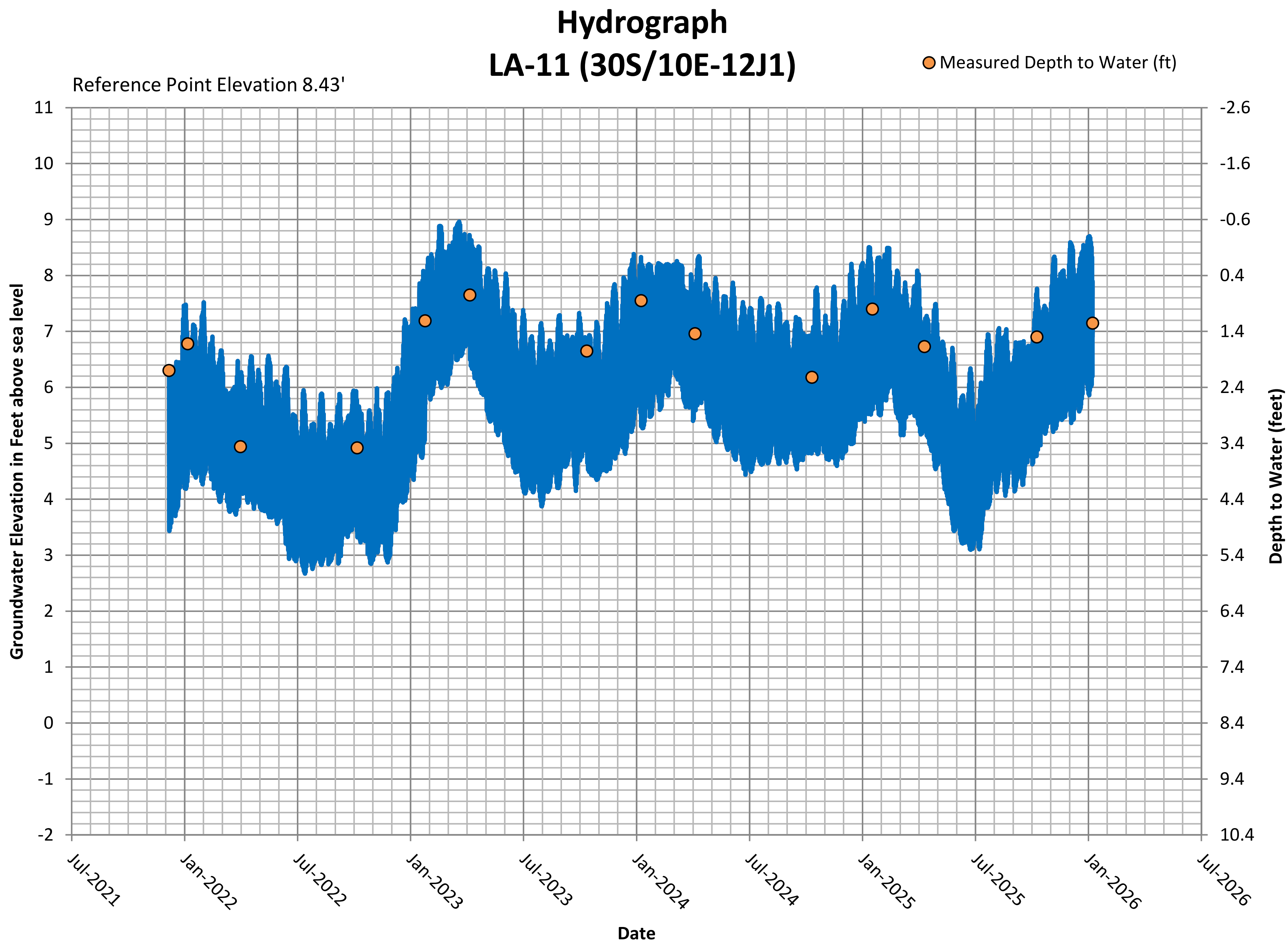
FINAL DRAFT


Hydrograph
UA-10 (30S/11E-18H1)
Reference Point Elevation: 110.02'
Measured Depth to Water (ft)
Transducer Replacement
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
35
30
25
20
15
10
5
0
-5
-10
-15
75
80
85
90
95
100
105
110
115
120
125
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Jan-2022
Jan-2023
Jan-2024
Jan-2025
Jan-2026
Jan-2027
Date

FINAL DRAFT

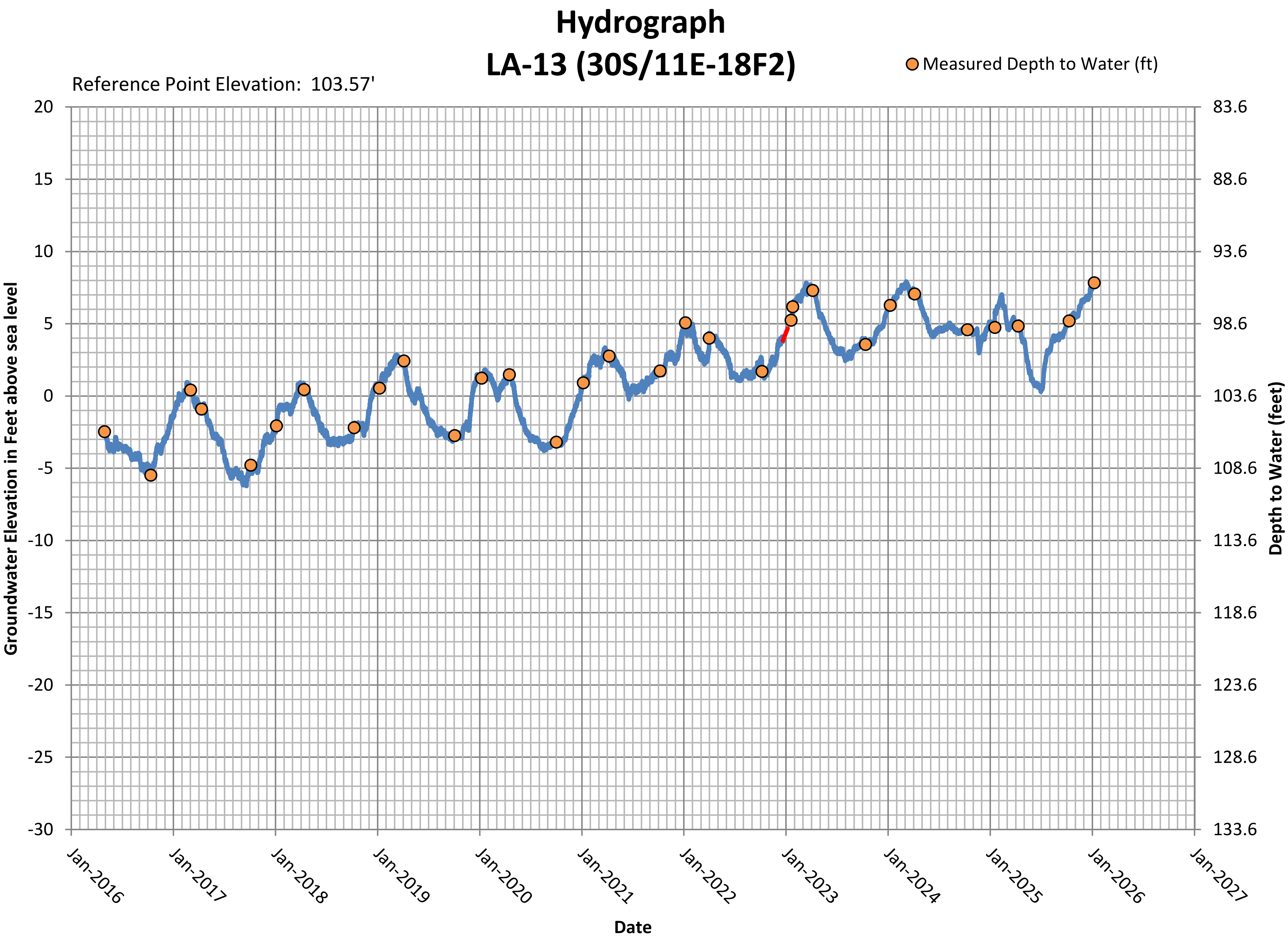

Hydrograph
LA-6 (30S/10E-13L4)
Reference Point Elevation: 74.58'
Measured Depth to Water (ft)
Data Gap
Data Gap
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Date
15
14
13
12
11
10
9
8
7
6
5
59.6
60.6
61.6
62.6
63.6
64.6
65.6
66.6
67.6
68.6
69.6
Jul-2021
Jan-2022
Jul-2022
Jan-2023
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
Jul-2026

FINAL DRAFT



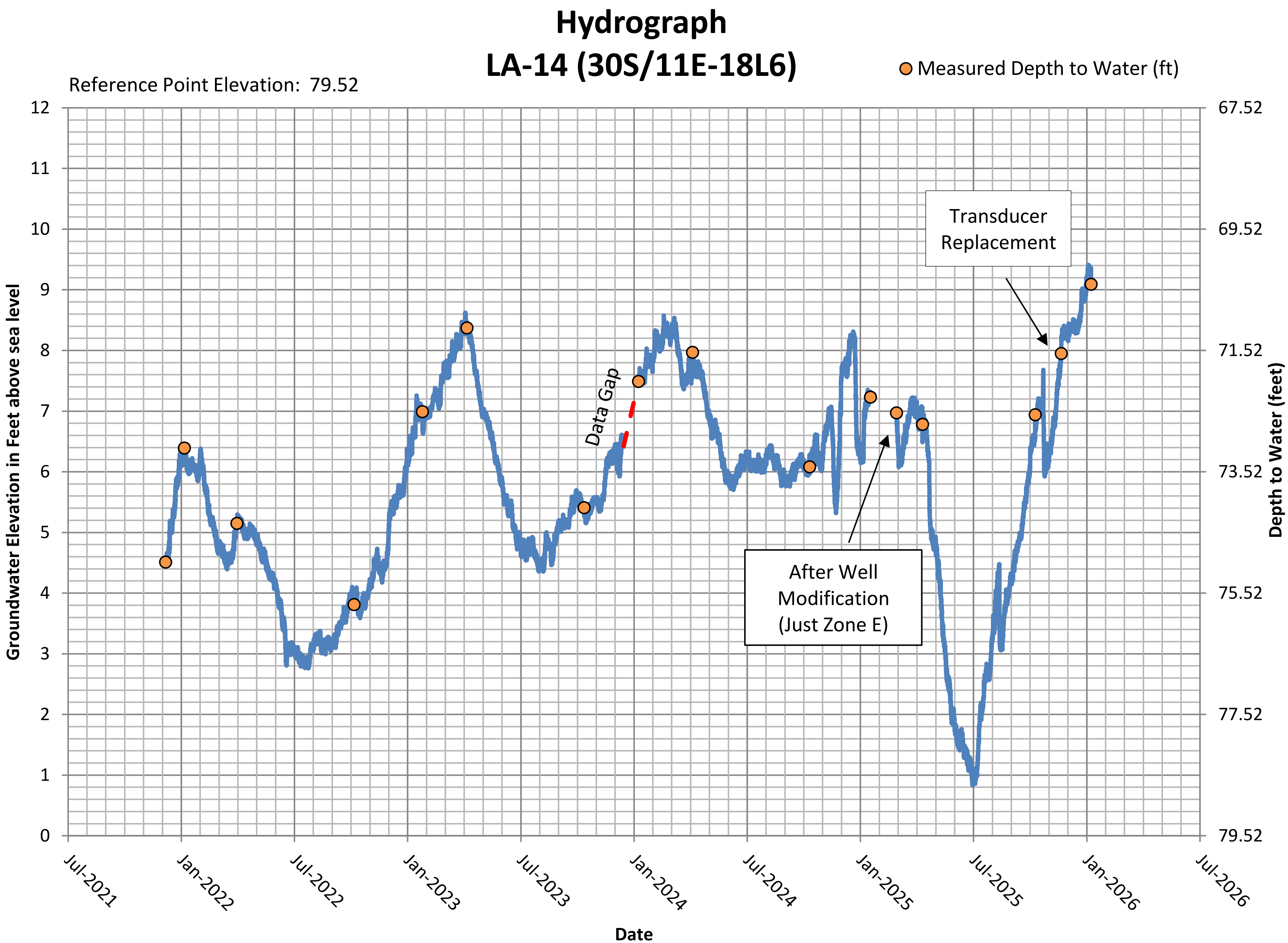
Hydrograph
LA-11 (30S/10E-12J1)
Measured Depth to Water (ft)
Reference Point Elevation 8.43'
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-2.6
-1.6
-0.6
0.4
1.4
2.4
3.4
4.4
5.4
6.4
7.4
8.4
9.4
10.4
Jul-2021
Jan-2022
Jul-2022
Jan-2023
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
Jul-2026
Date

FINAL DRAFT



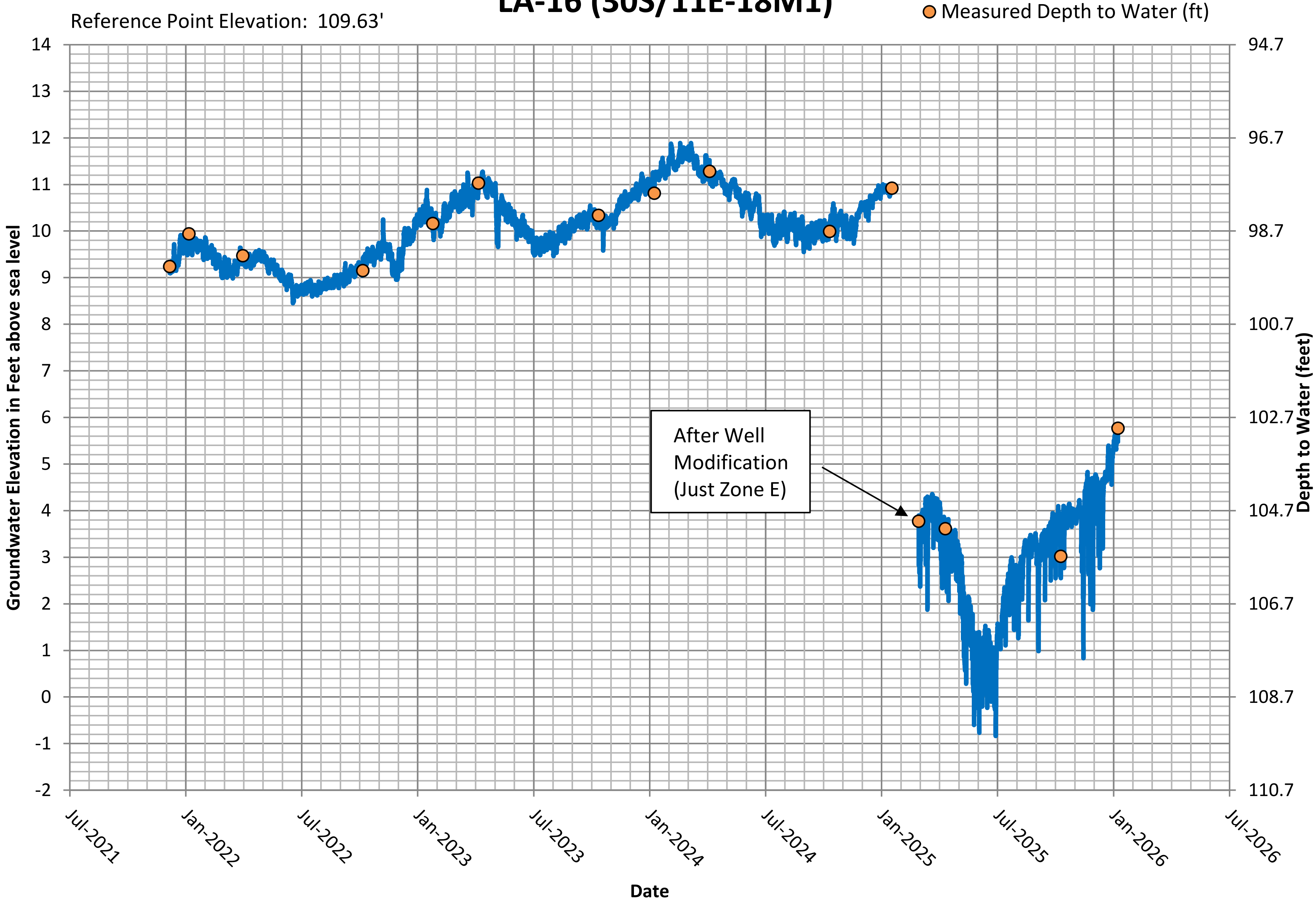
Hydrograph
LA-13 (30S/11E-18F2)
Measured Depth to Water (ft)
Reference Point Elevation: 103.57'
20
15
10
5
0
-5
-10
-15
-20
-25
-30
83.6
88.6
93.6
98.6
103.6
108.6
113.6
118.6
123.6
128.6
133.6
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Jan-2022
Jan-2023
Jan-2024
Jan-2025
Jan-2026
Jan-2027
Date

FINAL DRAFT


Hydrograph
LA-14 (30S/11E-18L6)
Reference Point Elevation: 79.52
Measured Depth to Water (ft)
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Date
12
11
10
9
8
7
6
5
4
3
2
1
0
67.52
69.52
71.52
73.52
75.52
77.52
79.52
Jul-2021
Jan-2022
Jul-2022
Jan-2023
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
Jul-2026
Data Gap
Transducer Replacement
After Well Modification (Just Zone E)

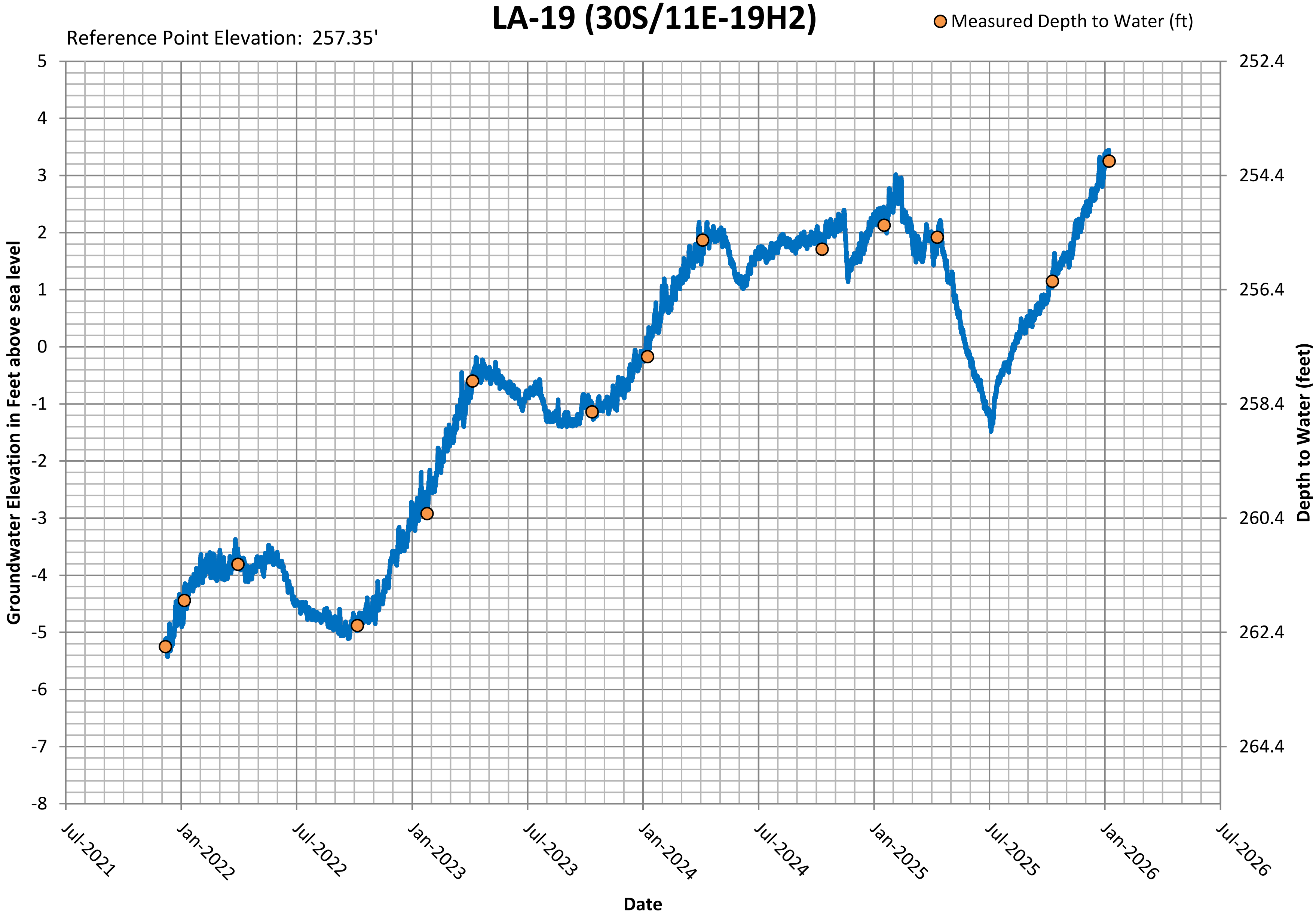
FINAL DRAFT

Hydrograph
LA-16 (30S/11E-18M1)

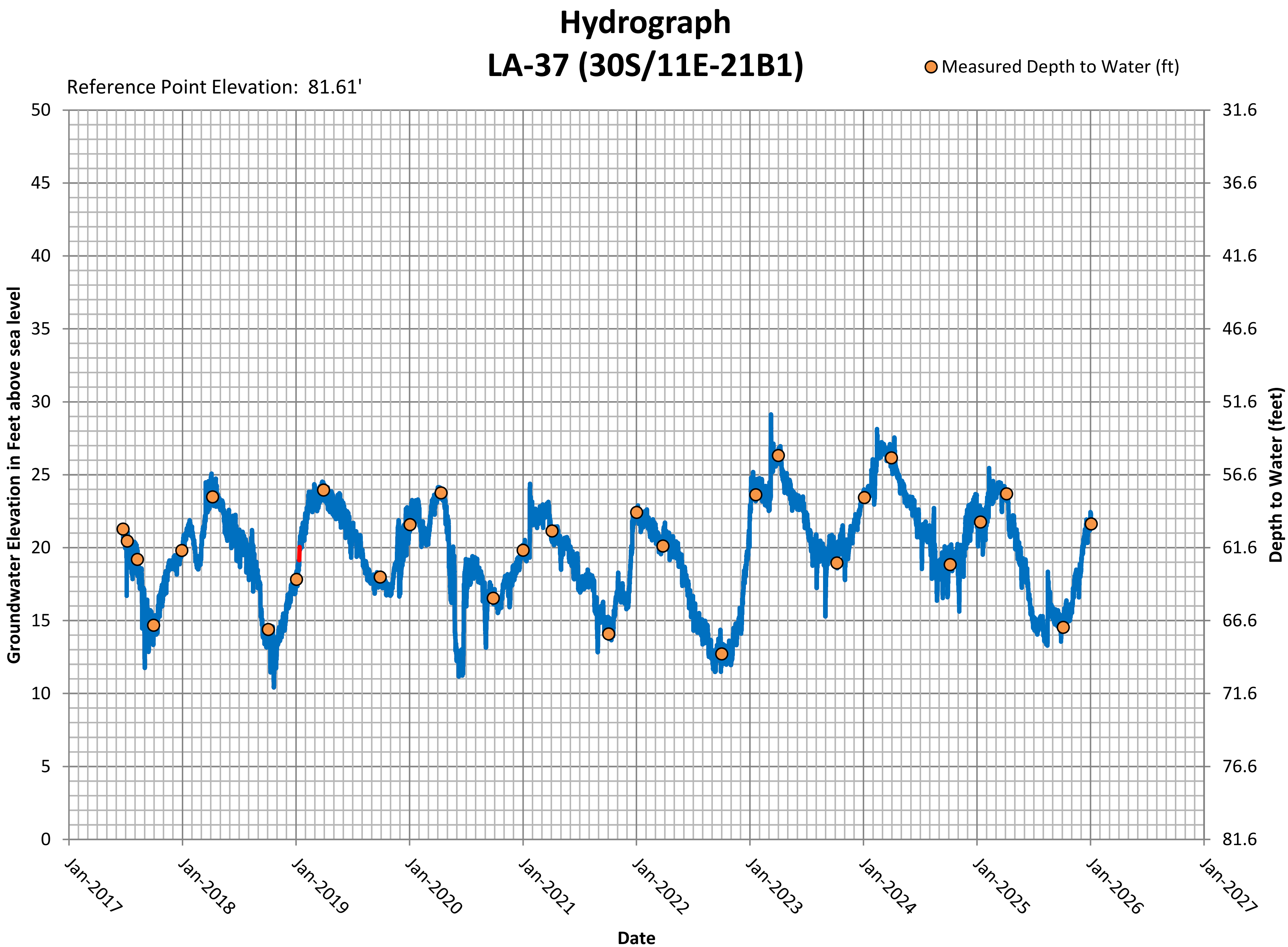


FINAL DRAFT

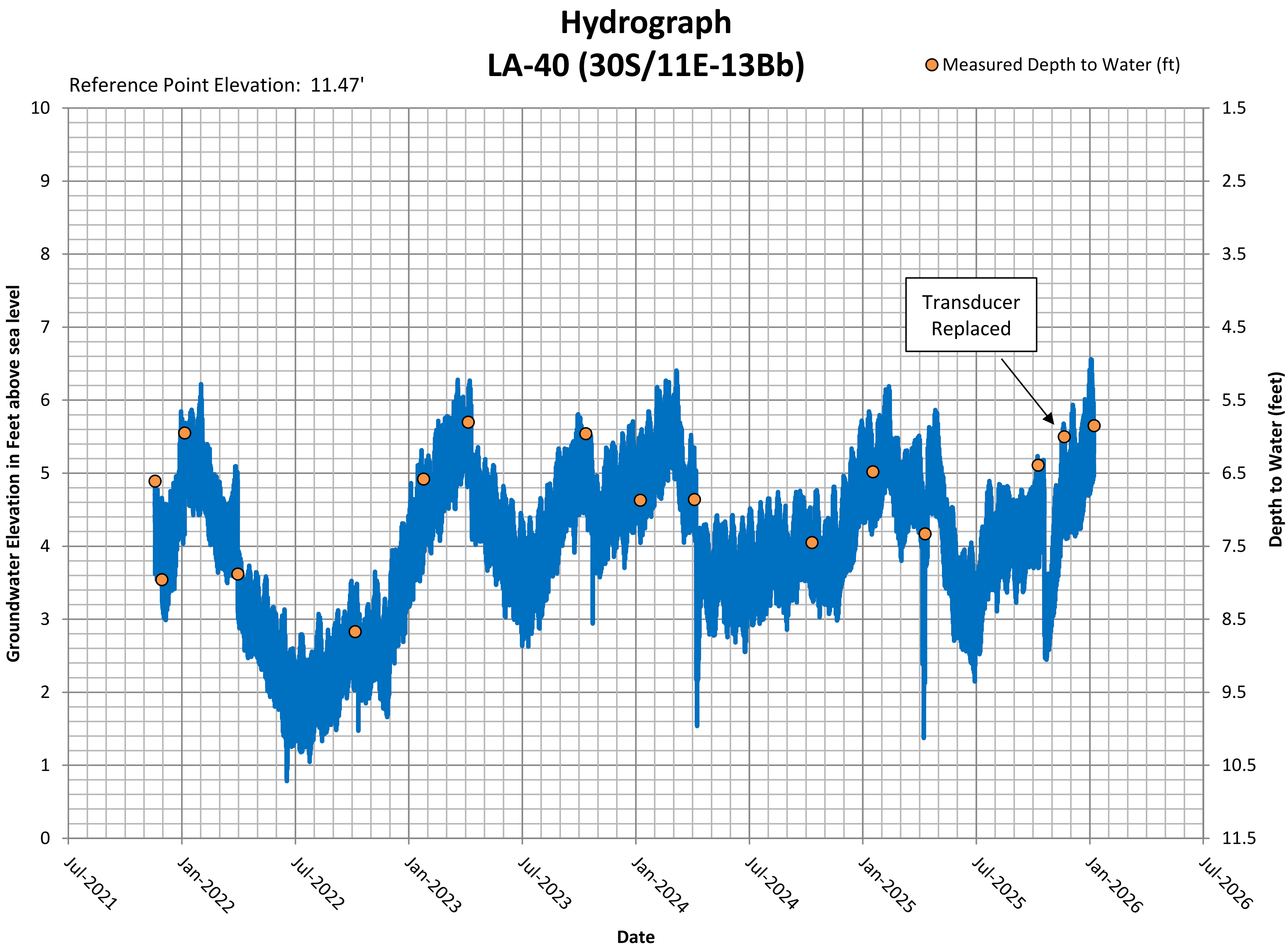
Hydrograph
LA-19 (30S/11E-19H2)



FINAL DRAFT


Hydrograph
LA-37 (30S/11E-21B1)
Measured Depth to Water (ft)
Reference Point Elevation: 81.61'
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Date
50
45
40
35
30
25
20
15
10
5
0
31.6
36.6
41.6
46.6
51.6
56.6
61.6
66.6
71.6
76.6
81.6
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Jan-2022
Jan-2023
Jan-2024
Jan-2025
Jan-2026
Jan-2027

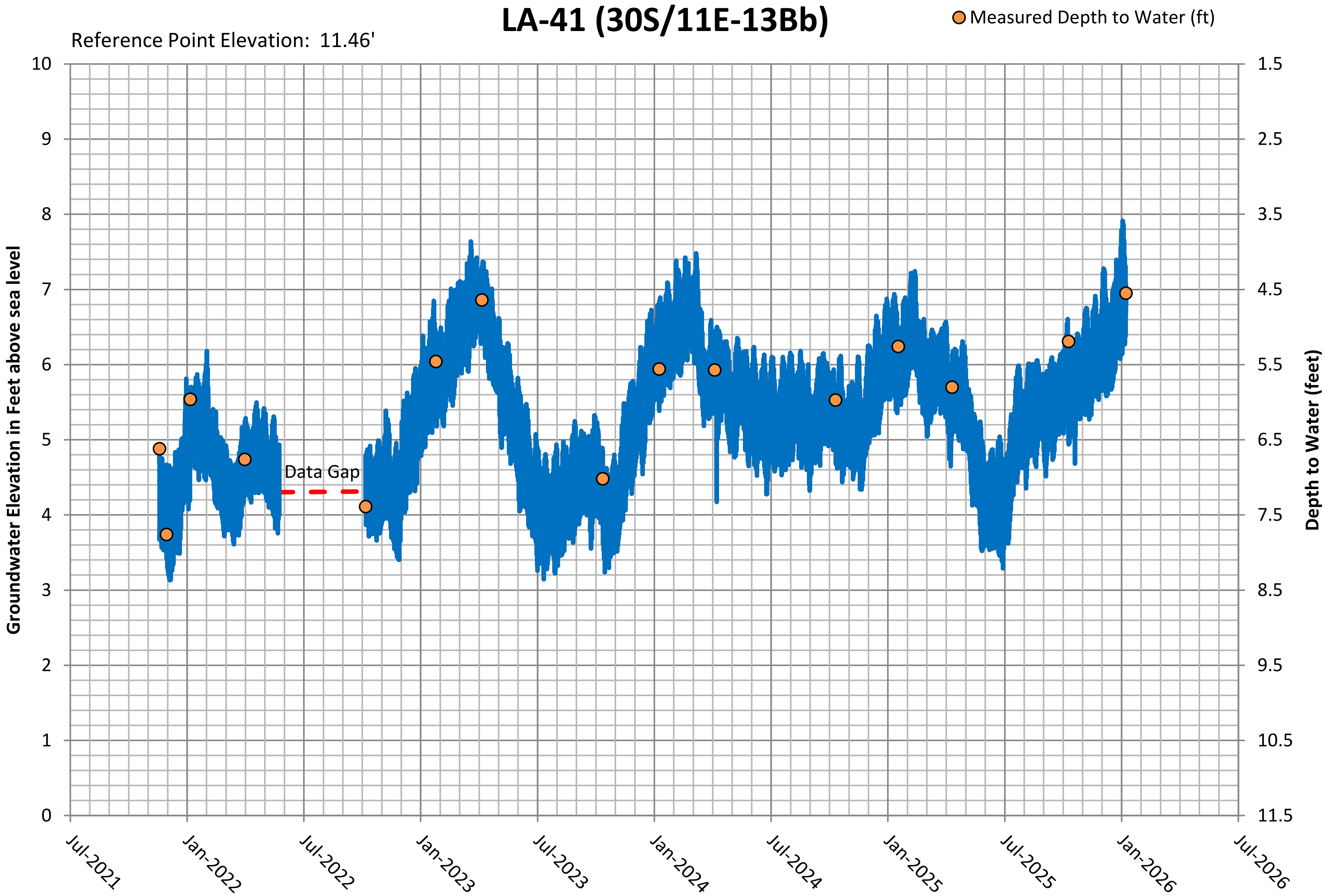
FINAL DRAFT



Hydrograph
LA-40 (30S/11E-13Bb)
Measured Depth to Water (ft)
Reference Point Elevation: 11.47'
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Transducer Replaced
Date
10
9
8
7
6
5
4
3
2
1
0
1.5
2.5
3.5
4.5
5.5
6.5
7.5
8.5
9.5
10.5
11.5
Jul-2021
Jan-2022
Jul-2022
Jan-2023
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
Jul-2026

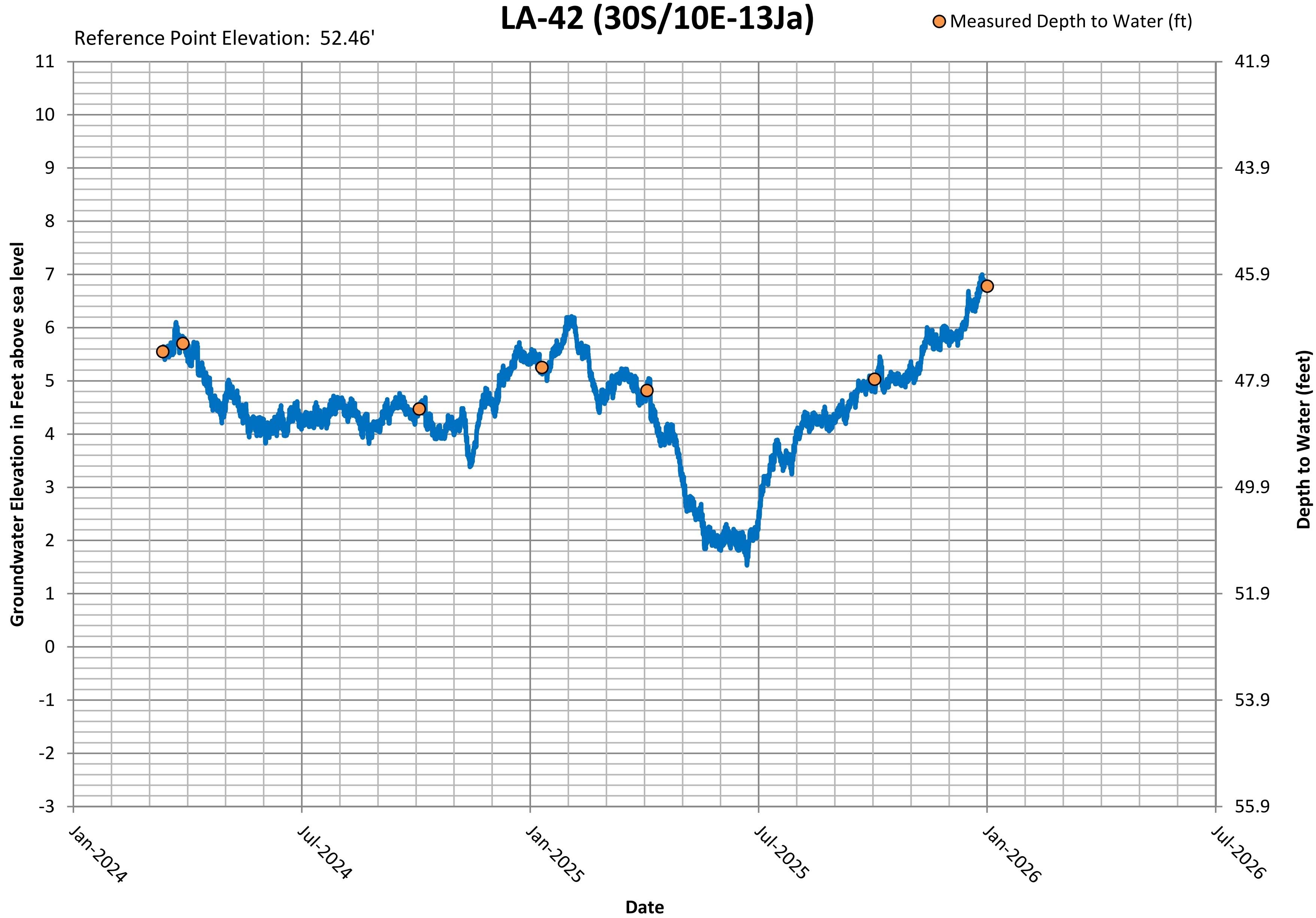
FINAL DRAFT

Hydrograph
LA-41 (30S/11E-13Bb)

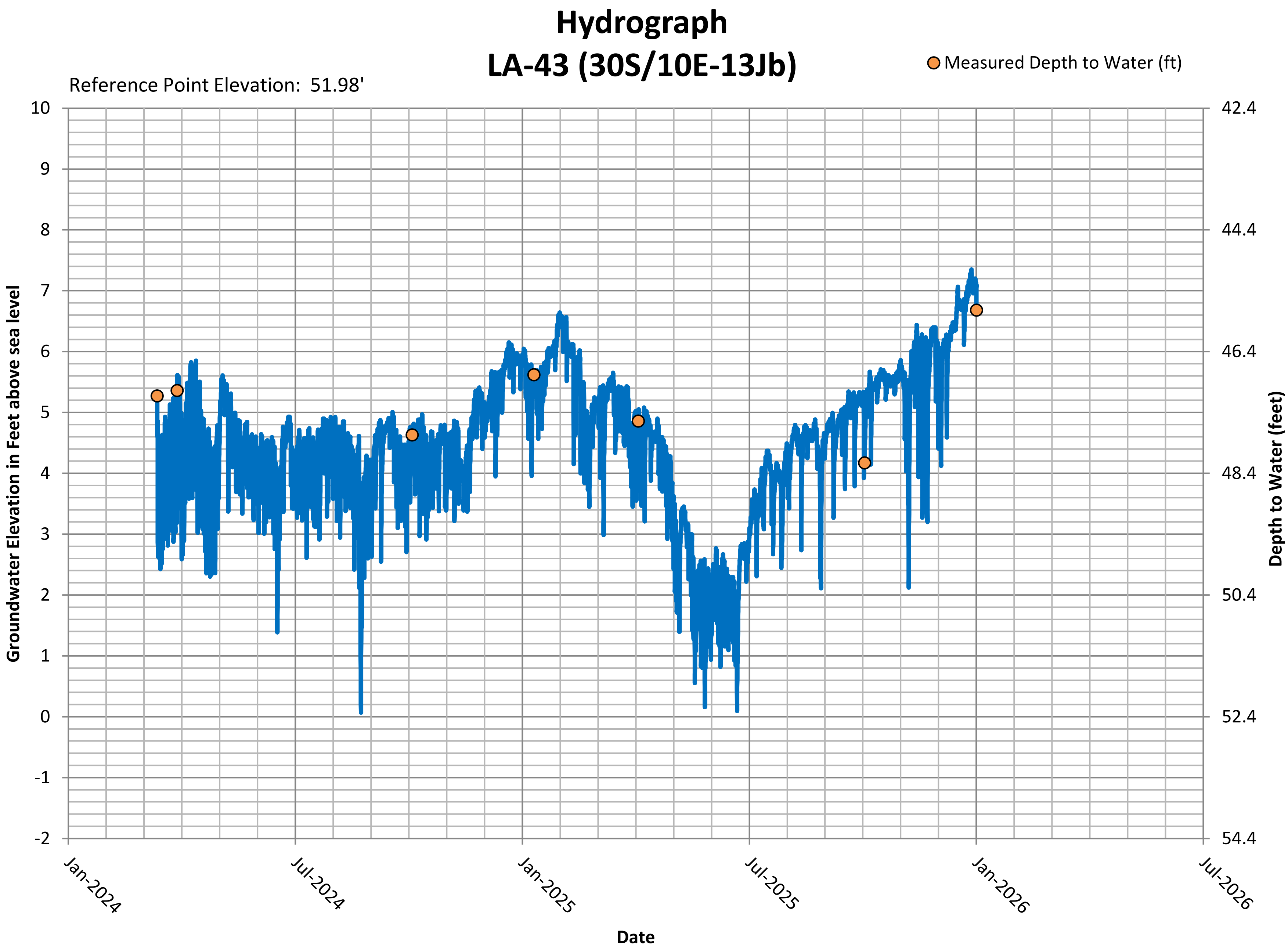


FINAL DRAFT

Hydrograph
LA-42 (30S/10E-13Ja)



FINAL DRAFT


Hydrograph
LA-43 (30S/10E-13Jb)
Measured Depth to Water (ft)
Reference Point Elevation: 51.98'
Groundwater Elevation in Feet above sea level
Depth to Water (feet)
Date
10
9
8
7
6
5
4
3
2
1
0
-1
-2
42.4
44.4
46.4
48.4
50.4
52.4
54.4
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
Jul-2026

FINAL DRAFT

APPENDIX J

Historical Water Quality for Lower Aquifer Wells

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-11A2	Sand Spit #1 East	LA2	D	3/14/2005	180	4600	16000	7.3	8900	5400	ND	430	770	640	20	1300
				10/21/2015	150	6640	17700	7.4	13100	6300	ND	740	1030	990	31	1560
				11/5/2020	220	6700	18000	7.7	15300	5890	ND	777	1140	936	38	1560
30S/10E-12J1	MBO5 DWR Obs.	LA11	E	2/14/2005	350	370	1300	8.1	840	77	ND	190	51	58	6.1	110
				11/20/2009	300	360	1150	7.5	732	83	ND	190	51	58	4.4	95
				7/24/2014	360	489	1290	7.7	780	105	ND	212	69	77	5	88
				4/22/2015	360	475	1290	7.8	810	112	ND	189	65	76	5	88
				10/1/2015	250	486	1280	7.3	840	117	ND	188	68	77	4	85
				4/20/2016	330	524	1370	n/a	840	151	ND	193	73	40	5	83
				10/10/2016	350	497	1370	7.1	930	173	ND	189	69	79	4	81
				4/11/2017	350	541	1380	7.5	880	167	ND	186	75	86	4	81
				10/4/2017	300	543	1370	7	850	162	ND	191	76	86	5	90
				4/10/2018	350	595	1390	7.6	820	173	ND	192	85	93	5	97
				10/2/2018	350	497	1340	7.4	870	160	ND	160	69	79	3	87
				4/9/2019	350	539	1430	7.4	860	196	ND	189	76	85	4	85
				10/2/2019	250	290	1520	7.6	1000	187	ND	189	80	90	5	91
				4/14/2020	350	667	1580	7	950	222	ND	187	81	113	5	83
				10/1/2020	350	763	1650	7.1	1040	242	ND	183	85	134	5	88
				4/5/2021	345	612	1630	7.6	1050	256	ND	192	88	96	5	91
				10/6/2021	340	569	1710	7.3	1020	258	ND	176	83	88	5	82
				4/13/2022	330	620	1800	7.3	1020	287	ND	183	90	96	4	87
				10/6/2022	350	633	1720	7.7	1220	279	ND	195	89	100	5	93
				4/13/2023	350	653	1840	7.2	1040	346	ND	188	92	103	5	89
				10/4/2023	340	715	1910	7.4	1300	350	ND	188	102	112	5	93
				4/2/2024	350	675	1870	7.6	1130	340	ND	194	94	107	5	91
				10/2/2024	330	725	1980	7.8	1250	340	ND	189	101	115	5	92
				4/2/2025	340	754	2060	7.6	1240	430	ND	193	106	119	5	94
				10/2/2025	330	795	2080	7.6	1480	**390**	ND	184	114	124	5	97

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	μmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-13Bb	Lupine Zone D	LA41	D	11/7/2019	210	312	1310	7.7	760	136	3.1	188	69	34	4	140
				4/8/2020	310	204	943	7.1	560	68	0.3	109	44	23	2	101
				10/8/2020	340	263	920	7.1	490	52	0.1	89.4	51	33	2	72
				4/14/2021	333	289	855	7.9	505	66	ND	86	53	38	2	60
				10/11/2021	340	309	812	7.2	460	48	ND	80	58	40	2	64
				4/12/2022	330	309	818	8.3	500	47	ND	67	58	40	2	58
				10/11/2022	340	315	766	7.6	470	48	ND	71	62	39	2	57
				4/11/2023	340	260	764	7.5	440	51	ND	58	48	34	2	47
				10/23/2023	340	281	754	7.0	460	48	ND	57	50	38	2	50
				4/9/2024	340	292	729	7.5	410	48	ND	52	51	40	2	51
				10/10/2024	340	270	744	7.5	400	48	ND	49	47	37	2	47
				4/9/2025	340	274	744	7.4	420	52	ND	48	49	37	2	46
				10/21/2025	340	274	730	7.4	470	**52**	ND	44	49	37	2	44
30S/10E-13Ba	Lupine Zone E	LA40	E	11/6/2019	210	2090	5330	7	4750	1460	1.3	224	388	272	6	182
				4/7/2020	240	3300	7360	7.6	6340	2190	0.3	202	569	458	7	203
				10/7/2020	270	4100	8220	6.9	7930	2220	ND	192	720	560	8	217
				4/15/2021	274	3760	8590	7.4	6760	2510	ND	217	558	576	7	210
				10/13/2021	270	3540	8930	7.4	7430	2910	ND	201	544	530	6	190
				4/14/2022	270	3780	8790	7.3	6790	2410	ND	187	523	601	6	178
				10/12/2022	280	3860	8860	7.5	8340	2900	ND	221	569	594	7	186
				4/12/2023	280	4570	9020	7.3	5870	2820	ND	232	575	762	7	198
				10/24/2023	280	4450	9200	6.9	9610	3200	ND	259	764	619	6	201
				4/8/2024	280	3760	9020	7.4	8040	3200	ND	251	650	519	6	197
				10/9/2024	290	3690	9140	7.4	7670	2900	ND	255	658	499	7	248
				4/7/2025	280	4160	8830	7.4	9070	2700	ND	249	693	590	6	211
				10/20/2025	270	4310	8990	7.3	8570	**3200**	ND	259	736	601	7	219

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-13J1* Highlighted chloride values have been adjusted for wellbore leakage	GSWC Rosina	LA10	D,E	12/20/2004	72	230	720	7.1	410	150	1.6	14	38	33	1.4	29
				1/14/2010	35	260	778	6	435	200	1.6	13	41	38	1.5	33
				7/24/2014	80	418	1200	7.3	910	303	1.7	16	67	61	2	39
				4/22/2015	80	431	1230	7.1	750	331	1.9	20	69	63	2	39
				10/5/2015	70	460	1280	7	950	329	1.7	19	74	67	2	41
				4/26/2016	80	412	1170	7.1	840	299	1.8	18	66	60	2	37
				10/12/2016	60	509	1430	6.8	1100	389	1.8	26.7	82	74	2	44
				4/10/2017	80	327	957	6.9	720	300	2.6	14.7	52	48	2	35
				10/12/2017	80	245	702	6.9	510	220	3.4	12.5	39	36	2	33
				4/24/2018	70	188	620	7.4	400	190	4.3	12.3	29	28	1	29
				10/9/2018	70	265	730	7.1	450	210	3.2	12.7	42	39	2	34
				4/15/2019	80	251	744	7	600	174	1.9	10.4	38	38	2	31
				10/14/2019	80	332	961	7.1	830	229	2	12.7	54	48	1	33
				4/21/2020	80	353	1310	6.4	970	250	2.1	14.2	59	50	2	32
				10/7/2020	70	183	618	7.6	430	310	4.6	11.3	29	27	1	33
				4/6/2021	81	405	1110	7.6	815	258	2.1	16.1	66	58	2	36
				10/8/2021	80	413	1180	7.2	790	289	2.1	16.8	65	61	2	37
				4/18/2022	70	192	612	7.1	420	220	5.8	14.9	29	29	1	37
				12/5/2022	90	327	911	7.7	690	235	2	13.4	52	48	2	33
				5/8/2023	80	303	892	7.1	690	211	2	12.5	49	44	2	51
				10/10/2023	80	277	805	7.6	610	235	3.2	13.2	45	40	2	35
				4/10/2024	70	230	688	7.2	480	211	3.2	11.4	36	34	2	31
				10/9/2024	80	519	1440	7.2	1120	360	2	26.9	86	74	2	43
				4/2/2025	80	312	894	7.6	750	210	2.2	14.2	51	45	2	33
				10/6/2025	80	326	945	6.9	750	**290**	3.1	15	53	47	2	36

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-13M2 4/1/2021 and 10/16/2024 results show Upper Aquifer influence due to reduced pumping	Howard East	LA31	C,D	11/22/2004	51	810	2900	7.3	1500	810	0.5	140	60	120	4.7	210
				12/9/2009	55	1100	3740	7.1	2170	1100	0.5	220	160	160	4.8	370
				8/4/2014	60	757	3340	7.1	2450	990	0.6	178	117	113	5	382
				4/21/2015	60	739	3430	7.3	1930	950	0.6	178	117	113	5	382
				10/6/2015	30	756	3370	7.1	2140	960	0.5	185	115	114	5	342
				4/20/2016	50	726	3520	7.2	2190	941	0.7	179	113	108	5	400
				10/19/2016	70	722	3420	7.4	2190	943	0.6	182	113	107	4	398
				4/17/2017	60	733	3380	6.8	2060	907	0.6	178	114	109	4	413
				10/5/2017	60	738	3350	7.5	2190	960	0.7	160	116	109	5	411
				4/24/2018	70	664	3370	7.2	2020	946	0.6	2.8	103	99	4	367
				10/17/2018	60	740	3400	7.3	2180	834	0.6	153	115	110	5	414
				4/3/2019	70	640	3290	7.8	2010	940	0.6	179	103	93	4	341
				10/3/2019	70	574	3120	7.4	2120	827	0.7	169	90	85	4	340
				4/9/2020	70	519	2970	7.8	1740	738	0.6	152	86	74	4	258
				10/1/2020	70	774	3330	8	2080	844	0.7	169	94	131	5	495
				4/1/2021	218	187	1010	8.3	581	161	2.9	47	31	27	20	113
				11/4/2021	70	509	2780	7.9	1700	629	0.6	124	77	77	4	305
				5/11/2022	70	388	2550	7.6	1540	578	0.6	134	60	58	3	303
				10/6/2022	70	506	2520	8.3	1840	636	0.7	145	79	75	4	268
				4/4/2023	70	352	2180	7.1	1370	599	0.6	121	52	54	4	272
				11/7/2023	70	425	2340	8.0	1440	600	0.7	131	68	62	3	247
				4/18/2024	70	375	2060	8.2	1230	560	0.7	113	58	56	3	221
				10/16/2024	80	193	1170	8.1	680	270	0.4	58.9	31	28	3	106
				4/17/2025	90	203	1290	7.8	750	300	1.0	69.6	32	30	5	136
				10/16/2025	100	223	1470	7.7	900	**390**	0.9	73.9	35	33	6	165

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-13N	S&T #5	LA8	D	11/23/2004	42	80	390	6.9	200	67	5.9	9.2	13	12	1.7	38
				11/19/2009	41	89	386	6.8	267	73	6.1	11	15	13	1.4	38
				7/24/2014	50	100	438	7.4	270	76	7	10	17	14	2	38
				4/21/2015	50	98	445	6.9	280	77	7.7	11	16	14	2	38
				10/6/2015	40	98	422	7.2	310	75	6.8	10	16	14	1	38
				4/20/2016	20	97.5	446	7	320	76	7.2	12	16	14	1	38
				10/13/2016	50	104	470	8	320	79	7.2	12	17	15	1	40
				4/11/2017	50	100	434	7.4	270	77	7.3	12.4	17	14	1	38
				10/2/2017	30	95	438	7.2	290	78	7.6	13.2	15	14	1	36
				4/11/2018	60	104	440	7	260	79	7.9	13.5	17	15	1	39
				10/3/2018	60	107	430	6.5	340	66	6.7	12.9	18	15	2	40
				4/3/2019	50	100	434	6.3	250	75	7.3	12.7	17	14	1	36
				10/7/2019	60	95	446	7.6	250	77	7.7	14.4	15	14	1	37
				4/13/2020	60	104	443	8	300	75	7.4	14.5	17	15	2	37
				10/1/2020	60	108	464	7.9	300	76	7.5	14.4	17	16	1	40
				4/6/2021	63	103	438	7.4	302	78	7.8	13.1	17	15	1.4	38
				10/8/2021	60	108	443	7.8	290	77	7.5	13.3	17	16	2	41
				4/13/2022	60	106	449	8.1	270	76	7.3	12.8	16	16	1	40
				10/4/2022	60	108	432	7.4	280	77	6.6	13.1	17	16	2	38
				4/13/2023	60	139	443	8.0	250	80	7.3	13.2	21	21	1	41
				10/4/2023	60	108	455	7.6	310	81	7.3	13.1	17	16	2	40
				4/4/2024	60	106	452	7.7	280	85	7.5	14.1	16	16	2	37
				10/10/2024	60	104	455	7.9	280	84	7.4	13.9	17	15	2	39
				4/1/2025	60	108	452	7.9	270	88	6.9	15.5	17	16	2	40
				10/1/2025	60	106	446	7.8	330	**84**	6.7	8.9	16	16	1	37

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/10E-24C1	GSWC Cabrillo	LA9	D	12/20/2004	64	130	610	7	310	110	4.5	19	22	19	1.6	50
				11/20/2009	60	150	611	7.1	347	130	4.1	22	23	22	1.6	52
				7/24/2014	40	69	339	7.6	240	46	8.4	6	11	10	1	32
				4/22/2015	70	117	530	7.3	320	95	5.5	16	19	17	2	45
				10/5/2015	50	75	349	7.6	270	50	7.6	7	12	11	1	34
				4/26/2016	70	115	499	7	300	90	5.6	16	18	17	2	44
				10/12/2016	70	111	506	7.1	320	93	5.5	15.1	18	16	1	44
				4/10/2017	70	111	490	7	310	89	5.7	15.9	18	16	1	43
				10/12/2017	70	117	484	7	270	89	6	16.3	19	17	2	46
				4/24/2018	70	115	486	7.8	300	90	6.2	16.7	18	17	1	43
				10/9/2018	60	135	477	6.9	280	76	5.8	17.2	21	20	2	50
				4/15/2019	70	112	488	7.1	310	92	5.7	15.6	17	17	2	45
				4/21/2020	300	75.2	674	6.7	370	37	0.2	28.4	3	35	2	42
				10/7/2020	60	102	460	7.4	270	75	6.6	13.1	16	15	1	40
				4/6/2021	63	98.6	443	7.9	287	78	6.8	12.2	16	15	1	39
				10/8/2021	60	112	490	7.7	280	86	6.4	16	17	17	2	44
				4/18/2022	70	126	533	7.2	330	93	6.2	16.2	19	19	2	46
				10/19/2022	70	126	502	7.4	310	93	6.5	15.6	19	19	2	48
				4/11/2023	80	117	518	7.5	330	98	6.8	17.3	19	17	1	43
				10/10/2023	70	128	545	7.6	380	96	6.8	17.4	20	19	2	47
				4/10/2024	70	128	535	7.1	330	98	7	17.9	20	19	2	47
				10/9/2024	80	131	559	7.4	380	110	7.1	18.5	21	19	2	49
				4/2/2025	70	131	549	7.6	350	100	7	19.1	21	19	2	48
				10/6/2025	80	144	597	6.8	400	**120**	6.6	19.9	23	21	2	51

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-7Q3	LOCSD 8th St.	LA12	D	11/18/2004	250	270	790	7.5	410	73	ND	39	44	40	2.3	48
				11/19/2009	220	290	782	7.4	465	92	ND	46	46	42	1.9	53
				7/23/2014	290	303	876	7.6	460	91	ND	43	49	44	2	54
				4/21/2015	290	305	897	7.7	500	101	ND	55	48	45	2	59
				10/6/2015	280	298	828	7.4	490	91	ND	46	47	44	2	55
				4/20/2016	190	307	907	7.7	520	91	ND	49	49	45	2	54
				10/11/2016	280	278	827	4.9	490	93	ND	46.2	44	41	2	52
				4/10/2017	300	294	839	7.3	480	91	ND	49.5	47	43	2	54
				10/4/2017	220	305	826	6.5	470	92	ND	45	48	45	2	56
				4/10/2018	300	319	814	7.7	440	93	ND	46.2	52	46	2	56
				10/2/2018	290	283	822	7.3	470	78	ND	50.1	46	41	1	53
				4/9/2019	300	301	844	7.5	480	94	ND	49.7	48	44	2	53
				10/2/2019	290	312	877	8	530	91	ND	50.9	49	46	2	56
				4/16/2020	310	301	883	7.8	500	94	ND	54.7	48	44	2	52
				10/5/2020	300	321	891	7.9	510	89	ND	49.6	51	47	2	57
				4/5/2021	305	297	849	7.7	504	94	ND	54.1	48	43	2	54
				10/6/2021	300	283	874	7.5	510	95	ND	55	46	41	2	51
				4/13/2022	300	276	879	7.4	490	94	ND	51.5	43	41	2	50
				10/4/2022	310	285	839	7.9	500	94	ND	51.5	45	42	2	52
				4/5/2023	310	317	842	7.1	490	98	ND	51.9	48	48	3	72
				10/11/2023	310	298	849	7.4	520	95	ND	52.1	47	44	2	53
				4/1/2024	310	305	849	7.9	480	95	ND	51.3	48	45	2	55
				10/1/2024	310	298	860	7.7	550	100	ND	54.7	47	44	2	52
				4/1/2025	320	305	848	7.8	470	98	ND	56.3	48	45	2	55
				10/1/2025	310	302	846	7.7	560	**98**	0.4	50.4	47	45	2	52
30S/11E-18L6	USGS Palisades OBS	LA14	E	4/22/2025	350	382	893	7.6	530	84	ND	92.1	69	51	2	34
				10/23/2025	350	375	892	7.5	580	**82**	ND	91.2	68	50	2	35
30S/11E-18M1	CCW #5 Broderson	LA16	E	4/21/2025	190	237	732	7.6	400	140	ND	25.7	39	34	2	40
				10/9/2025	200	495	1320	7.6	820	**330**	ND	24.3	83	70	3	49

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-17E8	So. Bay Obs. Middle	LA22	D	1/14/2005	150	150	440	7.5	290	34	2.2	11	24	22	1.4	28
				11/20/2009	120	160	455	7.3	255	42	4.3	12	25	23	1.3	29
				7/23/2014	150	166	500	7.6	270	43	6.3	10	27	24	2	28
				4/21/2015	150	157	481	7.6	270	49	7.1	13	25	23	1	28
				10/1/2015	120	164	475	7.4	290	44	6.6	10	26	24	1	28
				4/19/2016	150	164	476	6.9	290	45	6.9	12	26	24	1	29
				10/13/2016	140	161	521	7.3	290	46	6.9	11.9	25	24	1	29
				4/13/2017	150	164	466	7.3	300	46	6.7	13.2	26	24	1	29
				10/11/2017	150	168	476	7.7	260	47	7.2	14	26	25	1	29
				4/16/2018	150	165	473	6.4	310	47	6.7	14.2	25	25	1	29
				10/10/2018	150	160	471	7.5	250	43	6.1	15	26	23	1	28
				4/10/2019	180	153	466	7.2	290	46	5.8	13.6	25	22	1	28
				10/9/2019	150	155	485	7.3	270	49	7	14.9	24	23	1	28
				4/14/2020	160	164	482	8	280	48	6.3	14.9	26	24	1	27
				10/6/2020	160	181	506	7.5	340	47	6.7	14.7	28	27	1	30
				4/8/2021	159	154	470	7.5	329	46	5.8	12.5	24	23	1	27
				10/19/2021	170	181	480	7.4	310	41	5.8	14.9	28	27	1	29
				4/20/2022	160	178	518	7.6	320	43	7.4	14.6	27	27	1	29
				10/17/2022	180	213	485	7.4	300	45	7	16.5	31	33	2	32
				4/6/2023	200	176	496	7.7	300	41	5.5	14.9	26	27	1	26
				10/17/2023	170	169	465	7.0	290	45	6.1	13.7	25	26	2	28
				4/3/2024	170	159	465	7.6	250	45	4.9	14.4	24	24	1	28
				10/7/2024	160	178	509	7.6	310	49	8.9	16.2	27	27	2	29
				4/16/2025	170	161	473	7.4	280	47	6	15.2	25	24	1	28
				10/8/2025	170	173	473	7.6	280	**48**	6.5	14	28	25	2	30

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-17N10	GSWC So. Bay #1	LA20	C,D,E	Jan 2003	250	--	510	7.1	290	37	ND	21	41	25	1.3	35
				11/20/2009	230	220	638	7.3	357	41	0.5	30	35	33	1.7	37
				7/24/2014	280	232	646	7.7	370	37	0.5	24	37	34	2	41
				4/22/2015	290	234	653	7.4	360	43	0.6	27	36	35	2	42
				10/5/2015	280	227	614	7.2	370	38	0.5	23	35	34	2	41
				4/26/2016	230	227	629	7.1	360	39	0.6	27	35	34	2	40
				10/12/2016	290	221	631	7	370	40	0.6	25.2	34	33	2	40
				4/10/2017	280	227	624	7.2	380	39	0.6	26.7	35	34	2	40
				10/12/2017	260	240	583	6.6	320	41	0.7	27.9	37	36	2	43
				4/24/2018	200	166	515	7.4	330	43	3.2	23.2	27	24	2	31
				10/9/2018	290	273	632	7.2	340	38	0.6	29.2	42	41	3	47
				4/15/2019	200	181	559	7.4	310	42	3.1	21.7	28	27	2	34
				10/14/2019	290	221	626	7.2	380	41	0.7	29	34	33	2	40
				4/21/2020	300	230	705	7	400	50	0.7	26.9	36	34	2	42
				10/7/2020	290	227	654	7.5	350	40	0.7	27	35	34	2	42
				4/6/2021	204	178	529	7.9	329	43	3	21.1	29	26	2	33
				10/7/2021	290	245	633	6.8	340	40	0.7	27.8	37	37	2	43
				4/18/2022	280	242	636	7.4	360	39	0.7	26.6	36	37	2	42
				10/19/2022	300	245	616	7.6	330	40	0.7	26.4	37	37	2	43
				4/11/2023	200	173	515	7.8	290	43	3.4	21.8	28	25	2	33
				10/10/2023	220	193	538	7.7	320	43	3	23.4	31	28	2	36
				4/10/2024	300	231	610	7.3	330	40	0.7	27.3	35	35	2	40
				4/2/2025	270	223	593	7.5	310	44	1.4	26.4	35	33	2	39
				10/6/2025	200	177	505	7.2	350	**43**	3.2	21.5	28	26	2	33

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3 mg/l	Total Hardness mg/l	Cond µmhos/cm	pH	TDS mg/l	Cl mg/l	NO3-N mg/l	SO4 mg/l	Ca mg/l	Mg mg/l	K mg/l	Na mg/l
30S/11E-18K8	10th St. Obs. East (Deep)	LA18	E	1/19/2005	260	290	650	7.5	370	33	ND	38	62	33	2.5	28
				11/20/2009	230	220	620	7.5	378	32	ND	40	51	24	1.8	23
				7/24/2014	290	271	647	7.5	380	28	ND	34	56	32	2	27
				4/21/2015	290	265	634	7.7	400	33	ND	39	55	31	2	27
				10/19/2015	230	256	621	7.3	370	29	ND	33	53	30	2	26
				4/20/2016	190	265	700	7.5	390	31	ND	38	55	31	2	26
				10/18/2016	290	256	615	6.8	370	31	ND	35.9	53	30	2	26
				4/12/2017	290	274	616	7.5	450	31	ND	38	57	32	2	27
				10/10/2017	220	271	619	7.8	350	30	ND	35.5	56	32	2	27
				4/17/2018	290	260	625	7.3	390	33	ND	39.9	53	31	2	27
				10/10/2018	290	254	608	7.5	360	31	ND	39.8	54	29	2	26
				4/10/2019	290	245	620	7.6	380	32	ND	37.4	52	28	2	25
				10/9/2019	290	253	647	7.9	390	33	ND	40.5	52	30	2	26
				4/14/2020	290	269	629	7.5	400	33	ND	40.2	55	32	2	26
				10/22/2020	300	247	669	7.5	370	32	ND	38.2	51	29	3	26
				4/12/2021	298	267	621	7.6	389	32	ND	41.2	54	32	2	27
				10/19/2021	300	287	657	7.4	400	32	ND	38.4	59	34	2	28
				4/15/2022	290	257	638	8.3	420	31	ND	36.5	52	31	2	25
				10/10/2022	310	278	613	8.0	400	33	ND	39.3	57	33	2	29
				4/6/2023	310	252	623	7.9	410	32	ND	38.7	50	31	2	26
				10/17/2023	310	264	622	7.1	430	31	ND	37.7	53	32	2	26
				4/3/2024	310	260	628	7.6	410	33	ND	40	53	31	2	27
				10/3/2024	300	257	638	7.4	400	36	0.6	45.4	55	29	2	29
				4/3/2025	270	265	667	7.7	420	64	ND	60.9	55	31	2	35
				10/6/2025	260	254	657	7.6	440	**49**	ND	61.3	54	29	2	35

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-18K9	LOCSD 10th St.	LA32	C,D	5/1/2002	250	--	550	6.9	320	37	0.2	26	31	32	--	39
				11/20/2009	180	160	539	7.2	307	36	1	27	27	24	1.3	32
				7/23/2014	220	190	546	7.7	300	32	1	20	30	28	1	35
				4/21/2015	190	108	504	7.6	270	38	1.6	20	17	16	1	27
				10/6/2015	50	62	248	7.2	190	31	5.9	3	10	9	ND	21
				4/20/2016	130	121	382	7.5	220	32	3.3	12	19	18	1	27
				10/11/2016	200	168	511	6.6	270	36	1.2	21.5	26	25	1	34
				4/10/2017	190	155	461	7.3	270	35	1.9	19.1	24	23	1	31
				10/9/2017	200	168	493	7.6	270	36	1.4	23.1	26	25	1	33
				4/10/2018	50	75.2	256	7.7	150	35	6.5	28.6	12	11	ND	23
				10/2/2018	210	168	492	7.3	270	36	1.3	22	26	25	ND	33
				4/9/2019	200	172	474	7.6	270	34	1.6	21.5	26	26	1	33
				10/2/2019	200	185	531	7.4	310	36	1.4	24.7	28	28	1	35
				4/16/2020	60	72.7	272	8.1	190	35	6	5.4	11	11	ND	20
				10/6/2020	60	68.6	246	8	180	30	4	4.9	11	10	ND	21
				4/5/2021	143	128	390	7.8	247	34	2.1	15.7	20	19	1	27
				10/6/2021	60	68.6	255	7.7	150	30	3.9	5.7	11	10	ND	20
				4/13/2022	70	66.1	262	7.6	150	30	3.8	5.2	10	10	ND	20
				10/6/2022	200	211	461	7.7	260	38	1.4	23.5	32	32	2	58
				4/5/2023	190	169	465	7.2	290	38	1.4	22.8	25	26	1	33
				10/10/2023	200	168	482	7.6	290	38	1.3	21.4	26	25	2	32
				4/1/2024	200	172	487	7.7	260	41	1.4	23	26	26	2	32
				10/1/2024	200	161	493	7.6	300	43	1.4	22.7	25	24	1	30
				4/1/2025	200	178	500	7.7	280	50	1.4	24	27	27	1	33
				10/1/2025	200	178	507	7.4	320	**52**	1.4	18.9	27	27	1	31

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/ cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-18K	GSWC Los Olivos #5	LA39	D	4/15/2019	290	230	619	8.1	350	38	ND	27.4	33	36	2	41
				10/14/2019	300	225	628	7.2	370	37	ND	28.6	34	34	1	41
				4/21/2020	300	236	674	6.9	370	37	0.2	28.4	37	35	2	42
				10/7/2020	300	227	657	7.4	360	37	ND	28.2	35	34	2	43
				4/6/2021	301	226	629	8.0	382	38	ND	25.8	34	34	2	40
				10/8/2021	300	253	638	7.4	360	37	ND	29.3	37	39	2	45
				4/18/2022	250	209	561	7.6	330	34	ND	17.8	31	32	2	34
				10/19/2022	310	236	617	7.6	330	37	ND	28	37	35	2	44
				4/11/2023	310	214	626	7.5	340	38	ND	30.1	33	32	1	40
				10/10/2023	310	245	632	7.4	370	37	ND	29.4	37	37	2	42
				4/10/2024	310	235	625	7.2	350	38	ND	31.3	35	36	2	41
				10/9/2024	300	231	621	7.3	360	39	0.4	30.7	35	35	2	42
				4/2/2025	300	225	607	7.5	340	39	0.5	30.5	34	34	2	41
				10/6/2025	290	225	609	7.0	370	**38**	0.5	29.4	34	34	1	40
30S/11E-18L2**	LOCSD Palisades	LA15	D,E	11/18/2004	220	330	880	7.3	420	120	ND	31	54	48	2.2	40
				11/19/2009	200	590	1460	7.2	890	360	0.4	39	94	86	2	44
			D	7/23/2014	250	293	783	7.8	390	90	0.4	26	48	42	2	40
				10/28/2015	230	288	782	7.4	420	104	0.6	29	46	42	ND	36
				4/27/2016	230	264	796	7.3	450	93	0.9	28	43	38	2	43
				10/11/2016	200	221	694	7	380	91	1.7	25.5	36	32	1	35
				10/5/2017	180	306	768	7.6	400	102	0.7	27	50	44	2	40
				4/10/2018	250	311	767	7.3	420	100	0.8	32.4	52	44	2	40
				10/23/2018	250	288	772	7.7	440	83	0.6	30.7	48	41	1	38
				4/9/2019	250	301	774	7.4	460	102	0.8	29.2	48	44	1	38
				11/14/2019	210	303	806	7.8	430	107	0.7	32.9	49	44	2	39
				4/16/2020	260	299	832	7.7	460	109	0.8	32.5	49	43	2	37
				10/5/2020	250	319	841	7.8	450	109	0.7	29.7	52	46	2	41
				4/6/2021	234	290	780	7.7	444	108	1	27.2	47	42	2	38
				10/6/2021	250	295	856	7.3	490	107	0.5	32.8	49	42	2	37
				4/13/2022	250	330	876	7.3	470	116	0.5	30.3	53	48	2	43
				10/4/2022	250	326	885	7.7	610	138	0.8	31.2	53	47	2	40
				4/11/2023	250	282	877	8.2	470	142	0.8	31.4	47	40	2	37
				10/9/2023	270	331	898	7.6	570	130	0.5	31.1	55	47	2	40
				4/2/2024	260	323	861	7.9	480	130	0.7	32.9	52	47	2	39
				10/2/2024	250	323	900	8.2	530	130	0.8	31.7	52	47	2	39
				4/16/2025	260	326	913	7.4	560	160	0.7	34.7	53	47	2	39
				10/2/2025	240	405	943	7.8	590	**160**	1.1	31.9	65	59	2	46

FINAL DRAFT

Los Osos BMC Water Quality Results - Lower Aquifer Monitoring

Station ID	Well Name	Basin Plan Well ID	Aquifer Zone	Date	HCO3	Total Hardness	Cond	pH	TDS	Cl	NO3-N	SO4	Ca	Mg	K	Na
					mg/l	mg/l	µmhos/cm		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
30S/11E-18F2	LOCSD Ferrell	LA13	E	4/5/2023	190	132	668	8.3	310	77	ND	62.1	15	23	2	76
				10/11/2023	280	168	656	7.7	400	50	ND	39.7	23	27	2	70
				4/11/2024	210	139	583	8.4	290	61	ND	41	13	26	2	66
				10/8/2024	330	245	639	7.8	380	37	ND	28.4	34	39	2	42
				4/10/2025	310	224	625	8.0	350	42	ND	28.3	32	35	2	47
				10/8/2025	260	202	613	8.1	330	**57**	ND	29.1	28	32	2	52
30S/10E-14B2	Sand Spit #3 Deep	LA3	D	3/15/2005	100	3600	30000	8	17000	8500	ND	960	1200	130	34	4300
				10/21/2015	ND	7140	29500	11	24700	10000	ND	530	2830	20	80	4040
30S/11E-13Ja	Skyline 1a (North)	LA42	E	4/17/2024	270	2940	6150	7.5	6340	1900	ND	170	583	360	6	107
				10/16/2024	270	2290	6160	7.5	5800	1800	ND	156	517	242	5	99
				4/14/2025	270	2860	6090	7.5	5220	2100	ND	166	576	345	5	96
				10/16/2025	260	2370	5980	7.4	6710	**2000**	ND	462	564	234	5	96
30S/11E-13Jb	Skyline 1b (South)	LA43	D	4/17/2024	320	277	724	7.5	420	61	ND	37.9	45	40	2	41
				10/16/2024	330	286	712	7.6	400	49	ND	38.5	47	41	2	42
				4/14/2025	330	261	712	7.5	390	55	ND	41	42	38	2	39
				10/16/2025	340	268	678	7.4	420	**42**	ND	37.0	43	39	2	40

*Chloride concentrations at 13J1 can vary seasonally by 100+ mg/l and are affected by well production and borehole leakage, so fluctuations are expected.

**Water from 18L2 and 13M2 affected by wellbore leakage/upper aquifer influence when inactive

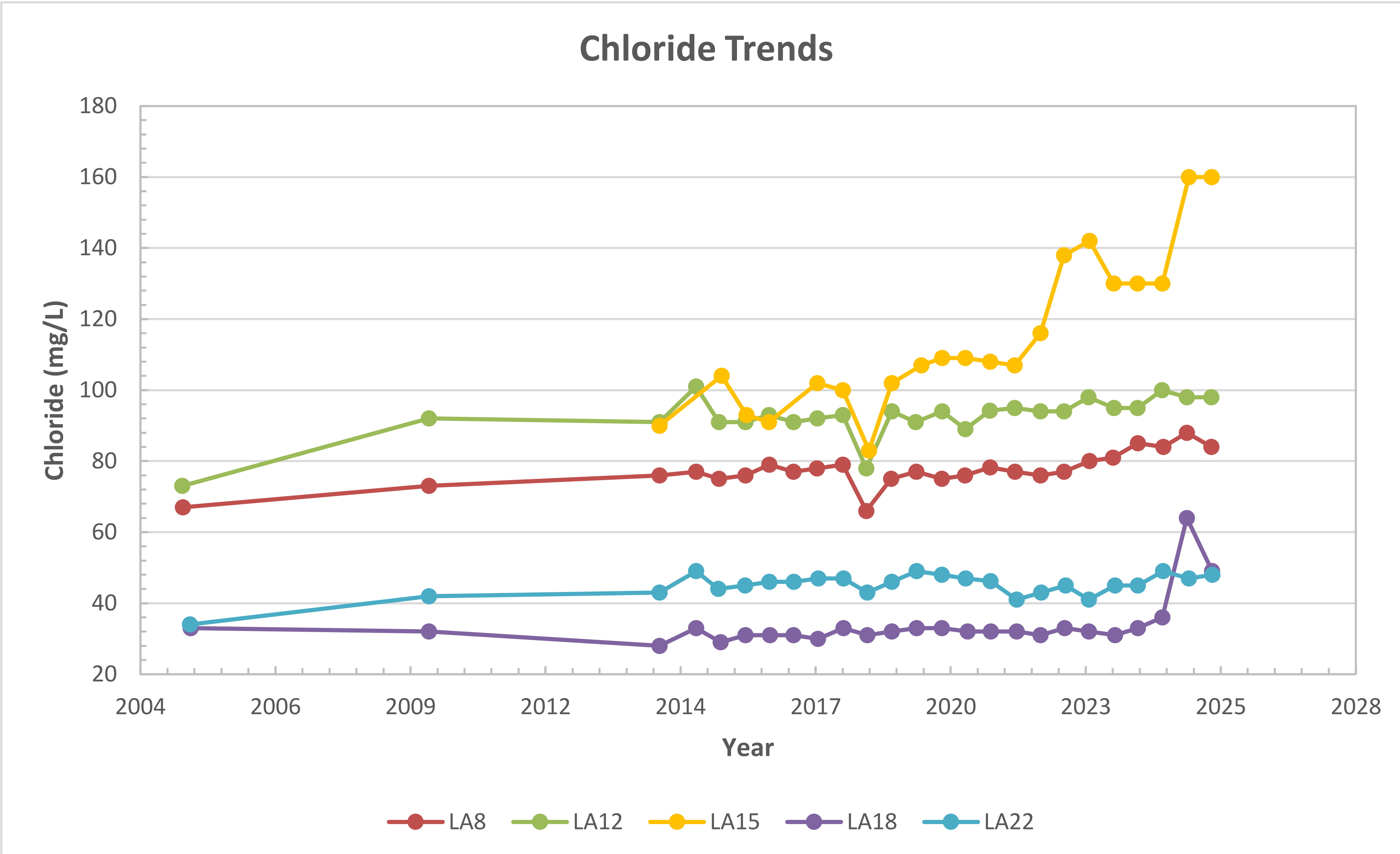
Legend and Detection Limits

Constituent	Description	Practical Quantitation Limit*
HCO3	Bicarbonate Alkalinity in mg/L CaCO3	10.0
Total Hardness	Total Hardness in mg/L CaCO3	--
Cond	Electrical Conductance in µmhos/cm	1.0
pH	pH in pH units	--
TDS	Total Dissolved Solids in mg/L	20.0
Cl	Chloride concentration in mg/L	1.0
NO3-N	Nitrate as Nitrogen concentration in mg/L	0.1
SO4	Sulfate concentration in mg/L	2.0
Ca	Calcium concentration in mg/L	1.0
Mg	Magnesium concentration in mg/L	1.0
K	Potassium concentration in mg/L	1.0
Na	Sodium concentration in mg/L	1.0

*where dilution not required

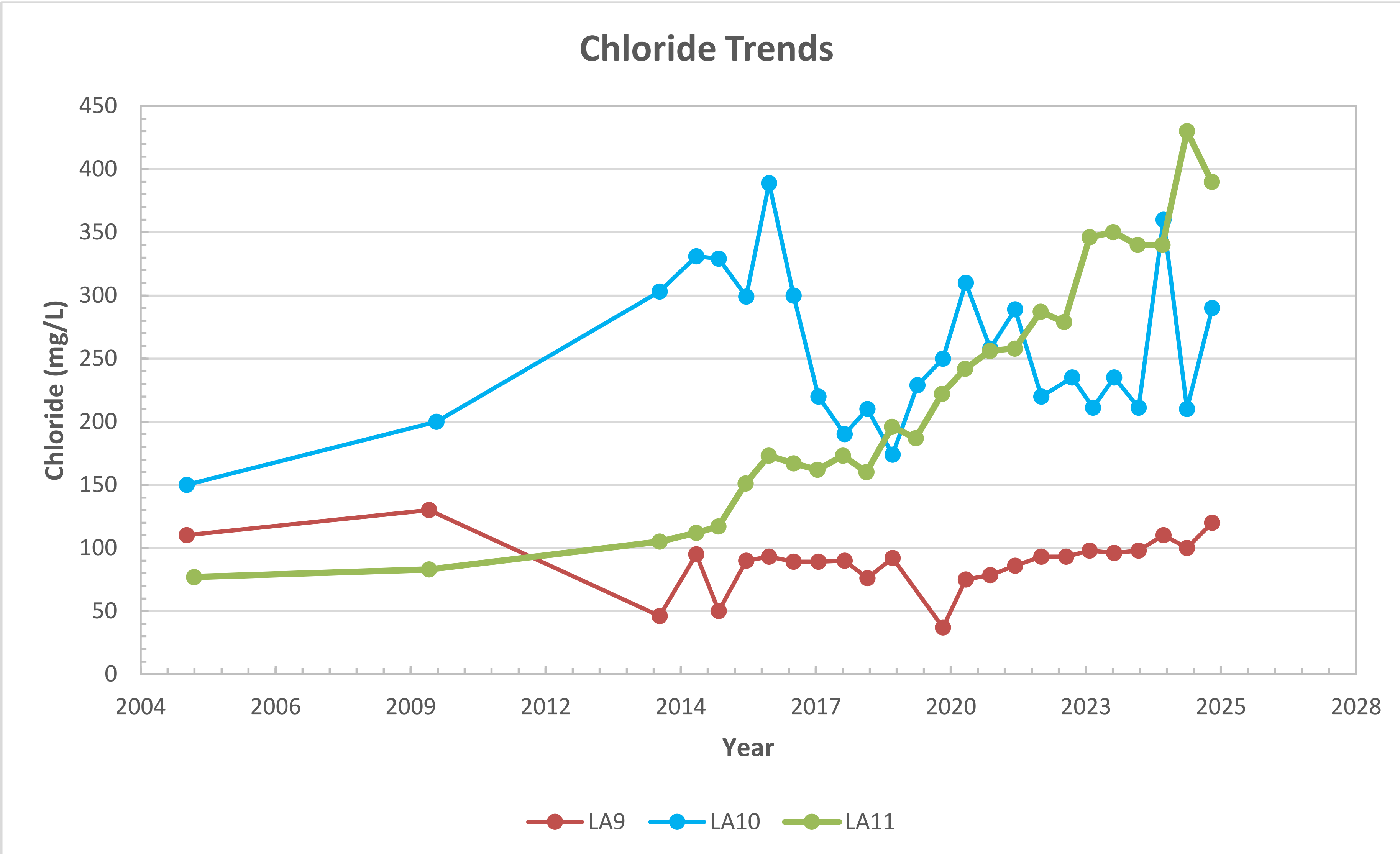
*where dilution not required

FINAL DRAFT

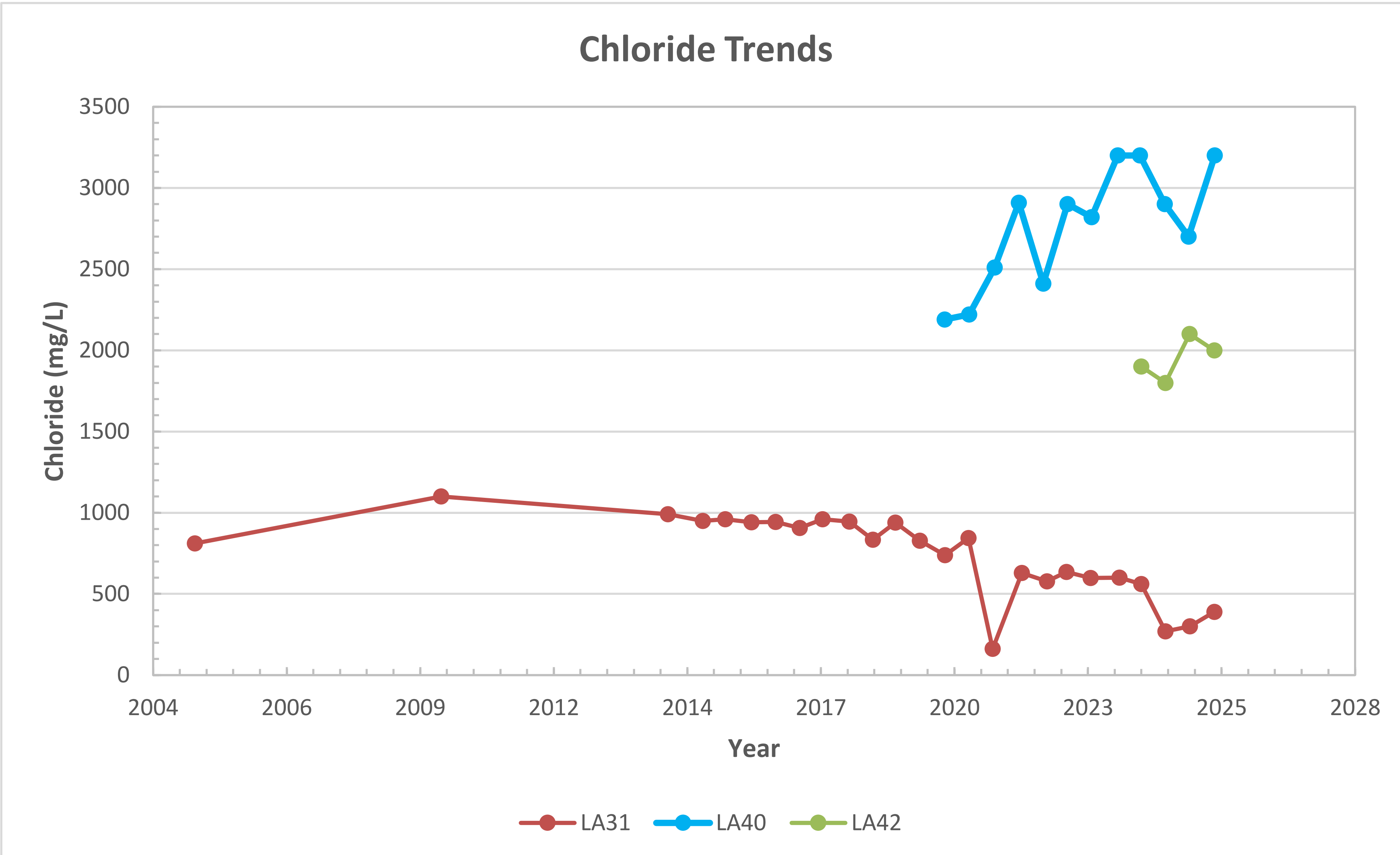


Chloride Trends
Chloride (mg/L)
180
160
140
120
100
80
60
40
20
2004
2006
2009
2012
2014
2017
2020
2023
2025
2028
Year
LA8
LA12
LA15
LA18
LA22

FINAL DRAFT


Chloride Trends
Chloride (mg/L)
450
400
350
300
250
200
150
100
50
0
2004
2006
2009
2012
2014
2017
2020
2023
2025
2028
Year
LA9
LA10
LA11

FINAL DRAFT


Chloride Trends
Chloride (mg/L)
3500
3000
2500
2000
1500
1000
500
0
2004
2006
2009
2012
2014
2017
2020
2023
2025
2028
Year
LA31
LA40
LA42

FINAL DRAFT

APPENDIX K

Groundwater Storage Calculation Example

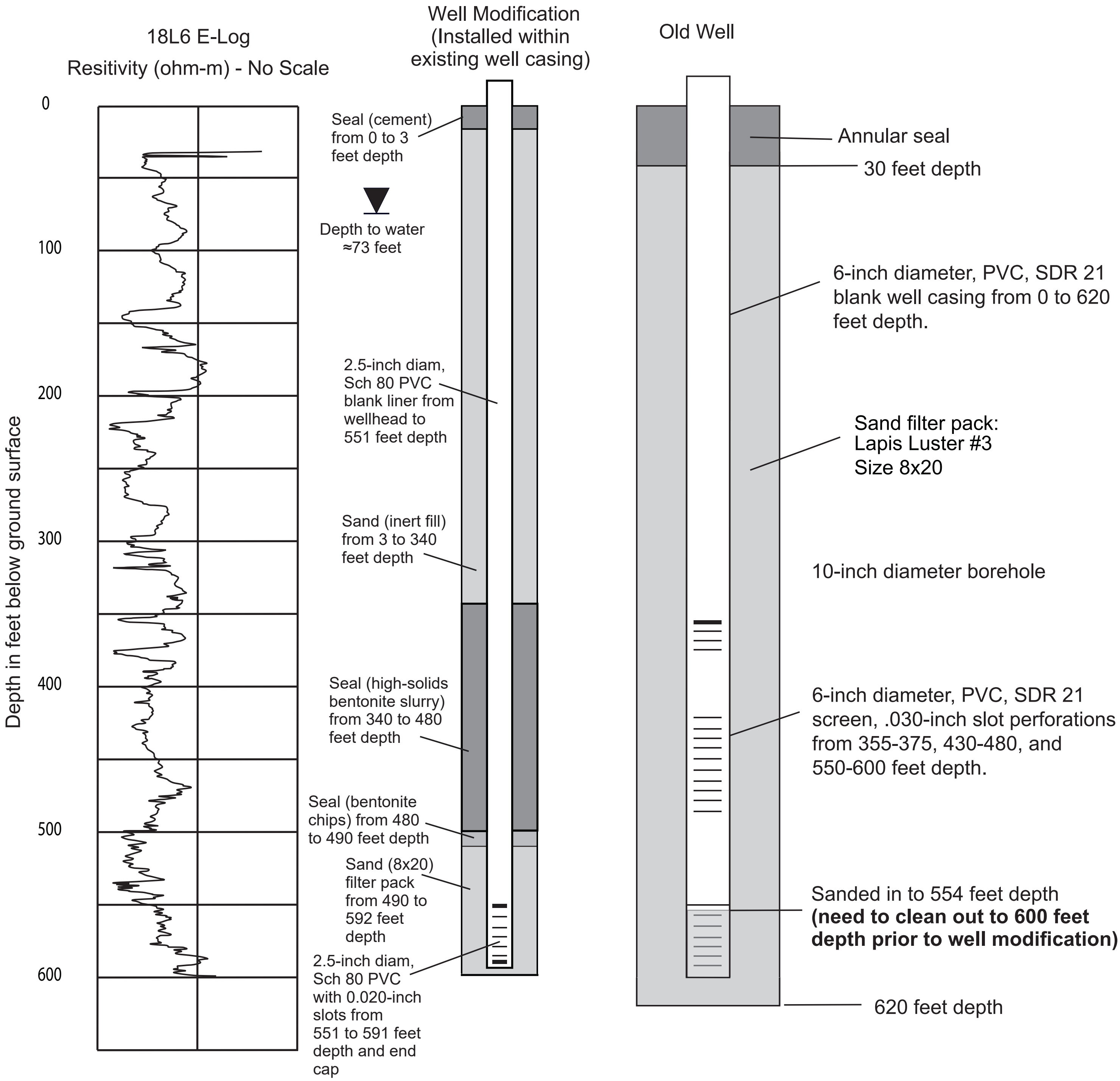


Figure K1
Well 18L6 (LA14)
Well Modification

Cleath-Harris Geologists

FINAL DRAFT

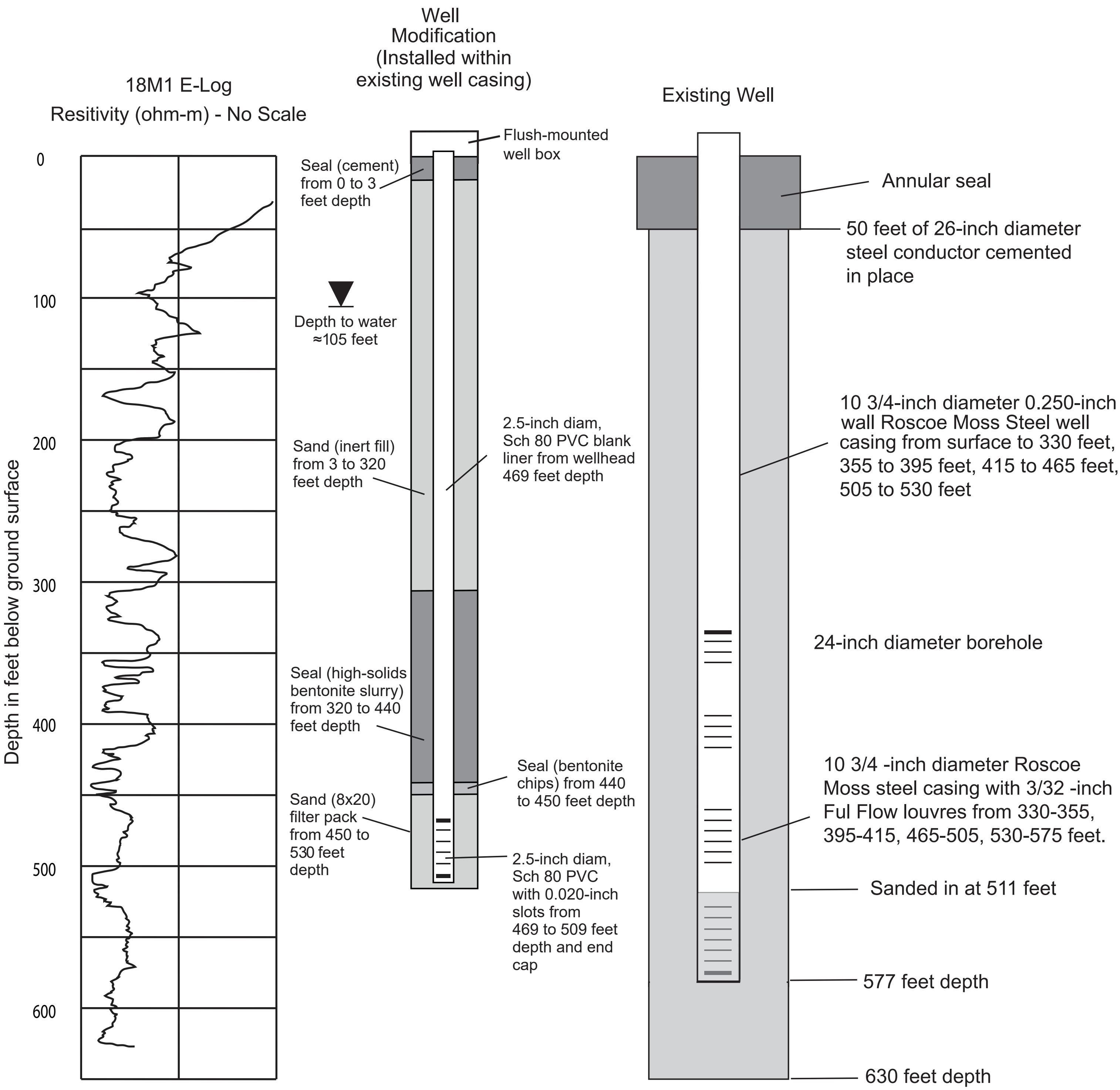


Figure K2
Well 18M1 (LA16)
Well Modification

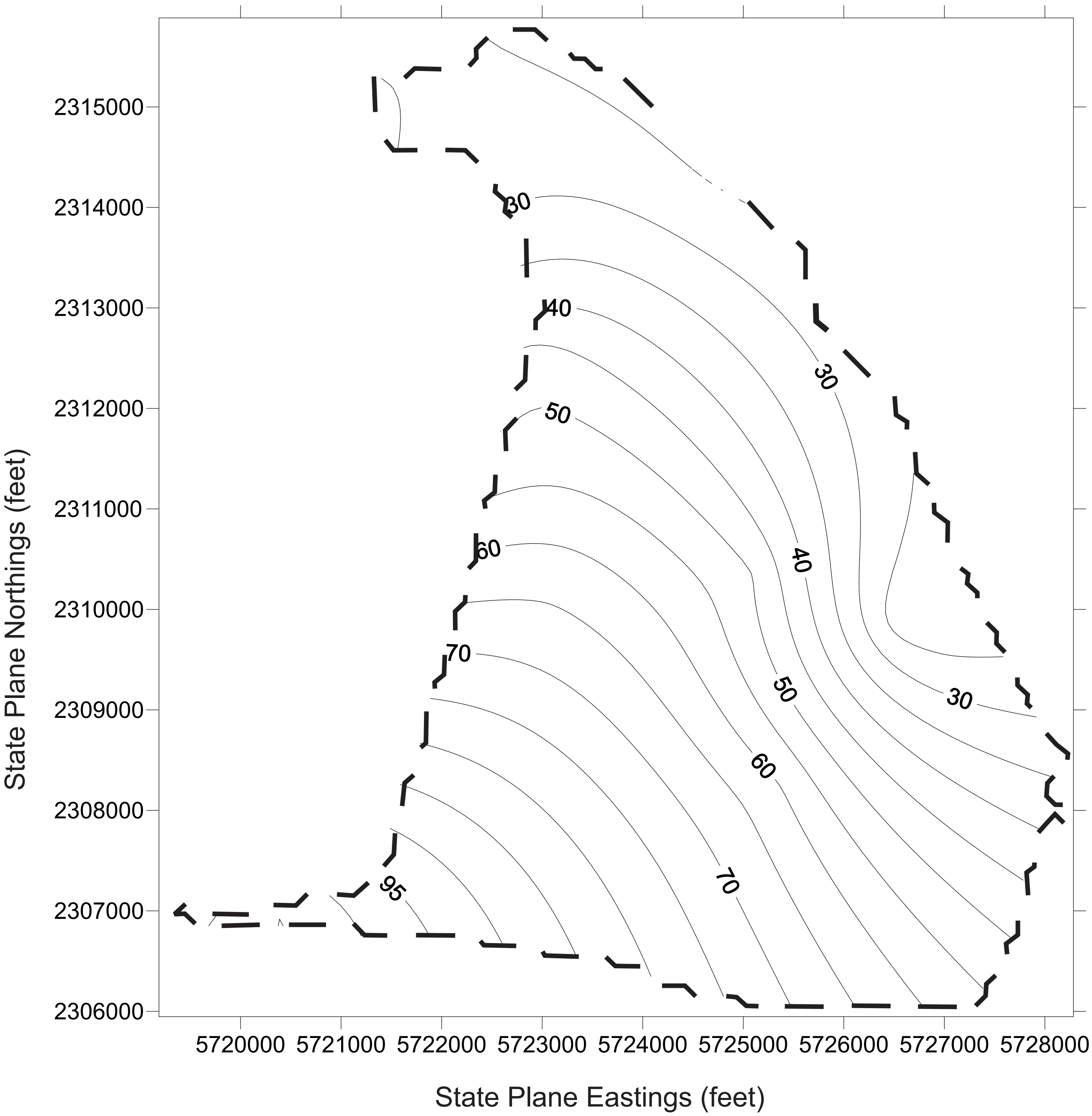
Cleath-Harris Geologists

APPENDIX L

Groundwater Storage Calculation Example

EXAMPLE STORAGE CALCULATION FOR EASTERN AREA:

STEP 1: GRID AND TRIM WATER LEVEL CONTOURS

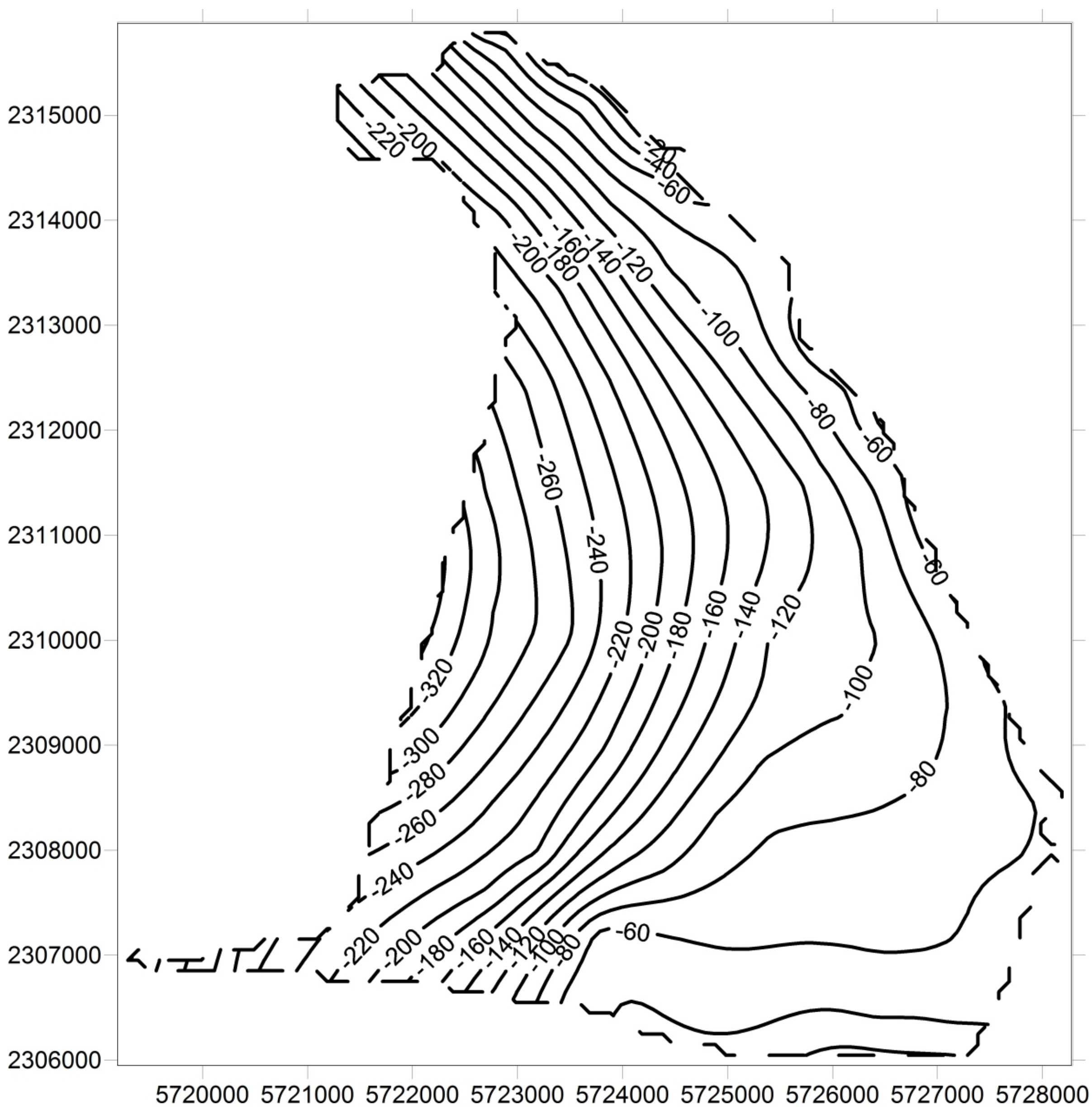


Spring 2025
Eastern Area Water Levels
Alluvial Aquifer and Lower Aquifer

FINAL DRAFT

EXAMPLE STORAGE CALCULATION FOR EASTERN AREA:

STEP 2: GRID AND TRIM BASE OF PERMEABLE SEDIMENTS

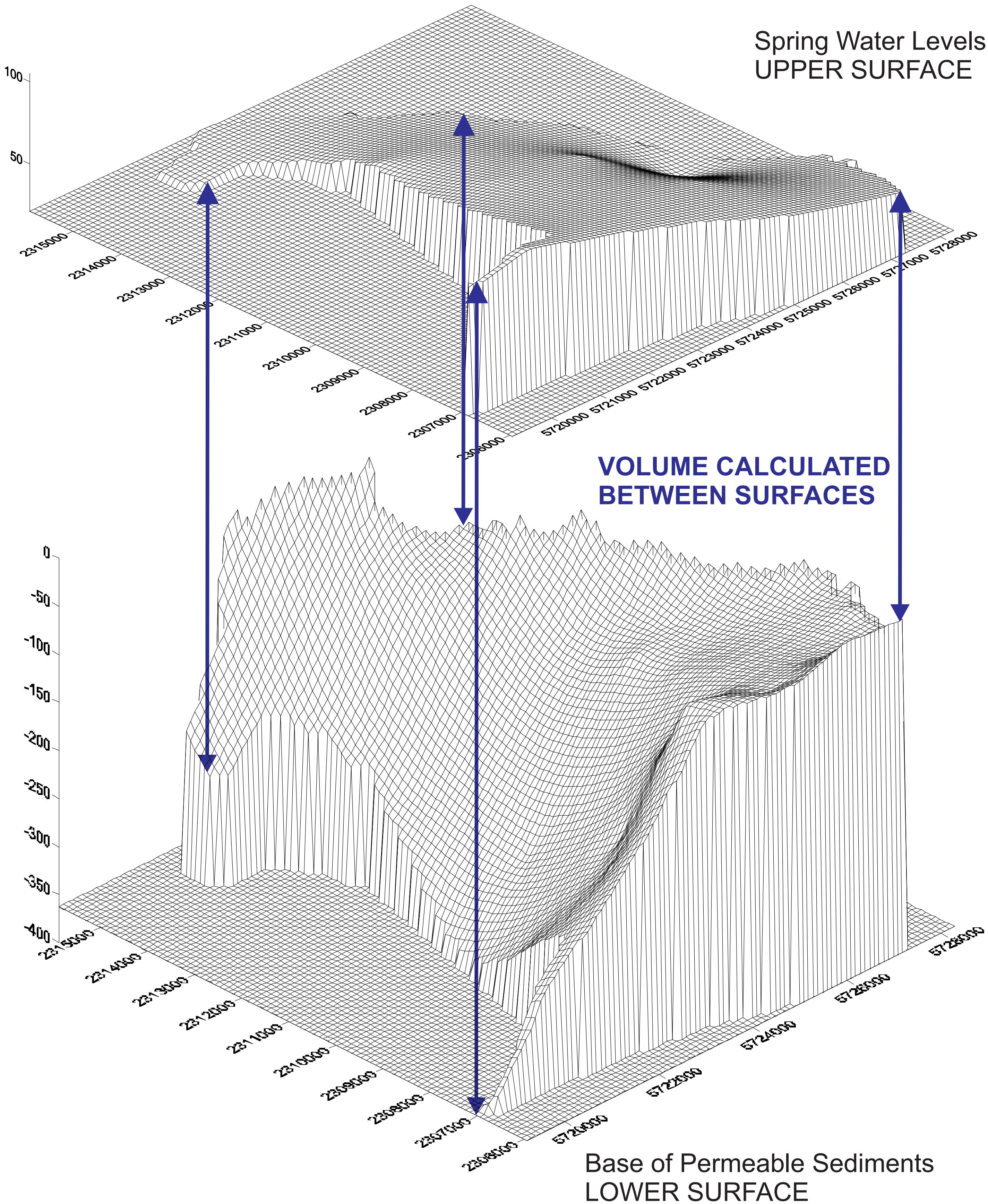


Eastern Area
Base of Permeable Sediments

FINAL DRAFT

EXAMPLE STORAGE CALCULATION FOR EASTERN AREA:

STEP 3: MATCH UPPER AND LOWER SURFACE GRIDS



FINAL DRAFT

EXAMPLE STORAGE CALCULATION FOR EASTERN AREA:

STEP 4: VOLUME COMPUTATION

Grid Volume Computations

Fri Feb 13 11:12:05 2026

Upper Surface

Grid File Name: \\CHG1\Projects\Los Osos BMC\2025\2025 AR\Working Data\Contouring and Storage\BLANKED FILES\EASTERN\uppereasternspriong2025_blanked_2.grd
Grid Size: 100 rows x 92 columns

X Minimum: 5719189
X Maximum: 5728284
X Spacing: 99.945054945055

Y Minimum: 2305947
Y Maximum: 2315886
Y Spacing: 100.39393939394

Z Minimum: 21.247139952492
Z Maximum: 105.06757177015

Lower Surface

Grid File Name: \\CHG1\Projects\Los Osos BMC\2025\2025 AR\Working Data\Contouring and Storage\BASE GEOMETRY\EASTERN\BOP Eastern blanked.grd
Grid Size: 100 rows x 92 columns

X Minimum: 5719189
X Maximum: 5728284
X Spacing: 99.945054945055

Y Minimum: 2305947
Y Maximum: 2315886
Y Spacing: 100.39393939394

Z Minimum: -362.32467224801
Z Maximum: 2.39586300134

FINAL DRAFT

EXAMPLE STORAGE CALCULATION FOR EASTERN AREA:

STEP 5: CALCULATE GROUNDWATER IN STORAGE

Volumes

Z Scale Factor:	1

Total Volumes by:

Trapezoidal Rule:	8454764819.8714
Simpson's Rule:	8450444247.5997
Simpson's 3/8 Rule:	8446735292.3473

Cut & Fill Volumes

Positive Volume [Cut]:	8454764819.8714
Negative Volume [Fill]:	0
Net Volume [Cut-Fill]:	8454764819.8714

Areas

Planar Areas

Positive Planar Area [Cut]:	41665677.518315
Negative Planar Area [Fill]:	0
Blanked Planar Area:	48729527.481685
Total Planar Area:	90395205

Surface Areas

Positive Surface Area [Cut]:	41785714.434733
Negative Surface Area [Fill]:	0

STORAGE CALCULATION

Positive Volume: 8,454,764,819.87 ft^3 * 0.101 specific yield ÷ 43,560 ft^3 per acre-foot = 19,604 acre-feet

FINAL DRAFT

APPENDIX M

Response to Comments on Public Draft

Appendix M presents responses to public written comments regarding the Annual Report received by the Executive Director during the public comment period, along with a response to verbal comments specific to the Annual Report from the public and BMC Board at the May 29, 2026 Board Meeting.

WRITTEN PUBLIC COMMENTS

Responses to Lynette Brooks

PROBLEMS WITH 2026 ANNUAL REPORT AND WATER-LEVEL MEASUREMENTS

Lynette Brooks, May 29, 2026 Los Osos Basin Management Committee Meeting

I have some suggestions to improve the annual report and future monitoring. I ask you to please read this document because it contains more detail than I can provide in the limited speaking me.

1. Be honest in the Executive Summary. Many people are never going to read beyond this.
    a. Seawater Intrusion Front: Don't make this sound as innocuous as it does currently. Copy some of the discussion from p. 61–64 up to here.
        i. "Seawater intrusion into Zone E is a significant threat to Basin sustainability and has been for decades."
        ii. "Chloride concentrations at LA15 have increased by 47% percent over the past five years."
        iii. "In Zone E, seawater intrusion is interpreted to be laterally pervasive in the Western

    Area, based on the elevated chloride concentrations in LA40 (Lupine Avenue), LA42 (Skyline Drive), historical data at LA15 (Palisades Avenue), and LA11 (Pasadena Drive). Although the intrusion front appeared to have stalled at LA11 in 2024, chloride concentrations increased in 2025. This overall trend indicates a worsening condition over time."

RESPONSE: *Text added to the Seawater Intrusion Front section of Basin Status in the ES (p.2).*

    b. Basin Yield Metric: Cleath-Harris and this board have known for years that the model calculated sustainable yield from the steady-state model was wrong. Even though the report technically has to use the SY decided for 2025, it needs to put very strong caveats on this within the Executive Summary. Use phrases such as: "the transient model shows that pumping at 1,830 acre-/yr is not sustainable". If you discuss the new 2,020 acre-/yr "sustainable yield", stress that pumping would have to be optimized and is not currently set up that way.

FINAL DRAFT

RESPONSE: *Specific sustainable yield values are not discussed in the ES. The ES notes an Update to the yield was approved and states the BYM is expected to decline based on Transient Model results, with references to the pertinent report section.*

c. Chloride Metric: Make it clear that the metric is heavily influenced by one well (LA10) that has erratic chloride concentrations.
    i. Specify that the chloride metric is calculated in the spring and fall, but in 2025, water levels at several wells were lowest in July. The chloride metric at that time is not known, but could have been much higher.

RESPONSE: *The ES indicates in the text (P. 2) and Table ES-2 that the Water Level, Chloride, and Nitrate Metrics are being re-evaluated with revisions currently in progress. Specific metric issues are discussed in the report, not the ES (see below). Water levels were lower during the 2012-2016 extended drought than observed last July, without a higher Chloride Metric. The available record does not support a potentially "much higher" Chloride Metric in July 2025, compared to spring or fall.*

d. Water-Level Metric: Make it clear that July water levels were 2 to 6 feet lower than spring levels in several wells. Something different was happening in the aquifer than in previous years, even though 2025 precipitation was above average.
    i. Discuss if tidal corrections have been applied to the water levels that are influenced by the tide.
    ii. Change the method to not include well LA16. Keeping the well with the highest water level at an assumed level violates scientific standards. If the average was recalculated without LA16, the metric would be 0.9 feet lower than in 2024, not 0.7 feet.

e. Upper Aquifer Water-Level Profile: Discuss if tidal corrections have been made.

RESPONSE: *These details would not normally be covered in the ES. The observed declines in water level in some wells during the summer are discussed in Section 7.2 (p. 55), with added text to quantify the average decline. There have been no corrections for tidal effects in the AR. This is being addressed in the metric re-evaluation (text added to AR p. 77 and p.82). Holding LA16 fixed at the unmodified elevation in the Water Level Metric preserves comparability with the historical record and the 8-foot target, all of which are defined using the same five wells.*

2. Tidal corrections must be made for all water levels used for the Water-Level Metric and the Upper Aquifer Water-Level Profile. The contour maps, especially for the Lower Aquifer, could also be misleading without tidal corrections.
    a. Changes to water levels can range from more than 70 percent of the tide range in wells located a few hundred feet from a tidally-influenced water body to less than 5

percent in wells a mile or more from a dally-influenced surface-water body (Czwartacki, 2017, p. 1).

b. During the days of water-level data collection in April 2025, de at Port San Luis varied from a high of 5.9 to a low of -0.8 (https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9412110&units=standard&bdate=20250401&edate=20250430&timezone=LST/LDT&clock=12hour&datum=MLLW&interval=hilo&action=dailychart). Water levels near the bay could change as much as 4.7 during this time. Similar tidal fluctuations existed in October 2025 and affected the fall water-level measurements.

c. A comparison of year-to-year changes and determining if the profile is above the “safety level” is completely meaningless unless tidal corrections are made. All previous data needs to be corrected so that year-to-year comparisons can be made.

RESPONSE: *As noted above, there have been no corrections for tidal effects in the AR. This is Being addressed in the metric re-evaluation (text added to AR p. 77 and p.82). Based on reviews to date of transducer data for 16 wells, the tides affect coastal wells LA11, LA40, LA41, and UA4. The LA wells had already been identified in the AR as influenced by the tides, and text has been added for UA4 on p.56. Based on the review in progress, effects on the Upper Aquifer profile are much less than suggested, and the uncorrected profiles are useful for screening.*

3. Broderson Leach Field: The annual report has never been clear about what is happening here.

    a. Page 72 states: “Further assumptions for the Basin Yield Metric in 2025 are that the Broderson mound is at 50 percent development.” Does that mean the steady-state model applied only 224 acre-/year?

    b. How much water does the transient model apply? The model report never specifies that.

    c. Explain how if 448 acre-/year are being sent to the leach field, where is 50% of the water going?

    d. Add explanation about what was expected, what has happened, why the two are different, and what this means for the Broderson leach field’s ability to reduce saltwater intrusion.

e. Add explanation that the Broderson leach field is currently recharging only 224 acre-/yr, and that septic tanks used to recharge about 1,300 acre-/yr. The Broderson leach field did not increase recharge as is implied.

f. Add explanation that the original USGS model that indicated recharge at the Broderson site could minimize salt-water intrusion simulated 2,380 acre- of recharge at Broderson, almost 10x the amount simulated in the steady-state model.

RESPONSE:* (a) Yes. (b) the transient model applies actual LOWRF deliveries to Broderson (reported in Annual Reports) for calibration. Assumed deliveries to Broderson for scenarios are reported in Table 8 of the 10/22/25 Scenarios. (c) in the steady-state model, the "other" 224 AFY was filling void space to create the mound. The mound pressure assumed for current conditions in steady state model was 50% of the anticipated final mound pressure, which is why only 50% of the water was applied. In the transient model, 448 AFY is applied and the mound develops in the model over time, with corresponding pressures. (d) done in item c. Broderson's ability to reduce seawater intrusion was restricted by the 50% leach field loading in the steady-state model but loading is not restricted in the transient model. (e) any comparison between the recharge proxy for 50% Broderson mound development in the steady state model and septic tank recharge when purveyor production was at its peak in the late 1980's is not meaningful. (f) The USGS model you refer to also assumed 3,920 acre-feet of purveyor production and over 5,000 acre-feet of basin production. Not all wastewater in the USGS model was discharged at the Broderson site. This type of discussion is not appropriate for an Annual Report.*

4. Monitoring should be expanded to include continuous recording of either specific conductance or chloride concentration in several wells.

    a. This would show what the chloride concentration is during the months with more pumping and less rainfall. It is possible that the 250 mg/L line is moving inward during that time and violating the threshold limit for intrusion.

    b. This would provide data to determine preferential flowpaths for intrusion.

    c. This would provide more data for model refinement, especially when using it as a pumping optimization tool.

RESPONSE*: Agreed. Continuous recording for specific conductance is available. Unlike standard pressure transducers, the EC probes would need to be lowered to be opposite the screened interval of interest. Consideration will be given to supplying selected monitoring wells with this capability.*

5. Water-level data should be presented like chloride data, with tables showing all the measurements. Right now, if the public wants to know what historic water levels are, they

must dig the information out of every annual report. An Excel file on the LOBMC web page would be another option.

RESPONSE: *Agreed. Consideration for providing the data either in the 2026 AR or as a separate database accessible on-line will be given.*

6. Present change maps, showing contours of water-level changes, preferably for different time periods, such as 1 year, 5 years, and 10 years. These present a much better description of changes than do contour maps of water levels every year, which are almost impossible to compare for changes. These would require tidal corrections for many of the wells.

RESPONSE: *Consideration will be given to providing change maps (intervals/aquifers to be determined), with tidal corrections as appropriate (this has been on our list since last year).*

7. Contours on water-level maps or change maps should not extrapolate where data are not available. Just because kriging will give you a number does mean it is real. This is apparent on figures 10 and 13 of last year's report along the north part of South Bay Boulevard and across Morro Bay Estuary. Also on figures 11 and 14 with contours across Morro Bay Estuary. You have no idea what water levels are like under the estuary.

RESPONSE: *There are monitoring wells on the sandspit in the Upper and Lower Aquifers, so we do have an idea of water levels beneath Morro Bay Estuary. For a few other areas, such as the north end of South Bay Boulevard, data extrapolation is carried to the basin boundaries for estimating basin change in storage. While contouring outside of the data points is not ideal, these areas get reviewed and show reasonable elevation trends.*

8. Some of the graphs showing historic trends have very large vertical scales. This masks the annual changes in the data.

RESPONSE: *Generally, graphs are scaled to fit all the data, so graphs with multiple wells may have the problem you mention. Consideration for providing historical water level data either in the 2026 AR appendices or as a separate database accessible on-line will be given, which will allow comparisons that don't rely on graph scale.*

REFERENCES

Czwartacki, Brooke, 2017, Determining Tidal Corrections for Upper Floridan Aquifer Wells, Beaufort County, South Carolina: South Carolina Department of Natural Resources, Hydrology Section, 25 p.

Responses to Sherrill Gardner

My comments are the following:

1. Executive Summary - need to bring more content forward from the main body of the report. A comment was made at the meeting on the 29th that some will only read the ES; whether due to time constraints or lack of specific technical expertise to be able to understand the details. Overall trends should be discussed for each of the parameters; not just the change from 2024 to 2025. This gives a false sense of accomplishment in most cases. Consider bringing some graphs forward into the ES. A picture is worth a 1000 words as they say. An ES should be able to stand on its own if written properly.

RESPONSE*: Consideration will be given to expanding the ES to provide more content for the 2026 AR.*

2. The fact that most parameters are either trending in the wrong direction or trending in a good direction but only over a short time period when the OVERALL trend is still off is lost in the weeds. Hard to see the forest for the trees. While this is good engineering work; management of the basin requires the writer and reader to understand the BIGGER picture and long-term trends.

RESPONSE*: Agreed. I assume this is another comment to support expanding the ES.*

3. I hope all comments are captured and responded to in a spreadsheet for public consumption. We need to feel like we are being heard and what the response is and WHY. Most environmental documents use this method. It promotes transparency which is sorely needed in this town.

RESPONSE*: Yes, public comments have been captured and responded to beginning in 2024 Annual Report. It is helpful to have comments in writing, as you have done.*

Thank you for the opportunity to respond,
Sherrill Gardner
Los Osos resident for 7 years
Retired Water Resources Engineer
Retired PE; Civil, State of CA

VERBAL PUBLIC COMMENTS at May 29, 2026 BMC Meeting

(Meeting Time Stamp in Blue)

Response to Lynette Brooks

COMMENT: 01:40:12 Verbal public comment by Lynette Brooks. Some suggestions for the annual report. Beef up the executive summary and be honest. A lot of people are never going to read beyond the executive summary. On the seawater intrusion front, don't make this sound as innocuous as it does currently. Copy some of the discussion from ear later in the report up to here. Seawater intrusion into zone E is a significant threat to the basin sustainability and has been for decades. Chloride concentrations of LA15 have increased by 47% over the past five years. In zone E, seawater intrusion is interpreted to be laterally pervasive in the western area. This overall trend indicates a worsening condition over time. Those are all quotes in the report. Move them up to the summary. The basin yield metric. Cleath Harris and this board have known for years that the model calculated sustainable yield from the steady state model was wrong. It did not match data. Even though the report technically has to use the sustainable yield decided for 2025 and there is a little footnote it needs to be put stronger caveats need to be put on that number use phrases such as the transient model shows pumping at the 1830-acre feet per year is not sustainable. If you discuss the new 2,000-acre feet sustainable yield, stress that pumping would have to be optimized and it is not currently optimized. The chloride metric make it clear that the metric is heavily influenced by one well that has erratic chloride concentrations. Specify that the chloride metric is calculated in the spring and fall, but in 2025 water levels at several wells were lowest in July. The water level metric make it clear again that July had much lower water levels. You see that if you look at the transducers but not really otherwise. It is written in the report that a few wells have that but it's actually more than a few wells. Change the method to not include well L16. Keeping the well with the highest water level at an assumed level violates scientific standards. If the average was recalculated without that then the metric would be 0.9 ft lower than in 2024 not point not 6 feet and I really hate to do this you guys all know me this all know me but I have to agree with Jeff Edwards Broderson leach field is never explained well there's this you know further assumption is that it's 50% development I think that only 224-acre feet were actually applied in the steady state model. I don't know how much is applied in the transient model, but where is the rest of the water going? What was expected to happen? What happened? Why are they different? And please allow me one more sentence. Add an explanation that the original USGS model that indicated recharge at the Broderson site could minimize saltwater intrusion simulated 2,380-acre feet of recharge at that site. almost 10 times the amount I think that was simulated in the steady state model.

RESPONSE: *See responses to similar written comments from Lynette Brooks.*

FINAL DRAFT

Response to Patrick McGibney

COMMENT: 01:43:38 Verbal comment by Patrick McGibney. Regarding the basin yield metric, it too is just an estimate as described in the basin plan on page 108 where it states that the basin yield metric can be altered by either increasing the sustainable yield or decreasing the extraction rate. In other words, it can be manipulated to match whatever outcome is desired. This is why the Department of Water Resources states neither it nor the sustainable yield should ever be used to indicate sustainability. Yet, this is what the county and the coastal commission are basing their decisions on and claiming our basin is sustainable. The fact that this committee has never pushed back on that assertion is alarming. These agencies need to know definitively from you that the BMC that you uphold the findings of the transient model and that our basin is not in a sustainable state for new development. In the director's report, the sustainable yield being used is from an old model which placed it at 2380-acre feet with a basin yield metric of 71% using an extraction rate of around 1,700-acre feet. The problem is this committee is using last year's data to manage this year's basin. The new transient model baseline scenario used the extraction rate of 1830-acre feet yearly which was based on an extraction from 2019 to 2023 and is predicted to remain the same for the next 45 years. With the new adopted sustainable yield set at 2,000-acre feet, an extraction rate of 1830 and a basin yield metric is going to be 91% not 71%. There won't be and actually there isn't now that required 20% buffer for uncertainties that this that indicates that there that this indicates that there isn't any extra water for new development. The stipulated judgment and the basin plan have one primary goal and that is to stop seawater intrusion. Chloride levels have been climbing since before you took over the management and have continued ever since. They are indicators of seawater intrusion which indicates a basin in overdraft. Our community has drastically reduced water use over the last decade and more, but we still have an overdraft in our basin. The basin plan says accurate data, not estimates, are required for successful management of the basin. Yet 40 plus% of our basin private ag well use is being estimated. Is it any wonder our basin is failing that we are looking for other sources of water? The basin plan has a suggested remedy for this and that is that the county pass an ordinance requiring metering of all of our wells. Maybe when we get a new supervisor this might happen.

RESPONSE: *Comments noted. The Annual Report states in several places that the updated sustainable yield is expected to reduce the Basin Yield Metric for 2026. A pilot program to collect actual grower pumping data would be helpful.*

Response to Becky McFarland

COMMENT: 01:46:44 Verbal comment by Becky McFarland. Before I get on here, could we bring up the zone E seawater intrusion graph that didn't get shown? [Board: Yeah, I don't think we have ready access to that, unfortunately. We'll take all I mean I plan, Mr. Chairman, I would think we can take all these comments and any that are written, we'll direct staff to respond to them over. So, if you'd like to make reference to that in your comments, we'll know what we're talking about]. Patrick made reference I mean and Lynette they made reference to this and I really think all of those seawater intrusion lines should be shown at these meetings because that red line used to be on with all of them and that red line is closer to what's our new well over here is that not a zone E well zone E seawater intrusion goes way farther in than anything on the zone D graph or map or whatever you want to call it. I think that's really important to put in there. People here, look it up online. I think I did post it on Next Door somewhere. I can't remember. But that should be in there. And as far as our basin not being an overdraft, if you have seawater intrusion, you have over drafted your basin. And the DWR has said not to use it. Is it the basin yield metric or the whatever metric is not to be used to prove sustainability. That is in it's all over the internet. You can find it. So it's beyond me why that was used by the county is continued continually used by the county. And that's what they told the California Coastal Commission. That's misrepresentation of our basin and it's dishonest and I find that appalling. You know, after air, what's our most important thing we need is water. This is our water supply. As to moving wells inland, we hear it should help the seawater intrusion. I haven't heard or maybe I missed it. How much how much does that actually help to move a well? How much, you know, does it make the head stronger to push the water out? I haven't really heard that. I keep hearing that it's supposed to work, but we also, and I think Beth may have said this before, when we move wells closer inland, we move them closer to that flow of toxic waste coming out of the unlined loss dump. And so, that needs to be known by people. And I think we need more info on what's going on there because that's scary. I don't drink the water out of my tap here. It doesn't taste bad, but I buy bottled water or we filter it. I'm not worried about seawater in my actual drinking water or the nitrates in there. I know those are filtered out. But seawater intrusion is a problem beyond having salty tasting water. Also on the A numbers, I just wonder I wonder on the numbers going into Broderson because it's only based on indoor water use. Also, I'm sorry, I'm going to go over like two seconds. I live at the Broderson gate right there and the county used to go in every single day. So now they have a computer monitoring of that. And so is that going to tell us more about what's happening? Where's the water going? I think it goes to my giant avocado tree which I appreciate but it would be nice to know.

RESPONSE: *The Zone E intrusion map will be included in future Annual Report presentations. Well pumping can be moved to a different aquifer, a different location, or both. The benefit is very site specific and aquifer specific. The greatest benefit is when pumping is moved from the Lower Aquifer to the Upper Aquifer, which results in up to 84% net benefit to the sustainable yield (84 AFY increased yield for every 100 acre-feet of pumping shift); WRFP Study Scenarios TM* *dated 10/22/2025. This significant benefit takes place because the water pressures in the Lower Aquifer increase following the shift and reduced Lower Aquifer Pumping. The Upper Aquifer pressures decrease, but those are greater pressures to begin with, and the pressures needed to avoid sea water intrusion in the Upper Aquifer are not as great as those needed in the Lower Aquifer. Shifting Lower Aquifer pumping farther away from the coast and closer to the Los Osos Creek valley induces more recharge from Los Osos Creek seepage, although this does not provide nearly as much benefit to sustainable yield as shifting from the Lower to the Upper Aquifer.*

Response to Jeff Edwards

COMMENT: 01:56:44 Verbal comment by Jeff Edwards. In referring to the basin plan metric summary that table I think it's become somewhat clunky. We know that the basin yield metric we've got this divergence or difference between 71 and 84 with regard to the water level metric. There's no context in terms of where this water level was and I mentioned earlier in 1990 we kind of hit peak demand for water wasting water and we were at a minus three and a half feet below sea level and so we've come up 7 ft as of now which I think is a substantial improvement yet it's indicates deterioration. Likewise with the nitrate metric and for the folks interested 87% of the development in Los Osos has already been connected to the sewer. So there's just a small fraction of 13% that's not. But with regard to that nitrate metric, there's again no context. We started at 25 22 plus mg per liter and now we're down to 12.9 which is a substantial improvement. And again after spending $200 million I would think that we did substantially decrease legacy nitrates. You heard about the Broderson discharges. 422-acre feet of the 521-acre feet of total wastewater generated that's 80.9%. We absolutely need to get our arms around that. And unfortunately I did not see exploring Broderson in the set of recommendations that staff has presented to you for 2025. In fact, all of the recommendations are paper pushing. There's no infrastructure projects in any of the recommendations. And if you want to talk infrastructure, we now have the second program sea well installed by the CSD. Unfortunately, there is a zero increase or zero addition to the safe field. Unfortunately, $3 million plus has been spent with no benefit seemingly. Program B has been discussed, but there's quantity and quality limitations with that. So, I don't think that's a panacea. We need to talk more about state water. That's not been discussed at all today. And I think we also there's this discussion about the creek and its importance in recharge. Well, I've advanced the idea of an inflatable dam on the north side or sorry, the south side of the bridge at Los Osos Creek and Los Osos Valley Road. Let's use nature to recharge the lower aquifer instead of putting treated or untreated storm water into the creek. That doesn't that's a non-starter. And then lastly, we have a geographic information system database for all the wells in town. Yet I have heard nothing about that understanding the distribution of those wells and how that database may be used for a well abandonment program which I think would be an in and helpful not only relative to quality but quantity certainly.

RESPONSE: *The basin metrics summary table will be revised for next year to reflect the metrics re-evaluation in progress. An expansion of the executive summary to add more context will also be considered. Seawater intrusion mitigation from LOWRF discharges to Broderson was evaluated in the WRFP Study. The mitigation benefit of Broderson was estimated by the transient model to be 25% (for every 100 acre-feet of recycled water discharged to Broderson there would be 25 acre-feet increase in bs sustainable yield). This is discussed in Section 4.3 of the WRFP Scenarios TM dated 10/22/2025. The transient model indicates any benefit to sustainable yield from the second Program C well is contingent on modifying the well to produce only from Zone D (not both Zones D and E). In either case (with or without Zone E pumping) there is still a significant benefit to the purveyor's water system resiliency from the additional pumping capacity.*

Response to Emily Miggins

COMMENT: 01:54:50 Verbal comment by Emily Miggins. And just going back in the presentation there, I think I have this right, but the actual performance of 521-acre feet per year leaves a 259-acre foot gap in our basin plan management goals. Just simply I'm curious that planned volume is a liability not an asset. if this isn't materializing for our community in basin we cannot maintain basin health with and combat seawater intrusion on paper alone as Jeff was saying. Hi Jeff. I urge the CSD to or the well I guess CSD and BMC to explain exactly why these critical urban and agricultural hookups are stalled and what is our specific timeline for reaching that 780-acre foot per year target. I've talked many years in the past about sustainability metrics and reporting standards and how are we working proactively. It'd be really nice to hear about that because there are metrics on helping pre-competitively commercial and small specialty crop farmers and fruit growers achieve water use real time water use goals. So, I'm just kind of curious maybe on a softer note on these things.

RESPONSE*: Comments noted. The growers in the creek valley are commercial, experienced operators. Programs to promote efficient irrigation practices could still be explored by the BMC.*

FINAL DRAFT

VERBAL BOARD COMMENTS at May 29, 2026 BMC Meeting

(Meeting Time Stamp in Blue)

Response to Director Reineke

Board comments 01:37:59

COMMENT: 01:38:12 Director Reineke – "I know we had switched over to the satellite imagery as a method and I'm just curious if that's where that change had come from primarily." 02:01:19 My question related to the agricultural pumping. As to how that that change, I guess, was determined. It was reduced by 50-acre feet a year. And I'm curious how that occurred or what them what the inputs for that was. So that's one question I have. But that's a question I you know I do want to make just the observation that sustainable yield as we've changed it in the last year which you know we changed it to reflect future projects and it doesn't sound like either of those or any of those at this point are on the immediate horizon. So we're still pumping at the same rate. In fact we're pumping more. you know, the purveyors are pumping more. Apparently, there's other users that are pumping less. So, our actual production number was a little bit lower than maybe it would have been last year. So I think these are important. So, that puts our sustainable yield, our basin yield metric at 71 for this year. And I don't I certainly don't want us to say at least here you know the purveyors I know we recognize the importance of staying within the bounds of what the basin can safely produce and I think we identified a different number and so 71 is definitely not it would be 84 if we were using the new number. So, I just want to say like I for one recognize that that that is a disparity compared to um what we had last year. The water levels I think that's an important thing too. I mean there are several metrics that I know we're reviewing those are it is promising to see our nitrate level go down. There's more work to do and I think Golden State and S&T have some ideas on how we can collaborate on that. uh the water level is an important metric and if you know we're not consistent in how we apply that logic that is absolutely something I want to see worked out for our next uh set of basin metrics and how we identify them and how we measure them. Seawater intrusion. I'm really honestly I would love to know how we have an alternate interpretation of what seawater intrusion or any of that is because why do we have so many people saying we are not we're not experiencing seawater intrusion. What is the other interpretation of an increasing amount of chloride in our basin every year? I would love to know if anyone can answer that. I'm putting it out to everyone. Please just humor me and give me an answer because I don't understand what other data information is going into the statements that we seem to hear on a pretty regular basis. So other than that I think those are just my high level comments and then my one question related to the ag users. Spencer, can you answer that that question about the ag production?

RESPONSE: *The reported 40 AFY reduction in agricultural irrigation demand for 2025 was based on the standard methodology used in past years (Chorro Valley CIMIS Station for reference evapotranspiration with crop coefficients applied, followed by a daily soil moisture budget using rainfall from local Station #727). The reduction in estimated agricultural pumping resulted primarily from lower reference evapotranspiration values reported by the CIMIS station during calendar year 2025. Agricultural pumping estimates using remote sensing (satellite) data was performed as a separate analysis in the Annual Report Appendix G2, with even lower estimate crop demand. A pilot program to collect actual grower pumping data would be helpful to ground truth the estimates going forward.*