Livermore Valley Groundwater Basin

Sustainable Groundwater Management Annual Report

2025 Water Year (October 2024 – September 2025)

Submitted by:

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Abbreviations

ACEH	Alameda County Environmental Health
AEM	Airborne Electromagnetic Surveys
AF	acre-feet
AFY	acre-feet per year
AN	Above Normal
AOC	Area of Concern
BN	Below Normal
CCR	California Code of Regulations
CCWD	Contra Costa Water District
cfs	cubic feet per second
CIP	Capital Improvement Program
COC	Constituents of Concern
COL	Chain of Lakes
CWS	California Water Service
CY	Calendar Year
DSRSD	Dublin San Ramon Service District
DWR	Department of Water Resources
EPA	Environmental Protection Agency
ERT	Electrical Resistivity Tomography
ft	feet
ft bgs	feet below ground surface
ft/ft	feet per linear foot
ft msl	feet above mean sea level
GPQ	Groundwater Pumping Quota
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWE	Groundwater Elevation
HCM	Hydrogeologic Conceptual Model
HI	Hydrologic Inventory
ICSW	Interconnected Surface Water
IDC	Integrated Water Flow Model Demand Calculator
InSAR	Interferometric Synthetic Aperture Radar
LAVWMA	Livermore-Amador Valley Water Management Agency
LBGFTM	Livermore Valley Basin Groundwater Flow and Transport Model
MCL	Maximum Contaminant Levels
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
MGDP	Mocho Groundwater Demineralization Plant
MNM	Monitoring Network Module
MO	Measurable Objective

MT	Minimum Threshold
NMP	Nutrient Management Plan
NO3	Nitrate Ion
OWTS	Onsite wastewater treatment system
PFAS	Per- and polyfluoroalkyl substances
PFOS	Perfluorooctane Sulfonate
P/MAs	Project and Management Actions
RMS	Representative Monitoring Site
SBA	South Bay Aqueduct
SFPUC	San Francisco Public Utilities Commission
SGMA	Sustainable Groundwater Management Act
SMC	Sustainable Management Criteria
SMP	Salt Management Plan
sTEM	stationary Time-Domain Electromagnetics
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
TDS	Total Dissolved Solid
UR	Undesirable Result
UWMP	Urban Water Management Plan
WMP	Well Master Plan
WY	Water Year

1. Executive Summary

The Livermore Valley Groundwater Basin (also referred to herein as "the Basin"), California Department of Water Resources (DWR) Basin No. 2-010, is classified as a "medium priority" basin (DWR, 2019). Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7 Water Agency or Zone 7) is the exclusive Groundwater Sustainability Agency (GSA) for the Basin and has managed local surface and groundwater resources for beneficial uses and users for more than 50 years.

Zone 7 submitted an Alternative Groundwater Sustainability Plan (Alternative GSP) for the Basin in December 2016. Subsequently, DWR reviewed and approved the Alternative GSP in July 2019. Zone 7 submitted the first Five-Year Periodic Evaluation to the Alternative GSP (2021 Alternative GSP; Zone 7 GSA, 2021, also referenced as the 2022 Alternative GSP in other reports) in December 2021. In June 2024, DWR approved the 2021 Alternative GSP.

This 2025 Water Year (WY) Annual Report for the Basin was prepared in compliance with California Code of Regulations (CCR) 23 §356.2 and is consistent with the DWR's October 2023 *GSP Implementation: A guide to Annual Reports, Periodic Evaluations, & Plan Amendments.*[1] The 2025 WY covers the period from 1 October 2024 through 30 September 2025. The GSP Annual Report Element Checklist provided with DWR's guideline is included in **Appendix A,** and identifies where each required element of the Annual Report is specifically addressed in this document. **Appendix B** through **Appendix E** provide supplemental data/information including groundwater levels and hydrographs, additional water storage and budget data, and water quality data.

General information about the Basin is provided in **Section 2**. The Basin encompasses approximately 69,600 acres (109 square miles) in Alameda and Contra Costa counties, and includes three Management Areas, defined by varying geologic, hydrogeologic, and groundwater conditions: the Main Basin Management Area (Main Basin), the Fringe Management Area (Fringe Area), and the Upland Management Area (Upland Area), as shown in **Figure 1**. Principal Aquifer units include the Upper Aquifer and Lower Aquifer within the Main Basin, the Fringe Aquifer within the Fringe Area, and the Upland Aquifer within the Upland Area.

Recent groundwater elevation trends within the Basin are detailed in **Section 3**. Groundwater elevation contours are shown for Spring 2025 (seasonal high) and Fall 2025 (seasonal low) groundwater conditions by Principal Aquifer unit on **Figure 3** through **Figure 8**. As indicated by the contours, groundwater flow directions and magnitudes did not vary greatly between the seasonal high to seasonal low periods in 2025 WY. Groundwater elevations within the Basin generally began to slightly decrease after two consecutive years of significant groundwater level increases in 2023 and 2024 WYs resulting in groundwater elevations nearing historic highs in

[1] DWR, 2023. *Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments (ca.gov)*

some areas of the Basin. The slight decrease in water levels observed during the 2025 WY is likely a result of below-average groundwater recharge and increased municipal pumping relative to the prior two WYs, though municipal pumping was still below-average relative to long-term trends. As further described in **Section 3**, water levels decreased by as much as 20 feet (ft) in the Upper Aquifer and 21 ft in the Lower Aquifer within portions of the Main Basin, predominantly in the Mocho II and Amador East subareas, from Fall 2024 to Fall 2025. In general, groundwater elevations in the Main Basin remained well above historic lows (up to about 136 ft) except in the central and southern portion of the Amador Subarea where two mining excavations have extended down into the Lower Aquifer. As indicated by the contours, groundwater flow directions and magnitudes did not vary greatly between the seasonal high (Spring) and seasonal low (Fall) 2025 WY monitoring events.

The 2021 Alternative GSP established 12 Representative Monitoring Sites for Chronic Lowering of Groundwater Levels (RMS-WL) and 14 Representative Monitoring Sites for Depletions of Interconnected Surface Water (RMS-ICSW), as further detailed in **Appendix B**. Hydrographs comparing recent groundwater elevations to the Sustainable Management Criteria (SMCs) defined at each RMS-WL and RMS-ICSW location are included in **Appendix C**. As shown in **Table 2** and **Table 3**, groundwater levels at all RMS-WL and RMS-ICSW wells locations remained above their respective Measurable Objectives (MOs) and Minimum Thresholds (MTs) throughout the 2025 WY.

Groundwater and surface water supplies and uses within the Basin during the 2025 WY are detailed in **Sections 4, 5, and 6.** Basin-wide groundwater extractions totaled approximately 10,594 acre-feet (AF) during the 2025 WY, 88% (9,154 AF) of which was used for municipal supplies. Zone 7 extracted 61% (5,755 AF, which includes 645 AF for Dublin San Ramon Service District [DSRSD]) of the total extraction (**Table 4** and **Table 5**). General locations of groundwater extractions are shown on **Figure 9**.

In addition to groundwater extraction, Zone 7 imported a total of 26,500 AF of surface water supplies to the Basin in the Calendar Year (CY) 2025 (**Table 6**). Total water use within the Basin for the 2025 WY consisted of 20.3% groundwater, 67.3% imported water, and 12.4% recycled water (**Table 10**, **Figure 10** and **Figure 11**). Zone 7 was also able to artificially recharge 3,747 AF of surplus imported supplies in the 2025 WY (**Table 11**). Since 1974, Zone 7 has artificially recharged 32,633 AF more than it has pumped.

Changes in groundwater storage over the 2025 WY were estimated using both the Groundwater Elevation (GWE) method and the Hydrologic Inventory (HI) method, as further described in **Section 7**. Taking an average of the two methods, the total groundwater in storage at the end of the 2025 WY was calculated to be 253.2 thousand acre-feet (TAF), which is about -1.0 TAF less than the 2024 WY average total storage value (**Table 12**). **Figure 13** shows the change in storage from Fall 2024 to Fall 2025 for each Main Basin node. **Figure 14** shows the annual change in groundwater storage and cumulative change in groundwater storage for the Basin along with the water year type from 1974 WY through 2025 WY. Using the Water Year Type methodology developed by DWR (DWR, 2021), the 2025 WY is considered a Below Normal (BN) WY, and the

change in groundwater storage for the Basin (-1.0 TAF) was less than that observed in the two prior Above Normal (AN) WYs. The minimal reduction in storage calculated for the 2025 WY can be attributed to nearly full Basin storage at the end of the 2024 WY coupled with below-average recharge and increased municipal pumping relative to the prior two WYs.

Section 8 presents a summary of Alternative GSP Implementation efforts performed throughout the 2025 WY. **Section 8.1** and **Table 13** summarize the Sustainable Groundwater Management Act (SGMA) Monitoring Activities performed and current conditions as of the 2025 WY relative to the SMCs defined for each Sustainability Indicator for the Basin. As further detailed in **Table 13**, no Undesirable Results (URs) occurred during the 2025 WY for any of the five Sustainability Indicators with SMCs defined in the 2021 Alternative GSP. A brief description of current conditions for each Sustainability Indicator is provided below; supplemental data and information including monitoring networks and measurements collected from each SGMA Representative Monitoring Site throughout the 2025 WY can be found in **Section 8.1** and **Appendix B** through **Appendix E**.

- **Chronic Lowering of Groundwater Levels.** As shown in **Table 2**, groundwater elevations in all RMS-WL wells generally remained stable or slightly decreased relative to 2024 WY conditions and were all measured above their respective MOs and MTs during both the seasonal high (Spring) and seasonal low (Fall) 2025 WY monitoring events. Therefore, no URs were observed within the Basin during the 2025 WY.

- **Reduction in Groundwater Storage.** Water Level SMCs are used as proxy for evaluating Reduction in Groundwater Storage. Therefore, no URs were observed within the Basin during the 2025 WY.

- **Degraded Water Quality.** As shown in **Table 15** through **Table 20**, one Representative Monitoring Site for Water Quality (RMS-WQ) location exceeded the MT for TDS (3S2E08H003 [8H3]) which had a detection of 746 milligrams per Liter (mg/L), 28 mg/L above the MT during the 2025 WY. No additional Constituents of Concern (COCs) for which SMCs are defined in the 2021 Alternative GSP (i.e., Total Dissolved Solids [TDS], Nitrate, Boron, and Chromium) were detected above their corresponding MTs at any of the 12 RMS-WQ sampled during the 2025 WY. A single MT exceedance does not constitute an Undesirable Result for Degraded Water Quality per the definition in the 2021 Alternative GSP. Therefore, no URs were observed within the Basin during the 2025 WY.

- **Land Subsidence.** Water levels at all applicable proxy RMS-WL sites for Land Subsidence remained above their respective MTs and MOs throughout the 2025 WY. Furthermore, as shown in **Figure 16**, vertical displacement data obtained from DWR's Interferometric Synthetic Aperture Radar (InSAR) monitoring program indicates ground surface elevations fluctuated by approximately -0.1 ft to +0.1 ft across the Basin throughout the 2025 WY. Therefore, no URs were observed within the Basin during the 2025 WY.

- **Depletion of Interconnected Surface Water.** As shown in **Table 3**, groundwater levels dropped exceeding the MO and MT at one RMS-ICSW site (3S2E23E001 [23E1]) by 0.06 ft during the seasonal low (Fall) 2025 WY monitoring event. The remaining RMS-ICSW locations were measured above their MTs and MOs during both the seasonal high (Spring) and seasonal low (Fall) 2025 WY monitoring events. A single MT exceedance does not constitute an Undesirable Result for Interconnected Surface Water Depletion per the definition in the 2021 Alternative GSP. Therefore, no URs were observed within the Basin during the 2025 WY.

The 2021 Alternative GSP outlined potential Projects and Management Actions (P/MAs) currently being implemented or otherwise proposed for future implementation. The P/MAs identified in the 2021 Alternative GSP generally fall into the following four categories: (1) water supply augmentation, (2) water demand reduction, (3) improvement of groundwater quality, and (4) data gap-filling activities. A brief description of the status of each P/MA through the 2025 WY is listed in **Section 8.2**. Progress made on addressing DWR's Recommended Corrective Actions in its Determination of the 2021 Alternative GSP is described in **Section 8.3**, and other information on plan implementation progress (e.g., ongoing stakeholder engagement efforts) is provided in **Section 8.4**.

To avoid duplication, material included in the 2021 Alternative GSP has not been repeated here, but specific sections are referenced when more background detail may be desired.

2. General Information

☑ *§ 356.2 (a)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(a) General information, including an executive summary and a location map depicting the basin covered by the report.

On 16 September 2014, the California legislature enacted the Sustainable Groundwater Management Act (SGMA), the primary purpose of which is to achieve and/or maintain sustainability within the state's high and medium priority groundwater basins. The Livermore Valley Groundwater Basin (also referred to herein as "the Basin"), California Department of Water Resources (DWR) Basin No. 2-010, is classified as a "medium priority" basin (DWR, 2019) and is not subject to the critical conditions of overdraft. Under its authority as the Exclusive Groundwater Sustainability Agency (GSA) of the Basin, Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7 Water Agency or Zone 7) submitted an Alternative Groundwater Sustainability Plan (GSP) for the Basin in December 2016, which was approved by DWR in July 2019, and the first Five-Year Periodic Evaluation to the Alternative GSP in December 2021 (i.e., the 2021 Alternative GSP), which was approved by DWR in June 2024.

This 2025 Water Year (WY) Annual Report for the Basin has been prepared in compliance with California Code of Regulations (CCR) 23 § 356.2 and is consistent with the DWR's October 2023 *GSP Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments*.[2] The 2025 WY includes the period from October 1, 2024 through September 30, 2025. This report also contains available and appropriate historical information back to Calendar Year (CY) 2015, as required by CCR 23 §356.2 (b), to provide information and data related to Basin conditions through the current reporting year. All the data included in this report are conveyed based on the 2025 WY; however, due to other reporting obligations, some information in this report (e.g., retailer groundwater pumping quota and surface water supply volumes) is compiled and reported on a CY basis (i.e., January 1 through December 31, 2025).

Zone 7 conducts water management in the Basin as part of its mission to deliver safe, reliable, efficient, and sustainable water services, and more specifically addresses Groundwater Management – Strategic Plan Goal D, and initiative *#11 – Manage the GSA and implement the groundwater sustainability plan*. Zone 7 has managed local surface and groundwater resources for beneficial uses for more than 50 years.

The Zone 7 service area is located about 40 miles southeast of San Francisco and encompasses an area of approximately 425 square miles of the eastern portion of Alameda County, including

[2] DWR, 2023. *Groundwater Sustainability Plan Implementation: A Guide to Annual Reports, Periodic Evaluations, & Plan Amendments (ca.gov)*

the Livermore-Amador Valley, Sunol Valley, and portions of the Diablo Range (**Figure 1**). Zone 7 also serves a portion of Contra Costa County (Dougherty Valley in San Ramon) through an out-of-service-area agreement with Dublin San Ramon Service District (DSRSD).

As shown on **Figure 1**, the Basin encompasses approximately 69,600 acres (109 square miles) in Alameda and Contra Costa counties, and includes three Management Areas based on varying geologic, hydrogeologic, and groundwater conditions: the Main Basin, Fringe Area, and Upland Area. The Basin is bordered on the northwest by the San Ramon Valley Basin (Basin No. 2-07), a very-low priority basin that extends to the northwest in Contra Costa County, and on the southwest by the Sunol Valley Basin (Basin No. 2-11), which is also a very-low priority basin.

Available hydrogeologic information indicates that the Basin is bounded by the Calaveras Fault on the west, the Greenville Fault on the east, and bedrock deposits of the Plio-Pleistocene Tassajara and Livermore Formations to the north and south, respectively. Principal Aquifer units include the Upper Aquifer and Lower Aquifer within the Main Basin, the Fringe Aquifer within the Fringe Area, and the Upland Aquifer within the Upland Area. The Upper Aquifer consists of recent (Holocene) alluvial fill materials and extends continually across the Main Basin at depths up to 190 feet below ground surface (ft bgs), containing groundwater typically under unconfined conditions. The Lower Aquifer exists below a confining aquitard with thicknesses ranging from less than 5.0 feet (ft) in the eastern parts of the Main Basin to up to 50 ft in the central and western parts of the Main Basin. The Lower Aquifer consists of Quaternary alluvial fill materials and the productive upper portion of the Livermore Formation, extending to depths of up to 800 ft bgs in the central Main Basin. A large majority of groundwater production occurs within the Lower Aquifer of the Main Basin. The Fringe Aquifer and Upland Aquifer are demonstrated to be of lower productivity and quality than the aquifers of the Main Basin, and groundwater production is limited to domestic and agricultural uses in these areas.

Sources of recharge to the Basin include rainfall recharge, applied water recharge, stream recharge, subsurface groundwater inflow, and pipe leakage. Groundwater outflows from the Basin include municipal pumping, agricultural pumping, mining use, and subsurface groundwater outflow. A historical water budget period (1974-2020 WYs) presented in the 2021 Alternative GSP shows that long-term sustainability has been maintained in the Basin for at least 45 years, as groundwater storage conditions have remained generally stable to increasing and have shown resilience following dry periods.

Detailed information regarding the Plan Area, Hydrogeologic Conceptual Model, and historical and recent Groundwater Conditions are provided in the 2021 Alternative GSP.

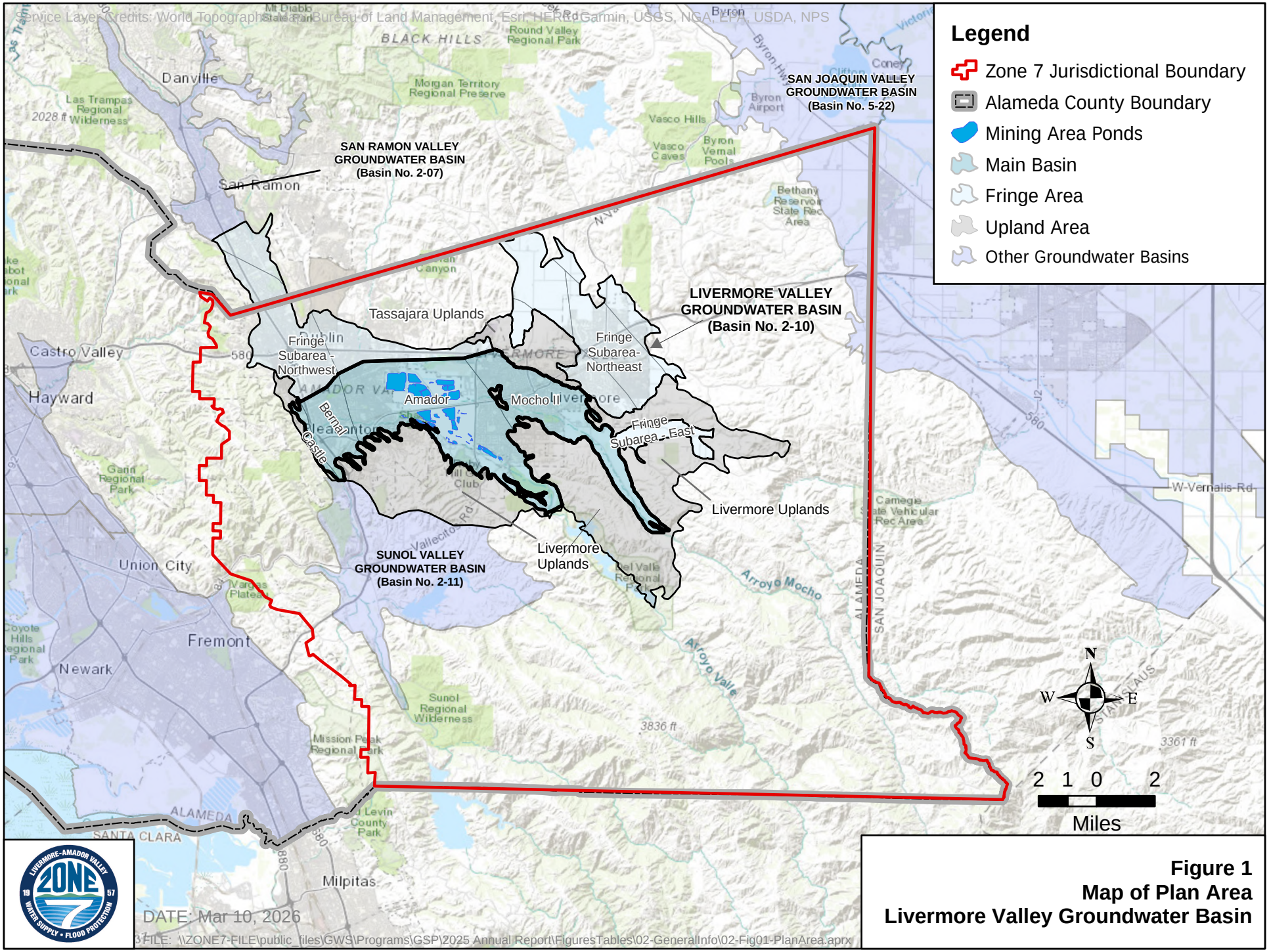

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Figure 1
Map of Plan Area
Livermore Valley Groundwater Basin

3. Groundwater Elevation Data

3.1. Description

☑ *§ 356.2 (b) (1)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.

(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.

Zone 7 has conducted an extensive program of groundwater level monitoring throughout the Basin since the mid-1970s. Background information regarding the Groundwater Elevation Monitoring Program is provided in **Appendix B** and detailed in *Section 14.2.1 Monitoring Network for Chronic Lowering of Groundwater Levels* of the 2021 Alternative GSP. This program includes the measurement of groundwater levels in monitoring and production wells to confirm that management objectives are met, to assess groundwater supplies, and to define any new management objectives needed to maintain sustainability. The program focuses on the Main Basin, where groundwater is pumped for municipal uses; however, water levels are also measured in the Fringe and Upland Areas.

Approximately 252 wells were included in Zone 7's Groundwater Elevation Monitoring Program during the 2025 WY (**Figure 2**). Groundwater elevations in most of these wells were measured at least two times throughout the water year, during both seasonal high (Spring) and seasonal low (Fall) groundwater conditions. Seasonal high (Spring) and seasonal low (Fall) 2025 WY groundwater elevation contour maps are presented in **Section 3.3** for each Principal Aquifer[3] in the Basin using water level measurements from the wells in the Groundwater Elevation Monitoring Program. Some municipal wells in the program may not have been measured because they were actively pumping during measurement events and therefore not representative of static groundwater elevations.

As further detailed in **Table 1** below, no wells were added or removed from the Groundwater Elevation Monitoring Program during the 2025 WY; however, several wells were unable to be measured due to obstructions or access limitations. The wells unable to be measured were not removed from the program because the intention is to clear the obstruction and continue future

[3] Insufficient monitoring wells currently exist in the Upland Area to prepare contour maps for the Upland Aquifer.

monitoring if possible. The Groundwater Elevation Program will be re-evaluated in the second Five-Year Periodic Evaluation of the Alternative GSP (2026 Alternative GSP) which is due to DWR by December 21, 2026.

Table 1. Elevation Monitoring Program Changes during the Water Year

Status	Location Name	Location Type	Reason	Note
Added to Program	None	N/A	N/A	N/A
Removed from Program	None	N/A	N/A	N/A
Unable to be Measured	3S1E20B002	Well	Well Pumping	Pumping – Not Measured
	3S1E11B001	Well	Obstruction	Obstructed with rocks. Zone 7 is working to clear the obstruction
	3S1E09H013	Well	Inaccessible	New property owners. Access not granted during the 2025 WY.
	3S1E08N001	Well	Obstruction	Well paved over. Zone 7 is working to evaluate the status of the well and clear the asphalt to regain access.

During the 2025 WY, Zone 7 maintained its existing telemetric monitoring network consisting of 16 wells across the Main Basin and Fringe Management Areas which include all eight Representative Monitoring Sites for Chronic Lowering of Groundwater Levels (RMS-WLs) in the Main Basin. Each site is equipped with telemetric monitoring equipment that allows for real-time, continuous monitoring of groundwater levels. Zone 7 intends to continue expanding the telemetric monitoring system over the next several years across the Main Basin and Fringe Areas by outfitting multiple wells within nested well sets and in areas where uncertainties and/or data gaps have previously been identified.

3.2. Representative Monitoring Wells

The Basin currently has 12 RMS-WLs and 14 Representative Monitoring Sites for Depletions of Interconnected Surface Water (RMS-ICSW) which represent a subset of the Groundwater Elevation Monitoring Program. Updated hydrographs of groundwater elevations are presented in **Appendix C** for each of the wells in the RMS-WL and RMS-ICSW monitoring networks.

One RMS-ICSW well, 3S2E23E001 (23E1), dropped below the Measurable Objective (MO) and Minimum Threshold (MT) by 0.06 feet during the seasonal low (Fall) monitoring event, however all wells, including 23E1, were measured above their respective MTs and MOs during the seasonal high (Spring) monitoring event

Table 2 and **Table 3** compare water level measurements from the seasonal high (Spring) and seasonal low (Fall) 2025 WY monitoring events to the MOs and MTs and defined at RMS-WL and RMS-ICSW wells, respectively, in the 2021 Alternative GSP. The tables also show the change in elevation from the previous year's seasonal low to this year's seasonal low at each well. Water levels at all RMS-WL and RMS-ICSW wells continued to remain above their respective MOs and MTs throughout both the seasonal high (Spring) and seasonal low (Fall) of the 2025 WY, with the exception of 23E1 as described above.

3.3. Groundwater Elevation Contour Maps

In general, groundwater levels for the 2025 WY followed a typical seasonal pattern observed from the historical data, rising in the beginning of the year with rainfall recharge and minimal pumping occurring, levelling off in late spring, and then dropping during the second half of the water year as rainfall ceased and pumping demands increased.

Groundwater gradients in both the Upper and Lower Aquifers were generally from east to west and ranged from 0.005 to 0.025 feet per linear foot (ft/ft), except across the major groundwater barriers (e.g., across the Parks Boundary delineating the Main Basin and northwestern Fringe Areas and across the boundary between the Mocho II and Amador Subareas) where the gradients steepen substantially. In general, the groundwater gradient runs toward the center of the Basin where there are piezometric depressions created around several municipal wellfields and actively dewatered quarry excavations that extend into the Lower Aquifer.

3.3.1. Upper Aquifer and Fringe Aquifer

Figure 3 and **Figure 4** show 2025 WY groundwater elevation contours in the Upper Aquifer and Fringe Aquifer during seasonal high (Spring) and seasonal low (Fall) conditions, respectively. **Figure 5** shows the change in groundwater elevation across the Upper Aquifer between seasonal low (Fall) 2024 WY and 2025 WY monitoring events. Groundwater elevations in the Upper Aquifer generally decreased slightly during the 2025 WY by an average of about 3.5 feet across the Basin; however, some parts of the Mocho II and Amador Subareas saw significantly greater decreases (e.g., by as much as about 20 ft) relative to historic high water levels observed in the 2024 WY. These declines are likely the result of below-average rainfall and corresponding reductions to groundwater recharge (from rainfall and stream sources) relative to the prior two WYs.

Quarry dewatering (mining) operations in the Amador Subarea create groundwater depressions in pits where water is pumped and mounds in pits that are not clay-lined and where excess water is stored. For example, during the 2025 WY water produced from the dewatering of MA-P042 and MA-P046 (future Lakes B and J, respectively) was discharged into other adjacent clay-lined mining pits. Normally, water from MA-R028 (future Lake D) is eventually discharged into Cope

Lake after which it is conveyed into Lake I and recharged back into the Basin. Most of the groundwater elevation head change (the steepest groundwater gradient) occurs in the central area of the Basin, where the mining pits are being excavated, and did not appear to vary significantly between the seasonal high (Spring) and seasonal low (Fall) 2025 WY monitoring events.

Water levels in wells in the southwestern portion of the Basin near the Arroyo de la Laguna (as indicated primarily by the Bernal Subarea Upper Aquifer Key Well 3S1E20C007 [20C7] and well 3S1E29M004 [29M4]) exceeded the upper threshold groundwater elevation at which Basin overflow occurs (i.e., about 295 feet above mean sea level [ft msl]). Consequently, groundwater overflowed from the Upper Aquifer into the Arroyo de la Laguna and exited the Basin during the 2025 WY.

In the Fringe Aquifer, water elevations stayed relatively constant throughout the 2025 WY, generally varying by less than 6.0 ft compared to groundwater levels in 2024 WY (see **Figure 5** and **Appendix C**). For more information regarding historic groundwater elevations and trends observed for the Fringe Area, refer to *Section 8.3 Current and Historical Groundwater Conditions* of the 2021 Alternative GSP.

3.3.2. Lower Aquifer

Figure 6 and **Figure 7** show 2025 WY groundwater elevation contours in the Lower Aquifer during seasonal high (Spring) and seasonal low (Fall) conditions, respectively. Flow directions and magnitudes indicated by the groundwater elevation contours did not vary greatly between the seasonal low and seasonal high conditions during the 2025 WY. In general, the groundwater gradient runs toward the center of the Basin where there are piezometric depressions created around two mining pits (MA-P042 [Lake B] and MA-R028 [Lake D]) that extend into the Lower Aquifer. The lowest groundwater elevation in the Lower Aquifer was observed near the MA-R028 (Lake D) mining excavation pond (187 ft msl).

Figure 8 shows the change in groundwater elevation across the Lower Aquifer between seasonal low (Fall) 2024 WY and 2025 WY monitoring events. After two consecutive years of increasing water levels resulting in nearly a full groundwater basin, water levels began to decline in the Lower Aquifer due to below-average groundwater recharge (from rainfall and stream sources) and average municipal pumping. Zone 7 also began increasing groundwater production from its wells during the summer and early fall of WY 2025 – ahead of the Fall monitoring event – to reduce groundwater levels in anticipation of the upcoming rainy season to capitalize on the 2026 WY recharge. Consequentially, Lower Aquifer water levels decreased by as much as 21 ft within portions of the Main Basin from Fall 2024 to Fall 2025. Despite the decrease in water levels, groundwater elevations continued to remain well above historic lows (up to about 136 ft) throughout the Main Basin with the exception of the central and southern portions of the Amador Subarea where two mining excavations have extended down into the Lower Aquifer (see **Figure 8** and **Appendix C**).

For more information on general groundwater gradient and water level trends, see *Section 8 Current and Historical Groundwater Conditions* of the 2021 Alternative GSP.

3.4. Groundwater Elevation Hydrographs

Groundwater levels for the 2025 WY generally followed a typical seasonal pattern observed from the historical data, rising in the beginning of the year with rainfall recharge and minimal pumping occurring, levelling off in late spring, and then dropping during the second half of the water year as rainfall ceased and pumping demands increased. Groundwater elevations generally decreased at RMS-WL wells in the Main Basin compared to water levels during the 2024 WY. Groundwater elevations decreased more significantly in the Mocho II and Amador East Subareas (by up to 13 feet) while decreasing modestly in the Amador West and Bernal Subareas (by up to 5.0 feet). The Upper Amador West RMS-WL well (3S1E09P005) increased slightly by about 2.0 feet. Groundwater conditions indicate decreasing groundwater elevations in the Mocho II and Amador East subareas and only a slight decrease in the Amador West and Bernal subareas during the 2025 WY. Despite the decreasing water levels, groundwater elevations across the Basin generally remained high as a result of two consecutive years of above-normal recharge and below-normal municipal pumping in 2025. For reference, Zone 7 identified the 2025 WY as a below-normal WY based on the methodology developed by DWR (DWR, 2021). Historical water year types are provided in **Figure 14**.

Hydrographs of historical and recent groundwater elevations at all RMS-WL and RMS-ICSW wells are included in **Appendix C**. These hydrographs further demonstrate the seasonal trends observed in both the Upper/Fringe Aquifers and the Lower Aquifer. The seasonal fluctuations are greater in the Lower Aquifer where more pumping occurs to meet seasonal demands in the warmer months, and when surface water treatment plant outages occur. Groundwater elevations will continue to be monitored at all RMS-WL and RMS-ICSW sites per the monitoring plans described in *Section 14 Monitoring Network* of the 2021 Alternative GSP.

TABLE 2
GROUNDWATER ELEVATIONS AT REPRESENTATIVE MONITORING SITES
FOR CHRONIC LOWERING OF GROUNDWATER ELEVATIONS
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		*Management Area/Unit*			*2025 Water Year (ft)*					*SMCs for GWE (ft above Mean Sea Level)*				
Well Name	*Map*	*Area*	*Subarea*	*Aquifer*	*Season High GWE*	*Season Low GWE*	*Change from 2024**	*Height above MT*	*Height above MO*	*MT*	*IM-5*	*IM-10*	*IM-15*	*MO*
3S1E20C007	20C7	Main	Bernal	Upper	308.3	301.0	-0.8	156.2	121.5	144.8	153.4	162.1	170.8	179.5
3S1E20C008	20C8	Main	Bernal	Lower	304.7	292.7	-7.4	147.9	113.2	144.8	153.4	162.1	170.8	179.5
3S1E09P005	9P5	Main	Amador West	Upper	311.0	306.4	+1.8	126.7	99.8	179.8	186.5	193.2	199.9	206.7
3S1E09P010	9P10	Main	Amador West	Lower	308.1	302.1	-2.6	122.4	95.5	179.8	186.5	193.2	199.9	206.7
3S1E11G001	11G1	Main	Amador East	Upper	326.9	322.1	-5.1	141.1	102.2	181.0	190.7	200.4	210.2	219.9
3S1E12K003	12K3	Main	Amador East	Lower	296.6	286.5	-13.0	105.5	66.6	181.0	190.7	200.4	210.2	219.9
3S2E08K002	8K2	Main	Mocho II	Upper	430.7	418.1	-13.2	163.0	125.0	255.1	264.6	274.1	283.6	293.1
3S2E08H003	8H3	Main	Mocho II	Lower	424.3	407.4	-13.1	152.2	114.2	255.1	264.6	274.1	283.6	293.1
3S1E06F003	6F3	Fringe	Northwest	Upper	325.3	324.4	0.0	19.4	9.8	305.0	307.4	309.8	312.2	314.6
2S2E34E001	34E1	Fringe	Northeast	Upper	496.7	494.4	-0.2	6.2	3.2	488.2	489.0	489.7	490.5	491.2
3S2E24A001	24A1	Fringe	East	Upper	697.6	696.3	-2.5	20.8	18.0	675.5	676.2	676.9	677.6	678.3
3S2E21K009	21K9	Upland	Upland	Upper	483.3	480.5	+2	10.4	10.4	470.1	470.1	470.1	470.1	470.1

RMS = Representative Monitoring Site
GWE = Groundwater Elevation (in ft above Mean Sea Level)
SMC = Sustainable Management Criteria
IM = Interim Milestone
MO = Measurable Objective
MT = Minimum Threshold
NA = Not Available (no access to well in Spring)
* = 2025 Seasonal Low minus 2024 Seasonal Low

Main
Fringe
Upland

TABLE 3
GROUNDWATER ELEVATIONS AT REPRESENTATIVE MONITORING SITES
FOR INTERCONNECTED SURFACE WATER
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		*Management Area/Unit*			*2025 Water Year (ft)*					*SMCs for ICSW (ft above MSL)*				
Well Name	*Map*	*Area*	*Subarea*	*Aquifer*	*Season High GWE*	*Season Low GWE*	*Change from 2024**	*Height above MT*	*Height above MO*	*MT*	*IM-5*	*IM-10*	*IM-15*	*MO*
3S2E30D002	30D2	Main	Amador	Upper	408.53	406.54	-2.53	5.54	0.04	401	403.8	404.7	405.6	406.5
3S1E16P005	16P5	Main	Amador	Upper	321.7	319.08	-1.12	33.88	33.88	285.2	285.2	285.2	285.2	285.2
3S2E33G001	33G1	Main	Amador	Upper	502.3	502.46	0.3	1.46	1.16	501	501.1	501.2	501.2	501.3
3S2E29F004	29F4	Main	Amador	Upper	449.08	449.15	0.6	11.35	4.55	437.8	441.2	442.3	443.5	444.6
3S2E33C001	33C1	Main	Amador	Upper	489.13	489.03	0.26	6.93	2.83	482.1	484.2	484.8	485.5	486.2
3S1E02N006	2N6	Main	Camp	Upper	339.31	337.63	-1.61	6.13	3.73	331.5	333.9	333.9	333.9	333.9
3S2E16E004	16E4	Main	Mocho II	Upper	489.36	473.61	-13.8	6.71	6.61	466.9	466.9	466.9	466.9	467
3S2E23E001	23E1	Main	Mocho II	Upper	597.45	595.34	-1.51	-0.06	-0.06	595.4	595.4	595.4	595.4	595.4
4S2E01A001	1A1	Main	Mocho II	Upper	801.32	784.05	-15.61	2.85	2.85	781.2	781.2	781.2	781.2	781.2
2S2E27P002	27P2	Fringe	Spring	Upper	504.12	502.24	-0.67	1.24	1.24	501	501	501	501	501
2S2E34E001	34E1	Fringe	May	Upper	496.74	494.44	-0.24	3.24	1.44	491.2	492.1	492.4	492.7	493
3S1E05K006	5K6	Fringe	Camp	Upper	334.07	333.27	0.71	7.27	5.07	326	328.2	328.2	328.2	328.2
3S1E02R001	2R1	Fringe	Camp	Upper	363.29	359.29	-1.5	13.99	5.69	345.3	349.4	350.8	352.2	353.6
3S2E32E007	32E7	Upland	Upland	Upper	598.9	592.74	-9.87	1.34	1.34	591.4	591.4	591.4	591.4	591.4

RMS = Representative Monitoring Site
GWE = Groundwater Elevation (in ft above Mean Sea Level)
SMC = Sustainable Management Criteria
ICSW = Interconnected Surface Water
MSL = Mean Sea Level
IM = Interim Milestone
MO = Measurable Objective
MT = Minimum Threshold
* = 2025 Seasonal Low minus 2024 Seasonal Low

Main
Fringe
Upland

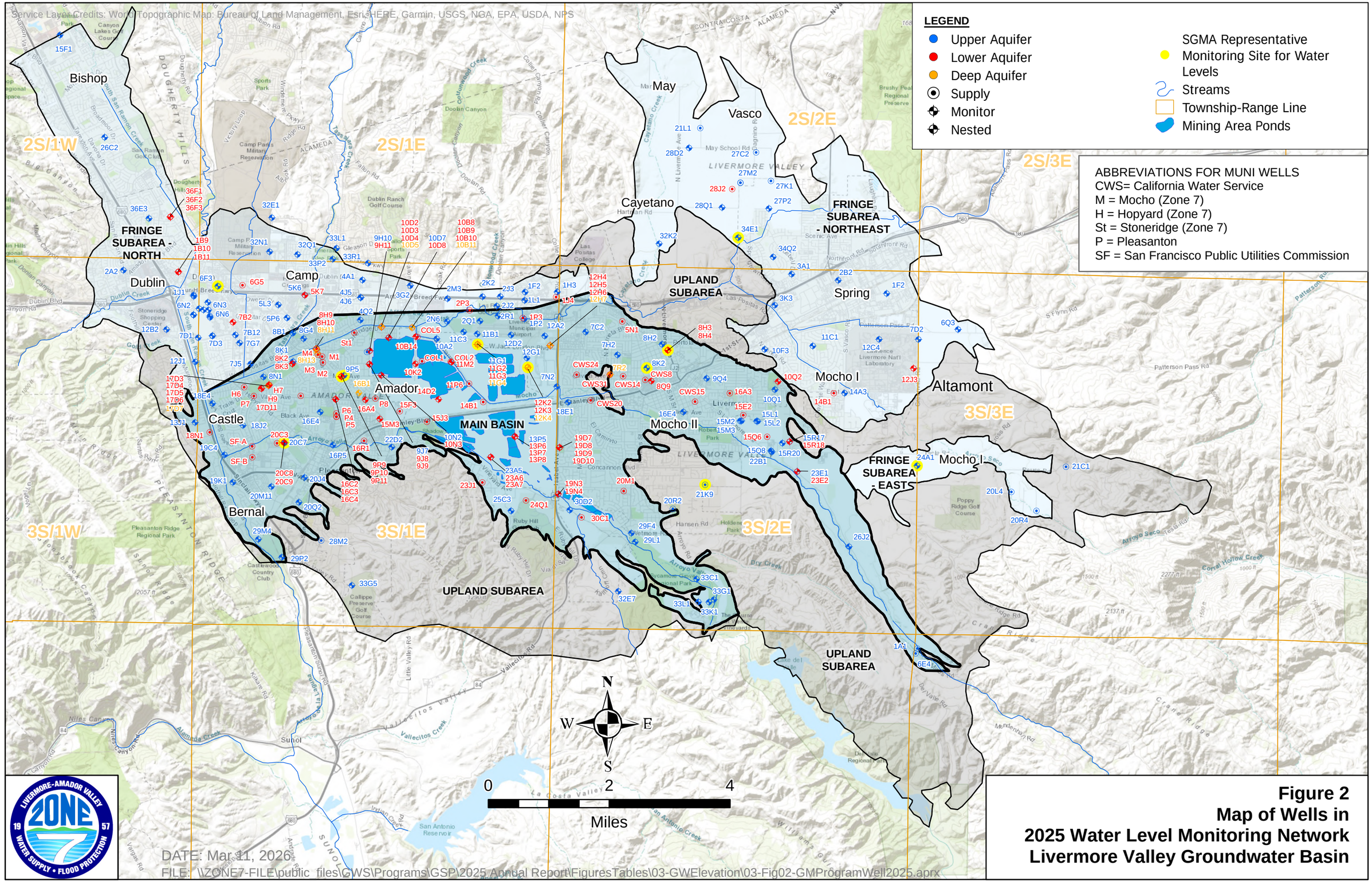

Figure 2
Map of Wells in
2025 Water Level Monitoring Network
Livermore Valley Groundwater Basin

LEGEND

Gradient Contours

- Contours (Interval = 10')
- Hatch pattern towards lower elevation

Wells - Upper Spring 2025

- Supply
- Monitor
- Nested
- Ponds
- SGMA Representative Monitoring Site for Water Levels

Mining Pond Areas 2025

- In Flux
- Pumped From
- Pumped Into
- Static
- Not In Contact With Groundwater
- Township-Range
- Main Basin
- Fringe Area
- Upland Area
- Livermore Valley SubBasins
- Streams

Bishop · May · Vasco · Cayetano · Altamont · Dublin · Camp · Spring · Amador · Castle · Bernal · Mocho I · Mocho II · Mocho

2S/1W · 2S/1E · 2S/2E · 2S/3E · 3S/1W · 3S/1E · 3S/2E · 3S/3E · 4S/1W · 4S/1E · 4S/2E · 4S/3E

N W E S

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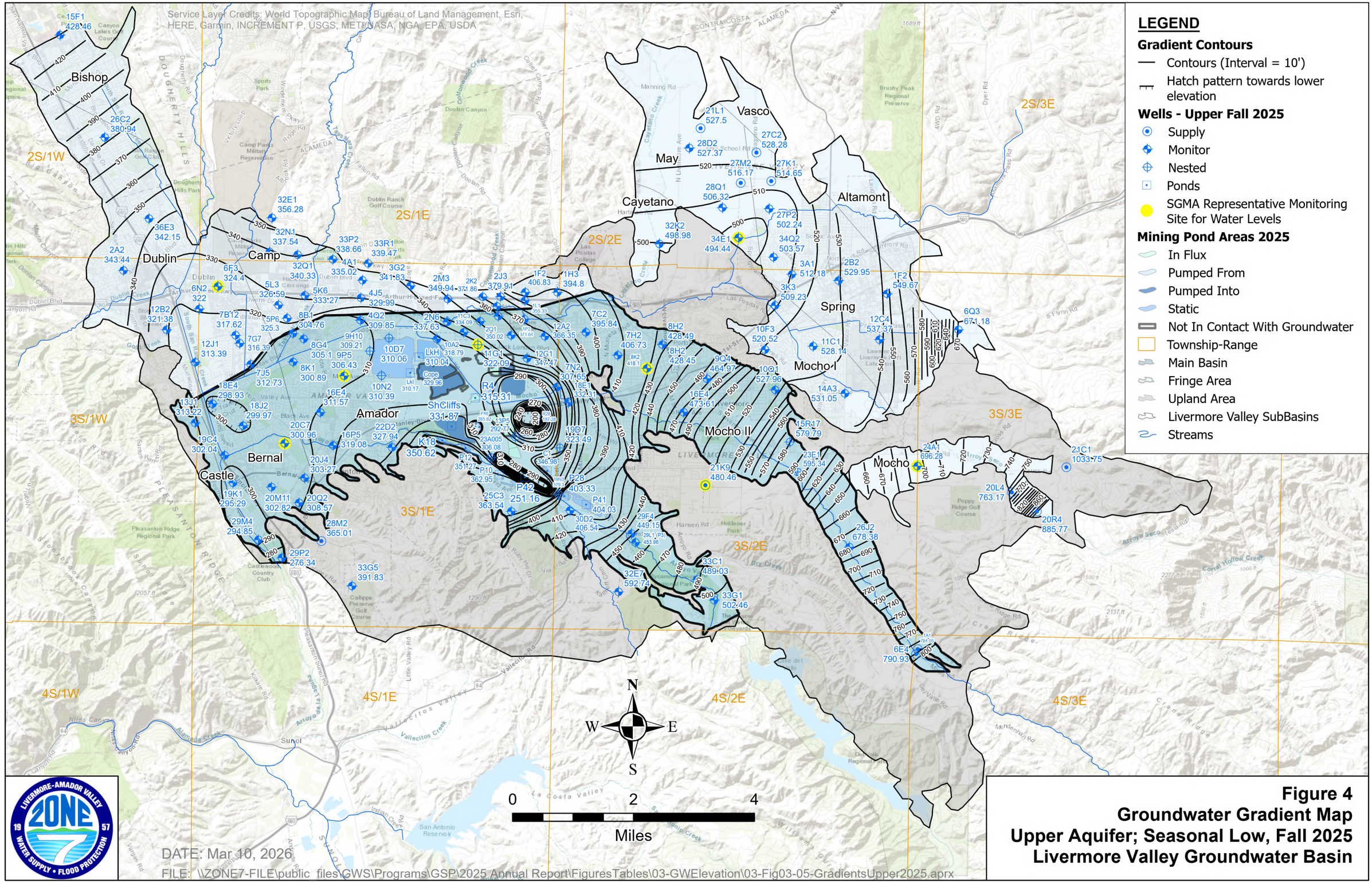
Figure 3
Groundwater Gradient Map
Upper Aquifer, Seasonal High, Spring 2025
Livermore Valley Groundwater Basin



LEGEND

Gradient Contours

- Contours (Interval = 10')
- Hatch pattern towards lower elevation

Wells - Upper Fall 2025

- Supply
- Monitor
- Nested
- Ponds
- SGMA Representative Monitoring Site for Water Levels

Mining Pond Areas 2025

- In Flux
- Pumped From
- Pumped Into
- Static
- Not In Contact With Groundwater
- Township-Range
- Main Basin
- Fringe Area
- Upland Area
- Livermore Valley SubBasins
- Streams

Figure 4
Groundwater Gradient Map
Upper Aquifer; Seasonal Low, Fall 2025
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Maps Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

LEGEND

Elevation Difference (ft) 24-25

- Elevation Difference (ft) 24-25
- < -45
- -45 to -35
- -35 to -25
- -25 to -15
- -15 to -5
- -5 to 5
- 5 to 15
- 15 to 25
- 25 to 35
- 35 to 45
- 45 to 55
- Mining Area Ponds
- Streams
- Main Basin
- Fringe Area
- Upland Area
- Livermore Valley SubBasins

Bishop
Dublin
Camp
Castle
Bernal
Amador
Cayetano
May
Vasco
Altamont
Spring
Mocho II
Mocho I
Mocho I

N
W E
S

0 2 4
Miles

* Fall 2025 Minus Fall 2024 so negative numbers represent a drop from 2024WY to 2025WY.

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Figure 5
Change in Groundwater Elevation
Upper Aquifer; Fall 2024 to Fall 2025
Livermore Valley Groundwater Basin

ABBREVIATIONS FOR MUNICIPAL WELLS
COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
St = Stoneridge (Zone 7)
CWS = Cal Water Service
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

Gradient Contours
- Contours (Interval = 10')
- Hatch pattern towards lower elevation

Wells - Lower Spring 2025
- Supply
- Monitor
- Nested
- Ponds
- SGMA Representative Monitoring Site for Water Levels
- Mining Area Ponds
- Streams
- Township-Range Line
- Main Basin
- Fringe Area
- Upland Area
- Livermore Valley SubBasins

N
W E
S

0 4,000 8,000
Feet

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Figure 6
Groundwater Gradient Map
Lower Aquifer; Seasonal High, Spring 2025
Livermore Valley Groundwater Basin

ABBREVIATIONS FOR MUNICIPAL WELLS
COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
St = Stoneridge (Zone 7)
CWS = Cal Water Service
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

Gradient Contours
- Contours (Interval = 10')
- Hatch pattern towards lower elevation

Wells - Lower Fall 2025
- Supply
- Monitor
- Nested
- Ponds
- SGMA Representative Monitoring Site for Water Levels
- Mining Area Ponds
- Streams
- Township-Range Line
- Main Basin
- Fringe Area
- Upland Area

N
W E
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Feet

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Figure 7
Groundwater Gradient Map
Lower Aquifer; Seasonal Low, Fall 2025
Livermore Valley Groundwater Basin

ABBREVIATIONS FOR MUNICIPAL WELLS
COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
St = Stoneridge (Zone 7)
CWS = Cal Water Service
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

Elevation Difference (ft) 2025

- Elevation Difference (ft) 2025
- < -45
- -45 to -35
- -35 to -25
- -25 to -15
- -15 to -5
- -5 to 5
- 5 to 15
- 15 to 25
- 25 to 35
- 35 to 45
- 45 to 55
- Mining Area Ponds
- Streams
- Main Basin
- Fringe Area
- Upland Area
- Livermore Valley SubBasins

N
W E
S

0 4,000 8,000
Feet

* Fall 2025 Minus Fall 2024 so negative numbers represent a drop from 2024WY to 2025WY.

DATE: Feb 27, 2026
FILE: R:\GWS\Programs\GSP\2025 Annual Report\FiguresTables\03-GWElevation\03-Fig06-08-GradientsLower2025.aprx

Figure 8
Change in Groundwater Elevation
Lower Aquifer; Fall 2024 to Fall 2025
Livermore Valley Groundwater Basin

4. Groundwater Extraction Data

☑ *§ 356.2 (b) (2)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.

Since the 1960s, Zone 7 has actively managed the Basin by applying a conjunctive water management approach that integrates local and imported surface water supplies with the local conveyance, storage, and groundwater recharge features. Zone 7's annual groundwater production and artificial recharge operations vary with the availability of surface water, treatment plant capacity, and the available groundwater storage space.

Table 4 below shows the Basin-wide, 2025 WY groundwater extraction data by water use sector, measurement method, and estimated measurement accuracy; reported units are in AF. Groundwater extractions within the Basin totaled approximately 10,594 AF during the 2025 WY, of which 88% (9,285 AF) was extracted for use in the municipal sector. Groundwater system losses and exported brine from Zone 7's Mocho Groundwater Demineralization Plant (MGDP) accounted for 131 AF, resulting in 9,154 AF being produced for use within the municipal sector (see **Section 6** for more information on Total Water Use by Sector).

Table 4. Summary of Groundwater Extractions by Source and Sector

Water Use Sector / Entity	2025 WY Groundwater Extractions (AF)	Measurement Method	Estimated Accuracy (AF)
Total Municipal Pumping	**9,285**	**See below**	**See below**
Zone 7 Pumping (excluding Zone 7 Pumping for DSRSD)	5,110	Metered by Zone 7	10
Zone 7 Pumping for DSRSD	645	DSRSD Groundwater Pumping Quota	10
City of Pleasanton	0	Metered by Pleasanton	10
California Water Service – Livermore (CWS)	2,908	Metered by CWS	10
San Francisco Public Utilities Commission (SFPUC)*	312	Metered by SFPUC	10
Fairgrounds	310	Metered by Fairgrounds	10
Domestic Pumping	**58**	**Estimated**	**50**
Pumping for Ag/Golf	**1,251**	**Estimated**	**100/50****
Total	***10,594***	**-**	**-**

*For 2025 Water Year, metered groundwater extractions were not provided to Zone 7 from SFPUC. Estimated value is based on average of last five years.
** 100 AF for Agricultural; 50 AF for Golf
AF = acre-feet; Ag = Irrigated Agriculture; DSRSD = Dublin San Ramon Service District; WY = Water Year

After three consecutive years of favorable allocation from the State Water Project (100% in 2023 WY, 40% in 2024 WY, and 50% in 2025 WY), Zone 7 pumped 5,110 acre-feet (AF) for the 2025 WY. Of this, 4,979 AF was delivered to Zone 7's retailers and the remaining 131 AF was accounted for in system losses and exported brine from Zone 7's MGDP. These totals do not include the water Zone 7 pumps for DSRSD (usually 645 acre-feet per year [AFY]), which is considered part of the "natural" demand (i.e., basin outflow allocated to natural recharge) as further described in *Section 9 Water Budget Information* of the 2021 Alternative GSP. During that same time, Zone 7 artificially recharged 3,747 AF in the 2025 WY. Since 1974, Zone 7 has artificially recharged 32,633 AF more than it has pumped.

Approximately 39% of the municipal groundwater pumping used was produced from groundwater pumped by Zone 7's retailers (i.e., the City of Pleasanton, City of Livermore, CWS, and DSRSD). The retailers are permitted by contract to pump a Groundwater Pumping Quota (GPQ) (accounted for on a CY basis) without having to pay a replenishment fee to Zone 7. They can carry forward any unpumped GPQ (up to 20% of their GPQ). The retailer's GPQ and total pumping for the 2025 CY (in AF) are shown in **Table 5** below. None of the retailers pumped more than their respective GPQ in 2025 CY.

Table 5. Retailer Groundwater Extractions vs. Groundwater Pumping Quota (GPQ)*

Retailer	GPQ (AF)	Carryover from 2024 CY (AF)	Pumped in 2025 CY (AF)	Carryover to 2026*** (AF)
City of Pleasanton	3,500	700	0	700
Cal Water Service	3,069	614	2,946	614
DSRSD (pumped by Zone 7)	645	0	645	0
City of Livermore (not used)**	31	-	0	-
Total	**7,214**	**1,314**	**3,591**	**1,314**

* = All values accounted for and reported on a Calendar Year (CY) basis
** = Livermore no longer pumps groundwater, GPQ not included in totals or carryover.
*** = Maximum of 20% of GPQ can be carried over
AF = acre-feet; CY = Calendar Year; DSRSD = Dublin San Ramon Service District

Figure 9 shows the general location and volume of groundwater extractions occurring throughout the Basin in the 2025 WY. A large majority of groundwater production is municipal pumping and occurs within the Lower Aquifer of the Main Basin. There are no municipal supply wells within the Fringe and Upland Areas. There are domestic wells within the Basin, but the pumping volumes from these domestic wells are minimal (i.e., less than 2.0 AFY per well). Agricultural pumping is estimated by the Integrated Water Flow Model Demand Calculator (IDC) details are provided in *Section 9 Water Budget Information* of the 2021 Alternative GSP.

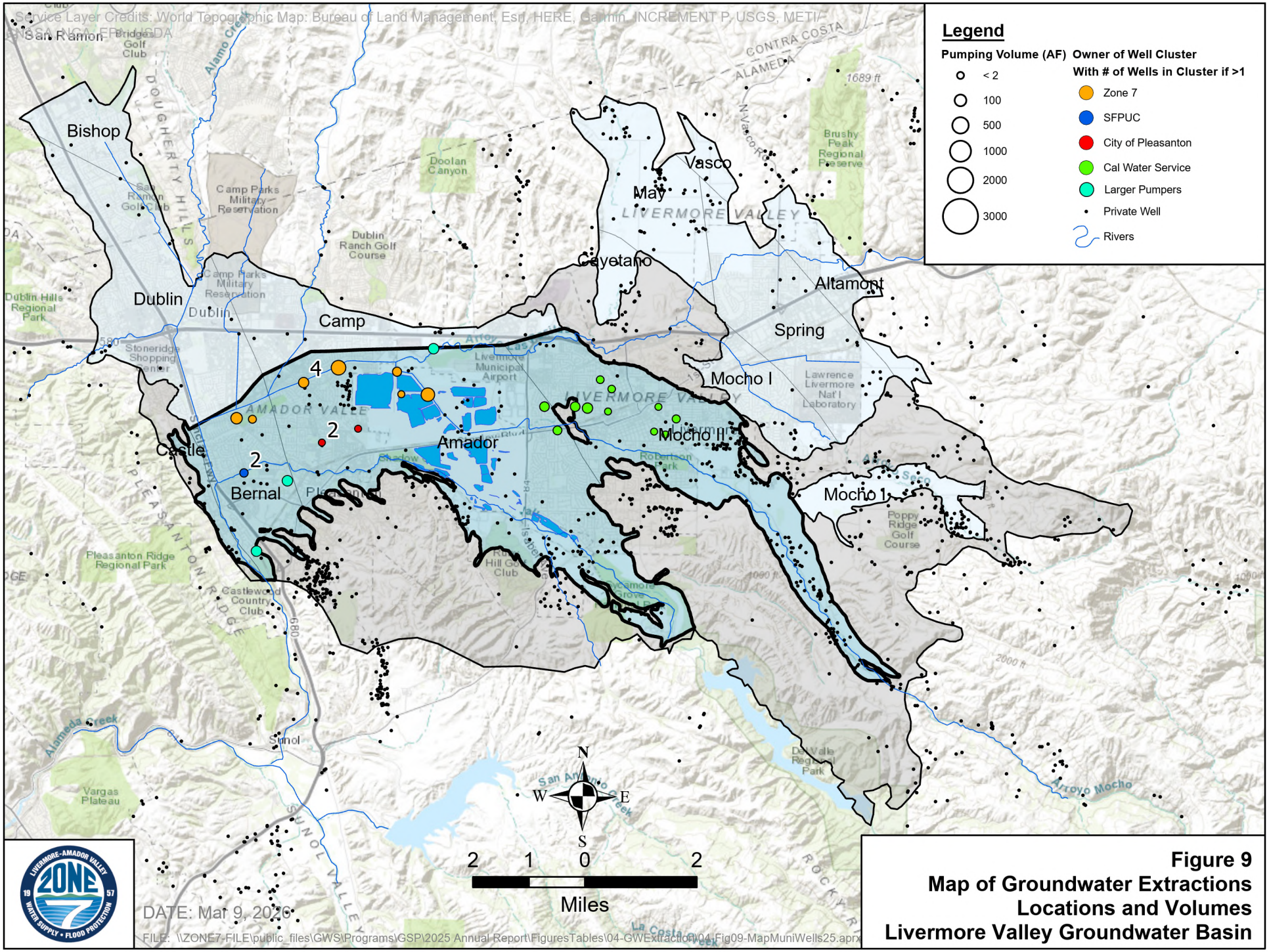


Figure 9
Map of Groundwater Extractions Locations and Volumes
Livermore Valley Groundwater Basin

5. Surface Water Data

☑ *§ 356.2 (b) (3)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.

5.1. Surface Water Supply

Zone 7 ensures that local water supplies (e.g., groundwater) are not depleted by importing approximately 80% of the Basin's water supply from the State Water Project (SWP) to be delivered to Zone 7's retailers and agricultural customers, and by recharging the Main Basin with surplus surface water when available ("artificial recharge"). Details regarding the surface water supply sources and contract amounts are provided in *Section 7.7.6 Source and Point of Delivery for Imported Water Supplies* of the 2021 Alternative GSP.

In accordance with DWR's accounting time-interval of SWP water, the allocation totals are accounted for by Calendar Year (CY). **Table 6** shows Zone 7's water supplies (imported and local water supplies) and demands for 2025 CY and the amounts being carried over to the 2026 CY. All deliveries of imported surface water are measured with electromagnetic flow meters and are accurate to within 1%.

Zone 7 had a total of 119,200 AF available surface water supplies as carryover from 2024 CY. New supplies include the 50% (40,300 AF) of Zone 7's maximum SWP Table A allocation, water previously stored in Kern County Groundwater Subbasin ("Kern Subbasin") water banking facilities, and Local Water. Total available surface water supplies for the 2025 CY were 169,000 AF. Zone 7 used 34,500 AF of these available supplies and banked an additional 9,000 AF, for a total surface water demand of 43,500 AF in the 2025 CY. The remaining unused supply of 125,500 AF was carried over for the 2026 CY.

Table 6. Imported and Local Surface Water Supplies by Source and Sector (AF)*

Source	2024 Carryover (Storage Beginning 2025)	Added in 2025 (New Water Available)	Imported to Zone 7 in 2025 (Water Used)	Transferred in 2025 (Water Banked)	2025 Carryover (Storage Available in 2026)
State Water Project	**9,200**	**40,300**	**26,500**	**9,000**	**14,000**
Table A (50% Allocation)	0	40,300	17,300	5,000	18,000
Article 56	9,200	0	9,200	0	0
Article 21	0	0	0	0	0
Transfer to SWP Contractor (W5)	0	0	0	4,000**	-4,000
Kern Subbasin Water Banks	**102,000**	**4,500**	**0**	**0**	**106,500**
Semitropic	75,100	4,500	0	0	79,600
Cawelo	26,900	0	0	0	26,900
Other Imported	**0**	**0**	**0**	**0**	**0**
Yuba/Dry Year Transfer	0	0	0	0	0
Mojave Water Agency	0	0	0	0	0
SUBTOTAL	**111,200**	**44,800**	**26,500**	**9,000**	**120,500**
TOTAL LOCAL: Lake Del Valle (AV Water Rights)	**8,000**	**5,000**	**8,000**	**0**	**5,000**
TOTAL	**119,200**	**49,800**	**34,500**	**9,000**	**125,500**

2025 CY TOTALS	SUPPLY (2024 Carryover + New Water Available)	DEMAND (Water Used + Water Banked)	UNUSED (Carryover to 2026)
TOTAL	**169,000**	**43,500**	**125,500**

* = All values accounted for and reported on a Calendar Year (CY) basis
**= Sold
AF = acre-feet; AV = Arroyo Valle

5.2. Surface Water Monitoring

One new stream gauging station, Sinbad Creek at Sunol Glen Elementary School (SV_SGE), was installed in September 2024 (2024 WY) near downtown Sunol, outside the Livermore Valley Groundwater Basin. The 2025 WY was the first year that Zone 7 continuously monitored flows at this location. Another stream gauging station was installed in November 2025 (2026 WY) along Dublin Creek at Interstate 680 (DC_I680) and will be added to the upcoming Surface Water Monitoring Program for the 2026 WY. A map of the Surface Water Monitoring Program is provided in **Appendix B** and is further detailed in *Section 5.2.1: Existing Monitoring and Management Programs* and *Section 14.2.7.2: Other Monitoring Networks – Surface Water Monitoring Program* of the 2021 Alternative GSP.

Table 7 shown below summarizes natural inflows from the upper watershed into the three main recharging stream reaches during the 2025 WY. DWR did not release any water from Lake Del Valle into the Arroyo Valle for flood control (i.e., flood releases) during the 2025 WY. **Table 8** summarizes the South Bay Aqueduct (SBA) releases to the recharging streams for "artificial" (or "conservation") recharge during the 2025 WY. "Live stream" conditions were maintained in the Arroyo Valle for 93% of the water year from natural and artificial flows, supporting recharge, water rights, habitat, and preventing dry channel conditions. The Arroyo Valle at Pleasanton gauge (ADVP) monitored "live stream" flow conditions. Zone 7 provided approximately 801 AF to the East Bay Regional Park District (EBRPD), sourced primarily from SBA_TO2_AV releases, to maintain recreational lake levels at Shadow Cliffs. A total of 24,537 AF of water flowed out of the Livermore-Amador Valley watershed, past Arroyo de la Laguna at Verona (ADLLV), which represents 51% of the 30-year annual average. **Table 9** summarizes peak flows and average annual flows along each principal stream during the 2025 WY in units of cubic feet per second (cfs)**.** Water quality results from all stations sampled during the 2025 WY were used to identify and monitor the quality of water recharging to and discharging from the Basin and are presented in **Appendix E.**

Table 7. Natural Flows from Upper Watershed, 2025 WY

Station	Stream	Natural Flow (AF)	Percent of 30-Year Average
AVBLC*	Arroyo Valle	10,596	44%
AMNL	Arroyo Mocho	1,081	32%
ALPL	Arroyo Las Positas	3,308	56%
TOTAL Natural Inflow		**14,985**	**45%**

* Natural flow into Lake Del Valle
AF = acre-feet; WY = Water Year

Table 8. South Bay Aqueduct Releases, 2025 WY

Station	Stream	Released (AF)	Percent of 30-Year Average
SBA_TO2_AV	Arroyo Valle	6,138	184%
SBA_AM	Arroyo Mocho	0	0%
SBA_ALTC	Arroyo Las Positas	0	0%*
TOTAL SBA Releases		**6,138**	**88%**

* No releases from SBA_ALTC since 2016
AF = acre-feet; SBA = South Bay Aqueduct; WY = Water Year

Table 9. Peak and Annual Mean Flows, 2025 WY

Stream	Station	Peak (cfs)	Annual Mean (cfs)
Arroyo Valle	ADVP	181	2.6
Arroyo Mocho	AM_KB	302	0.7
Arroyo Las Positas	ALPL	667	4.6
Arroyo de la Laguna	ADLLV	4,270	33.9

cfs = cubic feet per second; WY = Water Year

6. Total Water Use

☑ *§ 356.2 (b) (4)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

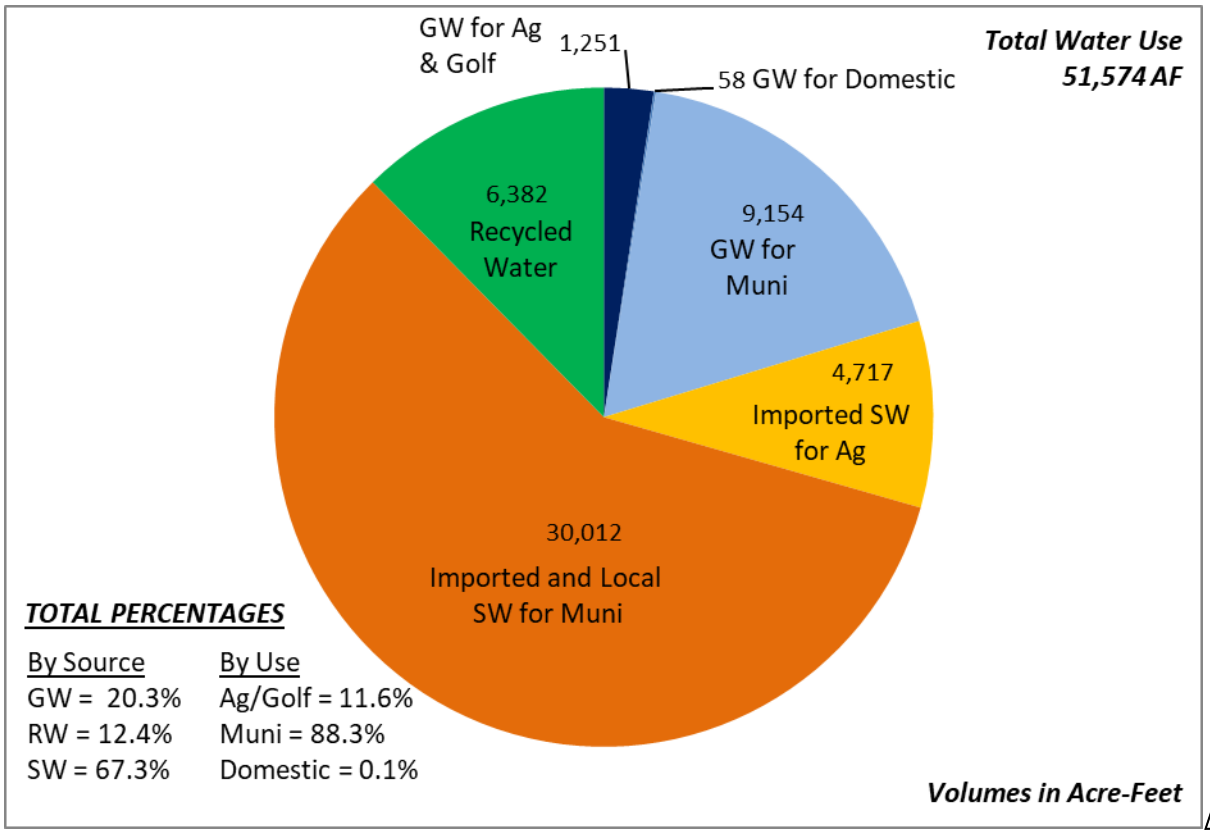
(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

The volume of water produced and used in the Basin over the 2025 WY is shown by water source type and by water use sector in **Figure 10** and **Table 10** below.

Groundwater production in the Basin (including by Zone 7, retailers, agriculture, domestic, etc.) supplied about 20.3% (10,463 AF) of the total Basin-wide water demand in the 2025 WY. This amount does not include groundwater pumped to waste or brine exports. Total surface water used in the Basin supplied about 67.3% (34,729 AF) of the total Basin-wide water demand, which is the volume of groundwater conserved instead of being pumped to meet this demand. This number varies from the number reported in **Table 6** due to different reporting timeframes (e.g. WY vs. CY). The final 12.4% (6,382 AF) of water demands were satisfied by recycled water supplies, 96% (6,149 AF) of which were used for urban irrigation, and 4% (233 AF) of which was used for golf course irrigation.

Of the total water use within the Basin during the 2025 WY (including groundwater, surface water, and recycled water), about 87.9% (45,315 AF) was used by the municipal sector, 12.0% (6,201 AF) was used by the agricultural sector (including golf courses), and 0.1% (58 AF) was used by the domestic sector. A more detailed breakdown of water supply and uses by source and sector within the Basin is provided in **Figure 11**. The historical Basin-wide production and relative percentage of groundwater production from the 1974 to 2025 WYs are show in **Figure 12.**

Figure 10: Pie-Chart Summary of Total Water Use by Source and Sector



Ag = Agriculture; Muni = Municipal; GW= Groundwater; RW = Recycled Water; SW = Surface Water

Table 10. Summary of Total Water Use by Source and Sector

Water Use Sector	Water Source	2025 WY Water Use (AF)
Municipal	Groundwater	9,154
	Imported and Local Surface Water	30,012
	Recycled Water	6,149
Agriculture/Golf	Groundwater	1,251
	Imported Surface Water	4,717
	Recycled Water	233
Domestic	Groundwater	58
Total		**51,574**

*Volume may vary from Groundwater Extractions due to pump to waste

AF = acre-feet; WY = Water Year

Methods of measurement and accuracy of measurements for groundwater extraction and surface water data are summarized in **Section 4** and **Section 5**, respectively.

Figure 11 - Livermore-Amador Valley Water Supply & Use (in Thousands of Acre-Feet)

2025 Water Year (except where noted)

* 2025 Calendar Year

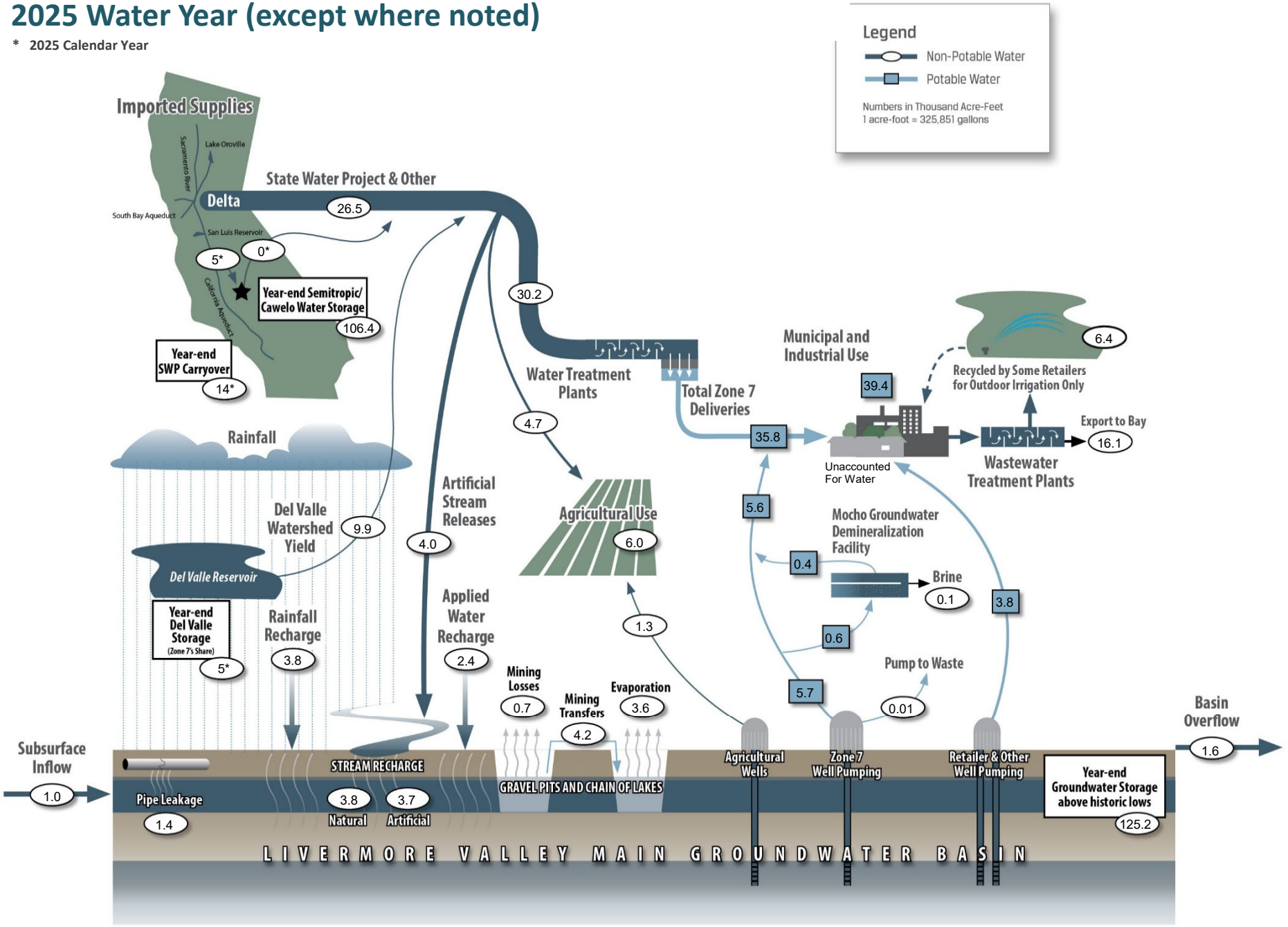
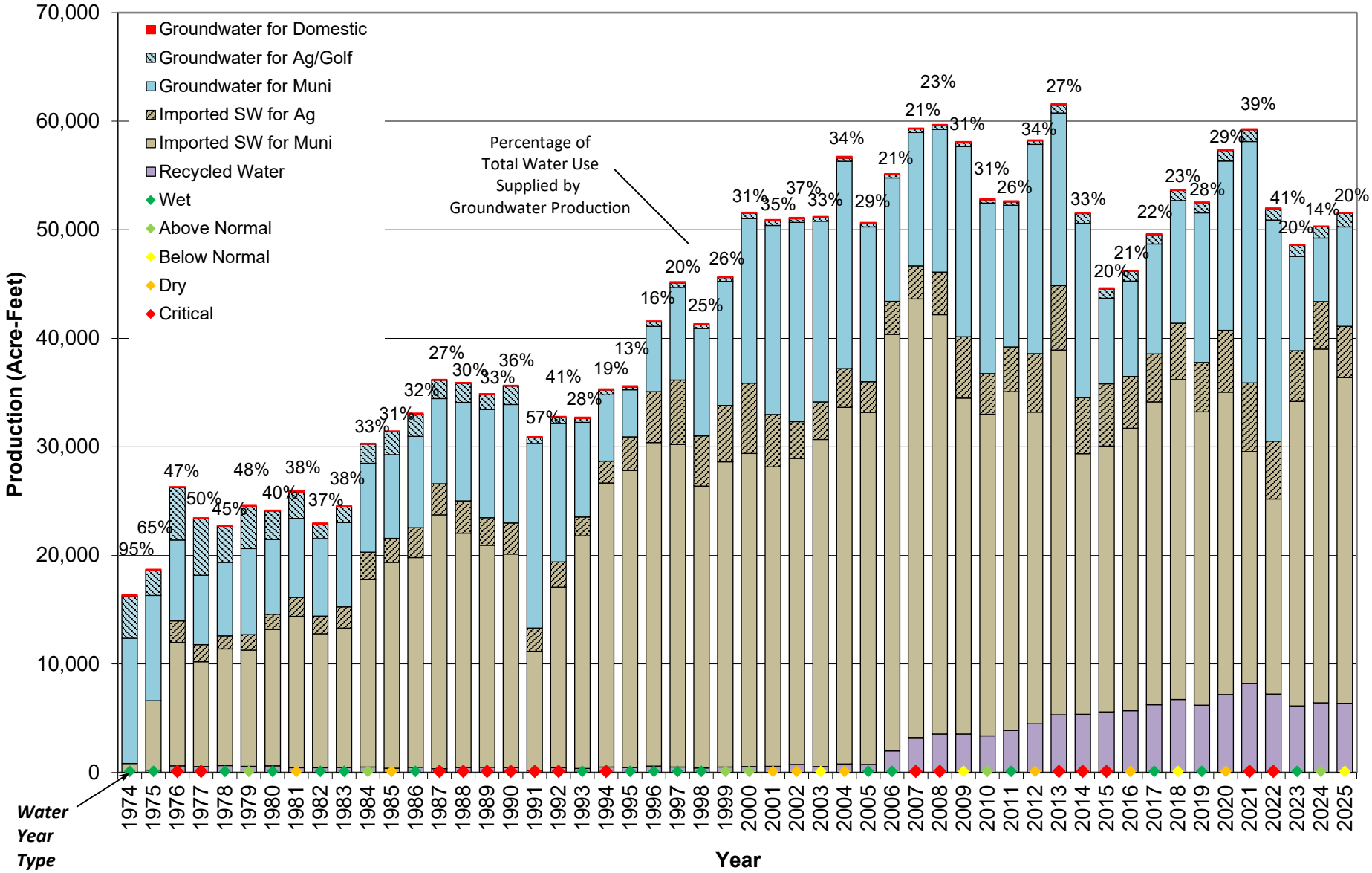


FIGURE 12
VALLEY WATER PRODUCTION FROM IMPORTED WATER AND GROUNDWATER
1974 TO 2025 WATER YEARS



3/11/2026
\\ZONE7-FILE\public_files\GWS\Programs\GSP\2025 Annual Report\FiguresTables\06-TotalWaterUse\06-Fig 11, 13-PieChart, Water Production 74-25.xlsx

7. Change in Groundwater Storage

☑ *§ 356.2 (b) (4)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(4) Change in groundwater in storage shall include the following:

(A) Change in groundwater in storage maps for each principal aquifer in the basin.

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

To avoid significant depletion of groundwater storage, Zone 7 operates the Basin such that groundwater storage remains between the historic full Basin volume (254 thousand acre-feet, TAF) and the historic low storage volume (128 TAF), or about one half of total storage volume. This 126 TAF (254 TAF – 128 TAF) is considered the Operational Storage. Groundwater below this historic low storage volume is regarded as Reserve Storage that is unavailable during nonemergency conditions. Most of the groundwater storage is contained in the Main Basin, which is characterized by the largest saturated thickness of aquifer materials.

Zone 7 currently uses two methods for calculating groundwater storage in the Basin: The Groundwater Elevation (GWE) method and the Hydrologic Inventory (HI) method. The GWE method uses groundwater level data and storage coefficients for "nodes" (originally developed by DWR in 1974) to estimate the total volume of water in the Basin (see *Section 8.4 Groundwater Storage* of the 2021 Alternative GSP). Zone 7 recently updated its Hydrogeologic Conceptual Model (HCM) and numerical groundwater flow model as part of its ongoing *Livermore Valley Hydrogeologic Investigations and Groundwater Model Update Project* (see **Section 8.4.4** for further details). As part of the 2026 Five-Year Periodic Evaluation of the Alternative GSP, Zone 7 will assess the feasibility of using the updated HCM and numerical groundwater flow model to calculate groundwater storage either as a replacement for or to supplement the existing GWE and HI methods.

The HI method, also known as the Water Budget, involves an accounting of all inflows and outflows and derivation of the change in storage as the residual of the water budget equation (see *Section 8.4 Groundwater Storage* of the 2021 Alternative GSP). Storage volumes from the two methods are averaged to quantify the total storage of the Basin.

The GWE method yielded a total storage of 247.9 TAF at the end of 2025 WY, which is 1.6 TAF less than the GWE value calculated for the 2024 WY. **Figure 13** displays the calculated change in groundwater storage for each node in the Main Basin and the change in storage in from Fall 2024 to Fall 2025 for each aquifer within the node.

The HI method produced a total storage value of 258.5 TAF for the end of 2025 WY, which is 0.3 TAF less than the end of 2024 WY HI value. Results of the HI method for the 2025 WY are summarized in **Table 11** below. All HI components are listed in **Appendix D**. **Figure 14** shows the annual change in groundwater storage and cumulative change in groundwater storage for the Basin along with the water year type from 1974 WY to 2025 WY.

Table 11: HI Method Groundwater Storage Supply and Demand Volumes, 2025 WY (AF)

Category	Sustainable Average	2025 WY	% of Average
SUPPLIES	**19,800**	**16,208**	**82%**
Stream Recharge Artificial	5,300	3,747	71%
Stream Recharge Natural	6,600	3,805	58%
Rainfall Recharge	4,300	3,845	89%
Applied Water Recharge	1,600	2,406	150%
Pipe Leakage	1,000	1,405	140%
Subsurface Inflow	1,000	1,000	100%
DEMANDS	**18,800**	**16,559**	**88%**
Zone 7 Pumping excluding DSRSD	5,300	5,110	97%
Other Pumping	8,175	4,233	52%
Agricultural and Golf Pumping	625	1,251	200%
Mining Losses	1,400	700	50%
Evapotranspiration (Eto)	3,200	3,631	113%
Subsurface Outflow	100	1,634	1634%
NET CHANGE (SUPPLY – DEMAND)	**1,000**	**-351**	**-**
TOTAL STORAGE (HI Method)	**-**	**258,486**	**-**

AF = acre-feet; Avg = average; DSRSD = Dublin San Ramon Services District; HI = Hydrologic Inventory

The total groundwater storage for the Basin is computed by averaging the storage estimates from the GWE and HI methods. As shown in **Table 12** below, the average total groundwater in storage at the end of 2025 WY was calculated to be 253.2 TAF, which is about 1.0 TAF less than the 2024 WY average total storage value of 254.2 TAF. This equates to approximately 125.2 TAF of

groundwater available as Operational Storage, which is just under 100% of the total operational storage capacity (i.e., 126 TAF). The minimal change in storage can be attributed to nearly full storage at the end of the 2024 WY coupled with below-average recharge and a slight increase in groundwater demands compared to the previous two WYs, and is consistent with the generally steady or slightly decreasing groundwater levels as discussed in **Sections 3.3 and 3.4.** The "historic full" Basin volume (i.e., 254 TAF) may be revised as part of the 2026 Five-Year Periodic Evaluation of the Alternative GSP based on updated calculations from the GWE and HI method and relevant information obtained from Zone 7's ongoing *Livermore Valley Hydrogeologic Investigations and Groundwater Model Update Project* (see **Section 8.4.4** for further details).

Table 12: Groundwater Storage Summary, 2025 WY (in TAF)*

Storage Calculation Method	End of 2024 WY	End of 2025 WY	Change in Storage
GWE Method	249.5	247.9	-1.6
HI Method	258.8	258.5	-0.3
TOTAL STORAGE (Average of GWE and HI Methods)	**254.2**	**253.2**	**-1.0**
Operational Storage*	126.2	125.2	-1.0

*Numbers rounded to nearest tenth TAF
** Operational Storage = Total Storage - Reserve Storage (i.e., 128 TAF)
GWE = Groundwater Elevation; HI = Hydrologic Inventory; TAF = Thousand acre-feet

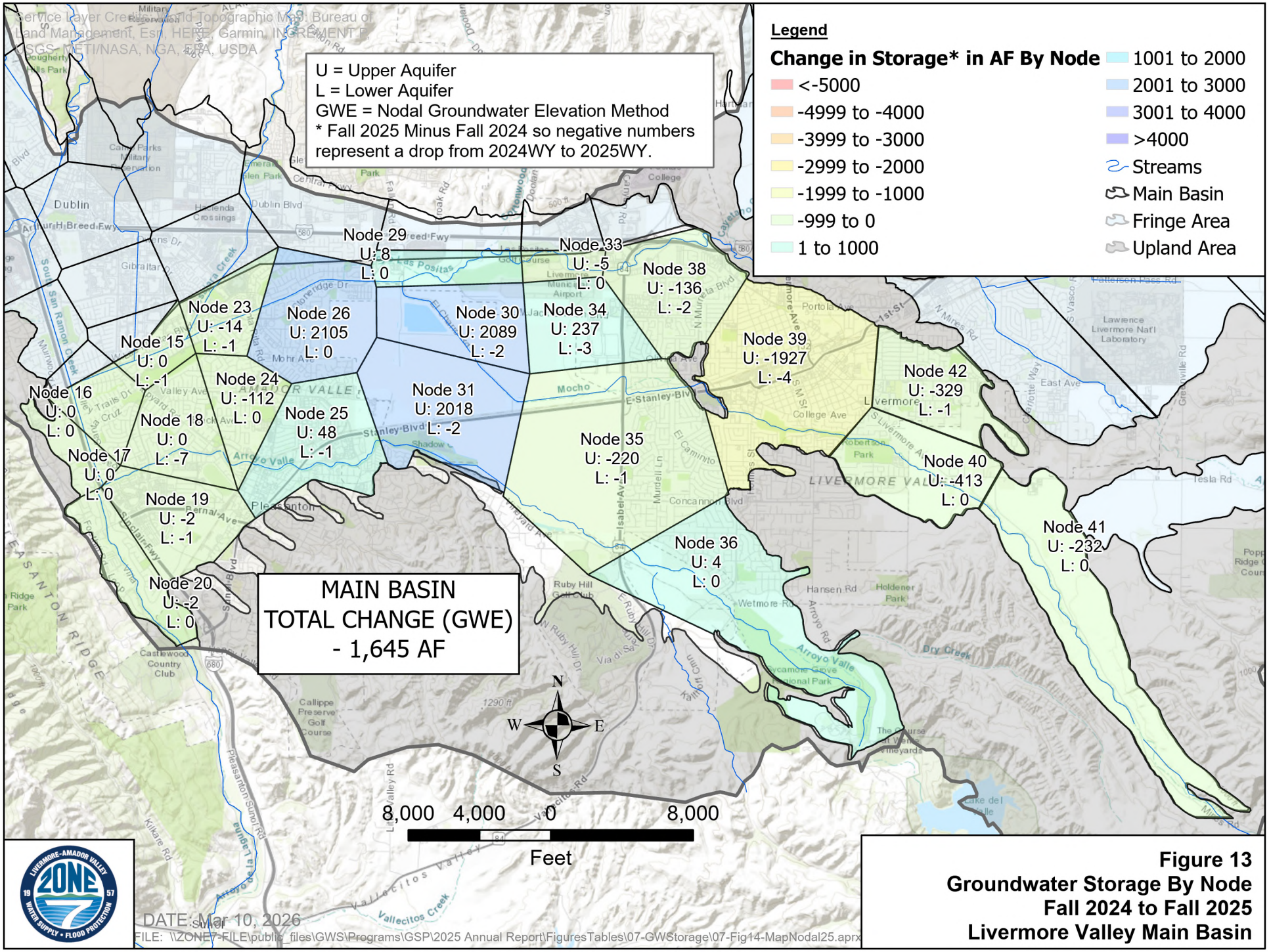
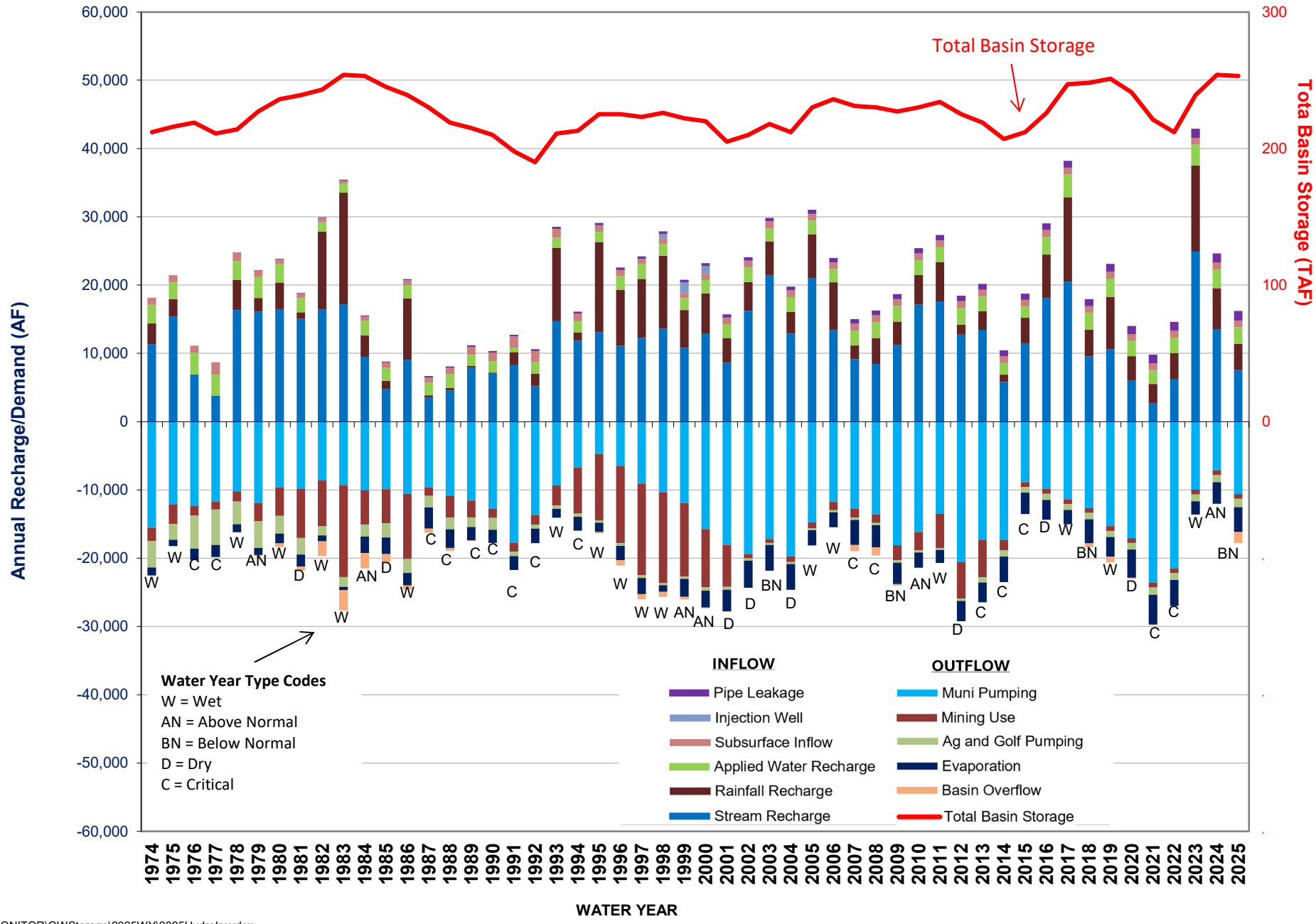


Figure 13
Groundwater Storage By Node
Fall 2024 to Fall 2025
Livermore Valley Main Basin

FIGURE 14
GRAPH OF GROUNDWATER STORAGE 1974 - 2025 WATER YEARS
LIVERMORE VALLEY GROUNDWATER BASIN



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2/10/2026

Figure 14

8. Plan Implementation

☑ *§ 356.2 (b) (4)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

8.1. SGMA Monitoring Activities and Current Conditions

8.1.1. Description

The 2021 Alternative GSP established and defined Undesirable Results (URs), Minimum Thresholds (MTs), and Measurable Objectives (MOs) for each applicable Sustainable Management Criteria (SMC). For more information on how these were established, refer to the 2021 Alternative GSP. **Table 13** summarizes the five Sustainability Indicators for which SMCs are defined within the Basin,[4] their associated URs, and MTs. The table also includes the 2025 WY status for each indicator and any action taken in the 2025 WY or planned for the upcoming water year. Additionally, each SMC is discussed in detail below. **Figure 15** shows the location of Representative Monitoring Sites (RMS) for groundwater levels (RMS-WL), groundwater quality (RMS-WQ), and Interconnected Surface Water (RMS-ICSW) monitoring networks, referred to collectively as the "SGMA Representative Monitoring Network". Background information regarding the SGMA Representative Monitoring Networks is provided in **Appendix B** and detailed in *Section 14. Monitoring Network* of the 2021 Alternative GSP.

8.1.2. Chronic Lowering of Groundwater Levels

As described in **Section 3.2** and shown in **Table 2**, water levels at all RMS-WL wells continued to remain above their respective MOs and MTs in all RMS-WL wells throughout both the seasonal high (Spring) and seasonal low (Fall) monitoring events during the 2025 WY. Updated hydrographs of groundwater elevations are presented in **Appendix C** for each of the wells in the RMS-WL monitoring network.

8.1.3. Depletion of Groundwater Storage

As described in *Section 13.2 Reduction of Groundwater Storage* of the 2021 Alternative GSP, the wells and criteria used to define URs for Depletion of Groundwater Storage are consistent with those used to define URs for Chronic Lowering of Groundwater. As described above in **Section 8.1.2**, water levels at all RMS-WL wells continued to remain above their respective MTs and MOs in both the season high (Spring) and seasonal low (Fall) 2025 WY monitoring events.

[4] Seawater intrusion is not occurring in the Basin and thus no SMCs have been defined for this Sustainability Indicator.

Therefore, no URs were observed within the Basin during the 2025 WY. More information on groundwater storage may be found in **Section 7** above and in **Appendix D**.

8.1.4. Seawater Intrusion

The Basin is not a coastal basin subject to seawater intrusion. Therefore, this sustainability indicator is not applicable, and no monitoring activities were conducted.

8.1.5. Degradation of Groundwater Quality

Zone 7's 2021 Alternative GSP also established the SMCs for Degraded Water Quality as shown in **Table 13**. Results of the 2025 WY Groundwater Quality Program are discussed below for each Constituent of Concern (COC). Additional information on groundwater quality may be found in **Appendix E.**

As further detailed in **Table 14** below, no wells were added or removed from the Groundwater Elevation Monitoring Program during the 2025 WY, however several wells were unable to be sampled due to obstructions or access limitations. Wells unable to be monitored will not be removed from the program because the intention is to clear the obstruction or regain access and continue monitoring. The Groundwater Quality Program will be re-evaluated during the next Five-year Periodic Evaluation.

Table 14: Groundwater Quality Program Changes during the 2025 Water Year

Status	Location Name	Location Type	Reason	Note
Added to Program	None	N/A	N/A	N/A
Removed from Program	None	N/A	N/A	N/A
Unable to be Sampled	3S1E01J004	Well	No sampling Port	No sample port available. Will be removed from 2026 WY GQ program.
	3S1E08N001	Well	Obstruction	Well paved over . Zone 7 is working to evaluate the status of the well and clear the asphalt to regain access.
	3S1E09H013	Well	Inaccessible	Zone 7 working to access the well.
	3S1E11B001	Well	Obstruction	Well damaged and obstructed. Zone 7 working to clear obstruction.

Status	Location Name	Location Type	Reason	Note
	3S1E11G003	Well	Obstruction	Bent casing does not allow sampling equipment to be inserted into the well. Zone 7 working to fix.
	3S1E11G004	Well	Obstruction	Bent casing does not allow sampling equipment to be inserted into the well. Zone 7 working to fix.
	3S1E13P007	Well	Obstruction	Bent casing does not allow sampling equipment to be inserted into the well. Zone 7 working to fix.
	3S1E13P008	Well	Obstruction	Bent casing does not allow sampling equipment to be inserted into the well. Zone 7 working to fix.
	3S1E15F003	Well	Inaccessible	Well is inaccessible for sampling equipment and access. Zone 7 working to resolve.
	3S1E15J003	Well	Inaccessible	Sample tap currently inaccessible. Zone 7 working to resolve.
	3S1E16B001	Well	Obstruction	Bent casing does not allow sampling equipment to be inserted into the well. Zone 7 working to fix.
	3S3E19C002	Well	Inaccessible	Sample faucet inaccessible. Zone 7 working to resolve.

8.1.5.1. Total Dissolved Solids (TDS)

Table 15 shows Total Dissolved Solids (TDS) results for the 2025 WY RMS-WQ relative to the MOs and MTs defined in the 2021 Alternative GSP. TDS was detected above the MT at one RMS-WQ (3S2E08H003 [8H3]), which had a detection of 746 milligrams per Liter (mg/L), 28 mg/L above the MT. Concentrations were below the MTs in all other RMS-WQs.

Four wells had concentrations above the MOs during the 2025 WY monitoring period including two wells in the Main Basin Upper Aquifer (3S1E11G001 [11G1] and 3S2E08K002 [8K2]), and two in the Main Basin Lower Aquifer (3S1E20C008 [20C8] and 3S2E08H003 [8H3]).

As described in *Section 13.4.1 Undesirable Results for Degraded Water Quality* of the 2021 Alternative GSP, *URs for Degraded Water Quality are defined to occur within the Basin if and when MTs are exceeded for any of the identified COCs in greater than 25% the RMS-WQs at least two (2) consecutive years as a result of groundwater recharge or extraction, such that they cannot be managed to provide drinking water supply (i.e., that treatment or blending is not possible or practicable).* Thus, no URs were observed for TDS for the 2025 WY.

8.1.5.2. Nitrates

Table 16 shows nitrate (as nitrogen, NO_3-N) results for the 2025 WY in RMS-WQ relative to the MOs and MTs defined in the 2021 Alternative GSP. Concentrations were below the MTs in all wells and above the MOs in three wells, one in the Main Basin Upper Aquifer (3S1E11G001 [11G1]), one in the Main Basin Lower Aquifer (3S2E08H003 [8H3]), and one in the Fringe Area (3S2E24A001 [24A1]). Thus, no URs were observed for Nitrate for the 2025 WY.

8.1.5.3. Boron

Boron exists at elevated concentrations in several areas of the Basin. These localized concentrations of boron have been relatively stable for many years. **Table 17** shows boron results for the 2025 WY in RMS-WQ relative to the MOs and MTs defined in the 2021 Alternative GSP. Concentrations were below the MTs in all wells but were above the MOs in one well in the Fringe Area (3S1E06F003 [6F3]). Thus, no URs were observed for Boron for the 2025 WY.

8.1.5.4. Chromium

Table 18 shows total chromium (Cr) results for the 2025 WY in RMS-WQ relative to the MOs and MTs defined in the 2021 Alternative GSP. Concentrations were below the MTs and MOs in all wells. Thus, no URs were observed for Chromium for the 2025 WY. Chromium concentrations did not exceed the 50 micrograms per Liter (µg/L) threshold in any wells for the 2025 WY; however, there are two areas that historically have had concentrations above the 50 µg/L threshold and continue to be monitored.

8.1.5.5. Per- and Polyfluoroalkyl Substances (PFAS)

On April 10, 2024, the Environmental Protection Agency (EPA) announced the finalized Maximum Contaminant Levels (MCLs) for six PFAS compounds as shown in **Table 19-A**. On May 14, 2025, the EPA announced its intention to revise the final rule of the National Primary Drinking Water Regulation by extending the compliance deadlines for PFOS and PFOA to 2031 and rescinding the regulations in order to reconsider regulatory determinations for the four other PFAS (PFBS, PFHxS, PFNA, and HFPO_DA). Final rules are anticipated to be released by Summer 2026.

On October 29, 2025 (2026 WY), the State Water Resources Control Board's (SWRCB's) Division of Drinking Water (DDW) issued new and revised drinking water notification levels and response levels, which are health-based advisory levels, for PFOA, PFOS, PFHxS, and PFHxA, as shown in **Table 19-B**.

Table 19-A: PFAS Regulatory Limits (Established by EPA)

PFAS Compound	Maximum Contaminant Level*
PFOA	4.0 ppt
PFOS	4.0 ppt
PFHxS	10 ppt
PFNA	10 ppt
HFPO-DA (GenX Chemicals)	10 ppt

PFAS Compound	Maximum Contaminant Level*
Mixtures of two of more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index

*Enforceable level determined by running annual averages at the sampling point
EPA = Environmental Protection Agency; ppt = parts per trillion;
PFAS = Per- and polyfluoroalkyl substances;
PFOA = Perfluorooctanoic acid;
PFOS = Perfluorooctane sulfonate;
PFHxS = Perfluorohexanesulfonic acid;
PFNA = Perfluorononanoic acid;
HFPO-DA = Hexafluoropropylene oxide dimer acid; PFBS = Perfluorobutane sulfonate

Table 19-B: PFAS Notification and Response Levels (Issued by DDW)

PFAS Compound	Notification Level (µg/L)	Response Level (µg/L)
PFOA	4.0	10
PFOS	4.0	40
PFHxS	3.0	10
PFHxA	1,000	10,000
PFBS	500	5,000

*DDW = California's State Water Resources Control Board's Division of Drinking Water
PFAS = Per- and polyfluoroalkyl substances;
PFOA = Perfluorooctanoic acid;
PFOS = Perfluorooctane sulfonate;
PFHxS = Perfluorohexanesulfonic acid;
PFHxA = Perfluorohexanoic Acid;
PFBS = perfluorobutanesulfonic acid

Zone 7 has already adjusted its PFAS treatment and blending practices to comply with federal standards ahead of EPA's compliance date and continues to comply with the new and updated Response Levels established by the State Water Resources Control Board's (SWRCB's) Division of Drinking Water (DDW). In addition, Zone 7 has developed a PFAS management strategy for which more information may be found in **Section 8.2.4.5**. SMCs for PFAS were not established in the current, DWR-approved 2021 Alternative GSP. As further described in **Section 8.2.4.5**, Zone 7 continues to sample for PFAS, collaborate with San Francisco Bay Regional Water Quality Control Board (RWQCB) to identify possible PFAS sources, and perform PFAS mobilization modeling to advance its understanding of PFAS conditions within the Basin. Any modification to Degraded Water Quality SMCs, including SMC assignments for PFAS compounds, will be addressed as part of its second Five-Year Periodic Evaluation of the Alternative GSP (2026 Alternative GSP) which is due to DWR by December 21, 2026.

Table 20 shows 2025 WY PFAS sampling results from the designated RMS-WQ wells. Additional information on PFAS may be found in **Appendix E**. The majority of wells with PFOS concentrations that were sampled above the EPA's 4 parts per trillion (ppt) MCL during the 2025 WY appear to

be within an area in both the Upper and Lower Aquifers that stretches from the east of the Livermore Municipal Airport (north of the mining area) to Pleasanton's Wellfield (west of the mining area) and to Zone 7's Mocho Wellfield (northwest of the mining area). Several upper aquifer wells were added to the 2025 WY PFAS sampling program in the western portion of the Basin. The PFAS footprint in the upper aquifer is more laterally extensive with detections in all subareas of the Main Basin, when comparing the footprint to the lower aquifer, where results suggest the Bernal subarea has not been substantially impacted. Groundwater production from municipal pumping wells, particularly in the Amador and Bernal subareas, do not draw water from the laterally-extensive impacted upper aquifer which only extends up to approximately 100 feet below ground surface in most areas of the Main Basin. Zone 7 continues to sample for and manage PFAS in accordance with its PFAS management strategy (**Section 8.2.4.5**).

8.1.6. Land Subsidence

For land subsidence monitoring, MTs were not exceeded at any applicable proxy RMS-WL sites, and ground surface elevations generally rose slightly (up to 0.1 ft) throughout the 2025 WY.

Figure 16 shows the land surface elevation change (approximately 100-meter resolution) from Fall 2024 to Fall 2025. The figure illustrates that land surface elevations generally rose (light grey) within 0.1 ft in the central and northern areas of the Basin and fluctuated within +/- 0.1 ft in the southern area of the Basin compared to the 2024 WY. These elevation changes are within the range Zone 7 considers to be "elastic deformation" (i.e., rebounds to the original elevation when groundwater levels return to previous levels). Some areas in the Fringe Area appear to have dropped more than 0.1 ft (indicated by orange) during the 2025 WY. The location of these changes and proximity to points of increased surface elevation change indicates that these areas are likely a reflection of mining activities and not land subsidence.

8.1.7. Depletions of Interconnected Surface Water

As described in **Section 3.2** and shown in **Table 3**, all but one RMS-ICSW well water levels remained above MOs and MTs during the seasonal low (Fall) and the seasonal high (Spring) monitoring events during the 2025 WY. One RMS-ICSW well, 3S2E23E001 (23E1), dropped below the MO and MT by 0.06 feet during the seasonal low (Fall) monitoring event, however all wells, including 23E1, were measured above their respective MTs and MOs during the seasonal high (Spring) monitoring event.

As described in *Section 13.6.1. Undesirable Results for Depletions of Interconnected Surface Water* of the 2021 Alternative GSP, URs for Depletions of ICSW will be experienced if and when Depletions of ICSW occur as a result of unsustainable groundwater extraction such that groundwater levels decline below their MTs in greater than 40% of the RMS-ICSW for more than two consecutive years. Thus, the one MT exceedance experienced in the RMS-ICSW monitoring network during the Fall 2025 WY monitoring event does not constitute a UR per the definition of the 2021 Alternative GSP.

Updated hydrographs of groundwater elevations are presented in **Appendix C** for each of the wells in the RMS-ICSW monitoring network. Groundwater Dependent Ecosystems are actively being studied, and SMCs for Depletion of Interconnected Surface Waters at each RMS-ICSW may be re-evaluated during the next Five-Year Periodic Evaluation of the Alternative GSP.

Table 13: Sustainable Management Criteria Status, 2025 WY

Sustainability Indicator	Undesirable Results Criteria	Minimum Threshold	2025 WY Status	Action Taken
Chronic Lowering of Groundwater Levels	Water levels in greater than 25% of the RMS-WLs decline below their respective MTs for two consecutive years.	Historic low minus maximum annual rate of groundwater level change, or historic low if maximum annual rate of groundwater level change is not available.	MOs and MTs were not exceeded at any RMS-WLs, see **Table 2**.	Continue to monitor.
Depletion of Groundwater Storage	Water levels in greater than 25% of the RMS-WLs decline below their respective MTs for two consecutive years. Not applicable to Upland Management Area.	Water Level SMCs used as proxy.	MOs and MTs were not exceeded at any RMS-WLs, see **Table 2**.	Continue to monitor.
Degradation of Groundwater Quality	If MTs are exceeded for any of the identified constituents of concern in greater than 25% of the RMS-WQs at least two (2) consecutive years as a result of SGMA-related groundwater management activities such that they cannot be managed to provide drinking water supply (i.e., that treatment or blending is not possible or practicable).	TDS > 1,000 milligrams per liter (mg/L) or 2015 Baseline concentration plus maximum deviation, whichever is greater.	TDS was detected above the MT in one RMS-WQ (3S2E08H003) and was detected above the MO in four RMS-WQs (3S1E20C008, 3S1E11G001, 3S1E08K002, and 3S2E08H003), see **Table 15**. As defined in the 2021 Alt-GSP, a single MT exceedance does not trigger an UR for the 2025 WY.	Continue to monitor and increase municipal supply pumping, implement SMP, review feasibility of additional groundwater demineralization plants, and conduct artificial groundwater recharge with low TDS water.
		NO3 (as N) > 10 mg/L or 2015 Baseline concentration plus maximum deviation, whichever is greater.	Nitrate was not detected above the MT in any RMS-WQs; however, nitrate was detected above the MO in three RMS-WQs (3S1E11G001, 3S2E08H003, and 3S2E24A001), see **Table 16**. No URs have been triggered within the Basin.	Continue to monitor and implement NMP.
		Boron > 1.4 mg/L, or 2015 Baseline concentration plus maximum deviation, whichever is greater.	Boron was not detected above the MT in any RMS-WQs; however, Boron was detected above the MO in one RMS-WQ (3S1E06F003), see **Table 17**.	Continue to monitor.

Sustainability Indicator	Undesirable Results Criteria	Minimum Threshold	2025 WY Status	Action Taken
Degradation of Groundwater Quality (continued)			No URs have been triggered within the Basin.	
		Total Chromium > 0.050 mg/L, or 2015 Baseline concentration plus maximum deviation, whichever is greater.	Chromium was not detected above the MT in any RMS-WQs, see **Table 18**. No URs have been triggered within the Basin.	Continue to monitor.
		SMCs for PFAS in development.	Zone 7 continued to sample for PFAS compounds (see **Table 20**), worked to implement PFAS management strategy, adjusted pumping to meet new regulations, investigated treatment options, performed PFAS groundwater modeling, and completed PFAS treatment facilities.	Continue to monitor.
Land Subsidence	Water Level SMCs used as proxy for Main Basin and Fringe Management Area, and no more than 0.4 ft of irreversible land surface elevation decrease in one year. Not applicable to Upland Management Area.	Water Level SMCs used as proxy and irreversible land surface elevation decrease of 0.4 ft.	MTs were not exceeded at any applicable RMS-WLs and elastic fluctuations were detected at rates within +/- 0.1 ft throughout the 2025 WY, see **Figure 16**.	Continue to monitor.
Depletions of Interconnected Surface Water	If groundwater levels decline below their MTs in greater than 40% of the RMS-ICSWs for more than two consecutive years.	Historic low water levels or to be determined if historical water levels are not available.	The MO and MT was exceeded at one RMS-ICSW Site, well 3S2E23E001 (23E1), by 0.06 feet. See **Table 3**. No URs have been triggered within the Basin.	Continue to monitor. Resume releases into Arroyo Mocho to offset declining water levels if supply is available in 2026 WY.

8.2. Implementation of Projects and Management Actions

8.2.1. Overview

This section provides an update on the Projects and Management Actions (P/MAs) described in *Section 15 Projects and Management Actions* of the 2021 Alternative GSP. As demonstrated in the 2021 Alternative GSP and in this Annual Report, Zone 7 continues to sustainably manage the Basin through numerous interrelated programs to assess, manage, monitor, and protect groundwater supplies. Using the data collected from its robust monitoring programs, Zone 7 adaptively manages its groundwater supplies by considering current hydrologic conditions, municipal/industrial and agricultural water demands, water quality conditions, and future water supply/demand forecasts. In addition to continuing the monitoring programs that are critical to Zone 7's sustainable groundwater management, Zone 7 is also working to implement its PFAS management strategy as well as Salt and Nutrient management plans, improve long-term surface water supply reliability, seek conjunctive use opportunities, provide watershed protection, and support water recycling operations.

8.2.2. Water Supply Augmentation Projects

8.2.2.1. Existing Imported Water Supplies

Imported surface water supplies secured by Zone 7 for the 2025 WY are shown in **Table 6** and **Figure 11** and are summarized below:

- The SWP (deliveries via the SBA) allocation for the 2025 CY was 50% of Zone 7's maximum allocation (80,619 AF) or approximately 40,300 AF. Approximately 17,300 AF of this was imported via the SBA for the 2025 CY, 5,000 AF was transferred, 4,000 was sold, and the remaining 14,000 AF was carried over for the 2026 CY. Zone 7 also imported 9,200 AF of water from its Article 56 allocation (previous year's carryover). Zone 7 did not import any water that was banked at San Luis Reservoir (Article 21) during the 2025 CY.

- Zone 7 did not recover any water that was previously stored in the Kern Subbasin water banks (via Semitropic and Cawelo Water Districts) but did add 4,500 AF to its storage accounts during the 2025 CY. Zone 7 had a total of 106,500 AF stored in the Kern Subbasin at the end of the 2025 CY.

- Zone 7 did not import any water from the Lower River Yuba Accord (Yuba) or the Mojave Water Agency during the 2025 CY.

- Total imported surface water supplies in the 2025 CY (26,500 AF) supplied 70% of regional water demands.

- Total groundwater production in the Basin (including by Zone 7, retailers, agriculture, domestic, etc.) supplied about 20% of the total Basin-wide water demand in the 2025 WY.

- Of the 5,755 AF of groundwater pumped by Zone 7 (including pumped by Zone 7 for DSRSD) during the 2025 WY, about 5,624 AF went into production; the remaining 131 AF is accounted for in system losses and exported brine from the groundwater demineralization process.

- Zone 7's total produced groundwater was about 16% of the total treated water production that Zone 7 delivered to its retailers during the 2025 WY (on average, groundwater makes up about 16% of Zone 7's annual treated water deliveries).

8.2.2.2. Future Water Supply Projects

Zone 7 continued its strategy of securing the long-term reliability of the water supply system to meet the needs of both existing and future customers as summarized below:

- In the 2024 WY, Zone 7 filed a petition to split its water right permit to license water previously put to beneficial use and continue diverting surface water captured in Lake Del Valle from the upper Arroyo Valle. Under the existing permit, Zone 7's average annual yield from the upper Arroyo Valle is about 7,300 AFY. A pipeline and pump station connecting Lake I to the South Bay Aqueduct are included in Zone 7's Capital Improvement Plan (CIP, 2018-2028). Once in service, these projects will augment and capture storage of water from the Del Valle Watershed.

- Zone 7 continues to participate in the planning, design, and permitting phase of the Delta Conveyance Project, a DWR-proposed project to upgrade the State Water Project system infrastructure and improve its long-term reliability while protecting the Sacramento-San Joaquin Delta (Delta) ecosystem. The Delta Conveyance Project is estimated to be in-service by 2045.

- Zone 7 had participated in the Los Vaqueros Reservoir Expansion Project since 2016 and considered the project as an option for new storage capacity. In November 2024, Contra Costa Water District (CCWD), the owner and operator of the project's key facilities, withdrew the project from the Water Storage Investment Program, effectively dissolving the Los Vaqueros Joint Powers Authority (JPA), to which Zone 7 was a partner Agency, and effectively terminating the project.

- Zone 7 continues to promote and evaluate alternative water supply and storage options such as the Chain of Lakes Conveyance System, Bay Area Regional Desalination Project, Sites Reservoir, and water transfers. Ultimately, Zone 7 may choose to implement one or several of these options depending on the results of further studies and planning efforts, as well as the amount and timing of development and conservation, and the determination of costs and benefits.

- Zone 7 partnered with the City of Pleasanton to evaluate the feasibility of adding new production wells within the Bernal subarea of the Main Basin. Zone 7's Mocho I well has

been out of service since 2019. Zone 7 has been seeking opportunities to recoup groundwater production by adding additional wells to replace Mocho I. Additionally, the City of Pleasanton stopped pumping their supply wells in 2023 due to PFAS concerns and have therefore been unable to recover their allotted groundwater pumping quota (GPQ), relying solely on purchased water from Zone 7. This project aims to serve both Zone 7 and the City of Pleasanton by constructing new wells outside of the known PFAS footprint, and by expanding Zone 7's production well network in the Bernal subarea to replace the now out of service Mocho 1 well. The project would also allow the City of Pleasanton to access their annual GPQ (3,500 AFY). This project has the potential to provide enhanced water supply reliability and boost drought resiliency to the region. If approved by Pleasanton's City Council and Zone 7's Board of Directors, a project could be initiated in 2026.

- Finally, Zone 7 continues to invest in planning and modeling tools to improve its long-term water supply reliability in the face of future hydrologic and water supply uncertainties. For example, Zone 7 continues to make improvements to its water supply risk model to enhance its capabilities to evaluate potential water supply portfolios and water supply shortage risks. The water supply risk model was developed on the RiverWare modeling platform and runs on a monthly timestep to simulate the seasonal availability of supplies in an integrated manner. Simulated supply sources include local runoff, imported surface water, recovered water from groundwater banks, and local groundwater. The water supply risk model can also be used in conjunction with Zone 7's updated groundwater model to further analyze the impacts of variable conjunctive use operations on groundwater conditions and SGMA compliance.

8.2.2.3. Conjunctive Use

Zone 7 implements conjunctive use practices within the Basin to the greatest extent possible given current hydrologic conditions and imported water supply availability. During the 2025 WY, Zone 7 released 4,043 AF from the SBA into the Arroyo Valle and Arroyo Mocho for artificial recharge and water rights, of which 3,747 AF was recharged.

Additionally, Zone 7 recently commissioned a technical study to assess the potential to increase conjunctive use in the Basin, including expansion of artificial recharge operations within the Chain of Lakes (COL), and an Update to its Water Supply Evaluation (Zone 7, 2022).

8.2.2.4. Well Master Plan (WMP, Zone 7, 2003)

During the 2025 WY, Zone 7 continued the process of reevaluating Zone 7's supply well needs. Site specific evaluation and future well construction will depend on the outcome of water supply needs, PFAS investigations, and future regulatory requirements. Once the evaluation is complete, Zone 7 plans to begin the WMP update in 2026.

8.2.2.5. Chain of Lakes Recharge Projects

During the 2025 WY, Zone 7 continued to work with Lehigh Hanson Aggregates (former quarry operator for Lakes H, I, and Cope) while they continue to finalize reclamation on Lake H and work toward closing out surface mining permit (SMP) 31/36.

One of the conditions of approval in CEMEX's 2021 amendment to SMP 23 was to install up to three new monitoring wells with guidance from Zone 7 on location and screened intervals. CEMEX completed one nested monitoring well location consisting of three wells screened at intervals corresponding to Zone 7's existing nested monitoring wells installed in 2010. The wells were incorporated into Zone 7's monitoring program in the 2024 WY.

Vulcan is required by Alameda County Community Development Agency to submit an amendment to their SMP 16 reclamation plan. Vulcan, along with the underlying property owner, is evaluating different reclamation options including reconfiguring the final lake designs for Lakes E, F, and G. Vulcan is working closely with Zone 7 during the process to ensure that any changes to the final reclamation will still meet the intended mitigation of the Livermore Amador Valley Quarry Area Reclamation (LAVQAR) Site Plan and support Zone 7's future use of the COLs for water management and flood protection.

8.2.3. Water Demand Reduction Management Actions

8.2.3.1. Existing and Future Non-Potable Recycled Water Use

Both the City of Livermore and DSRSD plan to expand the use of recycled water for turf and landscape irrigation projects over the next few years. The City of Pleasanton purchases recycled water from DSRSD and/or Livermore for irrigation of city parks and landscapes located within the Main Basin. In the 2025 WY, Livermore and DSRSD recycled about 6,411 AF, approximately 13% of the total water use for the Basin.

8.2.3.2. Water Conservation

Throughout the 2025 WY, Zone 7 continued its regional coordination and promotion of conservation programs, including community workshops and other education/training events, school education programs, and rebate and water-saving giveaway programs.

8.2.3.3. Groundwater Pumping Quota Program

The retailers are permitted by contract to pump a GPQ (accounted for on a CY basis) without having to pay a replenishment fee to Zone 7. They can carry forward any un-pumped GPQ (up to 20% of their GPQ). The retailer's GPQ, along with their groundwater pumping volumes for the 2025 CY, are shown in **Table 5**. None of the retailers pumped more than their respective GPQ in 2025 CY.

8.2.4. Projects to Improve Drinking Water Quality in Zone 7 Service Area

8.2.4.1. Well Ordinance Program

During the 2025 WY, Zone 7 issued 112 drilling permits, the same number of permits as the 2024 WY. Eleven water supply well permits were issued in the 2025 WY. About 94% of the permitted well work was physically inspected by Zone 7 permit compliance staff; the remaining 6% has been put on hold or proceeded with self-monitoring and reporting efforts when a licensed professional was supervising the project.

8.2.4.2. Toxic Site Surveillance Program

In the 2025 WY, Zone 7 tracked the progress of 112 open sites in or nearby the Livermore and Sunol groundwater basins. Zone 7 has designated twenty-eight of these cases as "high-priority" due to their impact or threat of impact on potable groundwater supplies. Another 314 contamination cases have been classified as either "Closed", "No Action", or "No Action Required" because they have been sufficiently cleaned up and/or pose minimal threat to drinking water supplies.

8.2.4.3. Salt Management & Groundwater Demineralization Program

Zone 7's long-term salt management strategy includes monitoring and increasing municipal supply pumping, increasing operation of the Mocho Groundwater Demineralization Plant (MGDP), and conducting artificial groundwater recharge with low TDS water. **Table 20** below shows the salt loading summary for the 2025 WY.

Table 21: Salt Loading Summary for 2025 WY

Category	Volume (AF)	Salt Mass (Tons)	TDS Concentration (mg/L)	Change in Concentration from 2024 WY (mg/L)
Inflow	16,208	13,072	594	198
Outflow	16,559	9,393	418	65
Net (In – Out)	-351	3,679	-	-
Basin Total	**258,486**	**253,186**	**721**	**11**

AF = acre-feet
mg/L = milligrams per Liter

- In the 2025 WY, the total salt mass added to the Main Basin by all the inflow (Supply) components was approximately 13,072 tons, whereas the total mass of salts removed from the Basin by all the outflow (Demand) components is estimated at 9,393 tons; a net increase of 3,679 tons.

- The salt load increase was accompanied by below-average groundwater extractions and below-average groundwater recharge with imported water during the 2025 WY, which

caused the end-of-water-year theoretical average TDS concentration for the Main Basin to increase by 11 mg/L from the previous WY average.

Zone 7 continued operating the MGDP throughout the 2025 WY:

- During the 2025 WY, the MGDP produced 119 AF of brine (compared to 151 AF in the 2024 WY) that resulted in the export of about 362 tons of salt from the Main Basin through the Livermore-Amador Valley Water Management Agency (LAVWMA) pipeline (compared to 441 tons in the 2024 WY).
- Since its inception, the MGDP has exported over 20,399 tons of salt from the Livermore Valley.
- The Mocho Groundwater Demineralization Plant (MGDP) is expected to undergo maintenance during the 2026 to 2028 WYs for the construction of a new PFAS treatment facility at the Mocho wellfield. The MGDP will resume operations at the completion of the project. Zone 7 will continue implementing the SMP by pumping groundwater with high TDS concentrations and releasing low-TDS concentrated water into the Arroyos for groundwater recharge.

8.2.4.4. Nutrient Management

The Nutrient Management Plan (NMP) (*Zone 7, 2015b*) identified ten local high nitrate Areas of Concern (AOC) where nitrate concentrations persist above the Basin Objective (which is the MCL, 10 mg/L NO_3-N).

During the 2025 WY, Zone 7 continued working with Alameda County Department of Environmental Health (ACDEH) to implement the NMP measures. One of these measures permits Zone 7 to regulate commercial onsite wastewater treatment systems (OWTS, a.k.a., septic systems) to manage nitrate loading in the groundwater. In the 2025 WY, Zone 7 received two applications for nonresidential OWTS. Zone 7 is working with ACDEH to process the applications.

8.2.4.5. PFAS Management Strategy

On April 10, 2024, the Environmental Protection Agency (EPA) announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS compounds. With this regulation, EPA established legally enforceable Maximum Contaminant Levels (MCLs) and a Hazard Index as shown in **Table 19-A**. The regulations include:

- By 2027, monitor for these PFAS with initial monitoring completed within three years followed by ongoing compliance monitoring.
- In 2027, provide the public with information on the levels of these PFAS in their drinking water.

- By 2029, implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs.

- Beginning in 2029, take action to reduce levels of these PFAS in drinking water and provide notification to the public of such a violation.

On May 14, 2025, the EPA announced its intention to revise the final rule of the National Primary Drinking Water Regulation by extending the compliance deadlines for PFOS and PFOA to 2031 and rescinding the regulations in order to reconsider regulatory determinations for the four other PFAS (PFBS, PFHxS, PFNA, and HFPO_DA).

On October 29, 2025 (2026 WY), the State Water Resources Control Board's (SWRCB's) Division of Drinking Water (DDW) issued new and revised drinking water notification levels and response levels, which are health-based advisory levels, for PFOA, PFOS, PFHxS, and PFHxA, as shown in **Table 19-B**.

Regardless of the EPA's final MCL determination, Zone 7 continues to comply with the MCLs and Hazard Index ahead of the 2029 due date in addition to complying with the SWRCB's orders concerning PFAS and meeting Response Levels established by the SWRCB DDW. In addition, Zone 7 has developed a PFAS management strategy consisting of PFAS monitoring, blending and treating, managing water quality, and diversifying groundwater resources. Zone 7 continues to expand and refine its PFAS monitoring network. Several municipal wells have been impacted by PFAS compounds over the last few years. The City of Pleasanton has ceased production in all three of its active municipal wells due to PFAS detections. As a result, Pleasanton studied various options to drill new production wells elsewhere in the Basin while acquiring water from Zone 7. Seven of Zone 7's nine active municipal wells have also detected elevated PFAS concentrations. The Hopyard Wellfield (Wells Hop 6 and Hop 9) located in the Bernal subarea (western portion of the Main Basin) has not detected PFAS to date. To meet the latest regulatory limits, Zone 7 has implemented the following management activities:

- Installed a new ion-exchange PFAS treatment facility at the Stoneridge Well that went online in September 2023 (2023 WY);

- Installed a PFAS treatment system at the Chain of Lakes Wellfield that went online in March 2025 (2025 WY);

- Installed a new PFAS Sentinel monitoring well in-between the Mocho and Hopyard well fields in January 2024 (2024 WY) to fill monitoring data gaps and to detect any PFAS that may migrate towards the Hopyard wellfield;

- Actively blending water pumped from the Mocho wellfield to meet regulatory limits ahead of the deadline as part of Zone 7's PFAS management strategy;

- Initiated design and construction of PFAS Treatment in the Mocho Wellfield that is

anticipated to be online in summer of 2028 (2028 WY);

- Actively evaluating the feasibility of new production wells in the Bernal subarea west of Zone 7's existing Hopyard wells, outside of the known PFAS footprint, including performing PFAS mobilization modeling with Zone 7's new groundwater flow and transport model as further detailed in **Section 8.2.5**.

Recent detections of PFAS in Pleasanton's wells and Zone 7's plan to replace out of service wells and increase drought resiliency prompted a joint project between the City of Pleasanton and Zone 7 to evaluate the feasibility of constructing new production wells in the Bernal subarea outside of the known PFAS footprint. This project would allow the City of Pleasanton to recover its GPQ (3,500 AFY) via new Zone 7 production wells in the Bernal subarea outside of the existing PFAS footprint and would give Zone 7 flexibility for management of the groundwater basin and redundancy in their existing production well network. Further information on this proposed project is provided in **Section 8.2.2.2**.

The San Francisco Regional Water Quality Control Board (RWQCB) is exercising their regulatory authority to initiate investigations into potential sources of PFAS within the Livermore Valley Groundwater Basin. Zone 7 continues to partner with the RWQCB as the number of investigations has continued to expand.

8.2.4.6. Basin Water Quality Plan

Zone 7 is developing a Basin Water Quality Plan which aims to serve as an agency-wide guidance document for the management of water quality issues within the Basin.

8.2.5. Data Gap-Filling and Other Alternative GSP Implementation Projects

In 2025 Zone 7 conducted the following implementation and data gap filling activities and/or projects and will be seeking grant funding to fill additional data gaps:

- **Livermore Valley Hydrogeologic Investigations and Groundwater Model Update:** In November 2023, Zone 7 began a project to update its hydrogeologic conceptual model (HCM) and numerical groundwater flow model and has completed the following tasks:
    - New geophysical surveys using seismic refraction, electrical resistivity tomography (ERT), and stationary time-domain electromagnetics (sTEM) were conducted in December 2023 along areas of interest and uncertainty.
    - Aquifer pumping tests were conducted at the Mocho 3 well and at CWS Well #31 during Q1 2024 to evaluate aquifer properties in the Amador West and Bernal Subareas, respectively.
    - The results of the geophysical surveys and pumping tests, in conjunction with DWR's Airborne Electromagnetic (AEM) Survey data (from December 2022) and

Zone 7's existing well construction, E-log and geology databases were used to build an updated HCM during Q2 2024 using Leapfrog geologic modeling software.

- Refinements to the updated HCM will be discussed in detail for the next 5-Year Periodic Evaluation of the Alternative GSP. The refined HCM was used as the basis for the geometry and stratigraphy of a new numerical groundwater flow model developed using MODFLOW6, which was completed in 2025.
- The new model, known as the Livermore Valley Basin Groundwater Flow and Transport Model (LBGFTM), was completed in 2025 and consists of nine layers and 500x500-foot grid spacing across the Basin, including the Fringe and Upland Areas. The LBGFTM is capable of simulating groundwater flow and transport conditions and is calibrated to groundwater elevation, streamflow, and TDS concentration monitoring data covering the historical period of 2004 – 2023 WYs.
- The LBGFTM has been applied to inform several of Zone 7's ongoing SGMA P/MAs including supporting the water supply augmentation project feasibility evaluations and PFAS mobilization studies described in **Sections 8.2.2.2** and **8.2.4.5** above, respectively. The updated HCM and LBGFTM will also be used to evaluate and refine storage calculation methods in the 2026 Alternative GSP.
- A web-based Decision Support Tool (DST) is being developed to support Zone 7's adaptive groundwater management planning and operational decision-making and inform ongoing P/MA planning and implementation efforts. The DST is directly coupled to the LBGFTM and allows Zone 7 staff to quickly design and run short-term predictive groundwater flow model scenarios under variable future hydrological, water supply availability, and groundwater pumping conditions and analyze water level responses relative to established SGMA MTs and MOs at designated RMS-WLs across the Basin. The tool is expected to be expanded in the future based on Zone 7's needs within the framework of groundwater sustainability and SGMA.

- **Water Supply Risk Model:** Zone 7 continues to make improvements to its new robust risk model using RiverWare software. This model runs on a monthly time step and simulates the seasonal availability of supplies including local runoff, imported surface water, recovered water from groundwater banks, and local groundwater in an integrated manner. Additionally, the risk model is expected to be used in conjunction with the updated numerical groundwater model to further analyze the impacts of variable conjunctive use operations on groundwater and sustainable management of the Basin.
- **StreamTracker Implementation:** Zone 7 developed a new public-facing web portal tool to display real-time precipitation, streamflow, and flood warnings across the Livermore Valley. The public portal was published in May 2025 and replaced Hydrosphere. For more information, please see the *Zone 7 StreamTracker website.*

- **Isotopic Recharge Pathway Study:** Zone 7 collaborated with research scientists at Lawrence Livermore National Laboratory (LLNL) who completed two studies, described below. Zone 7 and LLNL plan to build off these studies and continue collaborating in the future as funding and additional opportunities allow.
    - The first study used stable water isotopes (δ18O and δ2H) to quantify management impacts on plant water use. This paper, titled "California Trees Seasonally Use Augmented Water Sources: Water Isotope Tracking in a Groundwater-Dependent Ecosystem", was submitted 2025 September and accepted for publication 2025 December in the journal Ecohydrology.
    - The second study used sulfur- 35 (35S, t½ = 87 days) and tritium (3H, t½ = 12.3 years) to model the transit times of six wells in the Livermore Groundwater Basin. This study, titled "Quantifying groundwater recharge with cosmogenic isotopes and a hybrid age-ranked storage selection model in California (USA)" was submitted to the journal Water Resources Research in 2025 September and is currently in revision. On 27 January 2026, Dr. Ate Visser presented the results of the LLNL study to the Water Resources Committee of the Zone 7 Board.
- **Installation of Test Wells (3S1E18H037, 3S1E17M002, 3S1E18P007) in Bernal Subarea for the Regional Groundwater Facilities Project Feasibility Study:** In the 2025 WY, Zone 7 partnered with the City of Pleasanton to evaluate the feasibility of constructing and operating new production wells within the Bernal subarea of the Main Basin to enhance groundwater supply reliability. As part of this project, three test wells were drilled and constructed within the lower aquifer generally south of Zone 7's Hopyard well field. Each well was tested to evaluate aquifer yield and characteristics and sampled for water quality. Results of the aquifer testing were incorporated into the LBGFTM. The test wells will be added to the 2026 WY monitoring programs and will continue to be monitored in the future. More information on this project may be found in **Sections 8.2.2.2**, **8.2.4.5**, and **8.4.4.**
- **Livermore Valley Groundwater Basin Sustainable Management Annual Report, 2024 Water Year:** Zone 7 submitted its 2024 WY Annual Report to DWR on 27 March 2025, prior to the 1 April 2025 deadline.

8.3. Progress Made on Addressing Recommended Corrective Actions in the Department's 2021 Alternative GSP Determination

Zone 7 submitted the first Five-Year Periodic Evaluation of the Alternative GSP (2021 Alternative GSP; Zone 7 GSA, 2021, also referenced as 2022 Alternative GSP in other reports) in December 2021. As part of that submittal, Zone 7 addressed all recommended corrective actions from DWR on the original (2016) Alternative GSP (see 2021 Alternative GSP Section 1.2 – Summary of Major Plan Updates). The 2021 Alternative GSP was approved by DWR on June 27, 2024. Recommended corrective actions from DWR's review include:

- *Recommended Corrective Action #1:* Ensure that the monitoring network details in the Alternative GSP are consistent with the information contained in DWRs SGMA Portal Monitoring Network Module (MNM).

In response to this recommended corrective action, Zone 7 is reviewing its monitoring reporting data format to ensure compatibility with the SGMA Portal MNM. Zone 7 plans to specifically address the recommended corrective action and document implementation as part of its 2026 Alternative GSP which is due to DWR by December 21, 2026.

8.4. Other Information on Implementation Progress

8.4.1. Stakeholder Outreach and Engagement

During the 2025 WY, Zone 7 continued to conduct outreach to various stakeholders on a variety of platforms as summarized below.

- **Groundwater Monitoring Program Implementation**
  - Presentation to Zone 7 Water Resources Committee of Directors, Groundwater Monitoring Implementation, May 1, 2025
    - Agenda Item 3: https://portal.laserfiche.com/Portal/DocView.aspx?id=63892&repo=r-35dfdee4
    - Committee Meeting Minutes: https://portal.laserfiche.com/Portal/DocView.aspx?id=63896&repo=r-35dfdee4

- **Livermore Valley Hydrogeologic Investigations and Groundwater Model Update**
  - Presentation to Zone 7 Water Resources Committee of Directors, The Livermore Valley Hydrogeologic Investigations and Groundwater Model Update, October 8, 2024
    - Agenda Item 3: https://portal.laserfiche.com/Portal/DocView.aspx?id=36598&repo=r-35dfdee4
    - Minutes of Meeting: https://portal.laserfiche.com/Portal/DocView.aspx?id=38904&repo=r-35dfdee4
  - Presentation to Zone 7 Board of Directors, Livermore Valley Hydrogeologic Investigations and Groundwater Model Update, September 17, 2025
    - Agenda Item 9: https://portal.laserfiche.com/Portal/DocView.aspx?id=63309&repo=r-35dfdee4

    - Supplemental material item 9: https://portal.laserfiche.com/Portal/DocView.aspx?id=63294&repo=r-35dfdee4
    - Approved board meeting minutes: https://portal.laserfiche.com/Portal/DocView.aspx?id=64123&repo=r-35dfdee4

- **Regional Groundwater Facilities Project Feasibility Study**
  - Presentation to Zone 7 Water Resources Committee of Directors, Update on the Regional Groundwater Facilities Improvement Project – Phase I, February 5, 2025
    - Agenda item: https://portal.laserfiche.com/Portal/DocView.aspx?id=63534&repo=r-35dfdee4
    - Supplemental material item 3: https://portal.laserfiche.com/Portal/DocView.aspx?id=63535&repo=r-35dfdee4
    - Approved Committee Meeting Notes: https://portal.laserfiche.com/Portal/DocView.aspx?id=63533&repo=r-35dfdee4
  - Presentation to Zone 7 Board of Directors, Update on the Regional Groundwater Facilities Improvement Project, Phase I, June 18, 2025
    - Agenda Item 11: https://portal.laserfiche.com/Portal/DocView.aspx?id=63262&repo=r-35dfdee4
    - Supplemental material item 11: https://portal.laserfiche.com/Portal/DocView.aspx?id=64810&repo=r-35dfdee4
  - Board meeting minutes: https://portal.laserfiche.com/Portal/DocView.aspx?id=56505&repo=r-35dfdee4

8.4.2. Public Comments Received

During the 2025 WY, public comments were received by Zone 7 in the following forms: letters, emails, and verbal comments at the monthly Zone 7 Board of Directors meetings. **Section 8.4.1** above includes links to the minutes of the Zone 7 Board meetings where public comments were solicited and/or received.

8.4.3. Additional Information or Accomplishments

The following describes additional information and/or accomplishments Zone 7 has made related to implementation efforts that are being used to achieve the Basin's Sustainability Goal:

- Continued studying contaminant mobilization to protect Basin water quality objectives;

- Reviewed and commented on various California Environmental Quality Act documents with respect to potential impacts on the Basin's ability to meet SGMA compliance; and
- Reviewed and commented on various project development documents to ensure project proponents comply with requirements specified in the 2021 Alternative GSP.

8.4.4. Anticipated WY 2026 Implementation Activities

The following describes the planned and/or anticipated implementation activities to be undertaken by Zone 7 and associated Basin stakeholders for the upcoming 2025 WY.

- **Livermore Valley Hydrogeologic Investigations and Groundwater Model Update:** Zone 7 completed its refined HCM in 2024 and Groundwater flow and transport model in 2025. A web-based Decision Support Tool (DST) is also being developed to support Zone 7's adaptive groundwater management planning and operational decision-making and inform ongoing P/MA planning and implementation efforts. The DST is directly coupled to the LBGFTM and allows Zone 7 staff to quickly design and run short-term predictive groundwater flow model scenarios under variable future hydrological, water supply availability, and groundwater pumping conditions and analyze water level responses relative to established SGMA MTs and MOs at designated RMS-WLs across the Basin. Phase 1 of the DST is expected to be completed in early 2026 and may be expanded upon in the future based on Zone 7's needs within the framework of groundwater sustainability and SGMA.

- **Joint Regional Groundwater Facilities Project:** Zone 7 and the City of Pleasanton partnered to investigate the feasibility of constructing new production wells in the Bernal Subarea to enhance groundwater supply reliability and drought resiliency. Phase I, which began in November 2024, consisted of constructing three test wells at strategic locations within the Bernal Subarea, performing well and water quality testing, conducting groundwater model simulations, and completing a basis of design for new facilities and infrastructure for new wells and transmission pipeline. A feasibility study report was completed in late 2025. City of Pleasanton and Zone 7 staff are analyzing the feasibility study and will bring any proposed project for production wells to the Pleasanton City Council and the Zone 7 Board of Directors for consideration in 2026.
- **Urban Water Management Plan Update:** Zone 7 is required to prepare an Urban Water Management Plan (UWMP) every five years to assess water supply availability and reliability. The current report, the 2020 Zone 7 UWMP, was published in 2021. Zone 7 is developing the 2025 UWMP and it will be completed by July 1, 2026.
- **Livermore Valley Groundwater Basin Sustainable Management Annual Report, 2025 Water Year:** Submittal to DWR by 1 April 2026 deadline; accompanying appendices to be reviewed for approval at the April 15, 2026 Zone 7 Board of Directors meeting.

- **5-Year Alternative GSP Submittal:** In accordance with SGMA regulations, Zone 7 is required to re-submit its Alternative GSP every five years. Zone 7 last submitted its Alternative GSP (2021 Alt-GSP) on December 21, 2021. The next submittal date of Zone 7's Alternative GSP (2026 Alt-GSP) is due to DWR by December 21, 2026.

TABLE 15
TOTAL DISSOLVED SOLIDS (TDS) AT REPRESENTATIVE MONITORING SITES
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		Management Area/Unit			TDS (mg/L)			SMCs for TDS (mg/L)				
Well Name	Map	Area	Subarea	Aquifer	2025 WY	Below MT	Below MO	MT	IM-5	IM-10	IM-15	MO
3S1E20C007	20C7	Main	Bernal	Upper	366	434	134	800	725	650	575	500
3S1E20C008	20C8	Main	Bernal	Lower	505	249	-5	754	691	627	564	500
3S1E09P005	9P5	Main	Amador West	Upper	450	858	50	1,308	1,106	904	702	500
3S1E09P010	9P10	Main	Amador West	Lower	459	158	41	617	588	559	529	500
3S1E11G001	11G1	Main	Amador East	Upper	746	216	-246	962	847	731	616	500
3S1E12K003	12K3	Main	Amador East	Lower	344	252	156	596	572	548	524	500
3S2E08K002	8K2	Main	Mocho II	Upper	642	54	-142	696	647	598	549	500
3S2E08H003	8H3	Main	Mocho II	Lower	746	-28	-246	718	664	609	555	500
3S1E06F003	6F3	Fringe	Northwest	Upper	2,816	839	29	3,655	3,453	3,250	3,048	2,845
2S2E34E001	34E1	Fringe	Northeast	Upper	392	608	608	1,000	1,000	1,000	1,000	1,000
3S2E24A001	24A1	Fringe	East	Upper	900	279	124	1,179	1,140	1,102	1,063	1,024
3S2E21K009	21K9	Upland	Upland	Upper	689	311	311	1,000	1,000	1,000	1,000	1,000

RMS	Representative Monitoring Sites
TDS	Total Dissolved Solids
mg/L	milligrams per liter
MT	Minimum Threshold
IM-#	Interim Milestone at # years
MO	Measurable Objective
SMC	Sustainable Management Criteria

TABLE 16
NITRATE (as NO_3N) AT REPRESENTATIVE MONITORING SITES
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		Management Area/Unit			Nitrate (mg/L)			SMCs Nitrate (mg/L)				
Well Name	Map	Area	Subarea	Aquifer	2025 WY	Below MT	Below MO	MT	IM-5	IM-10	IM-15	MO
3S1E20C007	20C7	Main	Bernal	Upper	1.72	8.3	8.3	10	10	10	10	10
3S1E20C008	20C8	Main	Bernal	Lower	4.75	5.3	5.3	10	10	10	10	10
3S1E09P005	9P5	Main	Amador West	Upper	0.25	9.8	9.8	10	10	10	10	10
3S1E09P010	9P10	Main	Amador West	Lower	ND	10.0	10.0	10	10	10	10	10
3S1E11G001	11G1	Main	Amador East	Upper	10.8	8.5	-0.8	19	17	15	12	10
3S1E12K003	12K3	Main	Amador East	Lower	0.77	9.2	9.2	10	10	10	10	10
3S2E08K002	8K2	Main	Mocho II	Upper	9.78	6.4	0.2	16	15	13	12	10
3S2E08H003	8H3	Main	Mocho II	Lower	11.1	3.6	-1.1	15	14	12	11	10
3S1E06F003	6F3	Fringe	Northwest	Upper	ND	10.0	10.0	10	10	10	10	10
2S2E34E001	34E1	Fringe	Northeast	Upper	ND	10.0	10.0	10	10	10	10	10
3S2E24A001	24A1	Fringe	East	Upper	24.3	13.2	-14.3	38	31	24	17	10
3S2E21K009	21K9	Upland	Upland	Upper	5.6	4.4	4.4	10	10	10	10	10

RMS	Representative Monitoring Sites
Nitrate	Nitrate as Nitrogen
mg/L	milligrams per liter
MT	Minimum Threshold
IM-#	Interim Milestone at # years
MO	Measurable Objective
SMC	Sustainable Management Criteria
ND	Not Detected (i.e., below lab detection limits). Assumed 0 for calculations.

TABLE 17
BORON (B) AT REPRESENTATIVE MONITORING SITES
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		Management Area/Unit			Boron (ug/L)			SMCs Boron (ug/L)				
Well Name	Map	Area	Subarea	Aquifer	2025 WY	Below MT	Below MO	MT	IM-5	IM-10	IM-15	MO
3S1E20C007	20C7	Main	Bernal	Upper	290	1,110	1,110	1,400	1,400	1,400	1,400	1,400
3S1E20C008	20C8	Main	Bernal	Lower	240	1,160	1,160	1,400	1,400	1,400	1,400	1,400
3S1E09P005	9P5	Main	Amador West	Upper	460	940	940	1,400	1,400	1,400	1,400	1,400
3S1E09P010	9P10	Main	Amador West	Lower	570	830	830	1,400	1,400	1,400	1,400	1,400
3S1E11G001	11G1	Main	Amador East	Upper	1,000	400	400	1,400	1,400	1,400	1,400	1,400
3S1E12K003	12K3	Main	Amador East	Lower	250	1,150	1,150	1,400	1,400	1,400	1,400	1,400
3S2E08K002	8K2	Main	Mocho II	Upper	410	990	990	1,400	1,400	1,400	1,400	1,400
3S2E08H003	8H3	Main	Mocho II	Lower	450	950	950	1,400	1,400	1,400	1,400	1,400
3S1E06F003	6F3	Fringe	Northwest	Upper	2,900	1,690	-1,500	4,590	3,793	2,995	2,198	1,400
2S2E34E001	34E1	Fringe	Northeast	Upper	520	4,200	880	4,720	3,890	3,060	2,230	1,400
3S2E24A001	24A1	Fringe	East	Upper	810	1,590	590	2,400	2,150	1,900	1,650	1,400
3S2E21K009	21K9	Upland	Upland	Upper	100	1,300	1,300	1,400	1,400	1,400	1,400	1,400

RMS	Representative Monitoring Sites
ug/L	micrograms per liter
MT	Minimum Threshold
IM-#	Interim Milestone at # years
MO	Measurable Objective
SMC	Sustainable Management Criteria

TABLE 18
CHROMIUM (Cr) AT REPRESENTATIVE MONITORING SITES
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		Management Area/Unit			Chromium (ug/L)			SMCs Chromium (ug/L)				
Well Name	Map	Area	Subarea	Aquifer	2025 WY	Below MT	Below MO	MT	IM-5	IM-10	IM-15	MO
3S1E20C007	20C7	Main	Bernal	Upper	2.1	48	48	50	50	50	50	50
3S1E20C008	20C8	Main	Bernal	Lower	3.4	47	47	50	50	50	50	50
3S1E09P005	9P5	Main	Amador West	Upper	ND	50	50	50	50	50	50	50
3S1E09P010	9P10	Main	Amador West	Lower	1.5	49	49	50	50	50	50	50
3S1E11G001	11G1	Main	Amador East	Upper	7.2	43	43	50	50	50	50	50
3S1E12K003	12K3	Main	Amador East	Lower	0.98	49	49	50	50	50	50	50
3S2E08K002	8K2	Main	Mocho II	Upper	5.6	44	44	50	50	50	50	50
3S2E08H003	8H3	Main	Mocho II	Lower	7.5	43	43	50	50	50	50	50
3S1E06F003	6F3	Fringe	Northwest	Upper	2	48	48	50	50	50	50	50
2S2E34E001	34E1	Fringe	Northeast	Upper	4.7	45	45	50	50	50	50	50
3S2E24A001	24A1	Fringe	East	Upper	3.3	47	47	50	50	50	50	50
3S2E21K009	21K9	Upland	Upland	Upper	1.3	49	49	50	50	50	50	50

RMS	Representative Monitoring Sites
Chromium	Total Chromium
ug/L	micrograms per liter
MT	Minimum Threshold
IM-#	Interim Milestone at # years
MO	Measurable Objective
SMC	Sustainable Management Criteria
ND	Not Detected (i.e., below lab detection limits). Assumed 0 for calculations.

TABLE 20
PFAS AT REPRESENTATIVE MONITORING SITES
2025 WATER YEAR
LIVERMORE VALLEY GROUNDWATER BASIN

RMS Well		Management Area/Unit							
Well Name	Map	Area	Subarea	Aquifer	PFOA (ng/L)	PFOS (ng/L)	PFHxS (ng/L)	PFNA (ng/L)	HFPO-DA (GenX; ng/L)
3S1E20C007	20C7	Main	Bernal	Upper	3.6	7.4	ND	ND	ND
3S1E20C008	20C8	Main	Bernal	Lower	ND	ND	ND	ND	ND
3S1E09P005	9P5	Main	Amador West	Upper	39	16	9.2	2.7	ND
3S1E09P010	9P10	Main	Amador West	Lower	5.5	32	18	ND	ND
3S1E11G001	11G1	Main	Amador East	Upper	14	120	55	ND	ND
3S1E12K003	12K3	Main	Amador East	Lower	4.5	5.6	2.2	ND	ND
3S2E08K002	8K2	Main	Mocho II	Upper	21	20	7.4	ND	ND
3S2E08H003	8H3	Main	Mocho II	Lower	9	22	20	ND	ND
3S1E06F003	6F3	Fringe	Northwest	Upper	ND	ND	ND	ND	ND
2S2E34E001	34E1	Fringe	Northeast	Upper	ND	ND	ND	ND	ND
3S2E24A001	24A1	Fringe	East	Upper	ND	ND	ND	ND	ND
3S2E21K009	21K9	Upland	Upland	Upper	ND	ND	ND	ND	ND

RMS	Representative Monitoring Sites
PFAS	Per- and Polyfluoralkyl Substances
ng/L	nanograms per liter
ND	Not Detected (i.e., below lab detection limits).

RMS = Representative Monitoring Sites
ICSW = Interconnected Surface Water
GDE = Groundwater Dependent Ecosystem

Legend

- RMS Wells - Levels / Water Quality
- RMS Wells - ICSW/GDE
- RMS Wells - Quality
- RMS-ICSW/GDEs Stream Gauges
- Rivers
- Mining Area Ponds
- Township-Range
- Main Basin
- Fringe Area
- Upland Area
- SubBasins

2S/1W 2S/1E 2S/2E 2S/3E
3S/1W 3S/1E 3S/2E 3S/3E

6F3 5K6 2N6 2R1 27P2 34E1 ALTC_BD
ALP_ELCH 11G1 12K3 8K2 8H3 9P10 9P5 AMHAG 16E4
ADVP 20C8 20C7 16P5 AV_DIV_SC 21K9 23E1 24A1
30D2 29F4 SBA_AM 33C1 33G1 32E7 AMNL 1A1
AVNL SBA_TO1_AV

N W E S

2 1 0 2
Miles

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Figure 15
Representative Monitoring Sites
2025 Water Year
Livermore Valley Groundwater Basin

LEGEND

- Municipal Well
- RMS Well
- Mining Area
- Mining Area Ponds
- Upland Area
- Fringe Area
- Main Basin

Land Surface Elevation Change (ft)

- -0.20 - -0.10
- -0.10 - -0.05
- -0.05 - 0
- 0 - 0.05
- 0.05 - 0.10
- 0.10 - 0.20

34E1
6F3
11G1
8H3
8K2
9P5/P10
12K3
20C7/C8
21K9
24A1
Stoneridge
COL 5
COL 1
COL 2
Mocho 4
Mocho 3
Mocho 1
Mocho 2
Hopyard 6
Hopyard 9
Pleas 6
Pleas 8
Pleas 5
SFWD North (A)
SFWD South (B)
CWS 10
CWS 19
CWS 24
CWS 31
CWS 8
CWS 9
CWS 14
CWS 15
CWS 5
CWS 20

N
W
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0 2 4
Miles

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Figure 16
Land Surface Elevation Change
Fall 2024 to Fall 2025
Livermore Valley Groundwater Basin

9. References and Technical Studies

DWR, 2019, Sustainable Groundwater Management Act 2019, Basin Prioritization Process and Results. April 2019, 64 pp.

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Zone 7, 2003, Draft Report, Well Master Plan, Prepared by CH2MHill for Zone 7 Water Agency.

Zone 7, 2004, Salt Management Plan, Prepared by Zone 7 Water Agency.

Zone 7, 2015, Nutrient Management Plan, Livermore Valley Groundwater Basin. Prepared by Zone 7, July 2015.

Zone 7, 2019, 2019 Water Supply Evaluation Update. Prepared by Zone 7, April 2019.

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APPENDICES

Appendix A. Annual Report Submittal Checklist

Appendix B. Monitoring Network Supplemental Information

Appendix C. Groundwater Elevation Supporting Data & Hydrographs

Appendix D. Groundwater Storage Supplemental Data

Appendix E. Groundwater Quality Supplemental Data

Appendix A

Annual Report Submittal Checklist

Groundwater Sustainability Plan Annual Report Elements Guide

Basin Name	Livermore Valley Groundwater Basin (DWR No. 2-010)		
GSP Local ID			
California Code of Regulations - GSP Regulation Sections	***Groundwater Sustainability Plan Elements***	**Document *page number(s) that address the applicable GSP element.***	***Notes: Briefly describe the GSP element does not apply.***
Article 5	**Plan Contents**		
Subarticle 4	***Monitoring Networks***		
§ 354.40	**Reporting Monitoring Data to the Department**		
	Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.	20:21	
	Note: Authority cited: Section 10733.2, Water Code. Reference: Sections 10728, 10728.2, 10733.2 and 10733.8, Water Code.		
Article 7	**Annual Reports and Periodic Evaluations by the Agency**		
§ 356.2	**Annual Reports**		
	Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:		
	(a) General information, including an executive summary and a location map depicting the basin covered by the report.	8:14	
	(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:		
	(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:		
	(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.	23:24, 26:27	
	(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.	101:125	
	(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.	29:32	
	(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.	33:34	

California Code of Regulations - GSP Regulation Sections	*Groundwater Sustainability Plan Elements*	Document *page number(s) that address the applicable GSP element.*	*Notes: Briefly describe the GSP element does not apply.*
	(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.	37:40	
	(5) Change in groundwater in storage shall include the following:		
	(A) Change in groundwater in storage maps for each principal aquifer in the basin.	41:44	
	(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.	45	
	(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.	46:75	

Appendix B

Monitoring Network

Supplemental Information

TABLE B-1
WELL CONSTRUCTION DETAILS
2025 WATER YEAR

Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
2S1E32E001	32E1	None	Upper	Static-Monitor	Active	392.56	70	2	55 - 70	12/28/2000	37.71957854	-121.8925664
2S1E32N001	32N1	Fringe-Camp	Upper	Static-Monitor	Active	360.79	44	2.5	34 - 39	7/1/1976	37.7114049	-121.8930952
2S1E32Q001	32Q1	Fringe-Camp	Upper	Static-Monitor	Active	367.55	45	2	30 - 45	12/29/2000	37.71083835	-121.8846424
2S1E33L001	33L1	None	Upper	Static-Monitor	Active	389.46	80	2	65 - 80	12/27/2000	37.71246704	-121.8729086
2S1E33P002	33P2	Fringe-Camp	Upper	Static-Monitor	Active	370.05	55	2	45 - 55	12/20/2000	37.709849	-121.8739996
2S1E33R001	33R1	None	Upper	Static-Monitor	Active	358.5	60	2	40 - 60	10/23/2001	37.70901099	-121.8633039
2S1W15F001	15F1	Fringe-Bishop	Upper	Static-Monitor	Active	439.44	60	2.5	50.3 - 55.3	9/28/1976	37.762634	-121.9573902
2S1W26C002	26C2	Fringe-Dublin	Upper	Static-Monitor	Active	406.53	50	2.5	40 - 45	9/28/1976	37.7382566	-121.9434198
2S1W36E003	36E3	Fringe-Dublin	Upper	Static-Monitor	Active	346.51	60	2.5	50 - 55	9/13/1977	37.71896015	-121.9296811
2S1W36F001	36F1	Fringe-Dublin	Lower	Static-Nested	Active	342.71	190	2	140 - 180	5/8/1996	37.71940058	-121.9231834
2S1W36F002	36F2	Fringe-Dublin	Lower	Static-Nested	Active	342.71	320	2	270 - 310	5/8/1996	37.71940058	-121.9231834
2S1W36F003	36F3	Fringe-Dublin	Lower	Static-Nested	Damaged	342.71	520	2	440 - 510	5/8/1996	37.71940058	-121.9231834
2S2E21L001	21L1	Fringe-May	Upper	Supply-Domestic	Active	563	168	10	49 - 168	5/1/1973	37.74254338	-121.7635204
2S2E27C002	27C2	Fringe-Spring	Upper	Supply-Domestic	Active	542.14	108	8	41 - 56	10/7/1969	37.73688958	-121.7465468
2S2E27K001	27K1	Fringe-Spring	Upper	Supply-Livestock	Inactive	524.46	96	8	49 - 88	4/28/1954	37.73010073	-121.7419604
2S2E27M002	27M2	Fringe-May	Upper	Supply-Domestic	Active	524.52	112	6	NA	7/16/1975	37.729571	-121.7511641
2S2E27P002	27P2	Fringe-Spring	Upper	Static-Monitor	Active	505.43	68	4	35 - 63	6/18/1979	37.72345406	-121.7424964
2S2E28D002	28D2	Fringe-May	Upper	Static-Monitor	Active	555.15	55	2.5	44 - 49	11/2/1976	37.73773636	-121.7668496
2S2E28J002	28J2	Fringe-May	Lower	Supply-Industrial	Active	522.29	230	6	50 - 230	7/26/1984	37.72801831	-121.7536325
2S2E28Q001	28Q1	Fringe-May	Upper	Static-Monitor	Active	513.04	28	2.5	17.6 - 22.6	11/2/1976	37.72355394	-121.7566371
2S2E32K002	32K2	Fringe-Cayetano	Upper	Static-Monitor	Active	507.43	43	2.5	33 - 38	12/20/1977	37.71465576	-121.7754901
2S2E34E001	34E1	Fringe-May	Upper	Static-Monitor	Active	499.73	49	2.5	40 - 45	12/21/1977	37.71637658	-121.7516373
2S2E34Q002	34Q2	Fringe-Spring	Upper	Static-Monitor	Active	507.24	50	2	25 - 50	12/12/2001	37.71185103	-121.7410134
3S1E01F002	1F2	Fringe-Camp	Upper	Static-Monitor	Active	428.44	40	2	25 - 40	12/18/2000	37.70261358	-121.8157835
3S1E01H003	1H3	Fringe-Camp	Upper	Static-Monitor	Active	422.8	80	2.5	70 - 75	12/20/1977	37.70273077	-121.8060709
3S1E01J004	1J04	Fringe-Camp	Lower	Supply-Irrigation	Active	420.1	300	12	260 - 280	2/6/2018	37.70154317	-121.8063721
3S1E01L001	1L1	Fringe-Camp	Upper	Static-Monitor	Active	403.04	70	2	60 - 70	12/19/2000	37.70062709	-121.8158546
3S1E01P002	1P2	Main-Amador	Upper	Static-Monitor	Active	389.64	50	2.5	40 - 45	12/11/1975	37.69615154	-121.8159161
3S1E01P003	1P3	Main-Amador	Lower	Supply-Unspecified	Inactive	394.44	480	12	245 - 460	7/28/1988	37.69641495	-121.8163241
3S1E02J002	2J2	Fringe-Camp	Upper	Static-Monitor	Active	380.89	41	2	31 - 41	7/16/2003	37.69915575	-121.8242677
3S1E02J003	2J3	Fringe-Camp	Upper	Static-Monitor	Active	406.35	65	2	55 - 65	7/16/2003	37.70147188	-121.8232244
3S1E02K002	2K2	Fringe-Camp	Upper	Static-Monitor	Active	397.04	46	2.5	36.5 - 41.5	12/10/1975	37.70136562	-121.8286062
3S1E02M003	2M3	Fringe-Camp	Upper	Static-Monitor	Active	365.04	50	2	35 - 50	11/13/2000	37.70077863	-121.8391537
3S1E02N006	2N6	Main-Amador	Upper	Static-Monitor	Active	366.14	55	2	40 - 55	11/13/2000	37.69526639	-121.839172
3S1E02P003	2P3	Fringe-Camp	Lower	Supply-Domestic	Active	371.73	380	10	340 - 372	9/26/1977	37.6980521	-121.8324031
3S1E02Q001	2Q1	Main-Amador	Upper	Static-Monitor	Active	369.92	45	2	35 - 45	7/16/2003	37.69550867	-121.8292606

TABLE B-1
WELL CONSTRUCTION DETAILS
2025 WATER YEAR

Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S1E02R001	2R1	Main-Amador	Upper	Static-Monitor	Active	376.29	33	2.5	21 - 26	11/1/1975	37.69678774	-121.8238396
3S1E03G002	3G2	Fringe-Camp	Upper	Static-Monitor	Active	354.24	50	2.5	40 - 45	1/18/1978	37.70378281	-121.850466
3S1E04A001	4A1	Fringe-Camp	Upper	Static-Monitor	Active	350.67	49.5	2	29.5 - 49.5	10/23/2001	37.70494727	-121.8649313
3S1E04J005	4J5	Fringe-Camp	Upper	Static-Monitor	Active	345.2	47	2	22 - 47	10/25/2001	37.70074309	-121.8653726
3S1E04J006	4J6	Fringe-Camp	Upper	Static-Monitor	Active	345.55	110	2	65 - 110	10/24/2001	37.70072117	-121.8653748
3S1E04Q002	4Q2	Main-Amador	Upper	Static-Monitor	Active	345.42	90	2.5	80 - 85	12/13/1977	37.69534088	-121.8653882
3S1E05K006	5K6	Fringe-Camp	Upper	Static-Monitor	Active	346.05	75	4	40 - 70	6/7/1990	37.70112772	-121.8822743
3S1E05K007	5K7	Fringe-Camp	Lower	Static-Monitor	Active	346.19	150	4	134 - 144	6/8/1990	37.70112666	-121.882237
3S1E05L003	5L3	Fringe-Camp	Upper	Static-Monitor	Active	339.43	40	2	15 - 40	12/11/2001	37.69870795	-121.8902261
3S1E05P006	5P6	Fringe-Camp	Upper	Static-Monitor	Active	336.65	35	2	25 - 35	12/19/2000	37.69559774	-121.8875303
3S1E06F003	6F3	Fringe-Dublin	Upper	Static-Monitor	Active	329.82	36	2.5	27 - 32	9/29/1976	37.70295396	-121.908554
3S1E06G005	6G5	Fringe-Dublin	Lower	Supply-Industrial	Intent to Use	332.22	200	8	103 - 178	8/31/1977	37.70329332	-121.9010917
3S1E06M002	6M2	Fringe-Dublin	Upper	Static-Monitor	Unknown	334.65	26	4	13 - 26	1/16/1991	37.69902605	-121.9115084
3S1E06N002	6N2	Fringe-Dublin	Upper	Static-Monitor	Active	335.2	67	4	47 - 67	3/20/1985	37.69749378	-121.9141082
3S1E06N003	6N3	Fringe-Dublin	Upper	Static-Monitor	Active	340.74	72	4	52 - 72	12/4/1984	37.69719889	-121.9112851
3S1E06N004	6N4	Fringe-Dublin	Upper	Static-Monitor	Unknown	341.06	26	4	13 - 26	1/16/1991	37.69722299	-121.9127732
3S1E06N005	6N5	Fringe-Dublin	Upper	Static-Monitor	Unknown	333.47	35	2	20 - 35	11/9/2007	37.69576289	-121.9108258
3S1E06N006	6N6	Fringe-Dublin	Upper	Static-Monitor	Active	333.58	75	2	50 - 70	11/9/2007	37.69545188	-121.9107896
3S1E07B002	7B2	Fringe-Dublin	Lower	Static-Monitor	Active	327.77	152	4	143 - 149	5/17/1979	37.69435449	-121.9038312
3S1E07B012	7B12	Fringe-Dublin	Upper	Static-Monitor	Active	327.82	70	2	50 - 70	7/31/2002	37.69131374	-121.9030294
3S1E07D001	7D1	Fringe-Dublin	Upper	Static-Monitor	Unknown	330.09	75	2	54 - 74	11/6/2007	37.69051332	-121.9142604
3S1E07D003	7D3	Fringe-Dublin	Upper	Static-Monitor	Unknown	332.28	70	2	45 - 65	11/2/2007	37.69100972	-121.9099772
3S1E07D004	7D4	Fringe-Dublin	Upper	Static-Monitor	Unknown	332.55	35	2	20 - 35	11/2/2007	37.69104206	-121.9099778
3S1E07G007	7G7	Fringe-Dublin	Upper	Static-Monitor	Active	327.33	55	2	35 - 55	1/22/2002	37.68940513	-121.9017403
3S1E07J005	7J5	Fringe-Dublin	Upper	Static-Monitor	Active	326.78	50	2	30 - 50	7/10/2002	37.6844105	-121.8983365
3S1E08B001	8B1	Main-Amador	Upper	Static-Monitor	Active	338.28	148	4	55 - 82	5/31/1979	37.69195588	-121.8857078
3S1E08G004	8G4	Main-Amador	Upper	Static-Monitor	Active	341.47	85	2	60 - 85	12/19/2001	37.69068862	-121.8824326
3S1E08H009	8H9	Main-Amador	Lower	Static-Nested	Active	338.53	240	2	210 - 230	12/12/1996	37.6882223	-121.8785683
3S1E08H010	8H10	Main-Amador	Lower	Static-Nested	Active	339.26	440	2	290 - 430	12/12/1996	37.6882223	-121.8785683
3S1E08H011	8H11	Main-Amador	Deep	Static-Nested	Active	339.26	720	2	520 - 720	12/21/1996	37.6882223	-121.8785683
3S1E08H013	8H13	Main-Amador	Deep	Static-Monitor	Active	338.96	800	2	570 - 790	12/11/1998	37.68726452	-121.8782284
3S1E08H018	M4	Main-Amador	Lower	Supply-Municipal	Active	341.94	745	20	515 - 730	11/1/2000	37.68834051	-121.878448
3S1E08K001	8K1	Main-Amador	Upper	Static-Monitor	Active	332.37	99	2.5	89 - 94	1/23/1978	37.68512941	-121.8855166
3S1E08K002	8K02	Main-Amador	Lower	Static-Monitor	Active	332.02	235	2.5	210 - 230	1/2/2024	37.68461394	-121.8857046
3S1E08K003	8K03	Main-Amador	Lower	Static-Monitor	Active	331.88	390	2.5	365 - 385	1/2/2024	37.68461293	-121.8857045
3S1E08N001	8N1	Main-Bernal	Upper	Static-Monitor	Damaged	323.68	72	2.5	62 - 67	8/27/1976	37.68134858	-121.8943945

TABLE B-1
WELL CONSTRUCTION DETAILS
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Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S1E09B001	St1	Main-Amador	Lower	Supply-Municipal	Active	349.23	810	20	250 - 800	1/28/1992	37.69231936	-121.8671488
3S1E09H010	9H10	Main-Amador	Upper	Static-Nested	Active	352.89	145	2	120 - 140	11/22/2004	37.68799342	-121.8623821
3S1E09H011	9H11	Main-Amador	Lower	Static-Nested	Active	353.04	190	2	165 - 185	11/22/2004	37.68799342	-121.8623821
3S1E09H013	9H13	Main-Amador	Upper	Supply-Domestic	Active	354	145	8	NA	NA	37.6877128	-121.8632055
3S1E09J007	9J7	Main-Amador	Upper	Static-Nested	Active	357.36	145	2	120 - 140	11/23/2004	37.68478321	-121.8624034
3S1E09J008	9J8	Main-Amador	Lower	Static-Nested	Active	357.55	305	2	280 - 300	11/23/2004	37.68478321	-121.8624034
3S1E09J009	9J9	Main-Amador	Lower	Static-Nested	Active	357.68	505	2	480 - 500	11/23/2004	37.68478321	-121.8624034
3S1E09M002	M1	Main-Amador	Lower	Supply-Municipal	Active	343.95	530	16	150 - 510	4/6/1964	37.68646501	-121.8767331
3S1E09M003	M2	Main-Amador	Lower	Supply-Municipal	Active	347.47	575	18	250 - 570	5/4/1967	37.68504544	-121.8764517
3S1E09M004	M3	Main-Amador	Lower	Supply-Municipal	Active	342.89	498	20	315 - 493	11/1/2000	37.68689578	-121.8780313
3S1E09P005	9P5	Main-Amador	Upper	Static-Monitor	Active	349.4	105	2.5	95 - 100	12/6/1977	37.68196889	-121.870072
3S1E09P009	9P9	Main-Amador	Lower	Static-Nested	Active	349.44	210	2	185 - 205	3/23/2005	37.68172231	-121.8708385
3S1E09P010	9P10	Main-Amador	Lower	Static-Nested	Active	349.66	310	2	285 - 305	3/23/2005	37.68172231	-121.8708385
3S1E09P011	9P11	Main-Amador	Lower	Static-Nested	Active	349.44	425	2	405 - 420	3/23/2005	37.68172231	-121.8708385
3S1E10A002	10A2	Main-Amador	Upper	Static-Monitor	Active	367.35	88	4	70 - 80	5/10/1979	37.6911284	-121.8422623
3S1E10B008	10B8	Main-Amador	Lower	Static-Nested	Active	353.6	200	2	100 - 190	6/18/1997	37.69370509	-121.8497063
3S1E10B009	10B9	Main-Amador	Lower	Static-Nested	Active	353.49	294	2	244 - 284	6/18/1997	37.69370509	-121.8497063
3S1E10B010	10B10	Main-Amador	Lower	Static-Nested	Unknown	353.52	600	2	400 - 590	6/18/1997	37.69370509	-121.8497063
3S1E10B011	10B11	Main-Amador	Deep	Static-Nested	Active	353.52	810	2	660 - 800	6/18/1997	37.69370509	-121.8497063
3S1E10B014	COL5 Mon	Main-Amador	Lower	Static-Monitor	Unknown	355.59	690	2	390 - 690	2/26/2014	37.6915386	-121.848583
3S1E10B016	COL5	Main-Amador	Lower	Supply-Municipal	Active	357.58	690	18	390 - 690	7/19/2014	37.69149891	-121.8480508
3S1E10D002	10D2	Main-Amador	Lower	Static-Nested	Active	349.32	212	2	182 - 212	9/10/1998	37.69376676	-121.8589291
3S1E10D003	10D3	Main-Amador	Lower	Static-Nested	Active	349.28	322	2	262 - 312	9/10/1998	37.69376676	-121.8589291
3S1E10D004	10D4	Main-Amador	Lower	Static-Nested	Active	349.3	616	2	366 - 606	9/10/1998	37.69376676	-121.8589291
3S1E10D005	10D5	Main-Amador	Deep	Static-Nested	Active	349.32	790	2	720 - 780	9/10/1998	37.69376676	-121.8589291
3S1E10D007	10D7	Main-Amador	Upper	Static-Nested	Active	361.06	145	2	118 - 138	12/10/2004	37.69119492	-121.8567241
3S1E10D008	10D8	Main-Amador	Lower	Static-Nested	Active	361.02	215	2	190 - 210	12/10/2004	37.69119492	-121.8567241
3S1E10K002	COL1 Mon	Main-Amador	Lower	Static-Monitor	Active	358.68	590.6	4	195.5 - 585.6	1/17/2007	37.68501255	-121.8485413
3S1E10K003	COL1	Main-Amador	Lower	Supply-Municipal	Active	363.79	530	18	205 - 530	2/27/2008	37.68568239	-121.8465536
3S1E10N002	10N2	Main-Amador	Upper	Static-Nested	Active	357.92	195	2	125 - 145	12/2/2004	37.68215154	-121.8588009
3S1E10N003	10N3	Main-Amador	Lower	Static-Nested	Active	358	195	2	170 - 190	12/2/2004	37.68215154	-121.8588009
3S1E11B001	11B1	Main-Amador	Upper	Static-Monitor	Active	369.35	43	2.5	33 - 38	12/11/1975	37.69239923	-121.8300444
3S1E11C003	11C3	Main-Amador	Upper	Static-Monitor	Active	364.82	55	2	35 - 55	12/22/2003	37.69283014	-121.8341717
3S1E11G001	11G1	Main-Amador	Upper	Static-Nested	Active	371.62	120	2	100 - 110	4/8/1997	37.68989005	-121.8298545
3S1E11G002	11G2	Main-Amador	Lower	Static-Nested	Active	371.61	350	2	230 - 340	4/8/1997	37.68989005	-121.8298545
3S1E11G003	11G3	Main-Amador	Lower	Static-Nested	Active	371.64	590	2	380 - 580	4/8/1997	37.68989005	-121.8298545

TABLE B-1
WELL CONSTRUCTION DETAILS
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Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S1E11G004	11G4	Main-Amador	Deep	Static-Nested	Active	371.68	790	2	620 - 780	4/8/1997	37.68989005	-121.8298545
3S1E11M002	COL2 Mon	Main-Amador	Lower	Static-Monitor	Active	365.96	700	4.5	199 - 699	9/25/2007	37.68556226	-121.837704
3S1E11M003	COL2	Main-Amador	Lower	Supply-Municipal	Active	369.24	684	18	345 - 684	2/14/2008	37.68566728	-121.8378935
3S1E11P006	11P6	Main-Amador	Lower	Supply-Domestic	Active	376.67	400	5	240 - 380	3/10/2000	37.68048085	-121.8322497
3S1E12A002	12A2	Main-Amador	Upper	Static-Monitor	Active	401.35	69	2.5	63.7 - 68.7	12/11/1975	37.69215584	-121.8096504
3S1E12D002	12D2	Main-Amador	Upper	Static-Monitor	Active	384.45	44.6	2.5	36 - 41	NA	37.69227067	-121.8198301
3S1E12G001	12G1	Main-Amador	Upper	Static-Monitor	Active	404.47	73	2.5	63 - 68	12/12/1975	37.68680916	-121.8149596
3S1E12H004	12H4	Main-Amador	Lower	Static-Nested	Active	407.75	270	2	185 - 260	1/8/1998	37.68986417	-121.8079442
3S1E12H005	12H5	Main-Amador	Lower	Static-Nested	Active	407.78	400	2	360 - 390	1/8/1998	37.68986417	-121.8079442
3S1E12H006	12H6	Main-Amador	Lower	Static-Nested	Active	407.75	480	2	410 - 468	1/8/1998	37.68986417	-121.8079442
3S1E12H007	12H7	Main-Amador	Deep	Static-Nested	Active	407.67	684	2	609 - 674	1/8/1998	37.68986417	-121.8079442
3S1E12K002	12K2	Main-Amador	Lower	Static-Nested	Active	406.29	300	2	210 - 295	11/1/2005	37.68455972	-121.8145946
3S1E12K003	12K3	Main-Amador	Lower	Static-Nested	Active	406.83	475	2	355 - 470	11/1/2005	37.68455972	-121.8145946
3S1E12K004	12K4	Main-Amador	Deep	Static-Nested	Active	406.71	575	2	550 - 570	11/1/2005	37.68455972	-121.8145946
3S1E13P005	13P5	Main-Amador	Upper	Static-Nested	Active	393.7	135	2	110 - 130	11/2/2010	37.66793021	-121.8182036
3S1E13P006	13P6	Main-Amador	Lower	Static-Nested	Active	393.72	255	2	230 - 250	11/2/2010	37.66791839	-121.818219
3S1E13P007	13P7	Main-Amador	Lower	Static-Nested	Active	393.46	375	2	350 - 370	11/2/2010	37.6679184	-121.818218
3S1E13P008	13P8	Main-Amador	Lower	Static-Nested	Active	393.6	605	2	580 - 600	11/2/2010	37.66791385	-121.8182082
3S1E14B001	14B1	Main-Amador	Lower	Supply-Industrial	Active	384.2	435	8	200 - 410	NA	37.67610494	-121.8279187
3S1E14D002	14D2	Main-Amador	Lower	Static-Monitor	Active	371.83	740	14.5	170 - 740	8/30/2006	37.67657604	-121.8414452
3S1E15F003	15F3	Main-Amador	Lower	Supply-Unspecified	Inactive	368.99	625	14	195 - 615	7/20/1965	37.67360746	-121.8530645
3S1E15J003	15J3	Main-Amador	Lower	Supply-Unspecified	Unknown	344.59	196	8	154 - 184	12/2/1980	37.67117486	-121.8448453
3S1E15M003	15M3	Main-Amador	Lower	Static-Monitor	Active	362.09	600	2	280 - 590	12/15/1998	37.67169168	-121.8590916
3S1E16A002	P8	Main-Amador	Lower	Supply-Municipal	Active	358.2	500	20	200 - 495	3/27/1992	37.67657734	-121.8604764
3S1E16A004	16A4	Main-Amador	Lower	Static-Monitor	Active	359.36	603	2	280 - 580	12/3/1998	37.67621793	-121.8635022
3S1E16B001	16B1	Main-Amador	Deep	Static-Monitor	Active	355.81	805	2	605 - 800	12/18/1998	37.67784418	-121.8655189
3S1E16C002	16C2	Main-Amador	Lower	Static-Nested	Active	344.38	190	2	165 - 185	4/14/2005	37.67624109	-121.8724721
3S1E16C003	16C3	Main-Amador	Lower	Static-Nested	Active	344.27	305	2	280 - 300	4/14/2005	37.67624109	-121.8724721
3S1E16C004	16C4	Main-Amador	Lower	Static-Nested	Active	344.16	375	2	355 - 370	4/14/2005	37.67624109	-121.8724721
3S1E16E004	16E4	Main-Amador	Upper	Static-Monitor	Active	351.69	105	2.5	95 - 100	12/15/1977	37.67312563	-121.8770896
3S1E16L002	P4	Main-Amador	Lower	Supply-Municipal	Inactive	355.86	151	12	56 - 136	4/6/1949	37.672083	-121.8721526
3S1E16L005	P5	Main-Amador	Lower	Supply-Municipal	Active	358.05	685	18	149 - 650	4/4/1962	37.67205842	-121.8721569
3S1E16L007	P6	Main-Amador	Lower	Supply-Municipal	Active	354.47	647	18	165 - 647	6/1/1966	37.67284862	-121.8722088
3S1E16P005	16P5	Main-Amador	Upper	Static-Monitor	Active	354.51	75	2.5	64 - 69	10/8/1976	37.66524595	-121.8731113
3S1E16R001	16R1	Main-Amador	Lower	Supply-Unspecified	Unknown	362.5	239	10	70 - 226	3/5/1958	37.66640502	-121.863729
3S1E17B004	17B4	Main-Amador	Lower	Supply-Unspecified	Unknown	337.69	248	8	0 - 248	1/1/1950	37.67696479	-121.8830231

TABLE B-1
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Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S1E17D003	17D3	Main-Bernal	Lower	Static-Nested	Active	325.13	108	4	92 - 98	8/6/1996	37.67933322	-121.8927527
3S1E17D004	17D4	Main-Bernal	Lower	Static-Nested	Active	325.14	236	4	206 - 226	8/6/1996	37.67933322	-121.8927527
3S1E17D005	17D5	Main-Bernal	Lower	Static-Nested	Active	325.13	308	4	266 - 286	8/6/1996	37.67933322	-121.8927527
3S1E17D006	17D6	Main-Bernal	Lower	Static-Nested	Active	325.12	408	4	378 - 398	8/6/1996	37.67933322	-121.8927527
3S1E17D007	17D7	Main-Bernal	Deep	Static-Nested	Active	325.13	684	4	654 - 674	8/6/1996	37.67933322	-121.8927527
3S1E17D010	H7	Main-Bernal	Lower	Static-Monitor	Active	328.13	425	24	150 - 415	9/20/1996	37.6794648	-121.8925897
3S1E17D011	17D11	Main-Bernal	Lower	Static-Monitor	Active	324.84	603	2	340 - 505	12/16/1998	37.67853597	-121.8949212
3S1E17D012	H9	Main-Bernal	Lower	Supply-Municipal	Active	327.9	315	18	235 - 310	11/5/1999	37.67863057	-121.894969
3S1E18A005	P7	Main-Bernal	Lower	Supply-Municipal	Inactive	329.05	454	18	120 - 440	2/15/1968	37.67674805	-121.8971746
3S1E18A006	H6	Main-Bernal	Lower	Supply-Municipal	Active	326.74	500	18	158 - 490	2/1/1987	37.67883507	-121.9001384
3S1E18E004	18E4	Main-Bernal	Upper	Static-Monitor	Active	320.21	83	4	69 - 79	5/31/1979	37.67481704	-121.9096357
3S1E18J002	18J2	Main-Bernal	Upper	Static-Monitor	Active	323.02	71	2.5	61 - 66	10/20/1977	37.66966319	-121.9003532
3S1E18N001	18N1	Main-Bernal	Lower	Supply-Irrigation	Unknown	319.43	708	12	229 - 708	12/13/1962	37.66789814	-121.9103243
3S1E19A010	SF-B	Main-Bernal	Lower	Supply-Municipal	Active	337.02	331	18	189 - 327	NA	37.66204642	-121.8973684
3S1E19A011	SF-A	Main-Bernal	Lower	Supply-Municipal	Active	334.27	330	18	196 - 320	10/9/2001	37.66468211	-121.8974628
3S1E19C004	19C4	Main-Bernal	Upper	Static-Monitor	Active	322.23	78	4	68 - 73	6/11/1979	37.66251859	-121.9057766
3S1E19K001	19K1	Main-Bernal	Upper	Static-Monitor	Active	321.54	57.6	2.5	47.6 - 52.6	12/8/1975	37.65595477	-121.9031374
3S1E20B002	20B2	Main-Bernal	Lower	Supply-Unspecified	Active	344.03	500	12	218 - 500	12/27/1961	37.6628195	-121.8832699
3S1E20C003	20C3	Main-Bernal	Lower	Supply-Unspecified	Active	338.6	110	14	74 - 107	NA	37.66550942	-121.8899719
3S1E20C007	20C7	Main-Bernal	Upper	Static-Monitor	Active	338.66	153	2	65 - 145	6/15/2000	37.66558444	-121.8877176
3S1E20C008	20C8	Main-Bernal	Lower	Static-Nested	Active	338.67	315	2	295 - 315	10/20/2008	37.66566873	-121.8878765
3S1E20C009	20C9	Main-Bernal	Lower	Static-Nested	Active	338.78	515	2	495 - 515	10/20/2008	37.66566873	-121.8878765
3S1E20J004	20J4	Main-Bernal	Upper	Static-Monitor	Active	331.62	72	2.5	62 - 67	12/5/1975	37.65736986	-121.881537
3S1E20M011	20M11	Main-Bernal	Upper	Static-Monitor	Active	325.73	71	2.5	61 - 66	10/12/1977	37.65507486	-121.8915027
3S1E20Q002	20Q2	Main-Bernal	Upper	Static-Monitor	Active	325.82	65	10	45 - 53	2/17/1976	37.65138859	-121.8831251
3S1E22D002	22D2	Main-Amador	Upper	Static-Monitor	Active	368.05	72	2.5	62 - 67	10/28/1976	37.66498216	-121.8553477
3S1E23A005	23A005	Main-Amador	Upper	Static-Nested	Active	380.77	125	2.5	100 - 120	12/1/2023	37.66289356	-121.8254005
3S1E23A006	23A006	Main-Amador	Lower	Static-Nested	Active	380.8	325	2.5	240 - 260	12/1/2023	37.66289356	-121.8254005
3S1E23A007	23A007	Main-Amador	Lower	Static-Nested	Active	380.83	326	2.5	285 - 315	12/1/2023	37.66289356	-121.8254005
3S1E23J001	23J1	Main-Amador	Lower	Supply-Domestic	Unknown	428.2	120	8	0 - 120	3/4/1958	37.65681551	-121.8278374
3S1E24Q001	24Q1	Main-Amador	Lower	Supply-Irrigation	Unknown	427.5	440	14	200 - 400	10/1/1993	37.65264977	-121.8146015
3S1E25C003	25C3	Main-Amador	Upper	Static-Monitor	Unknown	454.16	146	2	70 - 140	11/28/1990	37.65008048	-121.8190712
3S1E28M002	28M2	Upland	Upper	Supply-Unspecified	Active	390.01	141	5	80 - 141	2/8/1962	37.64232947	-121.8761919
3S1E29M004	29M4	Main-Castle	Upper	Static-Monitor	Active	310.94	57	2.5	47 - 52	12/4/1975	37.64237925	-121.8952193
3S1E29P002	29P2	Main-Bernal	Upper	Static-Monitor	Active	302.82	42	2.5	32 - 37	12/9/1975	37.63815806	-121.8880498
3S1E33G005	33G5	Upland	Upper	Static-Monitor	Unknown	408.53	35	2	11 - 35	7/21/2006	37.63164833	-121.8667756

TABLE B-1
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Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S1W01B009	1B9	Fringe-Dublin	Lower	Static-Nested	Active	333.56	162	2	122 - 152	2/15/1996	37.70624094	-121.9205208
3S1W01B010	1B10	Fringe-Dublin	Lower	Static-Nested	Active	333.57	414	2	274 - 404	2/15/1996	37.70624093	-121.9205217
3S1W01B011	1B11	Fringe-Dublin	Lower	Static-Nested	Active	333.74	560	2	480 - 550	2/15/1996	37.70624016	-121.9205217
3S1W01J001	1J1	Fringe-Dublin	Upper	Static-Monitor	Unknown	334.36	70	4	47 - 64	12/4/1984	37.70071528	-121.9158464
3S1W01J002	1J2	Fringe-Dublin	Upper	Static-Monitor	Unknown	334.58	37	4	15 - 37	12/4/1984	37.70045912	-121.9157701
3S1W02A002	2A2	Fringe-Dublin	Upper	Static-Monitor	Active	369.4	47	2.5	37 - 42	10/7/1976	37.70644336	-121.9371554
3S1W12A009	12A9	Fringe-Dublin	Upper	Static-Monitor	Unknown	332.14	74	2	49 - 69	11/7/2007	37.69595276	-121.9157792
3S1W12A010	12A10	Fringe-Dublin	Upper	Static-Monitor	Unknown	331.99	40	2	20 - 35	11/7/2007	37.69600852	-121.9157919
3S1W12B002	12B2	Fringe-Dublin	Upper	Static-Monitor	Active	342.89	39.5	4	20 - 50	6/21/1996	37.69237453	-121.9238722
3S1W12J001	12J1	Fringe-Dublin	Upper	Static-Monitor	Active	329.31	62	2.5	52 - 57	12/9/1975	37.68471212	-121.915041
3S1W13J001	13J1	Main-Castle	Upper	Static-Monitor	Active	343.94	48	2.5	39 - 44	10/7/1976	37.67017797	-121.9148308
3S2E01F002	1F2	Fringe-Spring	Upper	Static-Monitor	Active	572.99	68.6	2.5	59 - 64	12/22/1977	37.70343468	-121.7065899
3S2E02B002	2B2	Fringe-Spring	Upper	Static-Monitor	Active	539.45	46	2.5	36.9 - 41.9	6/7/1976	37.70645613	-121.7212722
3S2E03A001	3A1	Fringe-Spring	Upper	Static-Monitor	Active	517.63	54	2.5	44 - 49	12/21/1977	37.7077886	-121.7353671
3S2E03K003	3K3	Fringe-Mocho I	Upper	Static-Monitor	Active	522.83	60	2.5	50 - 55	12/12/1977	37.70028566	-121.7403175
3S2E05N001	5N1	Main-Mocho II	Mixed	Supply-Unspecified	Inactive	444	210	10	0 - 210	10/5/1977	37.69590721	-121.7862742
3S2E07C002	7C2	Main-Mocho II	Upper	Static-Monitor	Active	420.84	49	2.5	39 - 44	4/6/1978	37.69324854	-121.7973158
3S2E07H002	7H2	Main-Mocho II	Upper	Static-Monitor	Active	442.85	54	2	44 - 54	7/29/1989	37.68785333	-121.7876082
3S2E07N002	7N2	Main-Amador	Upper	Static-Monitor	Active	422	162	2	132 - 152	12/20/2012	37.68002957	-121.8058031
3S2E07P003	CWS24	Main-Amador	Lower	Supply-Municipal	Active	431.46	510	16	300 - 490	4/4/1972	37.68298787	-121.7998331
3S2E07R002	7R2	Main-Mocho II	Deep	Static-Monitor	Active	446	805	2	750 - 805	3/4/2002	37.68314714	-121.7897049
3S2E07R003	CWS31	Upland	Lower	Supply-Municipal	Active	446	583	16	410 - 528	9/20/2002	37.68309817	-121.7898265
3S2E08F001	CWS10	Main-Mocho II	Lower	Supply-Municipal	Active	456.24	470	16	143 - 433	5/15/1954	37.69017666	-121.781769
3S2E08H002	8H2	Main-Mocho II	Upper	Static-Monitor	Active	469.61	46	2.5	36 - 41	6/14/1976	37.69053956	-121.7741831
3S2E08H003	8H3	Main-Mocho II	Lower	Static-Nested	Active	477.4	195	2	170 - 190	7/10/2009	37.68914777	-121.7724119
3S2E08H004	8H4	Main-Mocho II	Lower	Static-Nested	Active	476.97	385	2	360 - 380	7/10/2009	37.68914777	-121.7724119
3S2E08K002	8K2	Main-Mocho II	Upper	Static-Monitor	Active	464.78	74	2.5	64 - 69	12/13/1977	37.68480411	-121.7787244
3S2E08N002	CWS14	Main-Mocho II	Lower	Supply-Municipal	Active	453.64	526	10	140 - 515	1/16/1958	37.6827654	-121.7857943
3S2E08P001	CWS8	Main-Mocho II	Lower	Supply-Municipal	Active	468.2	273	10	122 - 263	11/1/1948	37.68196051	-121.7790926
3S2E08Q009	8Q9	Main-Mocho II	Lower	Static-Monitor	Active	464.7	114	2	99 - 114	6/15/1999	37.68170246	-121.7772797
3S2E09Q004	9Q4	Main-Mocho II	Upper	Static-Monitor	Active	504.5	80	2.5	70 - 75	11/1/1977	37.6825049	-121.760615
3S2E10F003	10F3	Fringe-Mocho I	Upper	Static-Monitor	Active	534.84	45	2.5	35 - 40	12/12/1977	37.68966916	-121.7431999
3S2E10Q001	10Q1	Main-Mocho II	Upper	Static-Monitor	Active	555.36	43.5	2.5	33.5 - 39	11/1/1976	37.68003217	-121.7399477
3S2E10Q002	10Q2	Main-Mocho II	Lower	Static-Monitor	Unknown	549.33	325	4.5	298 - 325	12/3/1990	37.68196748	-121.7390438
3S2E11C001	11C1	Fringe-Mocho I	Upper	Static-Monitor	Active	556.49	66.2	2.5	56.2 - 61.2	11/1/1976	37.69062848	-121.7286922
3S2E12C004	12C4	Fringe-Spring	Upper	Static-Monitor	Unknown	591.46	108	4.5	100 - 108	3/11/1988	37.69242351	-121.7087088

TABLE B-1
WELL CONSTRUCTION DETAILS
2025 WATER YEAR

Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S2E12J003	12J3	Fringe-Spring	Lower	Static-Monitor	Unknown	628.84	160	5	127 - 157	5/20/1981	37.68555739	-121.6981982
3S2E14A003	14A3	Fringe-Mocho I	Upper	Static-Monitor	Active	601.87	110	2.5	100 - 105	12/13/1977	37.67941811	-121.7189172
3S2E14B001	14B1	Fringe-Mocho I	Lower	Supply-Domestic	Unknown	593.36	300	9	146 - 234	5/26/1983	37.67938333	-121.7221287
3S2E15E002	15E2	Main-Mocho II	Lower	Supply-Irrigation	Active	549.69	192	8	104 - 189	11/14/1983	37.67381754	-121.7493657
3S2E15L001	15L1	Main-Mocho II	Upper	Static-Monitor	Active	561.5	40.5	2	20 - 40.5	10/10/2013	37.67238623	-121.7450171
3S2E15L002	15L2	Main-Mocho II	Upper	Static-Monitor	Active	561.13	70.5	2	40 - 70	1/14/2015	37.67239349	-121.7453542
3S2E15M002	15M2	Main-Mocho II	Upper	Static-Monitor	Active	549.46	45	2	25 - 45	10/10/2013	37.67241403	-121.7499167
3S2E15M003	15M3	Main-Mocho II	Upper	Static-Monitor	Active	549.07	75.8	2	45.3 - 75.3	1/13/2015	37.67240411	-121.7503234
3S2E15Q006	15Q6	Main-Mocho II	Lower	Supply-Irrigation	Abandoned	577.56	301	12	220 - 301	3/28/1980	37.66870598	-121.7420745
3S2E15Q008	15Q 8	Main-Mocho II	Upper	Static-Monitor	Active	584.44	41	2	10.5 - 40.5	1/14/2015	37.66534563	-121.7408763
3S2E15R017	15R17	Main-Mocho II	Upper	Static-Nested	Active	592.41	63	2	38 - 58	12/14/2006	37.66759872	-121.7352763
3S2E15R018	15R18	Main-Mocho II	Lower	Static-Nested	Active	592.47	138	2	113 - 133	12/15/2007	37.66759872	-121.7352763
3S2E15R020	15R20	Main-Mocho II	Upper	Static-Monitor	Active	589.27	51	2	20.5 - 50.5	1/14/2015	37.6672257	-121.7374859
3S2E16A003	16A3	Main-Mocho II	Lower	Supply-Irrigation	Active	527.06	240	10	91 - 240	5/1/1972	37.6790358	-121.7535376
3S2E16C001	CWS15	Main-Mocho II	Lower	Supply-Municipal	Active	510.97	584	16	150 - 523	2/18/1958	37.67691023	-121.7639859
3S2E16E004	16E4	Main-Mocho II	Upper	Static-Monitor	Active	506.26	45	2.5	35 - 40	12/15/1977	37.67438231	-121.7675059
3S2E18B001	CWS20	Main-Amador	Lower	Supply-Municipal	Active	438.56	497	16	190 - 465	1/30/1961	37.67687486	-121.7954896
3S2E18E001	18E1	Main-Amador	Upper	Static-Monitor	Active	423.86	133.8	2.5	123.8 - 128.8	4/22/1977	37.67630643	-121.802347
3S2E19D007	19D7	Main-Amador	Upper	Static-Nested	Active	415.07	180	2	100 - 180	1/29/1999	37.66544422	-121.80467
3S2E19D008	19D8	Main-Amador	Lower	Static-Nested	Active	415.04	260	2	210 - 260	1/29/1999	37.66544422	-121.80467
3S2E19D009	19D9	Main-Amador	Lower	Static-Nested	Active	414.98	390	2	280 - 390	1/29/1999	37.66544422	-121.80467
3S2E19D010	19D10	Main-Amador	Lower	Static-Nested	Active	414.89	470	2	420 - 470	1/29/1999	37.66544422	-121.80467
3S2E19N003	19N3	Main-Amador	Upper	Static-Nested	Active	418.45	120	2	105 - 115	7/27/2018	37.65429516	-121.8048619
3S2E19N004	19N4	Main-Amador	Lower	Static-Nested	Active	417.96	203	2	188 - 198	7/27/2018	37.65429516	-121.8048619
3S2E20M001	20M1	Main-Amador	Lower	Supply-Unspecified	Active	478.79	184	12	0 - 184	9/15/1928	37.65523586	-121.7851549
3S2E20R002	20R2	Upland	Upper	Supply-Irrigation	Active	523.15	257	9	107 - 252	5/1/1985	37.65113348	-121.7702377
3S2E21K009	21K9	Upland	Upper	Supply-Domestic	Active	567.08	NA	6	NA	NA	37.65700209	-121.7606041
3S2E22B001	22B1	Main-Mocho II	Upper	Static-Monitor	Active	585.88	31.9	2.5	21.9 - 26.9	7/8/1976	37.66508152	-121.7406318
3S2E23E001	23E1	Main-Mocho II	Upper	Static-Nested	Active	613.36	40	2	20 - 35	9/2/2004	37.6604406	-121.7328709
3S2E23E002	23E2	Main-Mocho II	Lower	Static-Nested	Active	613.23	110	2	95 - 105	9/2/2004	37.6604406	-121.7328709
3S2E24A001	24A1	Fringe-Mocho I	Upper	Static-Monitor	Active	717.7	46.3	2.5	36.3 - 41.3	11/1/1976	37.66221891	-121.6967396
3S2E26J002	26J2	Main-Mocho II	Upper	Static-Monitor	Active	689.92	44	2.5	34 - 39	12/27/1977	37.64259738	-121.7169555
3S2E29F004	29F4	Main-Amador	Upper	Static-Monitor	Active	457.5	36	2.5	26 - 31	10/28/1976	37.64513824	-121.7827012
3S2E29L001	29L1 (P3)	Main-Amador	Upper	Static-Monitor	Active	463.64	23	2	8 - 23	11/29/2001	37.64304199	-121.7814775
3S2E30C001	30C1	Main-Amador	Lower	Supply-Unspecified	Active	439.41	150	6	125 - 145	3/16/1995	37.64876027	-121.7977565
3S2E30D002	30D2	Main-Amador	Upper	Static-Monitor	Active	431.6	44	4	24 - 39	6/18/1979	37.65046551	-121.8013878

TABLE B-1
WELL CONSTRUCTION DETAILS
2025 WATER YEAR

Well	Map	Basin	Aquifer	Type	Status	RP (ft MSL)	Well Depth (ft)	Well Diam (in)	Screened Interval (ft)	Completed Date	Latitude	Longitude
3S2E32E007	32E7	Upland	Upper	Static-Monitor	Active	610.94	37	6	19 - 34	7/16/1991	37.63113514	-121.786384
3S2E33C001	33C1	Main-Amador	Upper	Static-Monitor	Inactive	497.63	20	2	5 - 20	11/29/2001	37.63433036	-121.7628251
3S2E33G001	33G1	Main-Amador	Upper	Static-Monitor	Active	511.52	17	2.5	9 - 14	12/12/1975	37.62947066	-121.7575143
3S2E33K001	33K1	Main-Amador	Upper	Static-Monitor	Unknown	546.83	15	2.5	7 - 12	NA	37.6288351	-121.7589648
3S2E33L001	33L1	Main-Amador	Upper	Static-Monitor	Unknown	557.63	16	2.5	11 - 16	NA	37.62885221	-121.7621792
3S3E06Q003	6Q3	Fringe-Altamont	Upper	Static-Monitor	Active	681.07	30	2	20 - 30	8/29/2016	37.69503167	-121.6849068
3S3E07D002	7D2	Fringe-Spring	Upper	Static-Monitor	Active	621.94	72	2.5	64 - 69	11/1/1976	37.69252688	-121.696822
3S3E19C002	19C2	Fringe-Mocho I	Upper	Supply-Domestic	Active	740.7	66	8	0 - 66	NA	37.66255583	-121.6893418
3S3E20L004	20L4	Fringe-Mocho I	Upper	Supply-Domestic	Active	862.38	340	5	NA	8/15/2005	37.65624203	-121.6681508
3S3E20R004	20R4	Fringe-Mocho I	Upper	Supply-Domestic	Active	923.77	NA	6	NA	NA	37.65177503	-121.660515
3S3E21C001	21C1	Upland	Upper	Supply-Domestic	Active	1067.2	128	12	60 - 124	1/1/1977	37.66242502	-121.6517804
4S2E01A001	1A1	Main-Mocho II	Upper	Supply-Irrigation	Active	819.76	130	6	45 - 130	2/6/2015	37.61837387	-121.6959369
4S3E06E004	6E4	Main-Mocho II	Upper	Supply-Domestic	Active	807.68	220	10	184 - 212	5/28/1976	37.61720182	-121.6964167
TOTAL WELLS IN THE EITHER THE GROUNDWATER LEVELS & QUALITY PROGRAMS = 265												

NA=Not Available
RP = Reference Point Elevation (in feet above Mean Sea Level)
ft=feet
MSL=Mean Sea Level
in=Inches

TABLE B-2
MINING PIT MONITORING LOCATION DETAILS
2025 WATER YEAR

Pond Name	Description	Chain of Lake	Map Name	Contact with Aquifer	Pond Activity	Mining Use	Pond Area (acre)	Latitude	Longitude
MA-C001	Lake C - southeast	C	C1	Yes	Static	Unused	4.9	37.65991162	-121.8084152
MA-K015	Shadow Cliffs	Sh.Cliff	ShCliffs	Yes	Pumped Into	Unused	89.3	37.67026499	-121.8374045
MA-K018	Lake Boris		K18	Yes	Static	Unused	11.2	37.66683035	-121.8401557
MA-K028	Lake H	H	LkH	Yes	Static	Unused	69	37.68676284	-121.8475729
MA-K030	Cope Lake	Cope	Cope	No	Pumped Into	Unused	185.5	37.68377819	-121.8479704
MA-K037	Lake I	I	LkI	Yes	Static	Unused	260.7	37.68293935	-121.8501302
MA-P010	P10	B	P10	Yes	Static	Unused	1	37.65881982	-121.822876
MA-P012	Island Pond		P12	Yes	Static	Unused	15	37.66511679	-121.8331313
MA-P027	Lake D - southwest	D	P27	Yes	Static	Unused	10.2	37.66774193	-121.8163585
MA-P028	Lake A - west	A	P28	Yes	Static	Unused	7.1	37.65387786	-121.8031512
MA-P041	Lake A - east	A	P41	Yes	Static	Unused	46.4	37.65195178	-121.7965365
MA-P042	Lake B - west	B	P42	Yes	Pumped From	Active Mining	9.3	37.65830723	-121.81505
MA-P044	P44	B	P44	Yes	In Flux	Water Storage	13.7	37.66698046	-121.8190954
MA-P046	Lake J	J	P46	Yes	Pumped From	Active Mining	15.2	37.67018063	-121.8302795
MA-R004	R4		R4	Yes	In Flux	Water Storage	10.9	37.67715277	-121.8304546
MA-R022	Lake F	F	R22	No	Pumped From	Settling Pond	60.3	37.68663632	-121.8249012
MA-R023	Vulcan Pond 5		R23	No	Pumped Into	Water Storage	22.3	37.68356493	-121.8210549
MA-R024A	Lake E - southeast	E	R24A	Yes	Pumped Into	Settling Pond	71.4	37.68118131	-121.8174422
MA-R028	Lake D - northwest	D	R28	Yes	Pumped From	Active Mining	4.3	37.67209793	-121.8120508

TABLE B-3
TABLE OF SURFACE WATER MONITORING STATIONS
AND MONITORING INFORMATION
2025 WATER YEAR

Station ID	Station Name	Stream	Station Type	SGMA-RMS	Flow Range	Flow Freq	Water Temp	SC	pH	WQ Freq	Flow By	Sample By
ARROYO VALLE - LINE E												
AVBLC	Arroyo Valle below Lang Canyon	Arroyo Valle	Gauge Height	-	Entire	15 Min	15 Min	-	-	Annual	USGS	Zone 7
LDV_FLD_GATE	Lake Del Valle Flood Gate	Lake Del Valle	Calculated	-	Entire	15 Min	-	-	-	-	DWR	
SBA_TO2_AV	SBA Turnout 2 to Arroyo Valle	SBA Turnout 2	Flow Meter	-	Entire	15 Min	15 Min	-	-	-	DWR	
SBA_TO1_AV	SBA Turnout 1 to Arroyo Valle	SBA Turnout 1	Estimated	RMS-ICSW	Entire	Daily	-	-	-	-	DWR	
AVNL	Arroyo Valle near Livermore	Arroyo Valle	Gauge Height	RMS-ICSW	Entire	15 Min	15 Min	-	-	Quarterly	USGS	Zone 7
AVDCC	Arroyo Valle at Dry Creek Confluence	Arroyo Valle	Water Temp Only	-		-	15 Min	-	-	-		
AV_ISABEL	Arroyo Valle at Isabel	Arroyo Valle	Water Temp Only	-		-	15 Min	-	-	-		
AV_DIV_SC	Arroyo Valle Diversion to Shadow Cliffs	Arroyo Valle	Flow Meter	RMS-ICSW	Entire	Daily	-	-	-	-	EBRPD	
ADVP	Arroyo Valle at Pleasanton	Arroyo Valle	Gauge Height	RMS-ICSW	Entire	15 Min	15 Min	-	-	Quarterly	Zone 7	Zone 7
AVADLL	Arroyo Valle above Arroyo De La Laguna	Arroyo Valle	Water Temp Only	-		-	15 Min	-	-	-		
ARROYO MOCHO - LINE G												
AMNL	Arroyo Mocho near Livermore	Arroyo Mocho	Gauge Height	RMS-ICSW	Entire	15 Min	15 Min	-	-	Annual	Zone 7	Zone 7
SBA_AM	SBA Turnout to Arroyo Mocho	SBA Turnout	Flow Meter	RMS-ICSW	Entire	15 Min	-	-	-	-	DWR	
AMHAG	Arroyo Mocho at Livermore	Arroyo Mocho	Gauge Height	RMS-ICSW	Entire	15 Min	-	-	-	Annual	Zone 7	Zone 7
MA_VUL_COPE	Vulcan Discharge to Cope Lake	Arroyo Mocho	Flow Meter	-	Entire	Daily	-	-	-	-	Vulcan	
MA_COPE_I	Cope Lake to Lake I	Arroyo Mocho	Gauge Height	-	Entire	Hourly	-	-	-	-	Zone 7	
AM_KB	Arroyo Mocho at Kaiser Bridge	Arroyo Valle	Gauge Height	-	Entire	15 Min	-	-	-	Annual	Zone 7	Zone 7
LG3_FD	Line G3 at Fairlands Drive	Line G3	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
AMP	Arroyo Mocho near Pleasanton	Arroyo Mocho	Gauge Height	-	Entire	15 Min	15 Min	-	-	Annual	Zone 7	Zone 7
ARROYO SECO - LINE P												
LLNL_ALP	LLNL Treated Groundwater Discharge to ALP	LLNL Treatment Effluent	Estimated	-	Entire	Daily	-	-	-	-	LLNL	
AS_SFR	Arroyo Seco at Southfront Rd	Arroyo Seco	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
ALTAMONT CREEK - LINE R												
SBA_ALTC	SBA Turnout to Altamont Creek	SBA Turnout	Flow Meter	-	Entire	15 Min	-	-	-	-	DWR	
ALTC_PS	Altamont Creek at Pasatiempo Street	Altamont Creek	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
ALTC_BD	Altamont Creek at Bluebell Drive	Altamont Creek	Gauge Height	RMS-ICSW	High	15 Min	15 Min	-	-	-	Zone 7	
ARROYO LAS POSITAS - LINE H												
ALP_NFR	Arroyo Las Positas at North Front Road	Arroyo Las Positas	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
ALPL	Arroyo Las Positas at Livermore	Arroyo Las Positas	Gauge Height	-	Entire	15 Min	15 Min	-	-	Annual	Zone 7	Zone 7
ALP_ELCH	Arroyo Las Positas above El Charro Road	Arroyo Las Positas	Gauge Height	RMS-ICSW	Entire	15 Min	15 Min	-	-	Annual	Zone 7	Zone 7
LINE M												
LM_LA	Line M at Lindbergh Ave	Collier Canyon Creek	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
CHABOT CANAL - LINE G-1												
LG1_DB	Line G1 at Dublin Blvd	Line G1	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
CC_BSRD	Chabot Canal below Stoneridge Drive near Pleasanton	Chabot Canal	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
SOUTH SAN RAMON CREEK - LINE J												
SSRC_AAVBLVD	South San Ramon Creek above Amador Valley Blvd	SAN RAMON CREEK	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	Zone 7	
LJ1_BDB	Line J1 Below Dublin Blvd	Line J1	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
TASSAJARA CREEK - LINE K												
TC_BI580	Tassajara Creek below Interstate 580	Tassajara Creek	Gauge Height	-	High	15 Min	15 Min	-	-	-	BalanceHydro	
ALAMO CANAL - LINE F												
AC_WCD	Alamo Creek at Willow Creek Dr near Dublin	Alamo Creek	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	
ACNP	Alamo Canal near Pleasanton	Alamo Canal	Gauge Height	-	Entire	15 Min	-	-	-	-	USGS	
ARROYO DE LA LAGUNA - LINE B												
ADLLCMNP	Arroyo De La Laguna at Corte Madrid near Pleasanton	Arroyo De La Laguna	Gauge Height	-	Entire	15 Min	-	-	-	-	USGS	
ADLLV	Arroyo De La Laguna at Verona	Arroyo De La Laguna	Gauge Height	-	Entire	15 Min	15 Min	15 Min	15 Min	Annual	USGS	Zone 7
ADLL_HWY84	Arroyo De La Laguna at Highway 84 in Sunol	Arroyo De La Laguna	Gauge Height	-	Entire	15 Min	15 Min	-	-	-	BalanceHydro	

Freq = Frequency. Flow Range = range of accurate data for flow measurements. SC = Specific Conductance. WQ = Water Quality. Min = Minutes.
Quarterly Water Quality Samples are required for water rights requirements.
Stations are ordered from upstream to downstream on each stream line.

LEGEND

- Upper Aquifer
- Lower Aquifer
- Deep Aquifer
- Supply
- Monitor
- Nested
- Representative (RMS)
- Streams
- Township-Range Line
- Mining Area Ponds

ABBREVIATIONS FOR MUNI WELLS
CWS= California Water Service
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
St = Stoneridge (Zone 7)
P = Pleasanton
SF = San Francisco Public Utilities Commission

Bishop
Dublin
Camp
Castle
Bernal
Amador
Cayetano
Vasco
May
Spring
Mocho I
Mocho II
Altamont
2S/1W
2S/1E
2S/2E
2S/3E
3S/1W
3S/1E
3S/2E
3S/3E
FRINGE SUBAREA - NORTH
FRINGE SUBAREA - NORTHEAST
FRINGE SUBAREA - EAST
UPLAND SUBAREA
UPLAND SUBAREA
UPLAND SUBAREA
MAIN BASIN
LIVERMORE VALLEY
AMADOR VALLEY

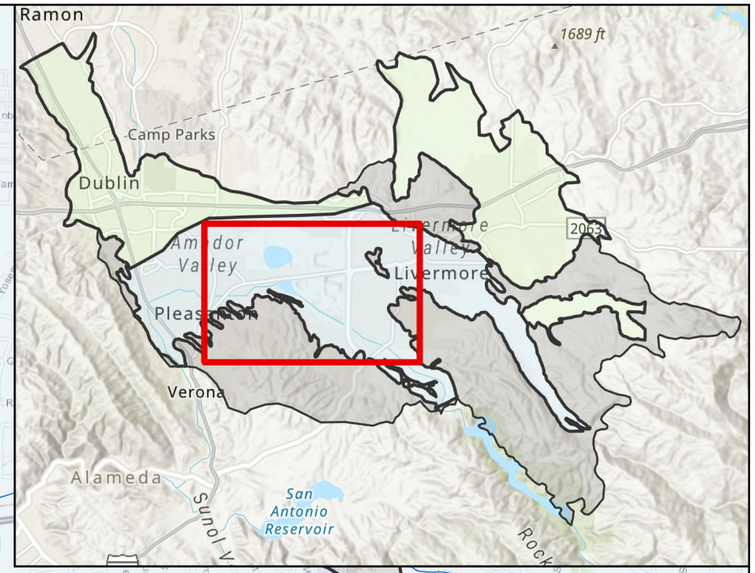
N
W E
S

0 2 4
Miles

DATE: Mar 10, 2026
FILE: \\zone7-file\public files\GWS\Programs\GSP\2025 Annual Report\FiguresTables\09-Appendices\B-MonitoringNetwork\B-Fig01-GMProgramWell2

Figure B-1
Map of Wells in 2025 Groundwater Elevation or Groundwater Quality Monitoring Network
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, NASA, NGA, USGS



LEGEND

- Pond Monitoring Point
- In Flux
- Pumped From
- Pumped Into
- Static
- Backfilled
- Chain of Lakes (Proposed)
- Not In Contact With Groundwater
- Rivers
- Main Basin
- Fringe Areas
- Upland Areas

N
W E
S

0 0.5 1
Miles

DATE: Feb 27, 2026

FILE: P:\GWS\Programs\GSP\2025 Annual Report\FiguresTables\09-Appendices\B-MonitoringNetwork\B-Fig02-MiningMaps2025.aprx

Figure B-2
Gravel Mining Pits in 2025 Groundwater Elevation and Quality Monitoring Program
Livermore Valley Groundwater Basin

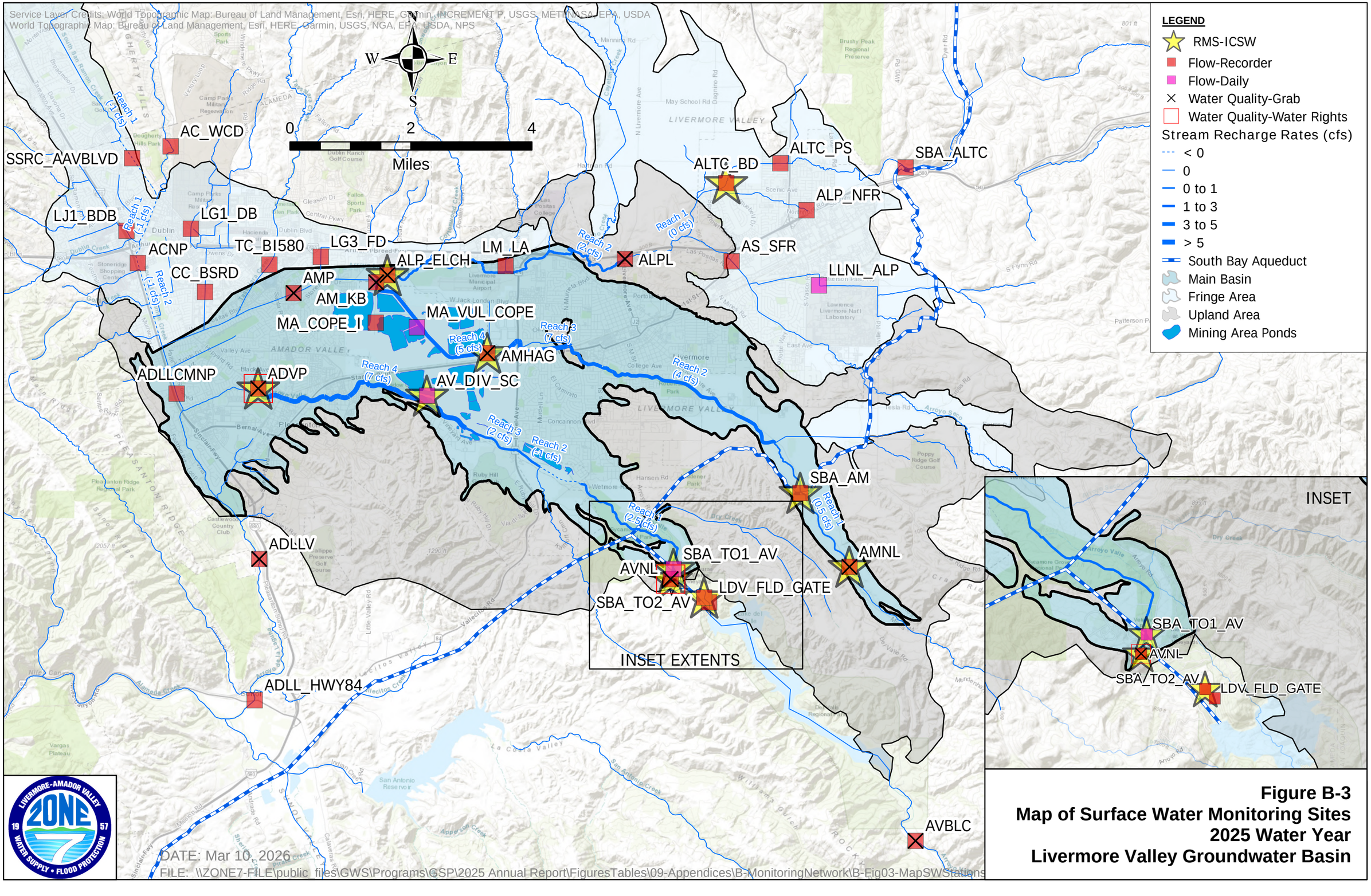


Figure B-3
Map of Surface Water Monitoring Sites
2025 Water Year
Livermore Valley Groundwater Basin

Appendix C

Groundwater Elevation

Supporting Data & Hydrographs

TABLE C-1
SEMIANNUAL GROUNDWATER LEVELS
(Feet above Mean Sea Level, NAVD88)
FALL 2024 TO FALL 2025

					Fall 2024		Spring 2025		Fall 2025		Change in Elevation (ft)		
											Seasonal		Annual
Well Number	Display Name	Well Depth	Aquifer	Subarea	Depth to Water	GW Elev	Depth to Water (ft)	GW Elev	Depth to Water (ft)	GW Elev	Fall 24 to Spring 25	Spring 25 to Fall 25	Fall 24 to Fall 25
2S1E32E001	32E1	70	Upper	None	36.0	356.6	35.3	357.3	36.3	356.3	0.7	-1.0	-0.3
2S1E32N001	32N1	44	Upper	Fringe-Camp	17.9	342.9	16.7	344.1	23.3	337.5	1.2	-6.6	-5.4
2S1E32Q001	32Q1	45	Upper	Fringe-Camp	27.1	340.4	26.3	341.3	27.2	340.3	0.8	-0.9	-0.1
2S1E33L001	33L1	80	Upper	None	51.1	338.4	50.3	339.2	50.1	339.4	0.8	0.2	0.9
2S1E33P002	33P2	55	Upper	Fringe-Camp	32.2	337.9	31.5	338.6	31.4	338.7	0.7	0.1	0.8
2S1E33R001	33R1	60	Upper	None	19.1	339.4	19.1	339.4	19.0	339.5	0.0	0.1	0.1
2S1W15F001	15F1	60	Upper	Fringe-Bishop	10.6	428.8	9.6	429.9	11.0	428.5	1.0	-1.4	-0.4
2S1W26C002	26C2	50	Upper	Fringe-Dublin	23.8	382.8	22.4	384.2	25.6	380.9	1.4	-3.2	-1.8
2S1W36E003	36E3	60	Upper	Fringe-Dublin	4.2	342.3	3.1	343.5	4.4	342.2	1.1	-1.3	-0.2
2S1W36F001	36F1	190	Lower	Fringe-Dublin	9.9	332.9	8.2	334.6	11.3	331.5	1.7	-3.1	-1.4
2S1W36F002	36F2	320	Lower	Fringe-Dublin	6.9	335.9	4.8	337.9	9.6	333.1	2.1	-4.8	-2.7
2S1W36F003	36F3	520	Lower	Fringe-Dublin	17.6	325.1	12.1	330.6	3.7	339.1	5.5	8.5	14.0
2S2E21L001	21L1	168	Upper	Fringe-May	34.8	528.3	33.6	529.5	35.5	527.5	1.2	-2.0	-0.8
2S2E27C002	27C2	108	Upper	Fringe-Spring	12.5	529.7	13.3	528.8	13.9	528.3	-0.9	-0.5	-1.4
2S2E27K001	27K1	96	Upper	Fringe-Spring	7.5	516.9	7.3	517.2	9.8	514.7	0.2	-2.5	-2.3
2S2E27M002	27M2	112	Upper	Fringe-May	8.1	516.4	6.4	518.2	8.4	516.2	1.7	-2.0	-0.3
2S2E27P002	27P2	68	Upper	Fringe-Spring	2.5	502.9	1.3	504.1	3.2	502.2	1.2	-1.9	-0.7
2S2E28D002	28D2	55	Upper	Fringe-May	28.3	526.9	27.9	527.3	27.8	527.4	0.4	0.1	0.5
2S2E28J002	28J2	230	Lower	Fringe-May	5.5	516.8	4.8	517.5	6.3	516.0	0.7	-1.5	-0.8
2S2E28Q001	28Q1	28	Upper	Fringe-May	4.7	508.4	3.4	509.7	6.7	506.3	1.3	-3.4	-2.0
2S2E32K002	32K2	43	Upper	Fringe-Cayetano	8.0	499.5	7.4	500.1	8.5	499.0	0.6	-1.1	-0.5
2S2E34E001	34E1	49	Upper	Fringe-May	5.1	494.7	3.0	496.7	5.3	494.4	2.1	-2.3	-0.2
2S2E34Q002	34Q2	50	Upper	Fringe-Spring	3.7	503.5	2.6	504.6	3.7	503.6	1.1	-1.1	0.0
3S1E01F002	1F2	40	Upper	Fringe-Camp	20.5	408.0	20.8	407.7	21.6	406.8	-0.3	-0.8	-1.1
3S1E01H003	1H3	80	Upper	Fringe-Camp	26.0	396.8	25.0	397.8	28.0	394.8	1.0	-3.0	-2.0
3S1E01J004	1J04	300	Lower	Fringe-Camp	NA	NA	NA	NA	NA	NA	-	-	-
3S1E01L001	1L1	70	Upper	Fringe-Camp	44.9	358.2	45.2	357.9	47.7	355.3	-0.3	-2.5	-2.8
3S1E01P002	1P2	50	Upper	Main-Amador	15.0	374.6	18.0	371.6	18.0	371.6	-3.0	0.0	-3.0
3S1E01P003	1P3	480	Lower	Main-Amador	89.2	305.2	87.6	306.9	103.2	291.3	1.6	-15.6	-14.0
3S1E02J002	2J2	41	Upper	Fringe-Camp	12.2	368.7	10.3	370.6	13.6	367.3	1.9	-3.3	-1.5
3S1E02J003	2J3	65	Upper	Fringe-Camp	25.6	380.8	25.9	380.5	26.4	379.9	-0.3	-0.6	-0.9
3S1E02K002	2K2	46	Upper	Fringe-Camp	24.7	372.4	23.6	373.4	25.2	371.9	1.1	-1.6	-0.5
3S1E02M003	2M3	50	Upper	Fringe-Camp	13.2	351.8	14.5	350.5	15.1	349.9	-1.3	-0.6	-1.9
3S1E02N006	2N6	55	Upper	Main-Amador	26.9	339.2	26.8	339.3	28.5	337.6	0.1	-1.7	-1.6
3S1E02P003	2P3	380	Lower	Fringe-Camp	68.9	302.9	70.9	300.8	82.5	289.2	-2.1	-11.6	-13.7
3S1E02Q001	2Q1	45	Upper	Main-Amador	17.9	352.1	17.2	352.7	19.9	350.0	0.7	-2.7	-2.0
3S1E02R001	2R1	33	Upper	Main-Amador	15.5	360.8	13.0	363.3	17.0	359.3	2.5	-4.0	-1.5
3S1E03G002	3G2	50	Upper	Fringe-Camp	12.2	342.1	11.3	343.0	12.4	341.8	0.9	-1.2	-0.2
3S1E04A001	4A1	50	Upper	Fringe-Camp	16.4	334.3	15.3	335.4	15.7	335.0	1.0	-0.3	0.7
3S1E04J005	4J5	47	Upper	Fringe-Camp	14.4	330.8	12.4	332.8	15.2	330.0	2.0	-2.8	-0.8
3S1E04J006	4J6	110	Upper	Fringe-Camp	16.2	329.3	14.0	331.5	NA	NA	2.2	-	-
3S1E04Q002	4Q2	90	Upper	Main-Amador	38.4	307.0	31.8	313.6	35.6	309.9	6.6	-3.8	2.8
3S1E05K006	5K6	75	Upper	Fringe-Camp	13.5	332.6	12.0	334.1	12.8	333.3	1.5	-0.8	0.7
3S1E05K007	5K7	150	Lower	Fringe-Camp	16.9	329.3	15.1	331.1	16.1	330.1	1.8	-1.0	0.8
3S1E05L003	5L3	40	Upper	Fringe-Camp	12.8	326.6	12.3	327.1	12.8	326.6	0.5	-0.5	0.0
3S1E05P006	5P6	35	Upper	Fringe-Camp	11.4	325.3	10.8	325.8	11.4	325.3	0.6	-0.5	0.0
3S1E06F003	6F3	36	Upper	Fringe-Dublin	5.4	324.4	4.5	325.3	5.4	324.4	0.9	-0.9	0.0
3S1E06G005	6G5	200	Lower	Fringe-Dublin	8.0	324.3	6.9	325.3	7.5	324.7	1.0	-0.6	0.4
3S1E06M002	6M2	26	Upper	Fringe-Dublin	12.2	322.5	11.8	322.9	NA	NA	0.4	-	-
3S1E06N002	6N2	67	Upper	Fringe-Dublin	13.3	322.0	12.1	323.1	13.2	322.0	1.2	-1.1	0.1
3S1E06N003	6N3	72	Upper	Fringe-Dublin	18.9	321.9	17.6	323.1	NA	NA	1.3	-	-
3S1E06N004	6N4	26	Upper	Fringe-Dublin	15.5	325.6	14.9	326.2	NA	NA	0.6	-	-
3S1E06N005	6N5	35	Upper	Fringe-Dublin	14.2	319.2	13.0	320.5	NA	NA	1.3	-	-
3S1E06N006	6N6	75	Upper	Fringe-Dublin	13.7	319.9	12.3	321.3	NA	NA	1.4	-	-
3S1E07B002	7B2	152	Lower	Fringe-Dublin	8.4	319.4	7.2	320.6	7.9	319.9	1.2	-0.7	0.5
3S1E07B012	7B12	70	Upper	Fringe-Dublin	10.6	317.2	9.2	318.7	10.2	317.6	1.4	-1.0	0.4
3S1E07D001	7D1	75	Upper	Fringe-Dublin	13.7	316.4	11.5	318.6	NA	NA	2.1	-	-
3S1E07D003	7D3	70	Upper	Fringe-Dublin	15.9	316.4	13.7	318.6	NA	NA	2.3	-	-
3S1E07D004	7D4	35	Upper	Fringe-Dublin	14.9	317.6	13.3	319.3	NA	NA	1.6	-	-
3S1E07G007	7G7	55	Upper	Fringe-Dublin	11.8	315.6	9.5	317.8	10.9	316.4	2.3	-1.4	0.8
3S1E07J005	7J5	50	Upper	Fringe-Dublin	13.9	312.9	12.5	314.3	14.1	312.7	1.3	-1.5	-0.2
3S1E08B001	8B1	148	Upper	Main-Amador	34.1	304.2	28.3	309.9	33.5	304.8	5.8	-5.2	0.6
3S1E08G004	8G4	85	Upper	Main-Amador	37.0	304.5	31.3	310.2	36.4	305.1	5.7	-5.1	0.6
3S1E08H009	8H9	240	Lower	Main-Amador	35.7	302.9	31.1	307.5	37.6	300.9	4.6	-6.6	-1.9
3S1E08H010	8H10	440	Lower	Main-Amador	37.8	301.5	33.9	305.3	41.2	298.0	3.8	-7.3	-3.4
3S1E08H011	8H11	720	Deep	Main-Amador	68.2	271.1	66.3	273.0	72.8	266.5	1.9	-6.5	-4.6
3S1E08H013	8H13	800	Deep	Main-Amador	59.0	279.9	40.3	298.6	66.2	272.7	18.7	-25.9	-7.2
3S1E08H018	M4	745	Lower	Main-Amador	52.9	289.1	NA	NA	NA	NA	-	-	-
3S1E08K001	8K1	99	Upper	Main-Amador	30.2	302.2	23.9	308.5	31.5	300.9	6.3	-7.6	-1.3

U = Upper; L = Lower; NM = Not Measured; NA = Not Available; OBS = Obstructed; - = Not Applicable
Highlighted = Representative Monitoring Site

TABLE C-1
SEMIANNUAL GROUNDWATER LEVELS
(Feet above Mean Sea Level, NAVD88)
FALL 2024 TO FALL 2025

					Fall 2024		Spring 2025		Fall 2025		Change in Elevation (ft)		
											Seasonal		Annual
Well Number	Display Name	Well Depth	Aquifer	Subarea	Depth to Water	GW Elev	Depth to Water (ft)	GW Elev	Depth to Water (ft)	GW Elev	Fall 24 to Spring 25	Spring 25 to Fall 25	Fall 24 to Fall 25
3S1E08K002	8K02	235	Lower	Main-Amador	30.1	301.9	23.3	308.8	32.4	299.6	6.9	-9.1	-2.3
3S1E08K003	8K03	390	Lower	Main-Amador	NA	NA	23.2	308.7	32.6	299.3	-	-9.4	-
3S1E08N001	8N1	72	Upper	Main-Bernal	NA	NA	NA	NA	NA	NA	-	-	-
3S1E09B001	St1	810	Lower	Main-Amador	41.3	307.9	36.5	312.8	40.5	308.8	4.8	-4.0	0.9
3S1E09H010	9H10	145	Upper	Main-Amador	46.8	306.1	40.2	312.7	43.7	309.2	6.7	-3.5	3.1
3S1E09H011	9H11	190	Lower	Main-Amador	47.2	305.8	42.4	310.6	47.4	305.6	4.8	-5.0	-0.2
3S1E09H013	9H13	145	Upper	Main-Amador	50.1	304.0	NA	NA	NA	NA	-	-	-
3S1E09J007	9J7	145	Upper	Main-Amador	51.7	305.7	53.2	304.2	49.0	308.4	-1.5	4.2	2.7
3S1E09J008	9J8	305	Lower	Main-Amador	53.2	304.4	49.2	308.3	55.2	302.3	4.0	-6.0	-2.1
3S1E09J009	9J9	505	Lower	Main-Amador	56.2	301.5	55.1	302.6	63.6	294.1	1.0	-8.4	-7.4
3S1E09M002	M1	530	Lower	Main-Amador	NA	NA	NA	NA	NA	NA	-	-	-
3S1E09M003	M2	575	Lower	Main-Amador	45.5	302.0	40.7	306.8	47.3	300.2	4.9	-6.7	-1.8
3S1E09M004	M3	498	Lower	Main-Amador	43.5	299.4	38.2	304.7	46.1	296.8	5.3	-7.9	-2.5
3S1E09P005	9P5	105	Upper	Main-Amador	44.8	304.7	38.4	311.0	43.0	306.4	6.4	-4.6	1.8
3S1E09P009	9P9	210	Lower	Main-Amador	45.6	303.8	39.5	310.0	44.8	304.7	6.2	-5.3	0.9
3S1E09P010	9P10	310	Lower	Main-Amador	45.0	304.7	41.6	308.1	47.5	302.1	3.4	-5.9	-2.6
3S1E09P011	9P11	425	Lower	Main-Amador	47.1	302.3	45.6	303.9	53.3	296.2	1.5	-7.7	-6.2
3S1E10A002	10A2	88	Upper	Main-Amador	52.8	314.6	46.8	320.6	48.6	318.8	6.0	-1.8	4.2
3S1E10B008	10B8	200	Lower	Main-Amador	46.5	307.1	41.2	312.4	45.1	308.5	5.3	-4.0	1.4
3S1E10B009	10B9	294	Lower	Main-Amador	48.5	305.0	45.6	307.9	51.2	302.3	3.0	-5.6	-2.7
3S1E10B010	10B10	600	Lower	Main-Amador	53.9	299.7	54.7	298.8	65.0	288.5	-0.8	-10.3	-11.2
3S1E10B011	10B11	810	Deep	Main-Amador	62.4	291.1	64.7	288.8	71.2	282.4	-2.3	-6.4	-8.7
3S1E10B014	COL5 Mon	690	Lower	Main-Amador	59.6	296.0	52.9	302.7	73.9	281.7	6.7	-21.0	-14.3
3S1E10B016	COL5	690	Lower	Main-Amador	64.0	293.6	62.6	295.0	NA	NA	1.4	-	-
3S1E10D002	10D2	212	Lower	Main-Amador	43.1	306.2	38.1	311.2	44.0	305.4	5.0	-5.8	-0.8
3S1E10D003	10D3	322	Lower	Main-Amador	45.1	304.2	40.0	309.3	47.5	301.8	5.1	-7.5	-2.4
3S1E10D004	10D4	616	Lower	Main-Amador	48.4	300.9	38.4	310.9	56.4	292.9	10.1	-18.1	-8.0
3S1E10D005	10D5	790	Deep	Main-Amador	58.2	291.1	38.3	311.0	66.6	282.7	19.9	-28.3	-8.4
3S1E10D007	10D7	145	Upper	Main-Amador	54.5	306.6	47.5	313.6	51.0	310.1	7.0	-3.5	3.4
3S1E10D008	10D8	215	Lower	Main-Amador	54.4	306.7	50.0	311.1	55.3	305.7	4.4	-5.4	-1.0
3S1E10K002	COL1 Mon	591	Lower	Main-Amador	54.3	304.4	51.8	306.9	57.7	301.0	2.5	-5.9	-3.4
3S1E10K003	COL1	530	Lower	Main-Amador	62.5	301.3	57.5	306.3	70.7	293.1	5.0	-13.2	-8.2
3S1E10N002	10N2	195	Upper	Main-Amador	51.9	306.0	45.1	312.8	47.5	310.4	6.8	-2.4	4.4
3S1E10N003	10N3	195	Lower	Main-Amador	52.3	305.7	47.3	310.7	52.5	305.5	5.0	-5.2	-0.2
3S1E11B001	11B1	43	Upper	Main-Amador	NA	NA	NA	NA	NA	NA	-	-	-
3S1E11C003	11C3	55	Upper	Main-Amador	29.3	335.5	29.6	335.2	30.7	334.1	-0.3	-1.1	-1.4
3S1E11G001	11G1	120	Upper	Main-Amador	44.4	327.2	44.7	326.9	49.5	322.1	-0.3	-4.8	-5.1
3S1E11G002	11G2	350	Lower	Main-Amador	65.9	305.7	68.0	303.7	78.1	293.5	-2.1	-10.2	-12.3
3S1E11G003	11G3	590	Lower	Main-Amador	71.5	300.2	75.0	296.6	87.8	283.8	-3.6	-12.8	-16.3
3S1E11G004	11G4	790	Deep	Main-Amador	77.5	294.2	79.0	292.7	88.4	283.3	-1.6	-9.4	-11.0
3S1E11M002	COL2 Mon	700	Lower	Main-Amador	62.7	303.3	60.7	305.3	75.9	290.1	2.0	-15.2	-13.2
3S1E11M003	COL2	684	Lower	Main-Amador	NA	NA	74.2	295.0	NA	NA	-	-	-
3S1E11P006	11P6	400	Lower	Main-Amador	75.2	301.5	73.1	303.6	83.4	293.3	2.1	-10.3	-8.2
3S1E12A002	12A2	69	Upper	Main-Amador	27.0	374.4	32.0	369.4	35.0	366.4	-5.0	-3.0	-8.0
3S1E12D002	12D2	45	Upper	Main-Amador	27.0	357.5	29.0	355.5	31.0	353.5	-2.0	-2.0	-4.0
3S1E12G001	12G1	73	Upper	Main-Amador	49.0	355.5	45.0	359.5	57.0	347.5	4.0	-12.0	-8.0
3S1E12H004	12H4	270	Lower	Main-Amador	98.4	309.4	101.0	306.8	113.4	294.3	-2.6	-12.4	-15.1
3S1E12H005	12H5	400	Lower	Main-Amador	110.5	297.3	112.9	294.9	122.4	285.4	-2.4	-9.5	-11.9
3S1E12H006	12H6	480	Lower	Main-Amador	111.1	296.7	113.3	294.5	122.6	285.2	-2.2	-9.3	-11.5
3S1E12H007	12H7	684	Deep	Main-Amador	168.4	239.3	152.8	254.9	170.1	237.6	15.6	-17.3	-1.7
3S1E12K002	12K2	300	Lower	Main-Amador	97.1	309.2	99.0	307.3	109.7	296.6	-1.9	-10.7	-12.6
3S1E12K003	12K3	475	Lower	Main-Amador	107.3	299.5	110.2	296.6	120.3	286.5	-2.9	-10.1	-13.0
3S1E12K004	12K4	575	Deep	Main-Amador	123.0	283.7	114.8	291.9	126.9	279.9	8.3	-12.1	-3.8
3S1E13P005	13P5	135	Upper	Main-Amador	100.0	293.8	99.8	293.9	100.9	292.8	0.1	-1.1	-1.0
3S1E13P006	13P6	255	Lower	Main-Amador	99.3	294.4	97.5	296.2	107.9	285.8	1.8	-10.4	-8.6
3S1E13P007	13P7	375	Lower	Main-Amador	95.7	297.8	93.9	299.5	104.4	289.1	1.8	-10.4	-8.7
3S1E13P008	13P8	605	Lower	Main-Amador	132.8	260.8	121.1	272.5	133.3	260.3	11.7	-12.2	-0.5
3S1E14B001	14B1	435	Lower	Main-Amador	86.5	297.7	84.9	299.4	93.9	290.3	1.7	-9.1	-7.4
3S1E14D002	14D2	740	Lower	Main-Amador	66.9	304.9	65.1	306.7	70.2	301.7	1.8	-5.1	-3.3
3S1E15F003	15F3	625	Lower	Main-Amador	99.2	269.8	61.9	307.1	69.8	299.2	37.3	-8.0	29.3
3S1E15J003	15J3	196	Lower	Main-Amador	40.9	303.7	38.1	306.5	48.5	296.1	2.9	-10.5	-7.6
3S1E15M003	15M3	600	Lower	Main-Amador	71.3	290.8	65.1	297.0	75.0	287.1	6.2	-9.9	-3.7
3S1E16A002	P8	500	Lower	Main-Amador	54.3	301.9	53.0	303.1	65.0	291.1	1.3	-12.0	-10.8
3S1E16A004	16A4	603	Lower	Main-Amador	58.4	301.0	55.4	304.0	63.9	295.5	2.9	-8.5	-5.5
3S1E16B001	16B1	805	Deep	Main-Amador	59.4	296.4	57.3	298.5	65.7	290.1	2.1	-8.4	-6.3
3S1E16C002	16C2	190	Lower	Main-Amador	41.1	303.3	36.5	307.9	42.5	301.8	4.6	-6.1	-1.4
3S1E16C003	16C3	305	Lower	Main-Amador	42.8	301.5	40.2	304.0	47.0	297.2	2.5	-6.8	-4.3
3S1E16C004	16C4	375	Lower	Main-Amador	45.0	299.2	44.6	299.6	51.2	293.0	0.4	-6.6	-6.2
3S1E16E004	16E4	105	Upper	Main-Amador	39.6	312.1	33.4	318.3	40.1	311.6	6.2	-6.7	-0.5

U = Upper; L = Lower; NM = Not Measured; NA = Not Available; OBS = Obstructed; - = Not Applicable
Highlighted = Representative Monitoring Site

TABLE C-1
SEMIANNUAL GROUNDWATER LEVELS
(Feet above Mean Sea Level, NAVD88)
FALL 2024 TO FALL 2025

Well Number	Display Name	Well Depth	Aquifer	Subarea	Fall 2024		Spring 2025		Fall 2025		Change in Elevation (ft)		
											Seasonal		Annual
					Depth to Water	GW Elev	Depth to Water (ft)	GW Elev	Depth to Water (ft)	GW Elev	Fall 24 to Spring 25	Spring 25 to Fall 25	Fall 24 to Fall 25
3S1E16L002	P4	151	Lower	Main-Amador	43.3	303.0	37.4	308.9	44.1	302.2	5.9	-6.7	-0.8
3S1E16L007	P6	647	Lower	Main-Amador	44.5	299.0	38.3	305.3	47.0	296.5	6.3	-8.8	-2.5
3S1E16P005	16P5	75	Upper	Main-Amador	34.3	320.2	32.8	321.7	35.4	319.1	1.5	-2.6	-1.1
3S1E16R001	16R1	239	Lower	Main-Amador	52.1	310.5	48.7	313.8	56.9	305.7	3.4	-8.2	-4.8
3S1E17B004	17B4	248	Lower	Main-Amador	35.6	302.1	29.2	308.5	41.2	296.5	6.4	-12.1	-5.6
3S1E17D003	17D3	108	Lower	Main-Bernal	25.2	299.9	20.7	304.5	35.7	289.4	4.6	-15.1	-10.5
3S1E17D004	17D4	236	Lower	Main-Bernal	25.9	299.2	26.5	298.7	46.4	278.8	-0.5	-19.9	-20.5
3S1E17D005	17D5	308	Lower	Main-Bernal	25.8	299.3	23.1	302.1	43.7	281.5	2.8	-20.6	-17.8
3S1E17D006	17D6	408	Lower	Main-Bernal	26.6	298.6	19.9	305.2	34.4	290.8	6.6	-14.4	-7.8
3S1E17D007	17D7	684	Deep	Main-Bernal	16.8	308.4	16.3	308.9	16.6	308.5	0.5	-0.4	0.1
3S1E17D010	H7	425	Lower	Main-Bernal	28.7	299.5	26.8	301.3	45.7	282.5	1.8	-18.9	-17.0
3S1E17D011	17D11	603	Lower	Main-Bernal	26.2	298.6	19.6	305.2	34.0	290.9	6.6	-14.4	-7.8
3S1E17D012	H9	315	Lower	Main-Bernal	NA	NA	NA	NA	NA	NA	-	-	-
3S1E18A005	P7	454	Lower	Main-Bernal	30.0	297.3	22.5	304.8	42.5	284.8	7.5	-20.0	-12.5
3S1E18A006	H6	500	Lower	Main-Bernal	NA	NA	NA	NA	NA	NA	-	-	-
3S1E18E004	18E4	83	Upper	Main-Bernal	20.0	300.2	13.7	306.5	21.3	298.9	6.3	-7.6	-1.3
3S1E18J002	18J2	71	Upper	Main-Bernal	21.4	301.6	14.5	308.5	23.1	300.0	6.9	-8.5	-1.7
3S1E18N001	18N1	708	Lower	Main-Bernal	19.5	299.9	14.6	304.9	23.0	296.4	4.9	-8.5	-3.5
3S1E19A010	SF-B	331	Lower	Main-Bernal	37.9	299.1	31.4	305.7	41.7	295.3	6.6	-10.3	-3.8
3S1E19A011	SF-A	330	Lower	Main-Bernal	32.5	301.8	25.9	308.4	NA	NA	6.6	-	-
3S1E19C004	19C4	78	Upper	Main-Bernal	19.9	302.4	13.4	308.9	20.2	302.0	6.5	-6.8	-0.3
3S1E19K001	19K1	58	Upper	Main-Bernal	21.8	299.7	14.6	307.0	26.3	295.3	7.2	-11.7	-4.4
3S1E20C003	20C3	110	Lower	Main-Bernal	37.9	300.7	31.5	307.1	35.9	302.7	6.4	-4.4	2.0
3S1E20C007	20C7	153	Upper	Main-Bernal	36.9	301.7	30.3	308.3	37.7	301.0	6.6	-7.4	-0.8
3S1E20C008	20C8	315	Lower	Main-Bernal	38.5	300.1	34.0	304.7	46.0	292.7	4.6	-12.0	-7.4
3S1E20C009	20C9	515	Lower	Main-Bernal	39.1	299.7	32.9	305.9	42.4	296.4	6.3	-9.5	-3.3
3S1E20J004	20J4	72	Upper	Main-Bernal	28.6	303.0	22.4	309.2	28.4	303.3	6.2	-5.9	0.3
3S1E20M011	20M11	71	Upper	Main-Bernal	21.3	304.5	14.9	310.9	22.9	302.8	6.4	-8.1	-1.7
3S1E20Q002	20Q2	65	Upper	Main-Bernal	17.3	308.6	17.0	308.9	17.3	308.6	0.3	-0.3	0.0
3S1E22D002	22D2	72	Upper	Main-Amador	39.0	329.1	36.6	331.4	40.1	327.9	2.3	-3.5	-1.2
3S1E23A005	23A005	125	Upper	Main-Amador	67.7	313.1	71.7	309.1	74.7	306.1	-4.0	-3.0	-7.0
3S1E23A006	23A006	325	Lower	Main-Amador	84.5	296.3	83.2	297.6	90.6	290.3	1.3	-7.3	-6.0
3S1E23A007	23A007	326	Lower	Main-Amador	85.8	295.1	84.4	296.5	94.2	286.6	1.4	-9.9	-8.4
3S1E23J001	23J1	120	Lower	Main-Amador	83.7	344.5	NA	NA	85.2	343.0	-	-	-1.5
3S1E24Q001	24Q1	440	Lower	Main-Amador	96.3	331.2	91.3	336.3	97.5	330.0	5.1	-6.3	-1.2
3S1E25C003	25C3	146	Upper	Main-Amador	85.9	368.3	87.8	366.3	90.6	363.5	-2.0	-2.8	-4.8
3S1E28M002	28M2	141	Upper	Upland	23.0	367.0	9.2	380.8	25.0	365.0	13.8	-15.8	-2.0
3S1E29M004	29M4	57	Upper	Main-Castle	16.0	294.9	9.5	301.4	16.1	294.9	6.5	-6.5	-0.1
3S1E29P002	29P2	42	Upper	Main-Bernal	26.4	276.4	24.8	278.1	26.5	276.3	1.7	-1.7	0.0
3S1E33G005	33G5	35	Upper	Upland	15.7	392.8	10.4	398.2	16.7	391.8	5.3	-6.3	-1.0
3S1W01B009	1B9	162	Lower	Fringe-Dublin	8.7	324.9	7.3	326.3	8.3	325.2	1.4	-1.1	0.4
3S1W01B010	1B10	414	Lower	Fringe-Dublin	10.2	323.3	5.2	328.4	3.7	329.9	5.0	1.6	6.6
3S1W01B011	1B11	560	Lower	Fringe-Dublin	4.2	329.6	1.7	332.0	0.7	333.1	2.5	1.0	3.5
3S1W01J001	1J1	70	Upper	Fringe-Dublin	12.0	322.3	9.9	324.5	NA	NA	2.2	-	-
3S1W01J002	1J2	37	Upper	Fringe-Dublin	11.9	322.7	9.5	325.1	NA	NA	2.4	-	-
3S1W02A002	2A2	47	Upper	Fringe-Dublin	25.0	344.4	23.3	346.1	26.0	343.4	1.7	-2.6	-0.9
3S1W12A009	12A9	74	Upper	Fringe-Dublin	12.8	319.4	10.8	321.3	NA	NA	1.9	-	-
3S1W12A010	12A10	40	Upper	Fringe-Dublin	13.4	318.6	12.1	319.9	NA	NA	1.3	-	-
3S1W12B002	12B2	40	Upper	Fringe-Dublin	20.4	322.5	19.4	323.5	21.5	321.4	1.0	-2.1	-1.2
3S1W12J001	12J1	62	Upper	Fringe-Dublin	15.9	313.4	14.0	315.4	15.9	313.4	2.0	-2.0	0.0
3S1W13J001	13J1	48	Upper	Main-Castle	29.9	314.0	25.2	318.7	30.7	313.2	4.7	-5.5	-0.8
3S2E01F002	1F2	69	Upper	Fringe-Spring	22.5	550.5	22.2	550.8	23.3	549.7	0.4	-1.2	-0.8
3S2E02B002	2B2	46	Upper	Fringe-Spring	9.1	530.4	8.5	530.9	9.5	530.0	0.6	-1.0	-0.4
3S2E03A001	3A1	54	Upper	Fringe-Spring	5.6	512.1	4.0	513.6	5.5	512.2	1.5	-1.4	0.1
3S2E03K003	3K3	60	Upper	Fringe-Mocho I	13.3	509.6	13.2	509.6	13.6	509.2	0.0	-0.4	-0.4
3S2E05N001	5N1	210	Mixed	Main-Mocho II	33.6	410.4	30.1	413.9	42.9	401.1	3.6	-12.8	-9.3
3S2E07C002	7C2	49	Upper	Main-Mocho II	24.0	396.8	25.0	395.8	25.0	395.8	-1.0	0.0	-1.0
3S2E07H002	7H2	54	Upper	Main-Mocho II	27.9	415.0	27.8	415.1	36.1	406.7	0.1	-8.3	-8.2
3S2E07N002	7N2	162	Upper	Main-Amador	94.5	327.5	100.0	322.0	114.4	307.7	-5.5	-14.3	-19.9
3S2E07P003	CWS24	510	Lower	Main-Amador	NA	NA	166.0	265.5	208.0	223.5	-	-42.0	-
3S2E07R002	7R2	805	Deep	Main-Mocho II	2.5	443.5	NA	NA	NA	NA	-	-	-
3S2E07R003	CWS31	583	Lower	Upland	NA	NA	76.0	370.0	182.0	264.0	-	-106.0	-
3S2E08H002	8H2	46	Upper	Main-Mocho II	37.7	431.9	36.8	432.8	41.2	428.5	0.9	-4.3	-3.4
3S2E08H003	8H3	195	Lower	Main-Mocho II	56.9	420.5	53.1	424.3	70.0	407.4	3.8	-17.0	-13.1
3S2E08H004	8H4	385	Lower	Main-Mocho II	139.3	337.7	121.2	355.8	157.0	320.0	18.1	-35.8	-17.7
3S2E08K002	8K2	74	Upper	Main-Mocho II	33.5	431.3	34.1	430.7	46.7	418.1	-0.6	-12.6	-13.2
3S2E08N002	CWS14	526	Lower	Main-Mocho II	62.6	391.0	47.0	406.6	78.0	375.6	15.6	-31.0	-15.4
3S2E08P001	CWS8	273	Lower	Main-Mocho II	NA	NA	41.0	427.2	56.0	412.2	-	-15.0	-
3S2E08Q009	8Q9	114	Lower	Main-Mocho II	28.1	436.7	28.5	436.3	42.9	421.8	-0.4	-14.5	-14.9

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TABLE C-1
SEMIANNUAL GROUNDWATER LEVELS
(Feet above Mean Sea Level, NAVD88)
FALL 2024 TO FALL 2025

Well Number	Display Name	Well Depth	Aquifer	Subarea	Fall 2024		Spring 2025		Fall 2025		Change in Elevation (ft)		
											Seasonal		Annual
					Depth to Water	GW Elev	Depth to Water (ft)	GW Elev	Depth to Water (ft)	GW Elev	Fall 24 to Spring 25	Spring 25 to Fall 25	Fall 24 to Fall 25
3S2E09Q004	9Q4	80	Upper	Main-Mocho II	23.2	481.3	24.6	479.9	39.5	465.0	-1.4	-14.9	-16.3
3S2E10F003	10F3	45	Upper	Fringe-Mocho I	13.0	521.8	12.9	521.9	14.3	520.5	0.1	-1.4	-1.3
3S2E10Q001	10Q1	44	Upper	Main-Mocho II	23.6	531.8	23.5	531.9	27.4	528.0	0.0	-3.9	-3.9
3S2E10Q002	10Q2	325	Lower	Main-Mocho II	29.8	519.7	NA	NA	34.3	515.3	-	-	-4.5
3S2E11C001	11C1	66	Upper	Fringe-Mocho I	26.8	529.7	27.6	529.5	28.4	528.1	-0.2	-1.4	-1.6
3S2E12C004	12C4	108	Upper	Fringe-Spring	52.7	538.7	NA	NA	54.1	537.4	-	-	-1.4
3S2E12J003	12J3	160	Lower	Fringe-Spring	83.4	547.6	NA	NA	83.6	547.5	-	-	-0.2
3S2E14A003	14A3	110	Upper	Fringe-Mocho I	68.4	533.8	NA	NA	71.2	531.1	-	-	-2.8
3S2E14B001	14B1	300	Lower	Fringe-Mocho I	63.0	530.3	62.9	530.4	64.2	529.2	0.1	-1.3	-1.1
3S2E15E002	15E2	192	Lower	Main-Mocho II	35.2	514.5	36.1	513.6	55.5	494.2	-0.8	-19.4	-20.2
3S2E15L001	15L1	41	Upper	Main-Mocho II	21.8	539.7	27.2	534.3	NA	NA	-5.3	-	-
3S2E15L002	15L2	71	Upper	Main-Mocho II	21.8	539.3	27.0	534.1	NA	NA	-5.2	-	-
3S2E15M002	15M2	45	Upper	Main-Mocho II	29.3	520.1	31.4	518.1	NA	NA	-2.0	-	-
3S2E15M003	15M3	76	Upper	Main-Mocho II	29.6	519.5	31.8	517.3	NA	NA	-2.2	-	-
3S2E15Q006	15Q6	301	Lower	Main-Mocho II	52.9	524.7	50.7	526.8	59.5	518.1	2.1	-8.8	-6.6
3S2E15Q008	15Q 8	41	Upper	Main-Mocho II	15.7	568.8	12.6	571.9	NA	NA	3.1	-	-
3S2E15R017	15R17	63	Upper	Main-Mocho II	11.8	580.6	9.5	582.9	12.6	579.8	2.4	-3.1	-0.8
3S2E15R018	15R18	138	Lower	Main-Mocho II	20.1	572.4	14.0	578.4	20.6	571.9	6.0	-6.6	-0.6
3S2E15R020	15R20	51	Upper	Main-Mocho II	14.6	574.7	11.6	577.7	NA	NA	3.0	-	-
3S2E16A003	16A3	240	Lower	Main-Mocho II	33.9	493.2	34.4	492.7	50.2	476.8	-0.5	-15.9	-16.3
3S2E16C001	CWS15	584	Lower	Main-Mocho II	NA	NA	NA	NA	NA	NA	-	-	-
3S2E16E004	16E4	45	Upper	Main-Mocho II	18.9	487.4	16.9	489.4	32.7	473.6	2.0	-15.8	-13.8
3S2E18B001	CWS20	497	Lower	Main-Amador	65.5	373.1	NA	NA	203.0	235.6	-	-	-137.5
3S2E18E001	18E1	134	Upper	Main-Amador	72.4	351.5	82.2	341.7	91.6	332.3	-9.8	-9.4	-19.1
3S2E19D007	19D7	180	Upper	Main-Amador	82.3	332.8	86.1	329.0	91.6	323.5	-3.8	-5.5	-9.3
3S2E19D008	19D8	260	Lower	Main-Amador	82.6	332.4	86.3	328.7	92.0	323.1	-3.7	-5.7	-9.4
3S2E19D009	19D9	390	Lower	Main-Amador	130.5	284.5	120.9	294.1	134.1	280.9	9.6	-13.2	-3.6
3S2E19D010	19D10	470	Lower	Main-Amador	141.3	273.6	124.0	290.9	141.4	273.5	17.3	-17.4	-0.1
3S2E19N003	19N3	120	Upper	Main-Amador	39.3	379.2	38.9	379.6	39.2	379.3	0.4	-0.3	0.1
3S2E19N004	19N4	203	Lower	Main-Amador	11.6	406.4	10.6	407.4	11.2	406.7	1.1	-0.7	0.4
3S2E20M001	20M1	184	Lower	Main-Amador	59.6	419.2	57.0	421.8	57.8	421.0	2.6	-0.8	1.8
3S2E21K009	21K9	0	Upper	Upland	88.6	478.5	83.8	483.3	86.6	480.5	4.8	-2.8	2.0
3S2E22B001	22B1	32	Upper	Main-Mocho II	20.9	565.0	14.1	571.8	NA	NA	6.8	-	-
3S2E23E001	23E1	40	Upper	Main-Mocho II	16.5	596.9	15.9	597.5	18.0	595.3	0.6	-2.1	-1.5
3S2E23E002	23E2	110	Lower	Main-Mocho II	14.5	598.8	13.8	599.5	16.1	597.2	0.7	-2.3	-1.6
3S2E24A001	24A1	46	Upper	Fringe-Mocho I	19.0	698.7	20.2	697.6	21.4	696.3	-1.2	-1.3	-2.5
3S2E26J002	26J2	44	Upper	Main-Mocho II	10.5	679.4	6.5	683.4	11.5	678.4	4.0	-5.0	-1.0
3S2E29F004	29F4	36	Upper	Main-Amador	9.0	448.6	8.4	449.1	8.4	449.2	0.5	0.1	0.6
3S2E29L001	29L1 (P3)	23	Upper	Main-Amador	10.2	453.4	9.8	453.8	9.7	454.0	0.4	0.1	0.6
3S2E30C001	30C1	150	Lower	Main-Amador	22.2	417.2	18.3	421.1	20.2	419.3	3.9	-1.9	2.1
3S2E30D002	30D2	44	Upper	Main-Amador	22.5	409.1	23.1	408.5	25.1	406.5	-0.5	-2.0	-2.5
3S2E32E007	32E7	37	Upper	Upland	8.3	602.6	12.0	598.9	18.2	592.7	-3.7	-6.2	-9.9
3S2E33C001	33C1	20	Upper	Main-Amador	8.9	488.8	8.5	489.1	8.6	489.0	0.4	-0.1	0.3
3S2E33G001	33G1	17	Upper	Main-Amador	9.4	502.2	9.2	502.3	9.1	502.5	0.1	0.2	0.3
3S2E33K001	33K1	15	Upper	Main-Amador	NA	NA	8.8	538.1	4.2	542.7	-	4.6	-
3S2E33L001	33L1	16	Upper	Main-Amador	NA	NA	2.7	555.0	NA	NA	-	-	-
3S3E06Q003	6Q3	30	Upper	Fringe-Altamont	9.9	671.2	10.0	671.1	9.9	671.2	-0.1	0.1	0.0
3S3E07D002	7D2	72	Upper	Fringe-Spring	47.3	574.6	NA	NA	NA	NA	-	-	-
3S3E20L004	20L4	340	Upper	Fringe-Mocho I	107.5	754.9	109.3	753.1	99.2	763.2	-1.8	10.1	8.3
3S3E20R004	20R4	0	Upper	Fringe-Mocho I	27.2	896.6	29.6	894.2	38.0	885.8	-2.3	-8.5	-10.8
3S3E21C001	21C1	128	Upper	Upland	32.4	1034.8	33.0	1034.2	33.5	1033.8	-0.6	-0.5	-1.1
4S2E01A001	1A1	130	Upper	Main-Mocho II	20.1	799.7	18.4	801.3	35.7	784.1	1.7	-17.3	-15.6
4S3E06E004	6E4	220	Upper	Main-Mocho II	3.9	803.8	2.1	805.6	16.8	790.9	1.8	-14.6	-12.8

U = Upper; L = Lower; NM = Not Measured; NA = Not Available; OBS = Obstructed; - = Not Applicable
Highlighted = Representative Monitoring Site

TABLE C-2
SEMIANNUAL WATER LEVELS IN MINING AREA PONDS
2025 WATER YEAR

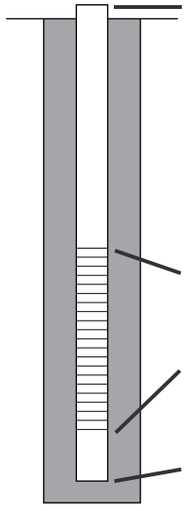
POND DESCRIPTION					CURRENT POND STATUS				POND ELEVATION (ft)			
Pond Name	Description	Chain of Lake	Map Name	Pond Status	Pond Area (acre)	Contact with Aquifer	Pond Activity	Mining Use	Fall 24	Spring 25	Fall 25	WY Diff
MA-C001	Lake C - southeast	C	C1	Existing	4.9	Yes	Static	Unused	351.75	350.19	346.98	-4.77
MA-K015	Shadow Cliffs	Sh.Cliff	ShCliffs	Existing	89.3	Yes	Pumped Into	Unused	330.79	330.91	331.87	1.08
MA-K018	Lake Boris		K18	Existing	11.2	Yes	Static	Unused	350.26	350.78	350.62	0.36
MA-K028	Lake H	H	LkH	Existing	69	Yes	Static	Unused	305.74	313.2	310.04	4.3
MA-K030	Cope Lake	Cope	Cope	Existing	185.5	No	Pumped Into	Unused	332.31	332.41	329.96	-2.35
MA-K037	Lake I	I	LkI	Existing	260.7	Yes	Static	Unused	306.61	313.54	310.17	3.56
MA-P010	P10	B	P10	Existing	1	Yes	Static	Unused	NM	363.72	362.95	-
MA-P012	Island Pond		P12	Existing	15	Yes	Static	Unused	350.92	351.29	351.27	0.35
MA-P027	Lake D - southwest	D	P27	Existing	10.2	Yes	Static	Unused	NM	282.8	280.96	-
MA-P028	Lake A - west	A	P28	Existing	7.1	Yes	Static	Unused	403.08	403.33	403.33	0.25
MA-P041	Lake A - east	A	P41	Existing	46.4	Yes	Static	Unused	403.27	403.59	404.03	0.76
MA-P042	Lake B - west	B	P42	Existing	9.3	Yes	Pumped From	Active Mining	250.28	251.74	251.16	0.88
MA-P044	P44	B	P44	Existing	13.7	Yes	In Flux	Water Storage	347.64	349.89	349.74	2.1
MA-P046	Lake J	J	P46	Existing	15.2	Yes	Pumped From	Active Mining	299.6	286.73	285.82	-13.78
MA-R004	R4		R4	Existing	10.9	Yes	In Flux	Water Storage	316.31	314.18	315.31	-1
MA-R021	R21		R21	Existing	27.1	Yes	Static	Unused	NM	NM	351.5	-
MA-R022	Lake F	F	R22	Existing	60.3	No	Pumped From	Settling Pond	363.96	363.86	363.08	-0.88
MA-R023	Vulcan Pond 5		R23	Existing	22.3	No	Pumped Into	Water Storage	362.49	362.35	362.34	-0.15
MA-R024A	Lake E - southeast	E	R24A	Existing	71.4	Yes	Pumped Into	Settling Pond	297.19	302.24	304.44	7.25
MA-R028	Lake D - northwest	D	R28	Existing	4.3	Yes	Pumped From	Active Mining	183.01	186.7	187.28	4.27

NM = Not Measured
WY Diff = Water Year Difference (Fall to Fall)

Hydrograph of Measured Groundwater Elevation for Well 2S2E27P002

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
2S2E27P002			X

Basin Type - Subbasin: Fringe-Spring
Aquifer Designation: Upper

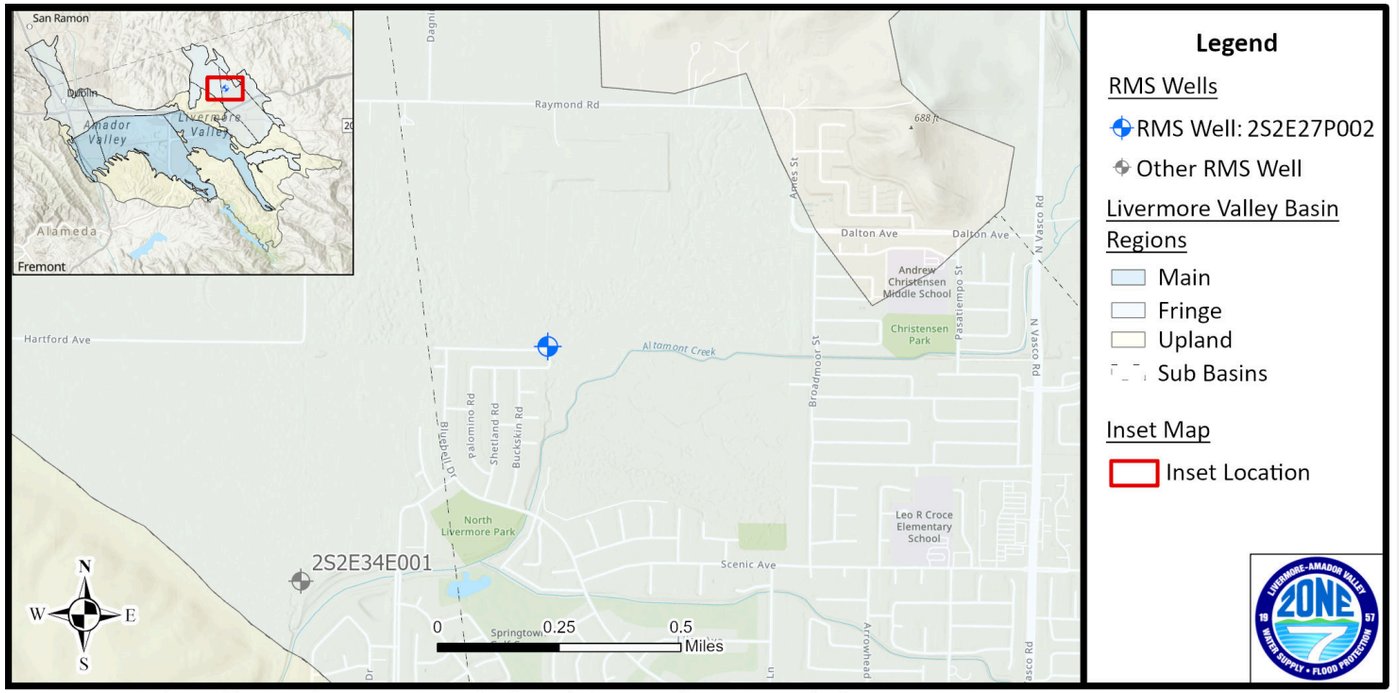


Reference Point Elevation (ft.):
505.43

Depth to Top of Screen (ft. bgs):
35.00

Depth to Bottom of Screen (ft. bgs):
63.00

Total Well Depth (ft.):
68.00



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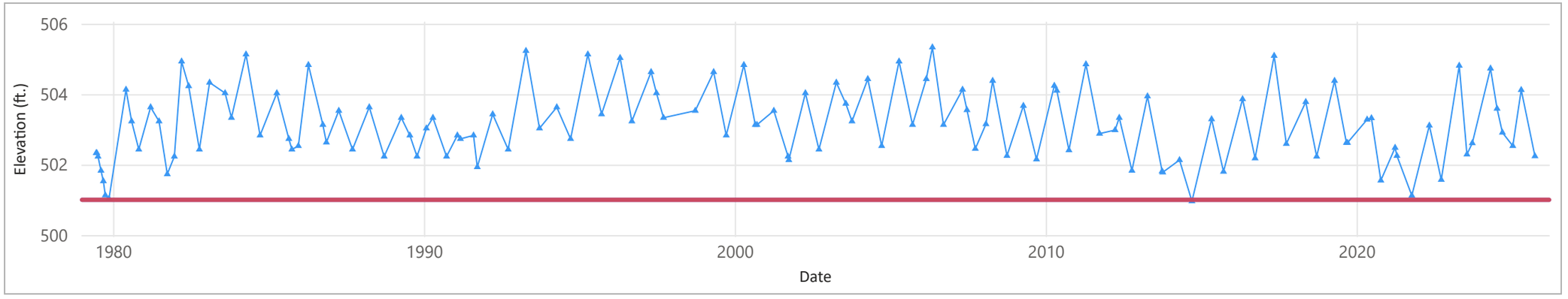
Latitude: 37.723454 Longitude: -121.742496

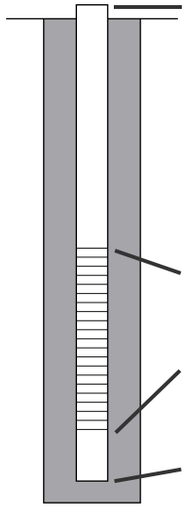


Minimum Objective: 501.00 (ft.)
Minimum Threshold: 501.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 2S2E34E001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
2S2E34E001	X	X	X

Basin Type - Subbasin: Fringe-May
Aquifer Designation: Upper

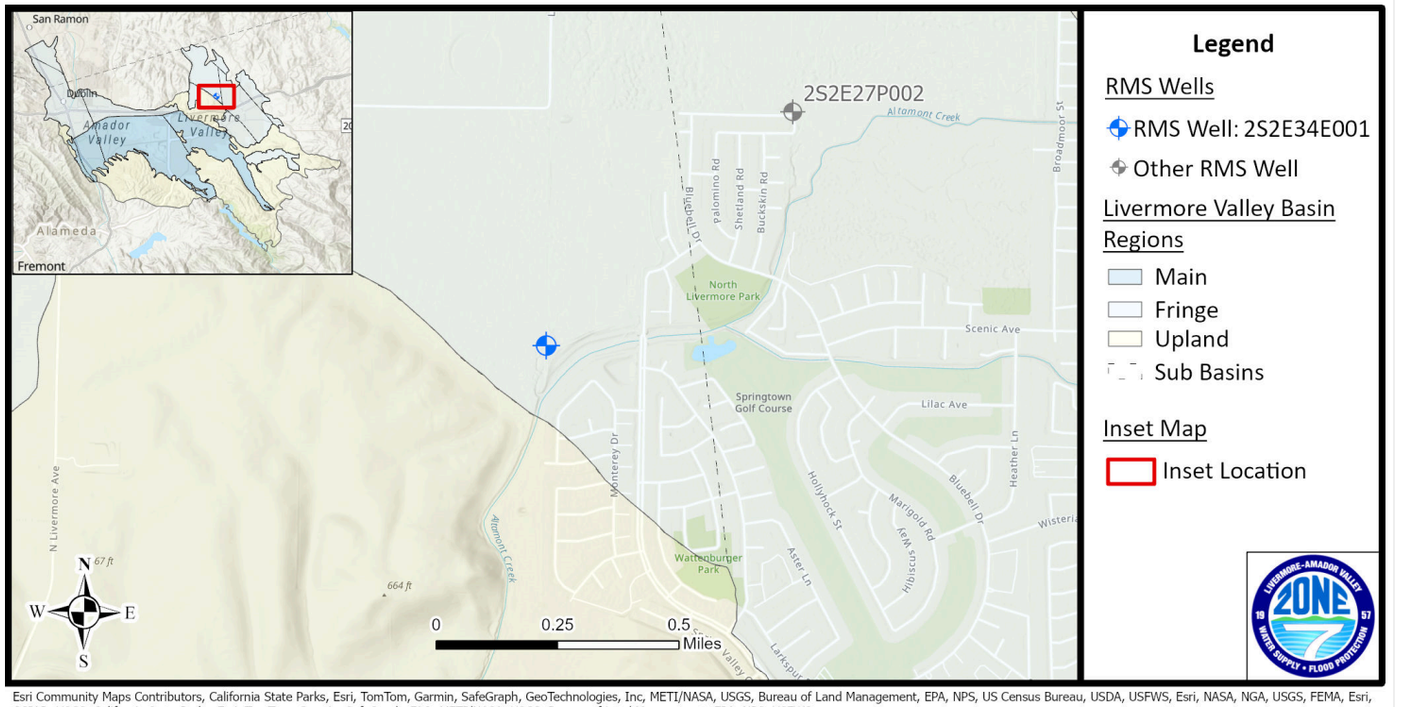


Reference Point Elevation (ft.):
499.73

Depth to Top of Screen (ft. bgs):
40.00

Depth to Bottom of Screen (ft. bgs):
45.00

Total Well Depth (ft.):
49.00



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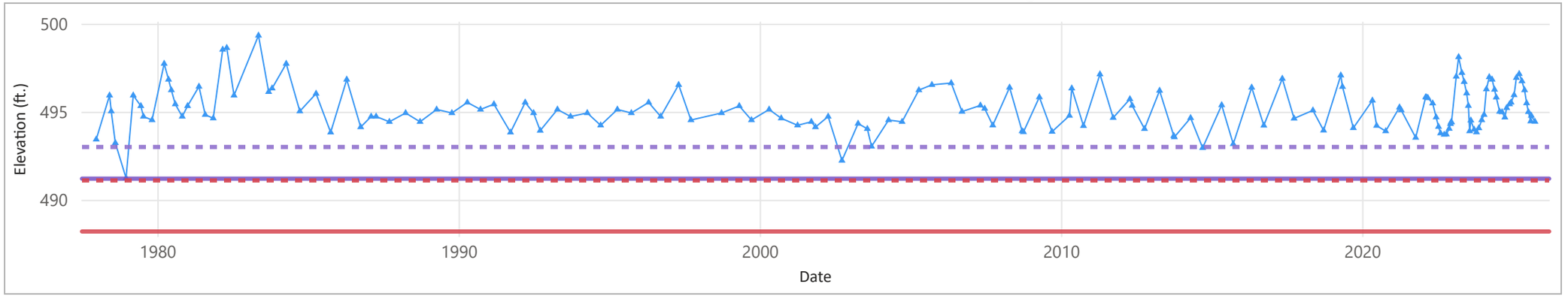
Latitude: 37.716377 Longitude: -121.751637

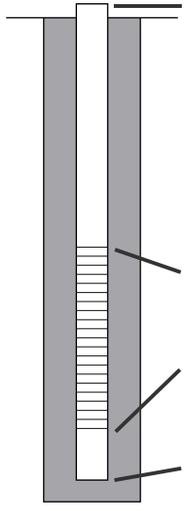


Minimum Objective (ICSW): 493.0 (ft.)
Minimum Objective (WL): 491.20 (ft.)
Minimum Threshold (ICSW): 491.0 (ft.)
Minimum Threshold (WL): 488.20 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E02N006

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E02N006			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

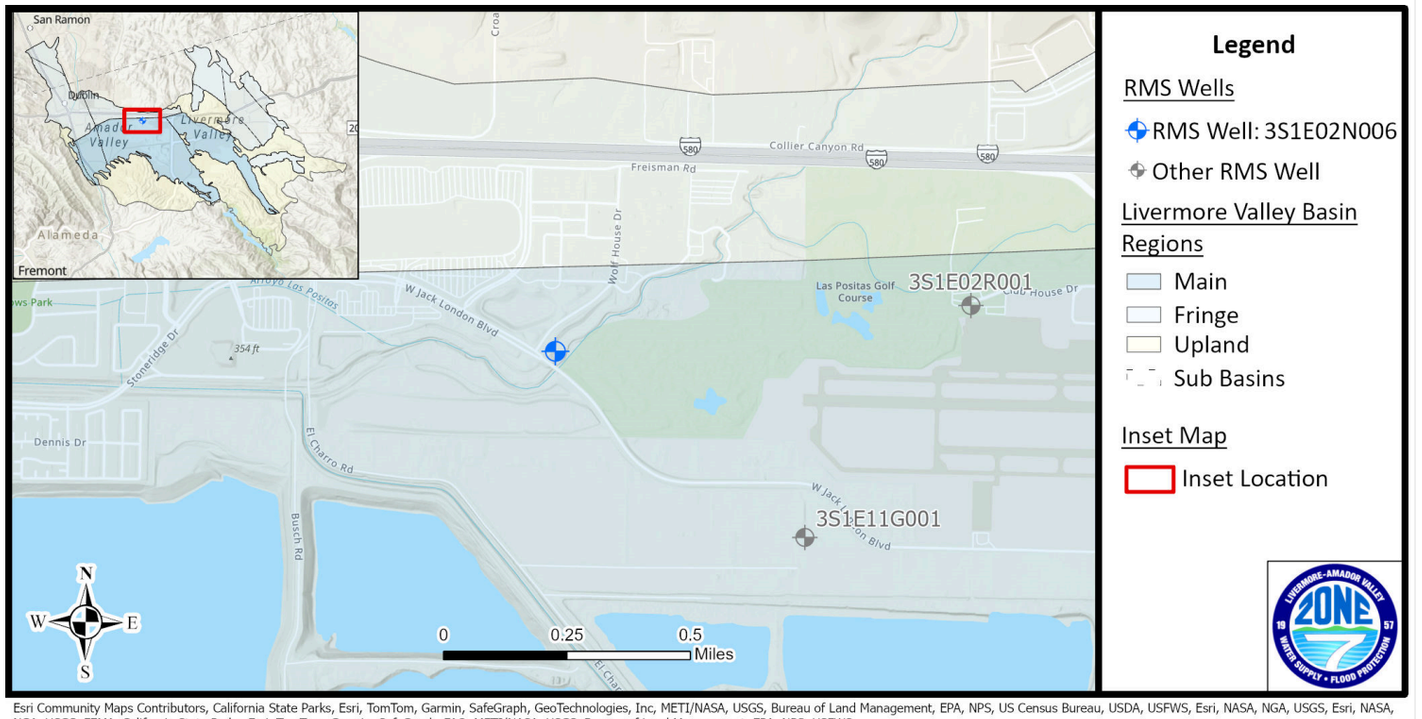


Reference Point Elevation (ft.):
366.14

Depth to Top of Screen (ft. bgs):
40.00

Depth to Bottom of Screen (ft. bgs):
55.00

Total Well Depth (ft.):
55.00



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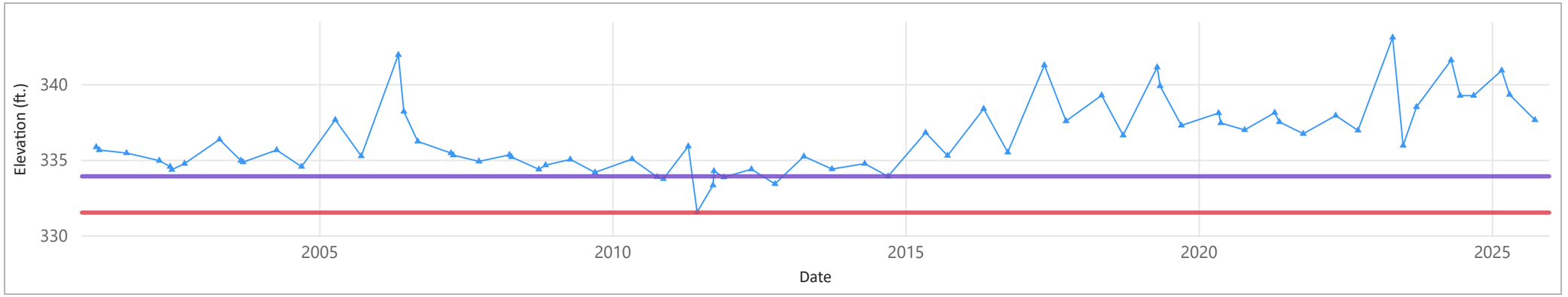
Latitude: 37.695266 Longitude: -121.839172

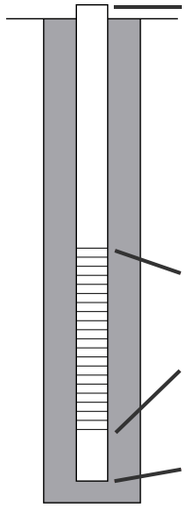


Minimum Objective: 333.90 (ft.)
Minimum Threshold: 331.50 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E02R001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E02R001			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

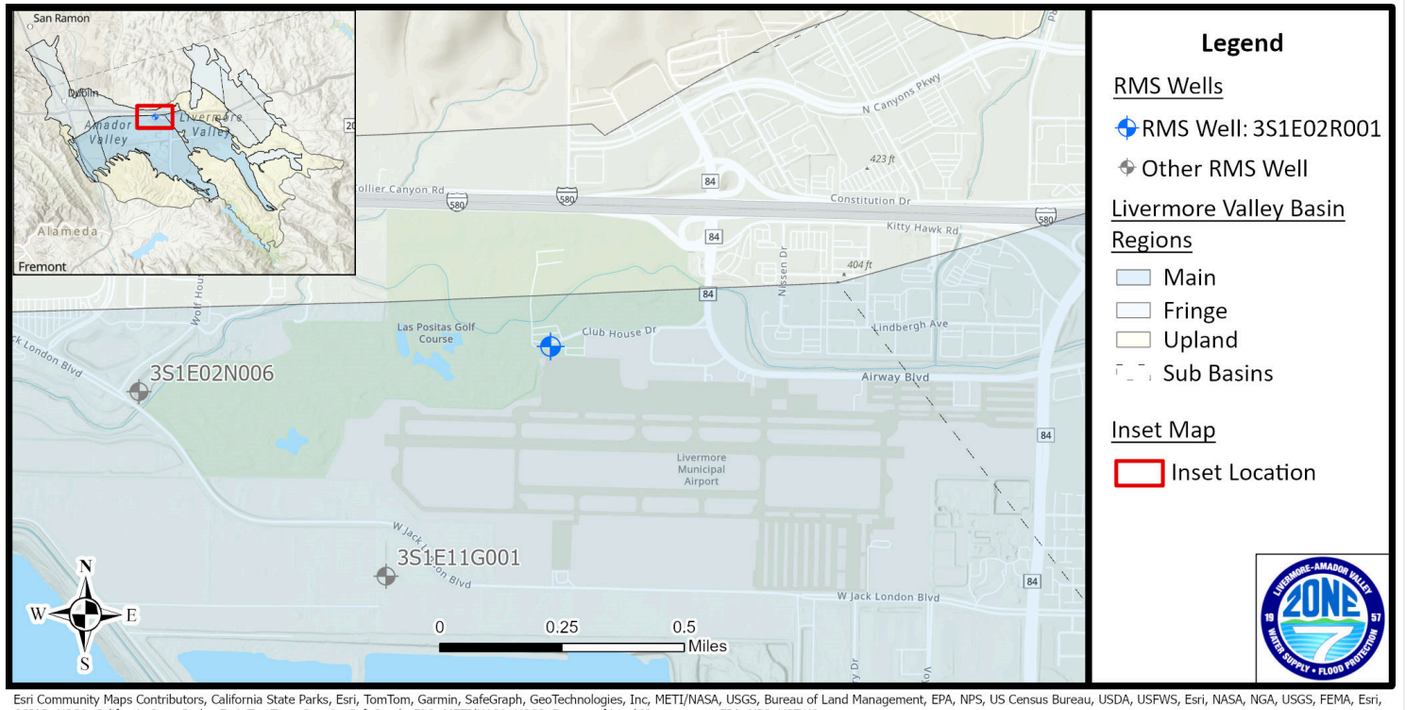


Reference Point Elevation (ft.):
376.29

Depth to Top of Screen (ft. bgs):
21.00

Depth to Bottom of Screen (ft. bgs):
26.00

Total Well Depth (ft.):
33.00



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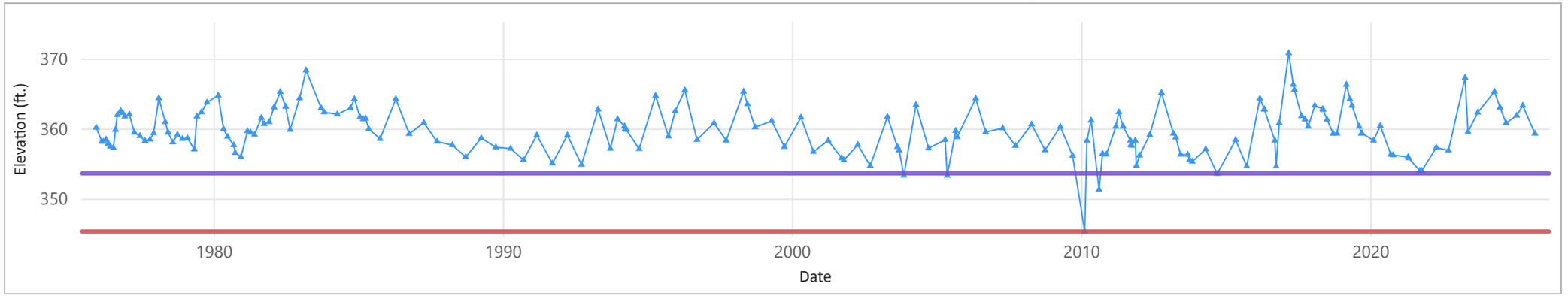
Latitude: 37.696788 Longitude: -121.823840

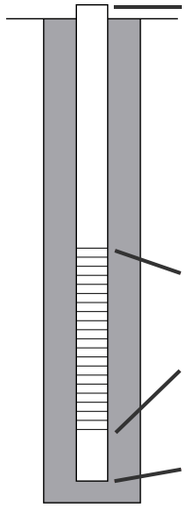


Minimum Objective: 353.60 (ft.)
Minimum Threshold: 345.30 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E05K006

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E05K006			X

Basin Type - Subbasin: Fringe-Camp
Aquifer Designation: Upper

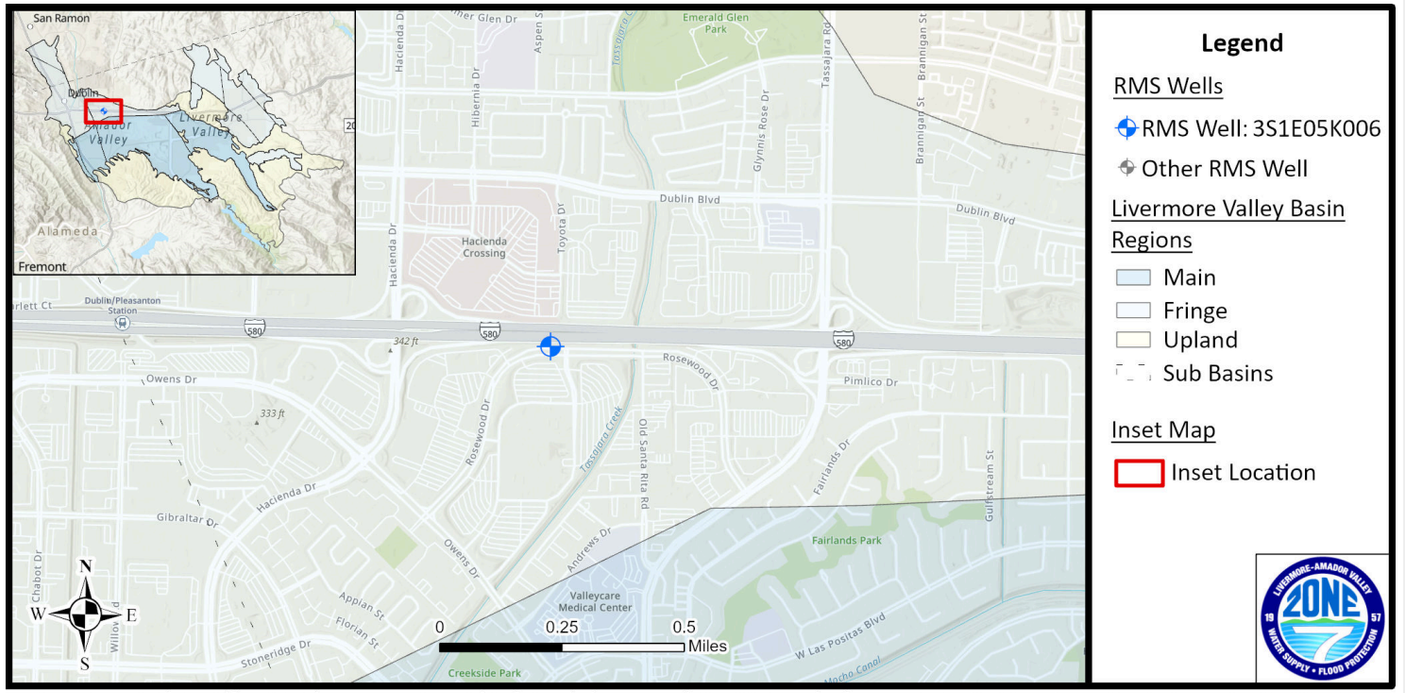


Reference Point Elevation (ft.):
346.05

Depth to Top of Screen (ft. bgs):
40.00

Depth to Bottom of Screen (ft. bgs):
70.00

Total Well Depth (ft.):
75.00



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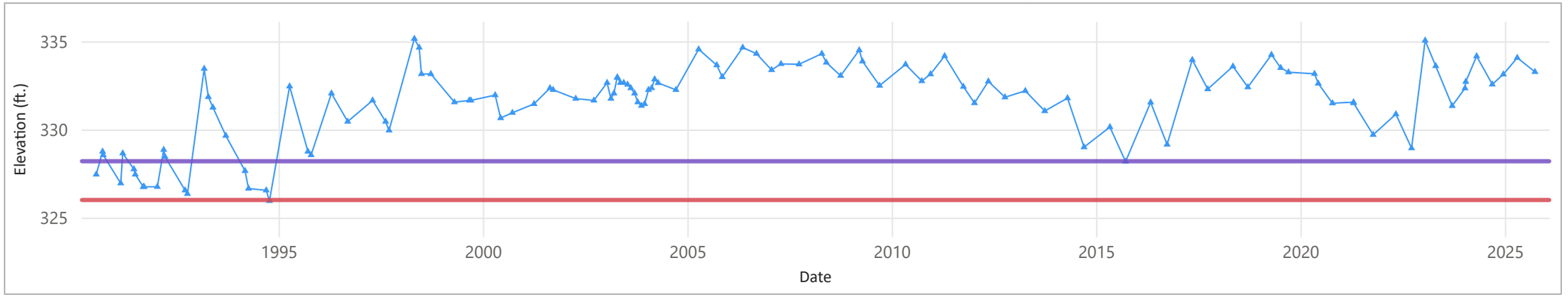
Latitude: 37.701128 Longitude: -121.882274

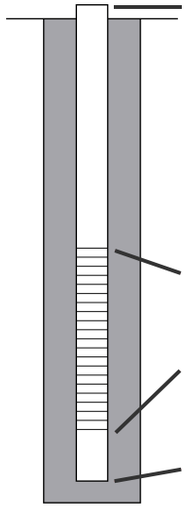


Minimum Objective: 328.20 (ft.)
Minimum Threshold: 326.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E06F003

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E06F003	X	X	

Basin Type - Subbasin: Fringe-Dublin
Aquifer Designation: Upper

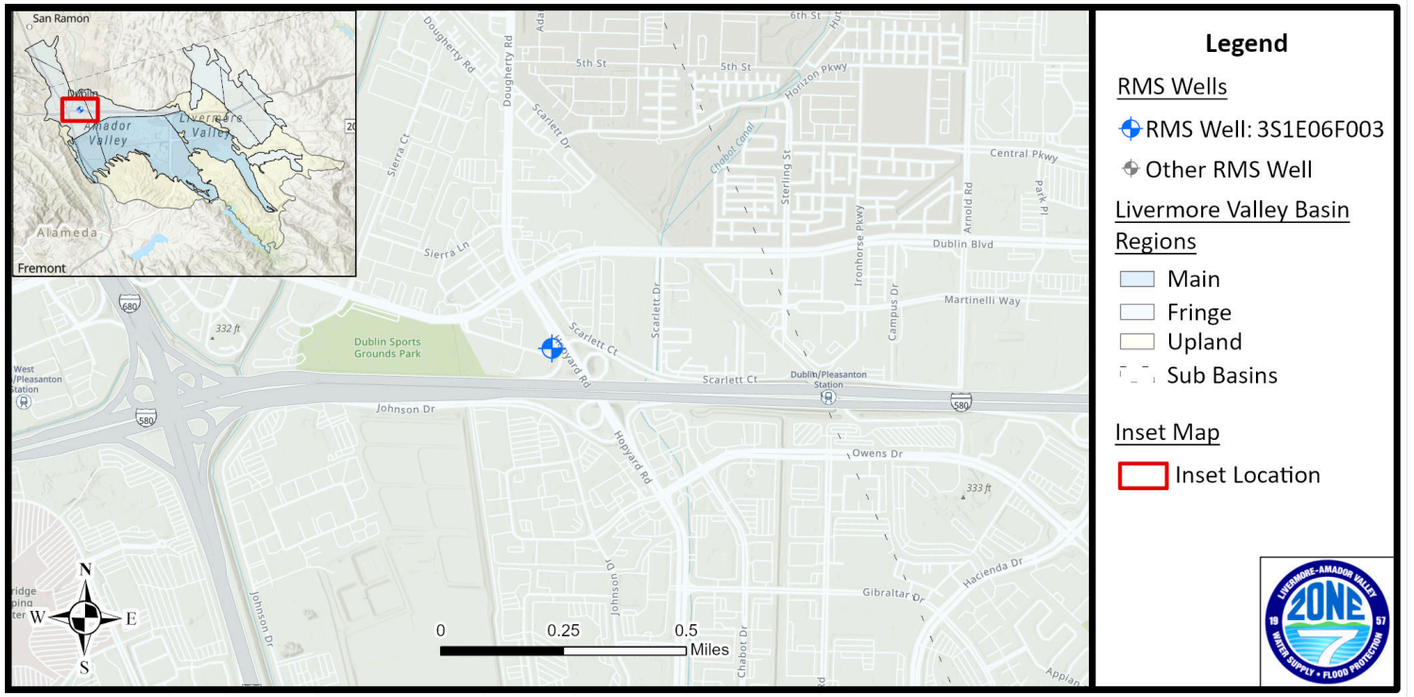


Reference Point Elevation (ft.):
329.82

Depth to Top of Screen (ft. bgs):
27.00

Depth to Bottom of Screen (ft. bgs):
32.00

Total Well Depth (ft.):
36.00



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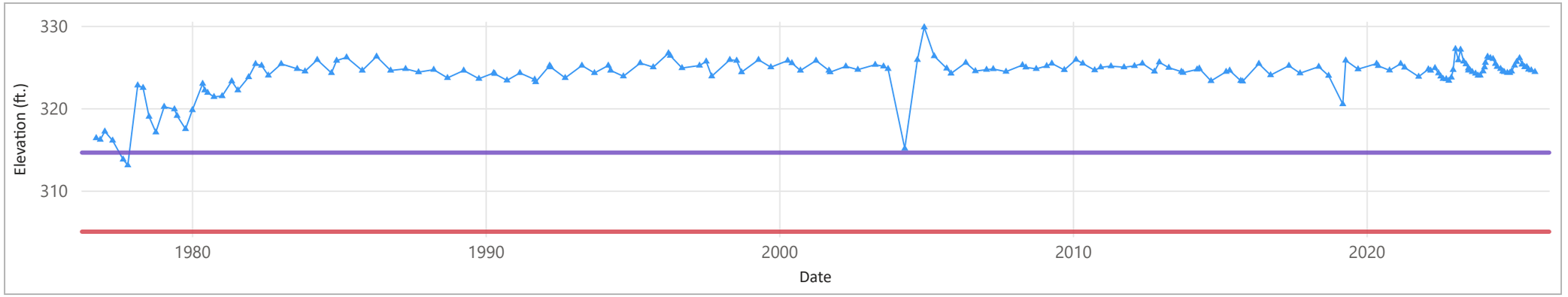
Latitude: 37.702954 Longitude: -121.908554

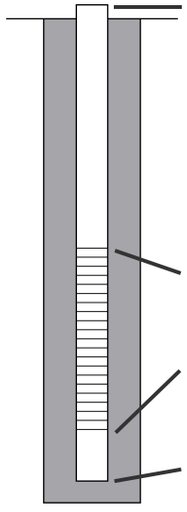


Minimum Objective: 314.60 (ft.)
Minimum Threshold: 305.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E09P005

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E09P005	X	X	

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

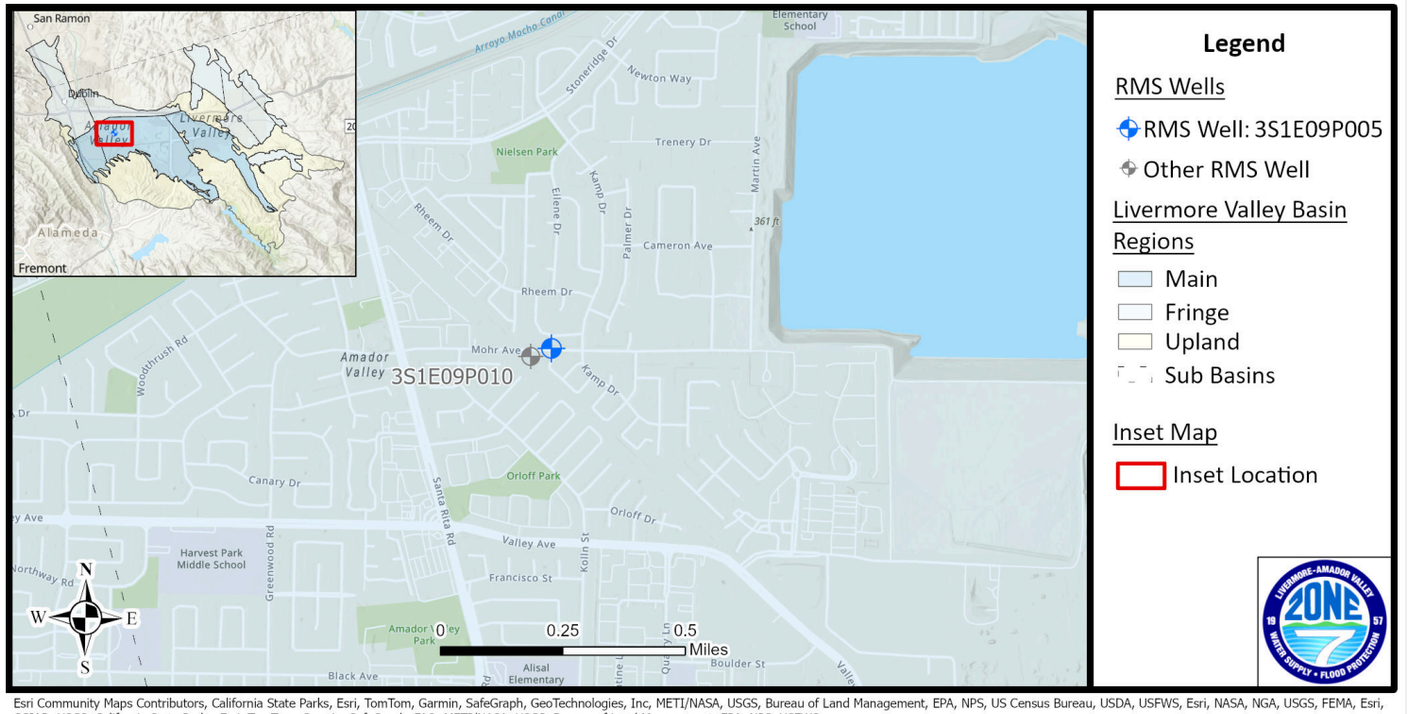


Reference Point Elevation (ft.):
349.40

Depth to Top of Screen (ft. bgs):
95.00

Depth to Bottom of Screen (ft. bgs):
100.00

Total Well Depth (ft.):
105.00



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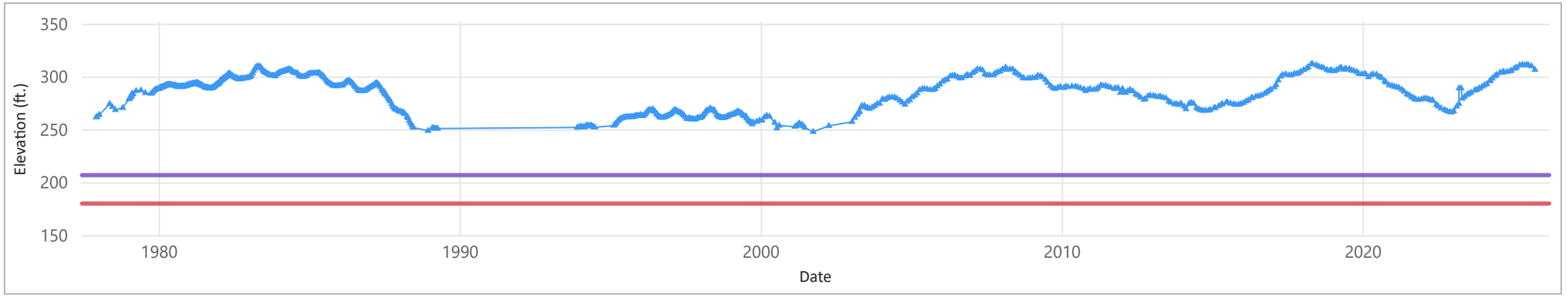
Latitude: 37.681969 Longitude: -121.870072

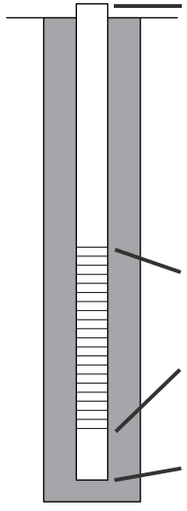


Minimum Objective: 206.70 (ft.)
Minimum Threshold: 179.80 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E09P010

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E09P010	X	X	

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Lower

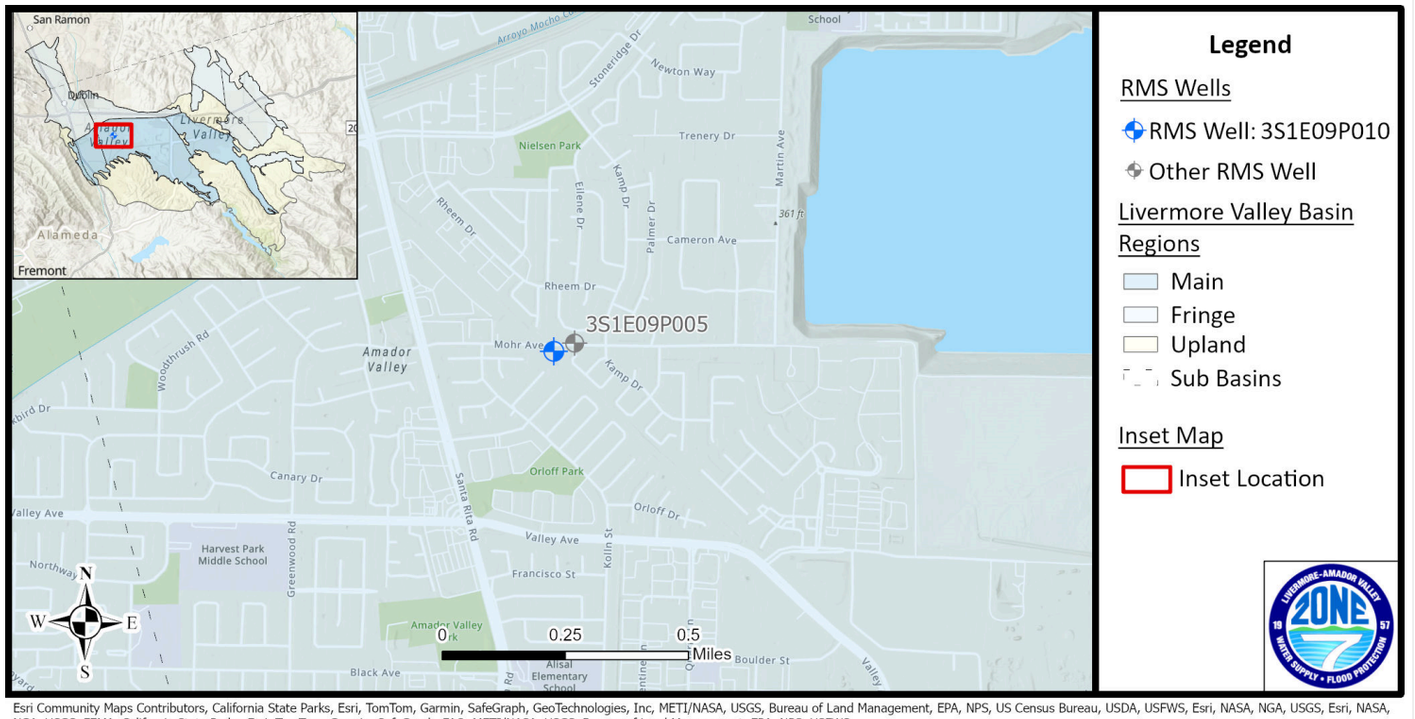


Reference Point Elevation (ft.):
349.66

Depth to Top of Screen (ft. bgs):
285.00

Depth to Bottom of Screen (ft. bgs):
305.00

Total Well Depth (ft.):
310.00



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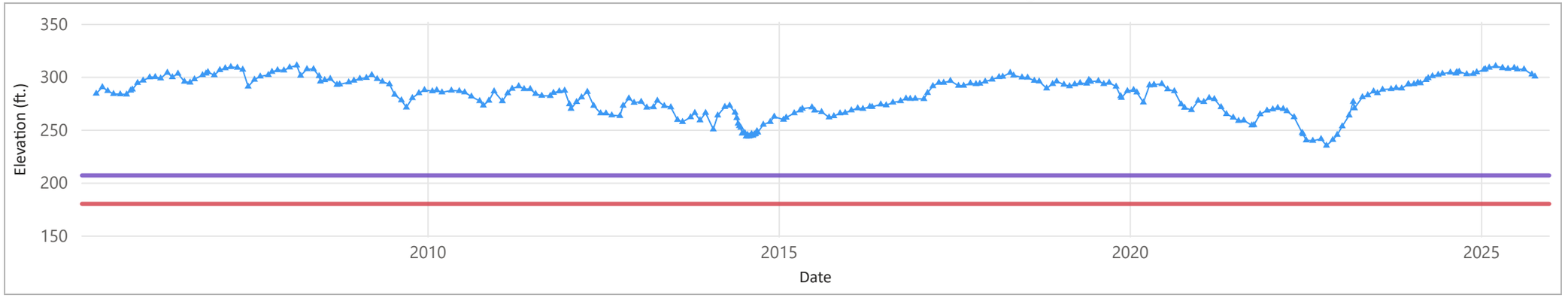
Latitude: 37.681722 Longitude: -121.870839

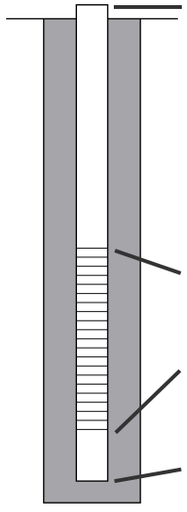


Minimum Objective: 206.70 (ft.)
Minimum Threshold: 179.80 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E11G001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E11G001	X	X	

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

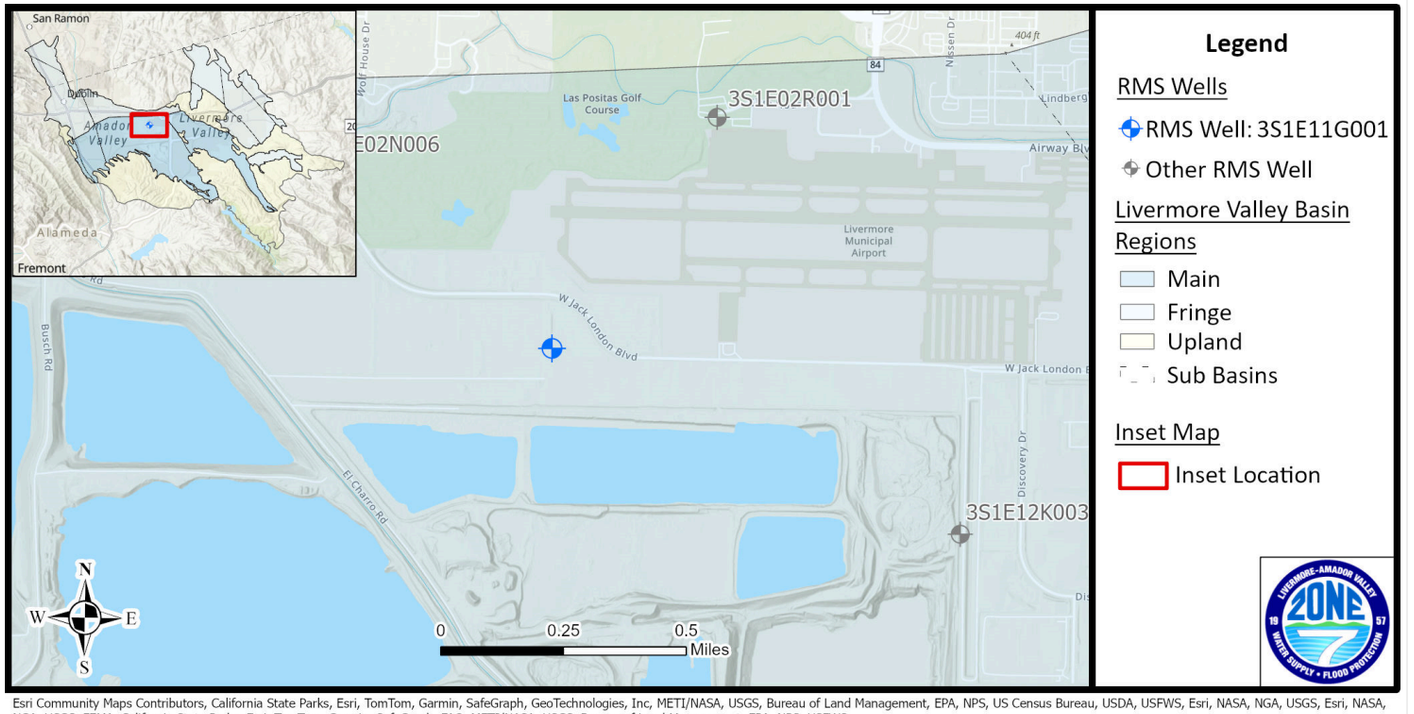


Reference Point Elevation (ft.):
371.62

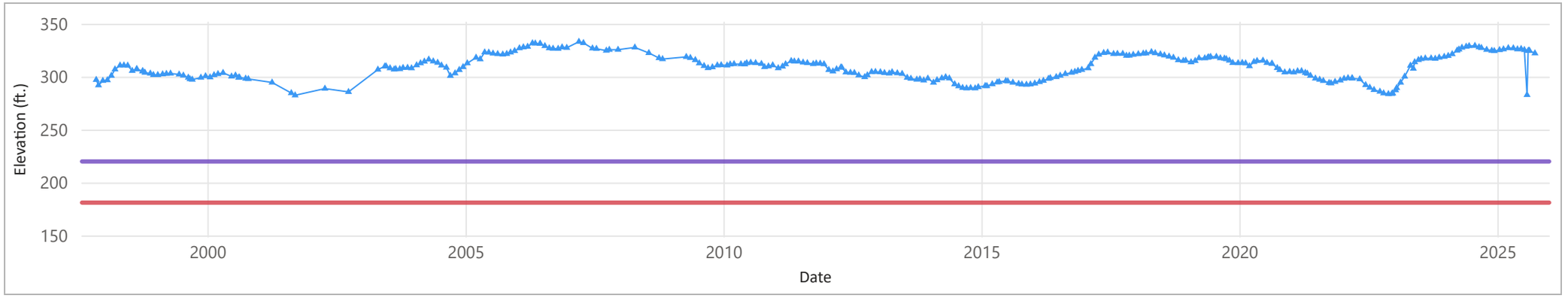
Depth to Top of Screen (ft. bgs):
100.00

Depth to Bottom of Screen (ft. bgs):
110.00

Total Well Depth (ft.):
120.00



Latitude: 37.689890 Longitude: -121.829854

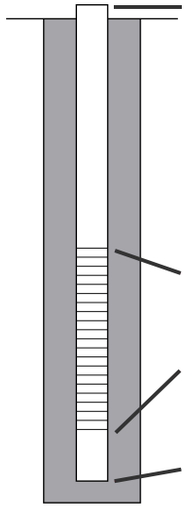


Minimum Objective: 219.90 (ft.)
Minimum Threshold: 181.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E12K003

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E12K003	X	X	

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Lower

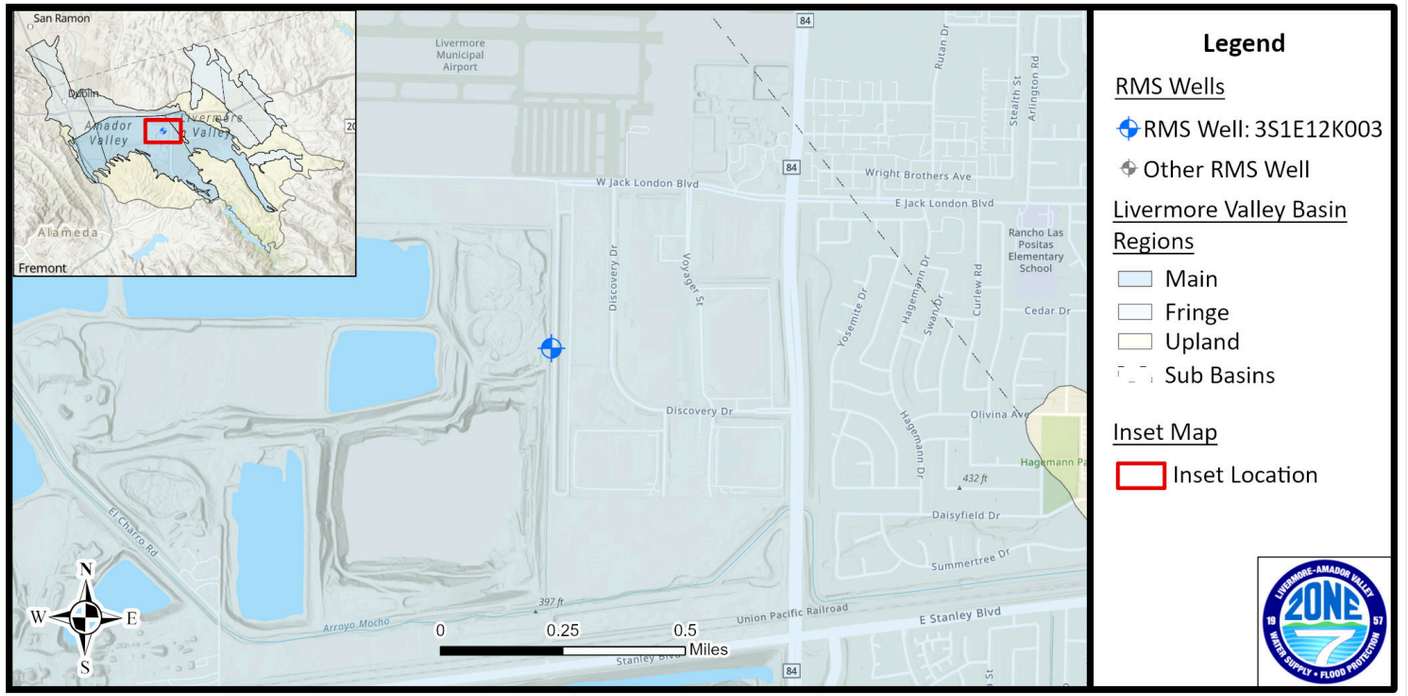


Reference Point Elevation (ft.):
406.83

Depth to Top of Screen (ft. bgs):
355.00

Depth to Bottom of Screen (ft. bgs):
470.00

Total Well Depth (ft.):
475.00



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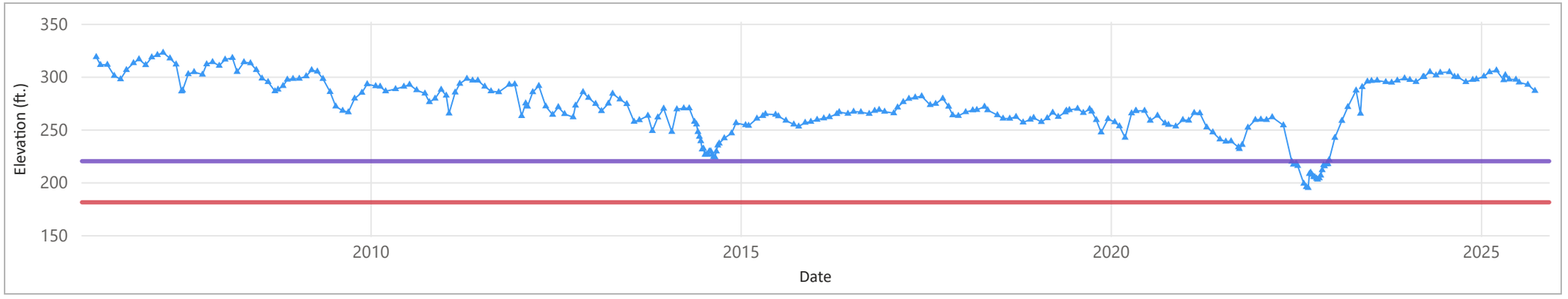
Latitude: 37.684560 Longitude: -121.814595

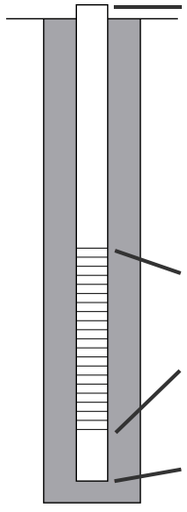


Minimum Objective: 219.90 (ft.)
Minimum Threshold: 181.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E16P005

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E16P005			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

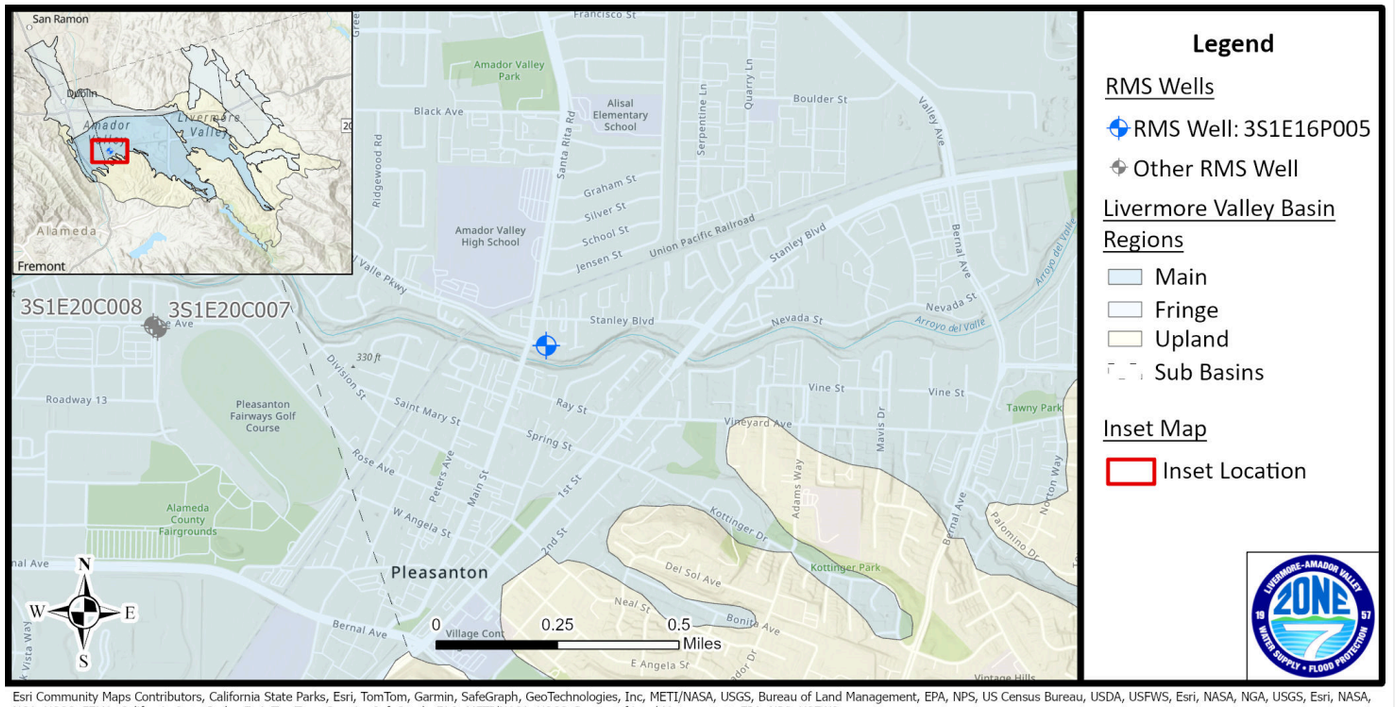


Reference Point Elevation (ft.):
354.51

Depth to Top of Screen (ft. bgs):
64.00

Depth to Bottom of Screen (ft. bgs):
69.00

Total Well Depth (ft.):
75.00



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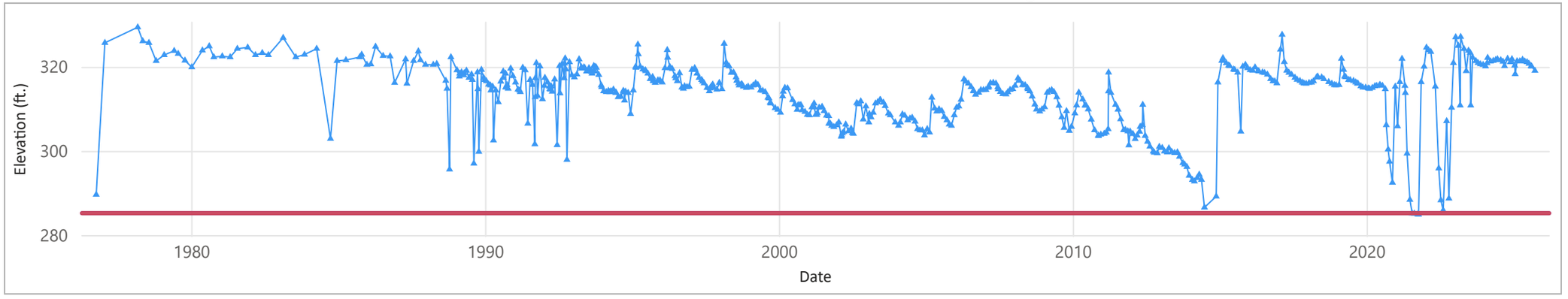
Latitude: 37.665246 Longitude: -121.873111

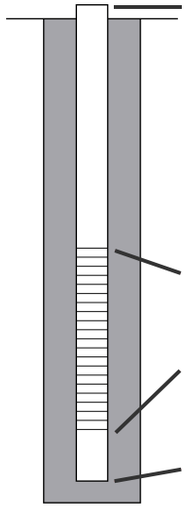


Minimum Objective: 285.20 (ft.)
Minimum Threshold: 285.20 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E20C007

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E20C007	X	X	

Basin Type - Subbasin: Main-Bernal
Aquifer Designation: Upper



Reference Point Elevation (ft.):
338.66

Depth to Top of Screen (ft. bgs):
65.00

Depth to Bottom of Screen (ft. bgs):
145.00

Total Well Depth (ft.):
153.00

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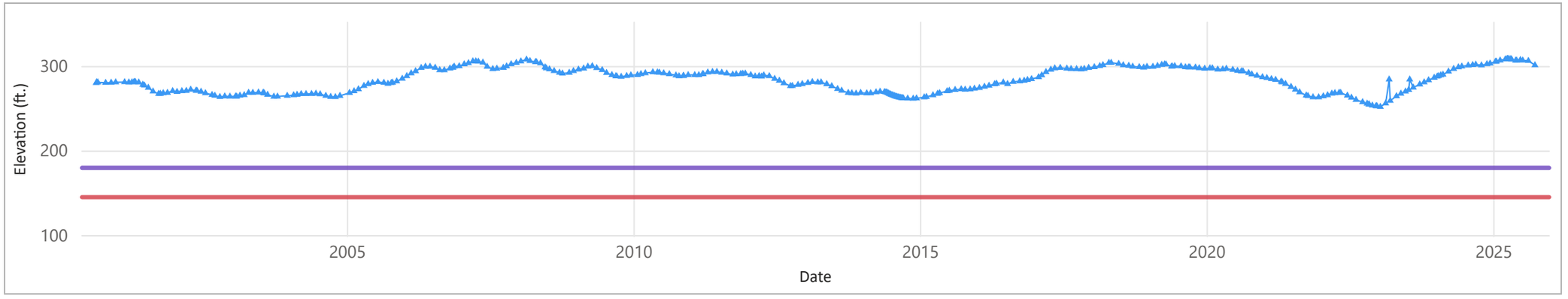
Latitude: 37.665584 Longitude: -121.887718

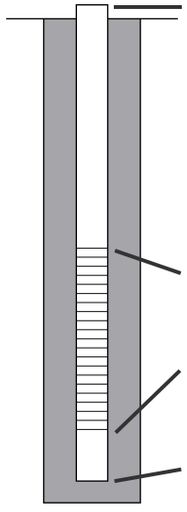


Minimum Objective: 179.50 (ft.)
Minimum Threshold: 144.80 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S1E20C008

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S1E20C008	X	X	

Basin Type - Subbasin: Main-Bernal
Aquifer Designation: Lower

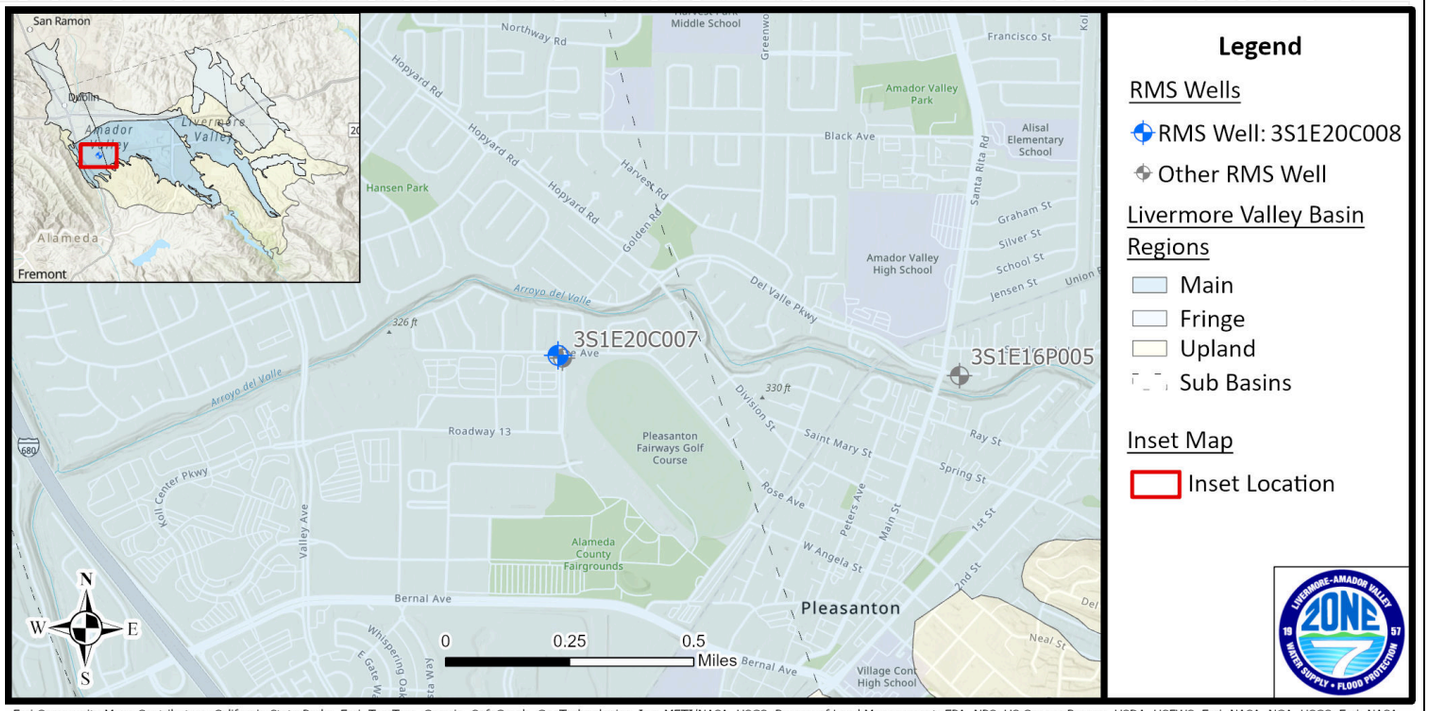


Reference Point Elevation (ft.):
338.67

Depth to Top of Screen (ft. bgs):
295.00

Depth to Bottom of Screen (ft. bgs):
315.00

Total Well Depth (ft.):
315.00



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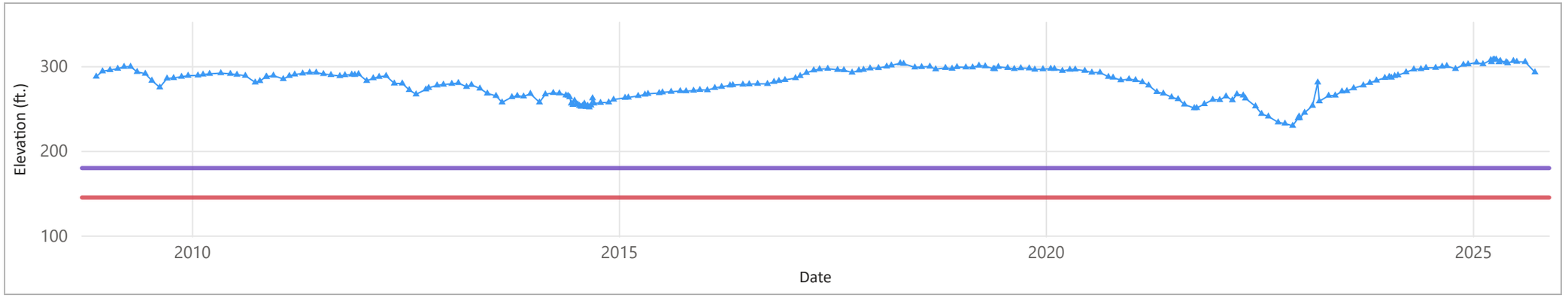
Latitude: 37.665669 Longitude: -121.887876

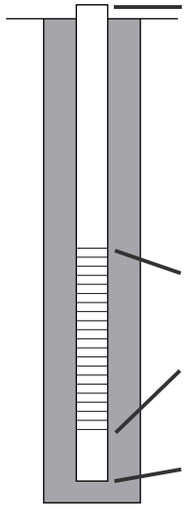


Minimum Objective: 179.50 (ft.)
Minimum Threshold: 144.80 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E08H003

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E08H003	X	X	

Basin Type - Subbasin: Main-Mocho II
Aquifer Designation: Lower

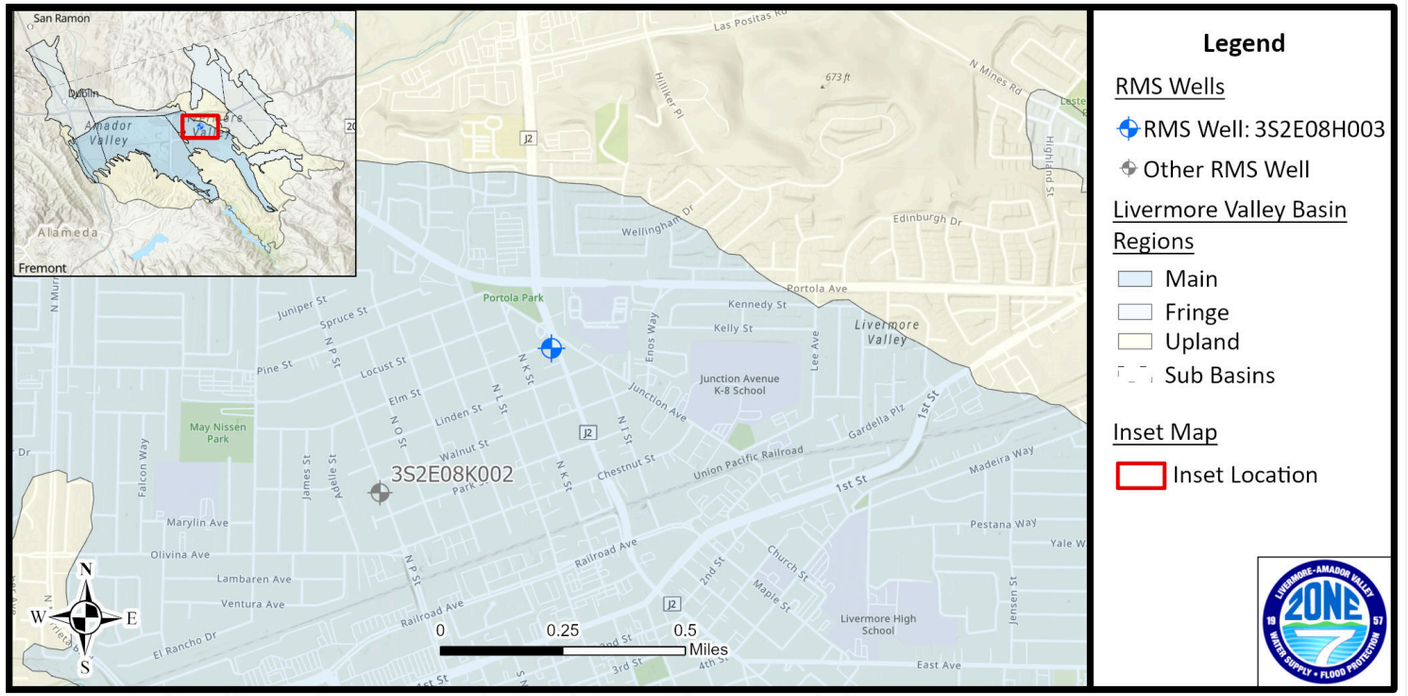


Reference Point Elevation (ft.):
477.40

Depth to Top of Screen (ft. bgs):
170.00

Depth to Bottom of Screen (ft. bgs):
190.00

Total Well Depth (ft.):
195.00



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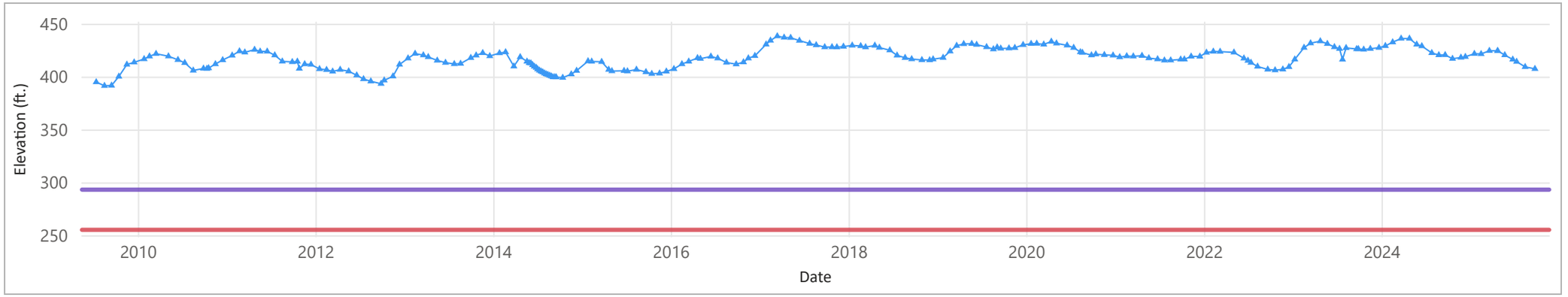
Latitude: 37.689148 Longitude: -121.772412

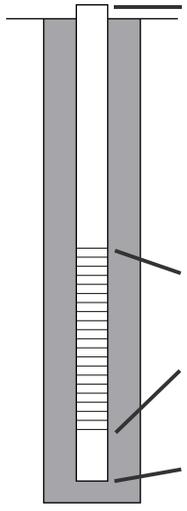


Minimum Objective: 293.10 (ft.)
Minimum Threshold: 255.10 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E08K002

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E08K002	X	X	

Basin Type - Subbasin: Main-Mocho II
Aquifer Designation: Upper

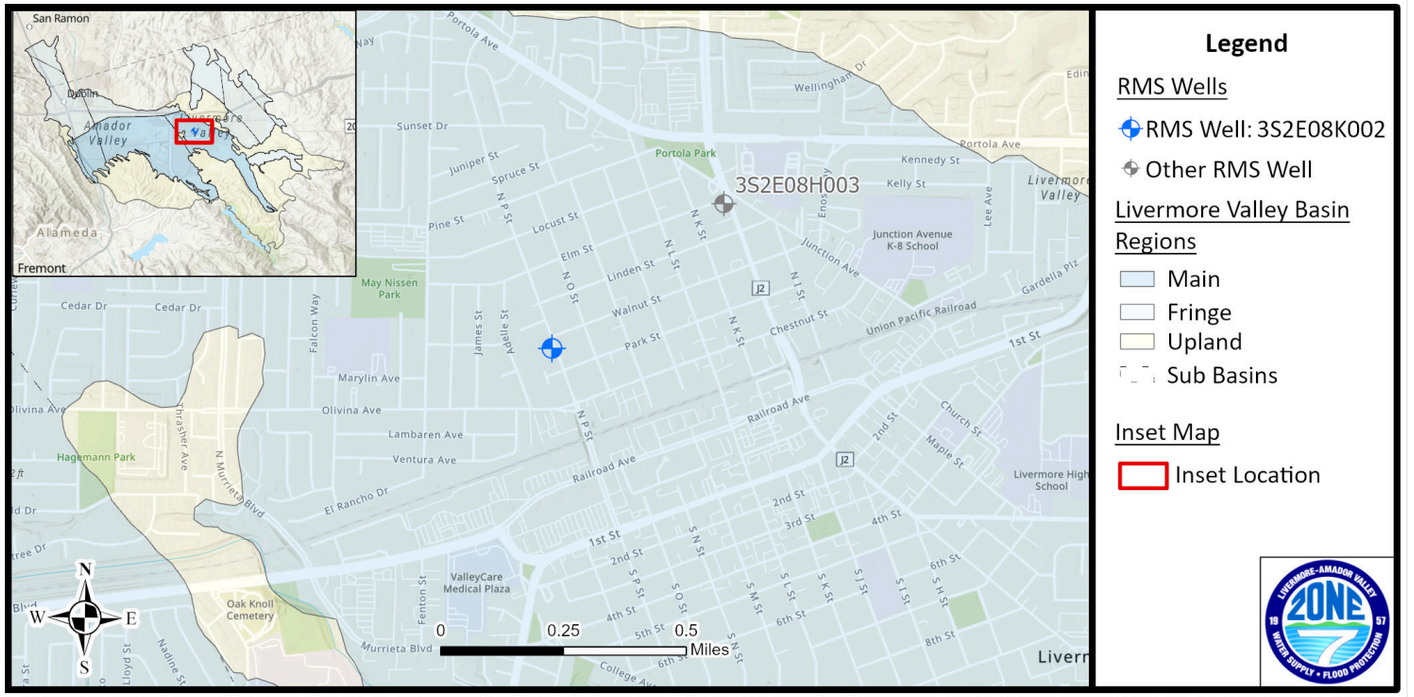


Reference Point Elevation (ft.):
464.78

Depth to Top of Screen (ft. bgs):
64.00

Depth to Bottom of Screen (ft. bgs):
69.00

Total Well Depth (ft.):
74.00



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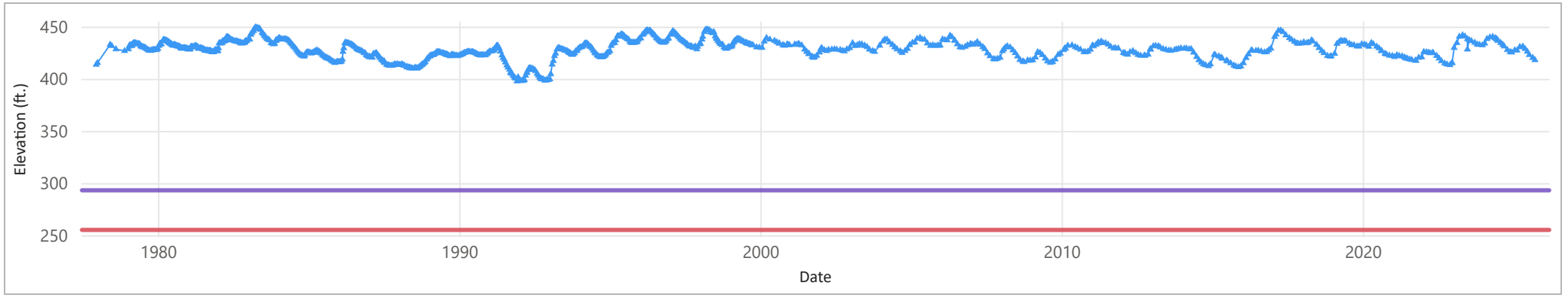
Latitude: 37.684804 Longitude: -121.778724

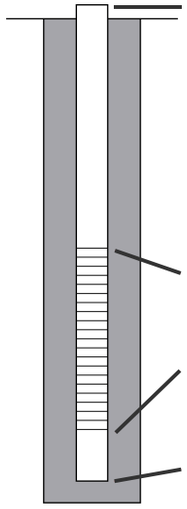


Minimum Objective: 293.10 (ft.)
Minimum Threshold: 255.10 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E16E004

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E16E004			X

Basin Type - Subbasin: Main-Mocho II
Aquifer Designation: Upper

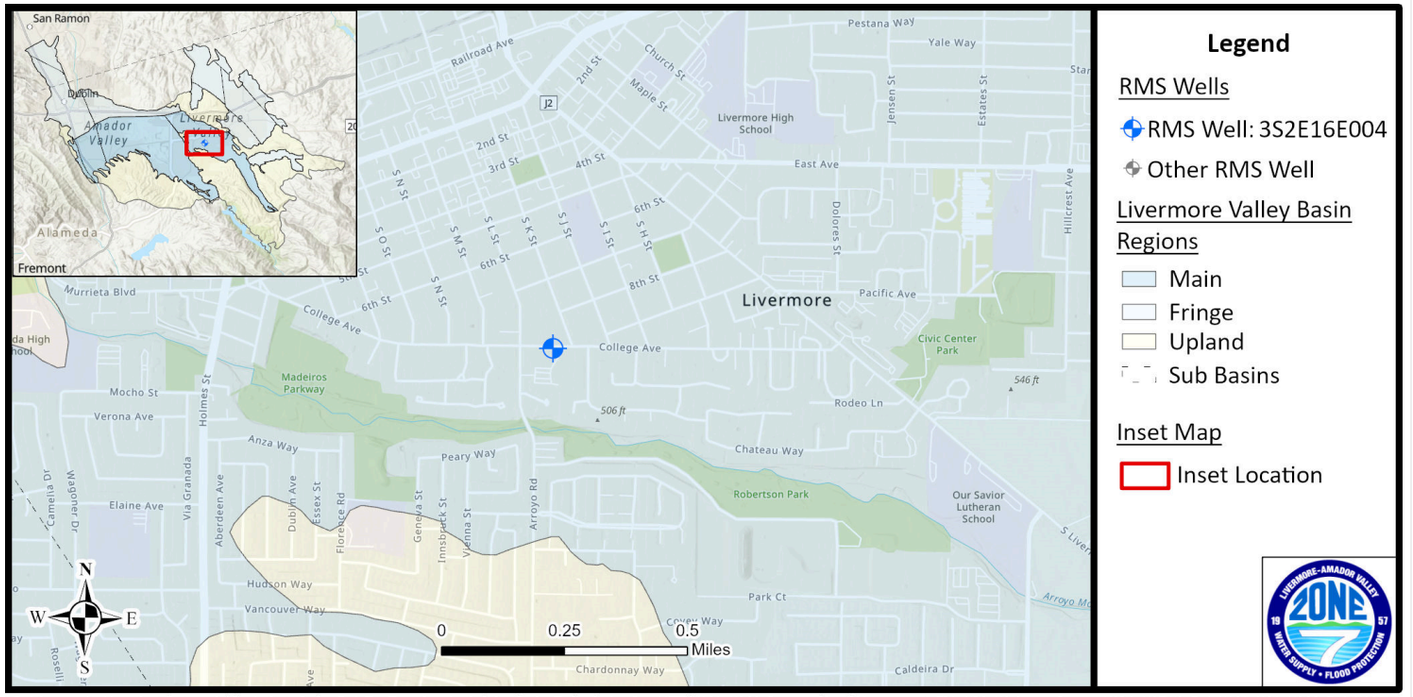


Reference Point Elevation (ft.):
506.26

Depth to Top of Screen (ft. bgs):
35.00

Depth to Bottom of Screen (ft. bgs):
40.00

Total Well Depth (ft.):
45.00



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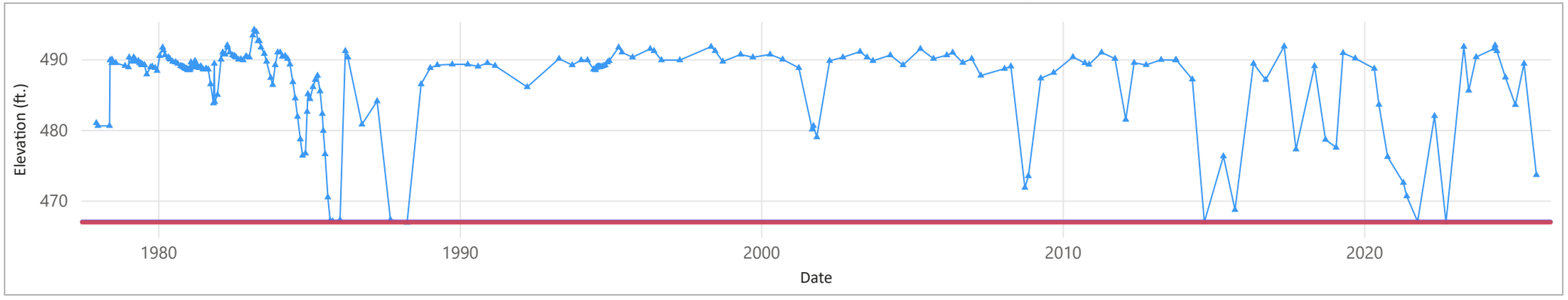
Latitude: 37.674382 Longitude: -121.767506

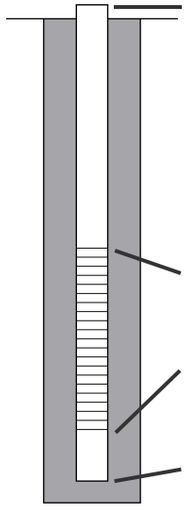


Minimum Objective: 467.00 (ft.)
Minimum Threshold: 466.90 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E21K009

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E21K009	X	X	

Basin Type - Subbasin: Upland
Aquifer Designation: Upper

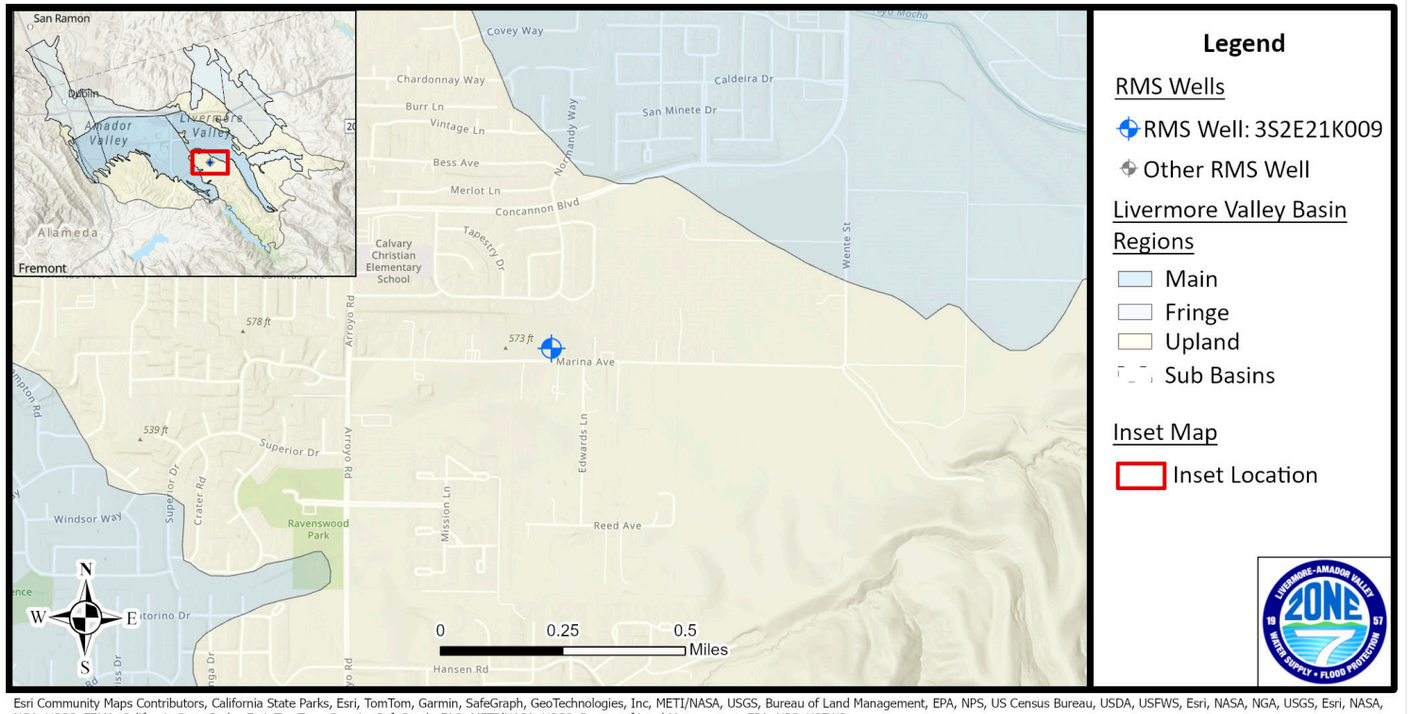


Reference Point Elevation (ft.):
567.08

Depth to Top of Screen (ft. bgs):
0.00

Depth to Bottom of Screen (ft. bgs):
0.00

Total Well Depth (ft.):
0.00



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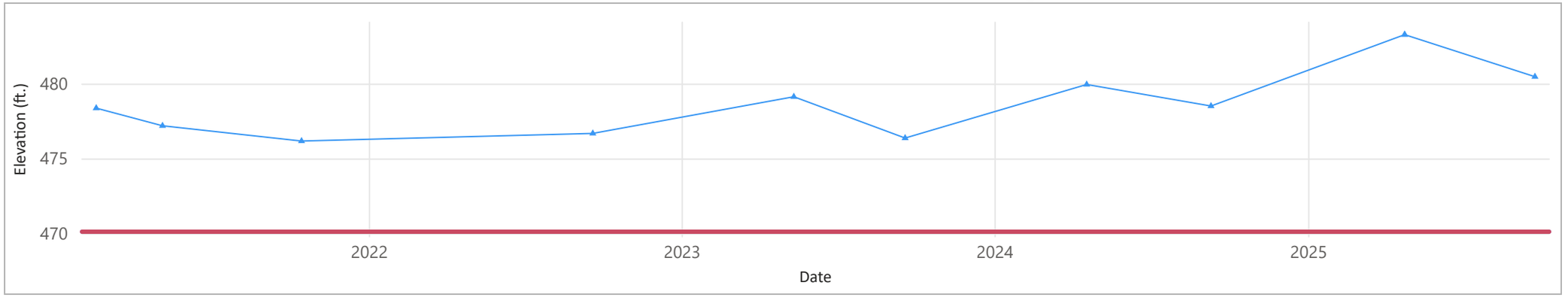
Latitude: 37.657002 Longitude: -121.760604

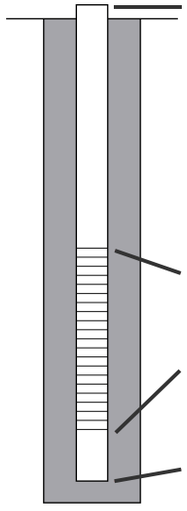


Minimum Objective: 470.10 (ft.)
Minimum Threshold: 470.10 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E23E001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E23E001			X

Basin Type - Subbasin: Main-Mocho II
Aquifer Designation: Upper

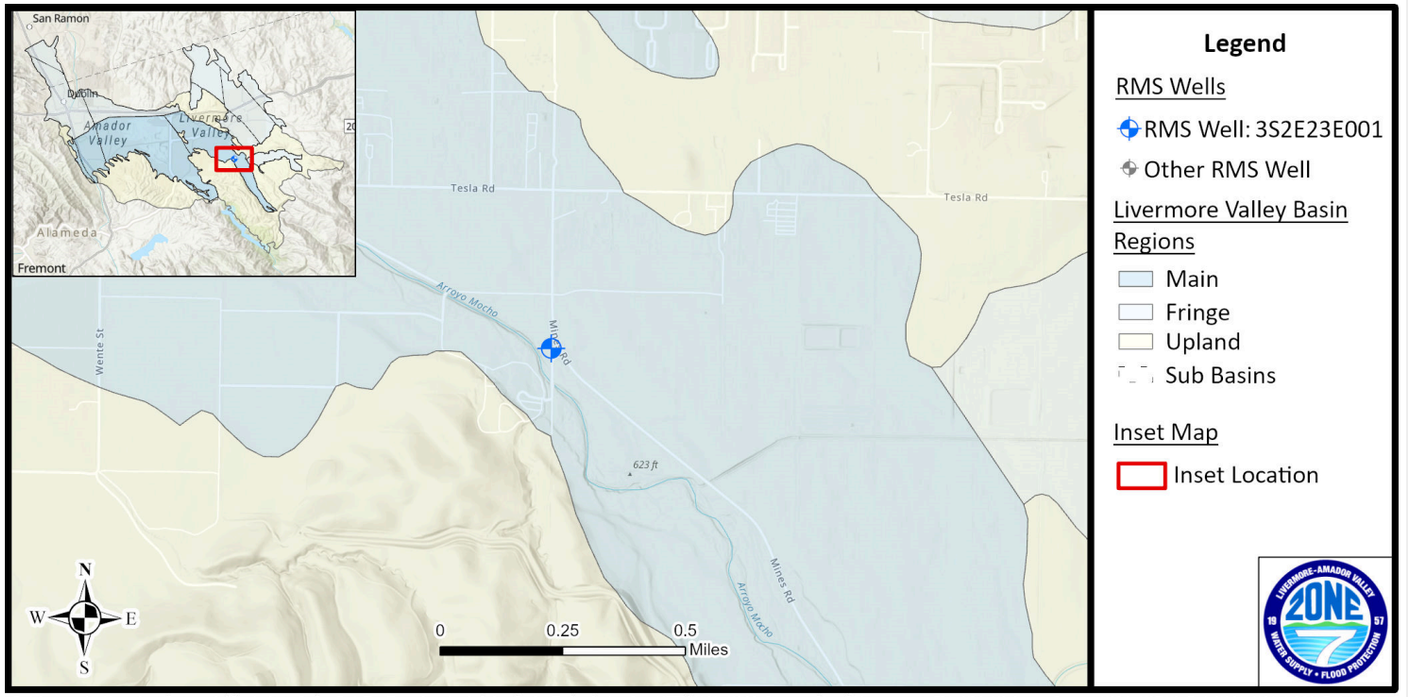


Reference Point Elevation (ft.):
613.36

Depth to Top of Screen (ft. bgs):
20.00

Depth to Bottom of Screen (ft. bgs):
35.00

Total Well Depth (ft.):
40.00



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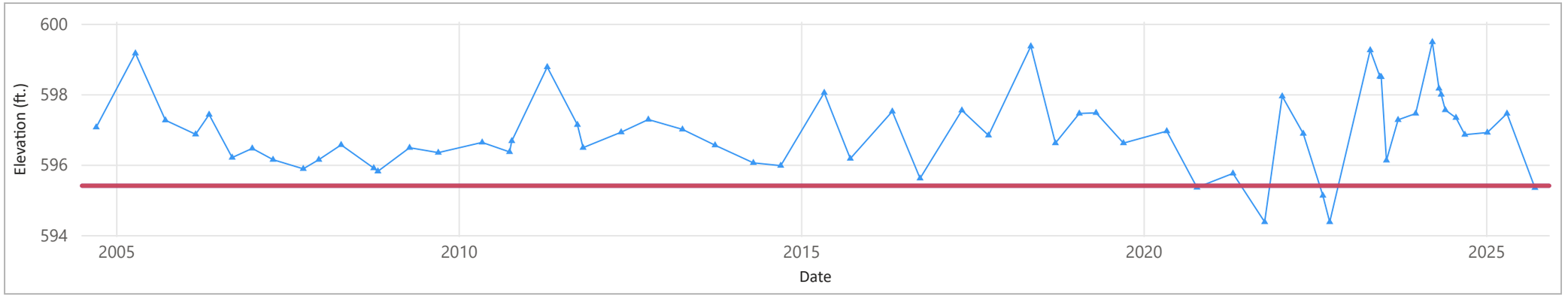
Latitude: 37.660441 Longitude: -121.732871

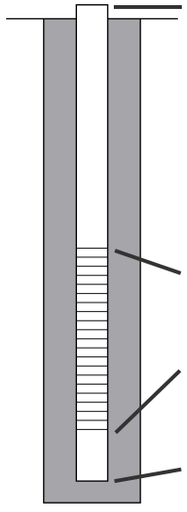


Minimum Objective: 595.40 (ft.)
Minimum Threshold: 595.40 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E24A001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E24A001	X	X	

Basin Type - Subbasin: Fringe-Mocho I
Aquifer Designation: Upper

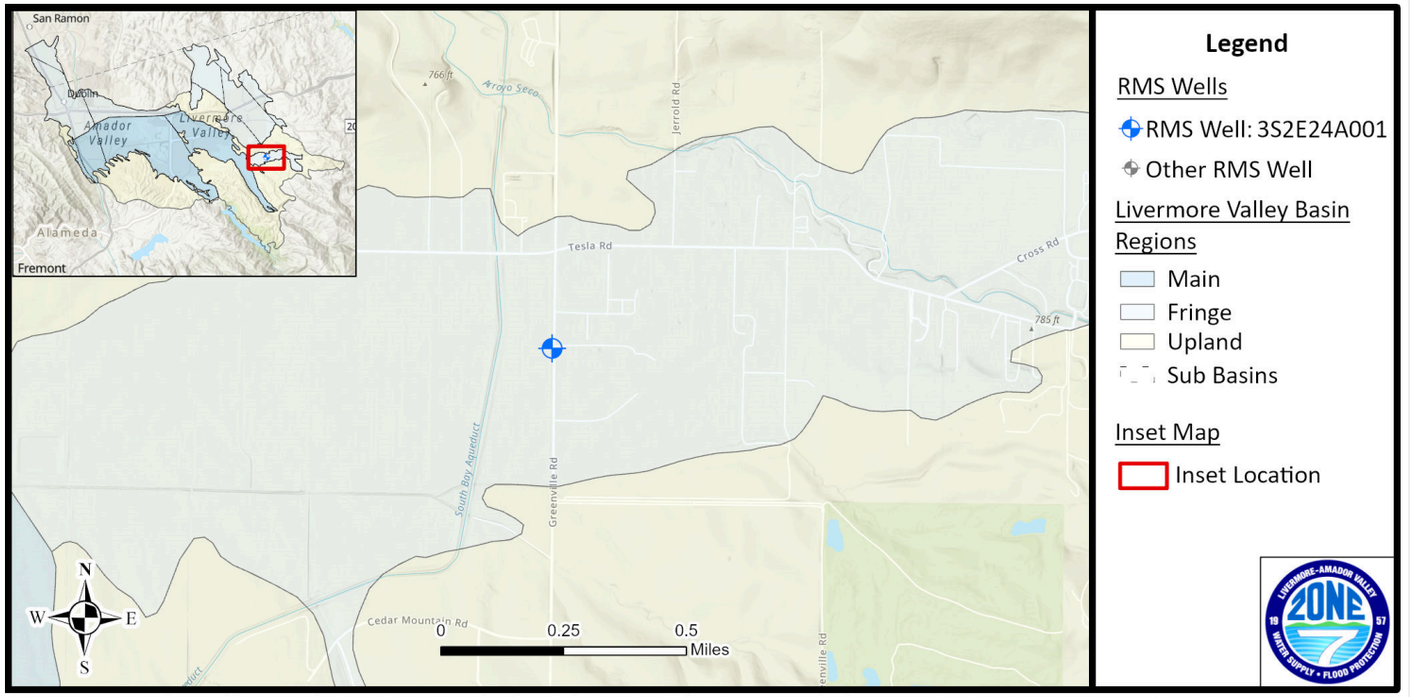


Reference Point Elevation (ft.):
717.70

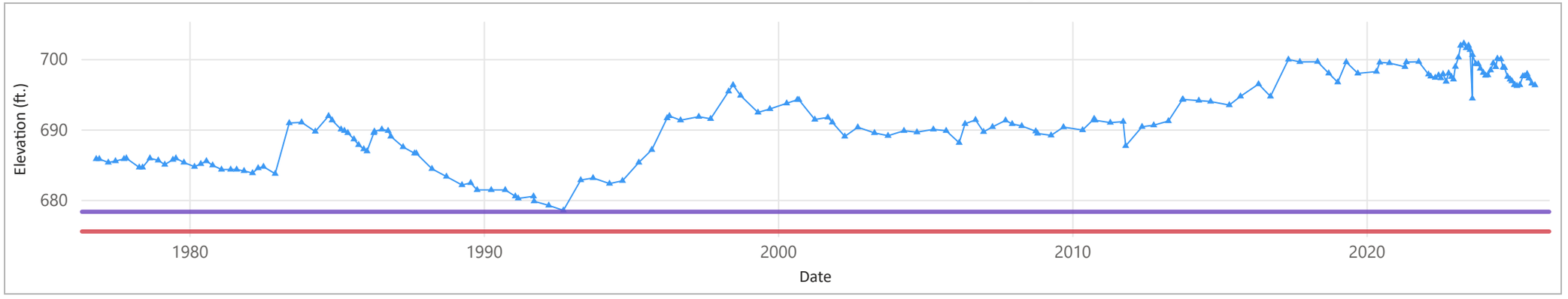
Depth to Top of Screen (ft. bgs):
36.30

Depth to Bottom of Screen (ft. bgs):
41.30

Total Well Depth (ft.):
46.30



Latitude: 37.662219 Longitude: -121.696740

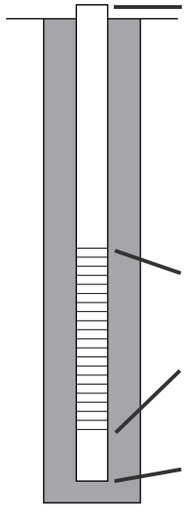


Minimum Objective: 678.30 (ft.)
Minimum Threshold: 675.50 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E29F004

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E29F004			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

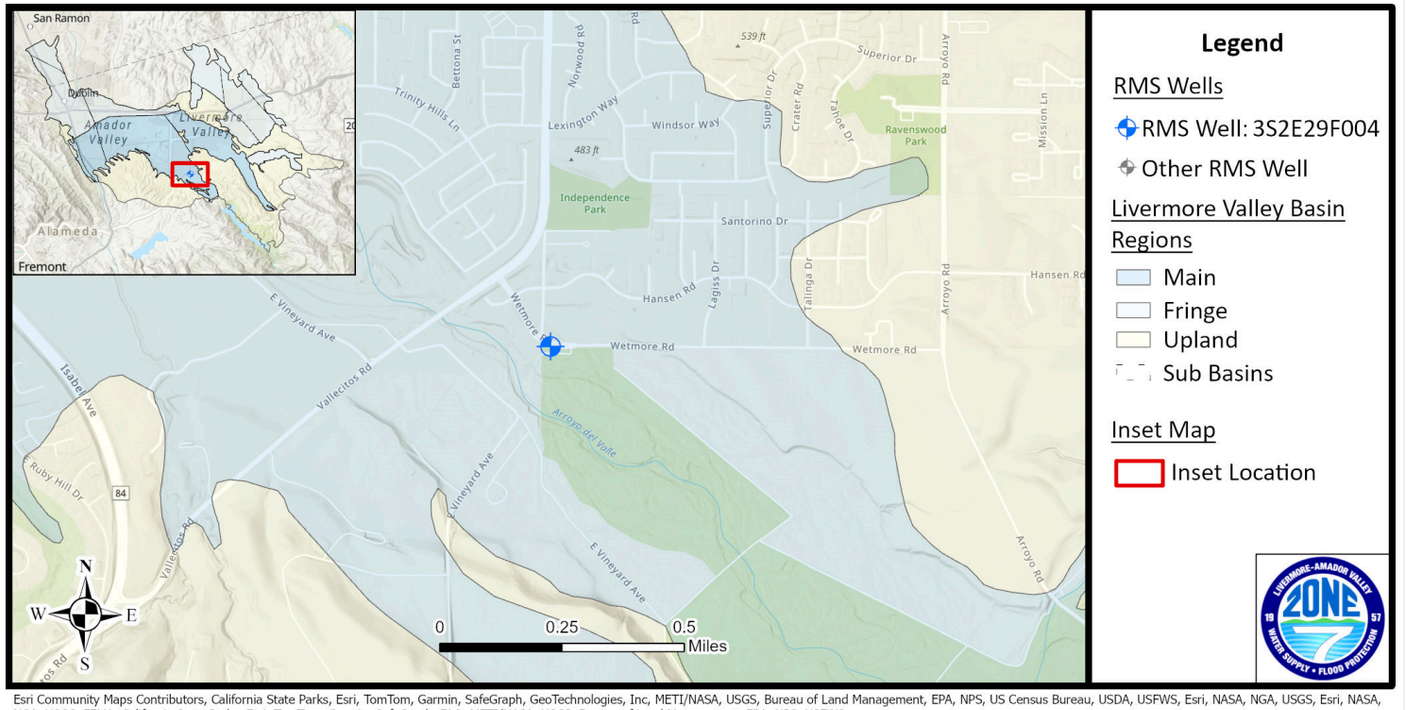


Reference Point Elevation (ft.):
457.50

Depth to Top of Screen (ft. bgs):
26.00

Depth to Bottom of Screen (ft. bgs):
31.00

Total Well Depth (ft.):
36.00



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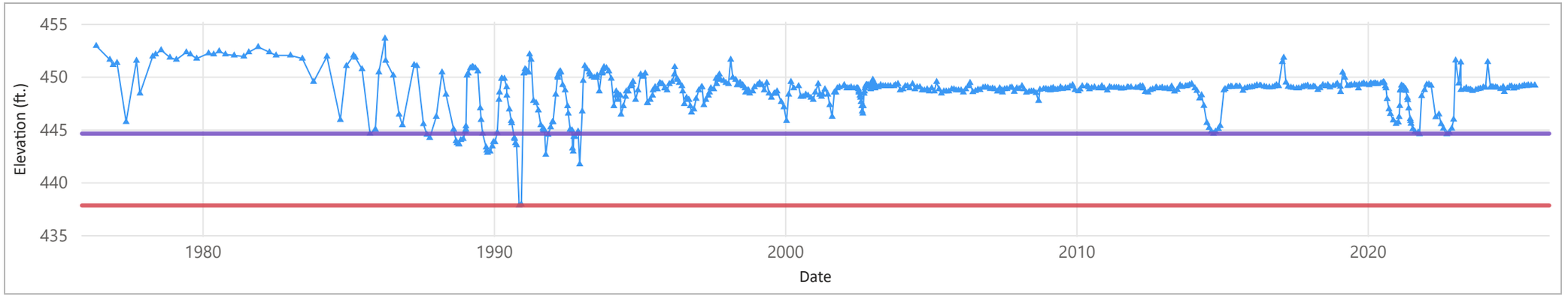
Latitude: 37.645138 Longitude: -121.782701

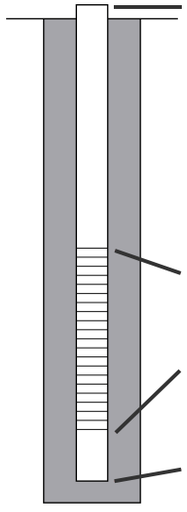


Minimum Objective: 444.60 (ft.)
Minimum Threshold: 437.80 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E30D002

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E30D002			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

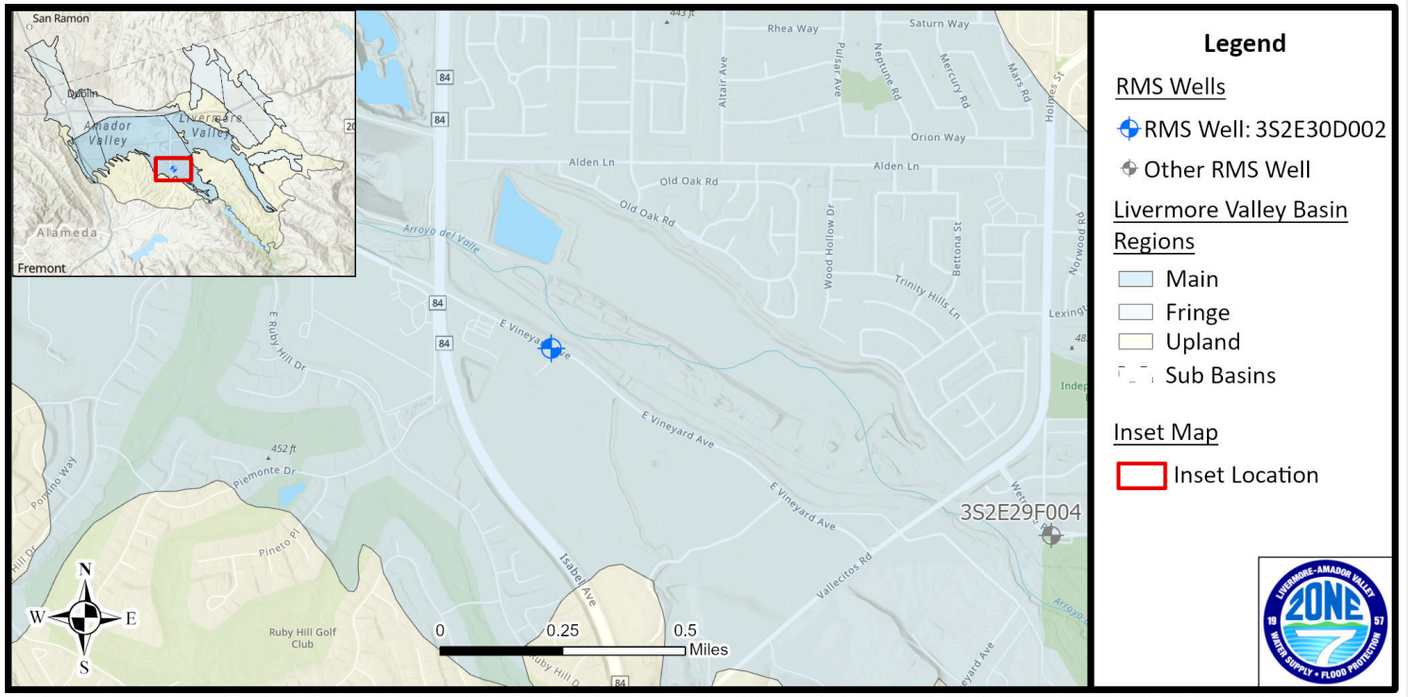


Reference Point Elevation (ft.):
431.60

Depth to Top of Screen (ft. bgs):
24.00

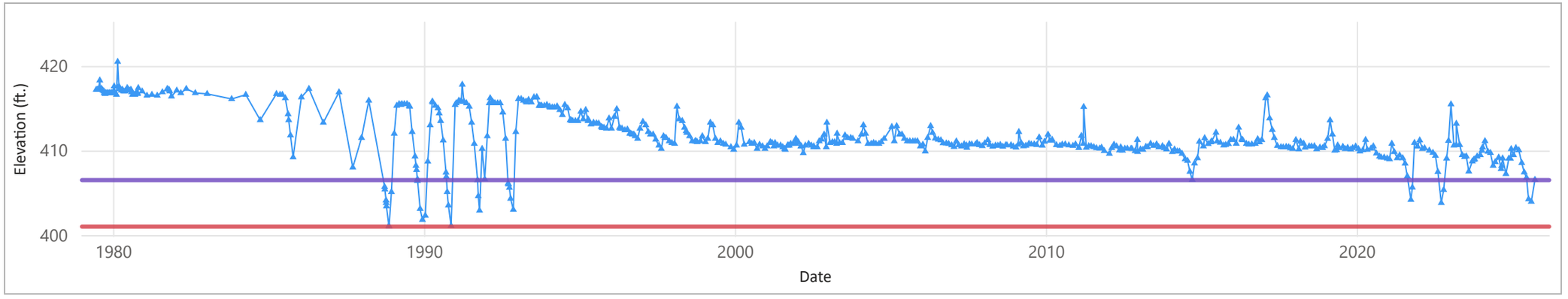
Depth to Bottom of Screen (ft. bgs):
39.00

Total Well Depth (ft.):
44.00



Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS, Esri, NASA, NGA, USGS, Esri, NASA, NGA, USGS, FEMA, California State Parks, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS

Latitude: 37.650466 Longitude: -121.801388

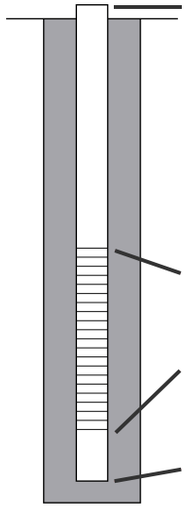


Minimum Objective: 406.50 (ft.)
Minimum Threshold: 401.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E32E007

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E32E007			X

Basin Type - Subbasin: Upland
Aquifer Designation: Upper

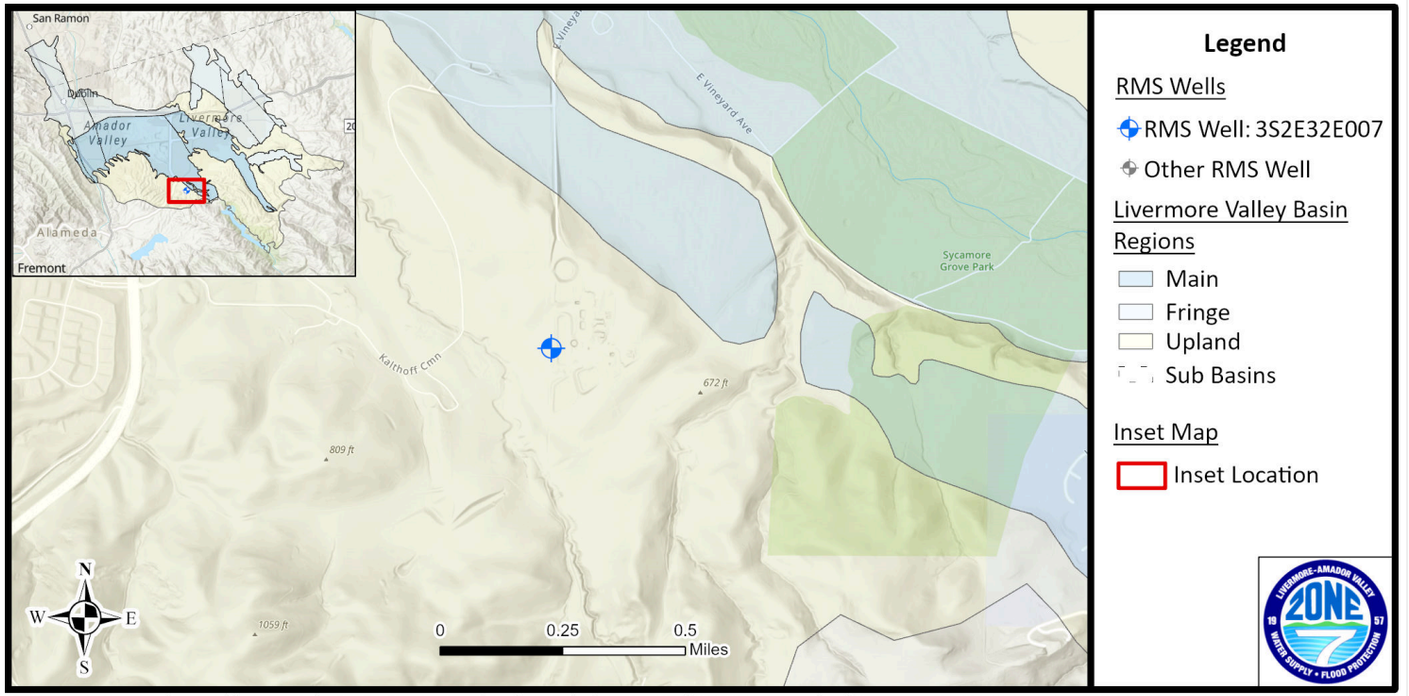


Reference Point Elevation (ft.):
610.94

Depth to Top of Screen (ft. bgs):
19.00

Depth to Bottom of Screen (ft. bgs):
34.00

Total Well Depth (ft.):
37.00



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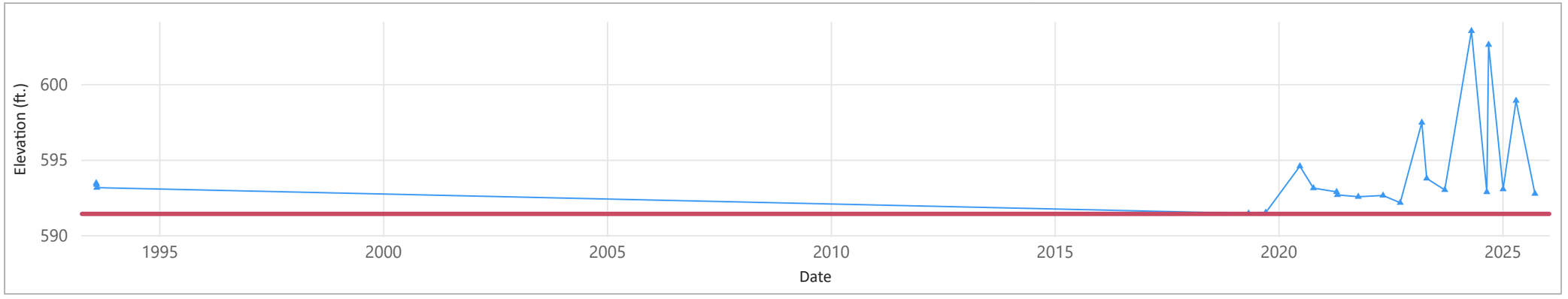
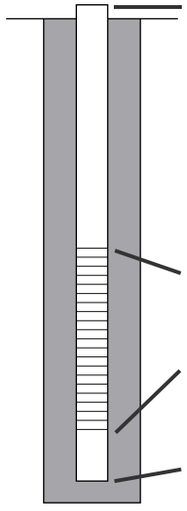


Minimum Objective: 591.40 (ft.)
Minimum Threshold: 591.40 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E33C001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E33C001			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

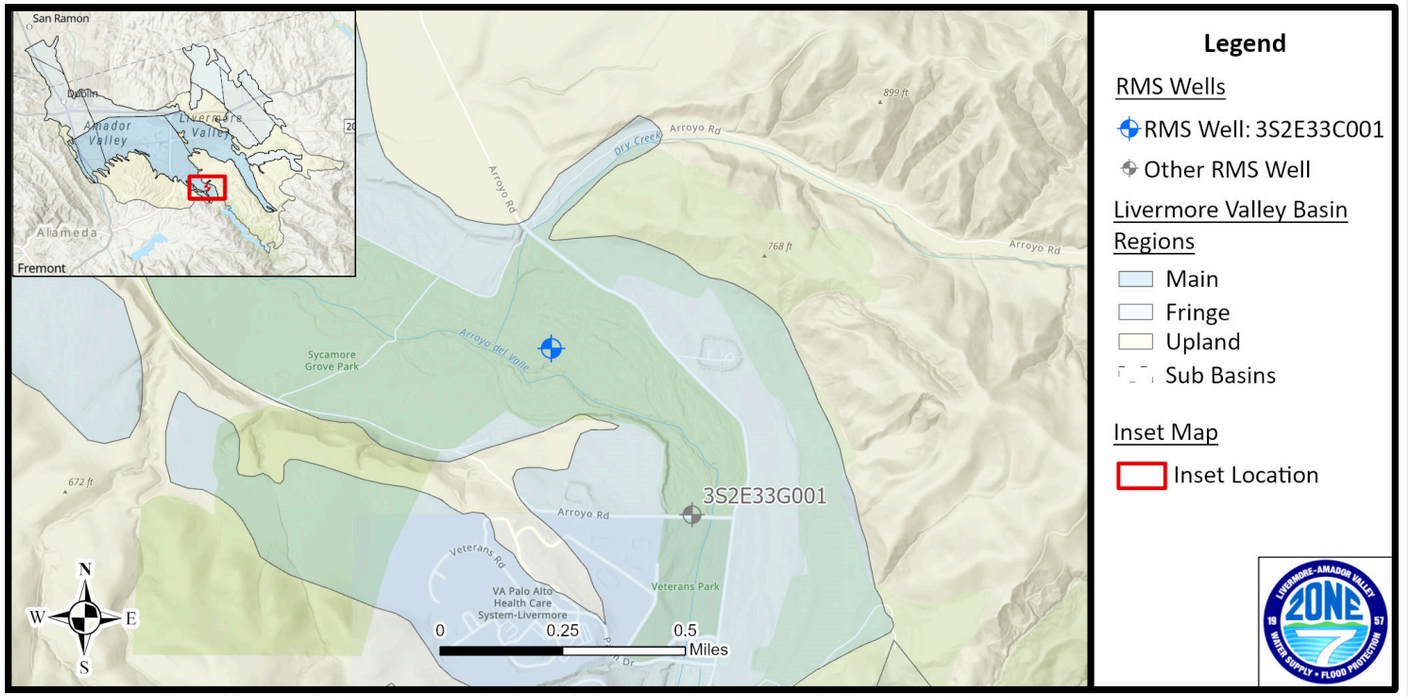


Reference Point Elevation (ft.):
497.63

Depth to Top of Screen (ft. bgs):
5.00

Depth to Bottom of Screen (ft. bgs):
20.00

Total Well Depth (ft.):
20.00



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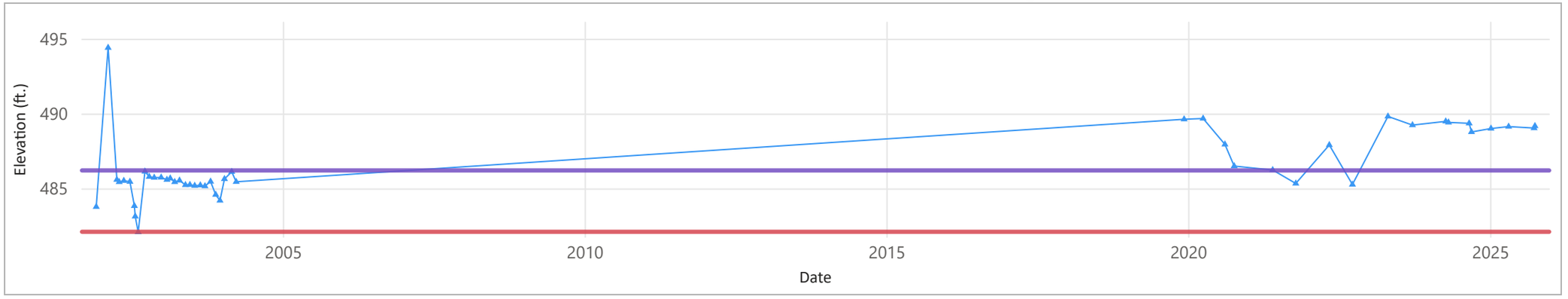
Latitude: 37.634330 Longitude: -121.762825

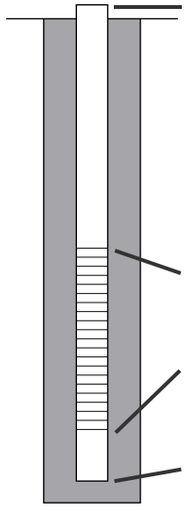


Minimum Objective: 486.20 (ft.)
Minimum Threshold: 482.10 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 3S2E33G001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
3S2E33G001			X

Basin Type - Subbasin: Main-Amador
Aquifer Designation: Upper

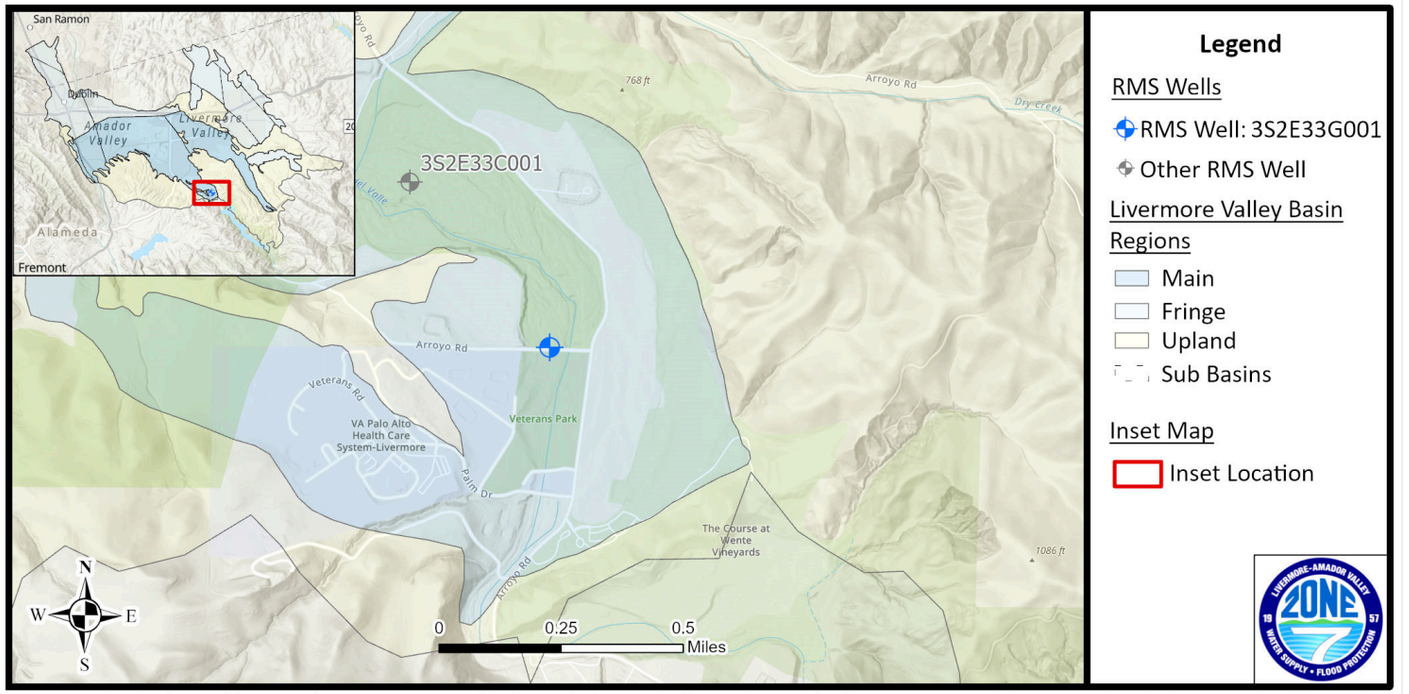


Reference Point Elevation (ft.):
511.52

Depth to Top of Screen (ft. bgs):
9.00

Depth to Bottom of Screen (ft. bgs):
14.00

Total Well Depth (ft.):
17.00



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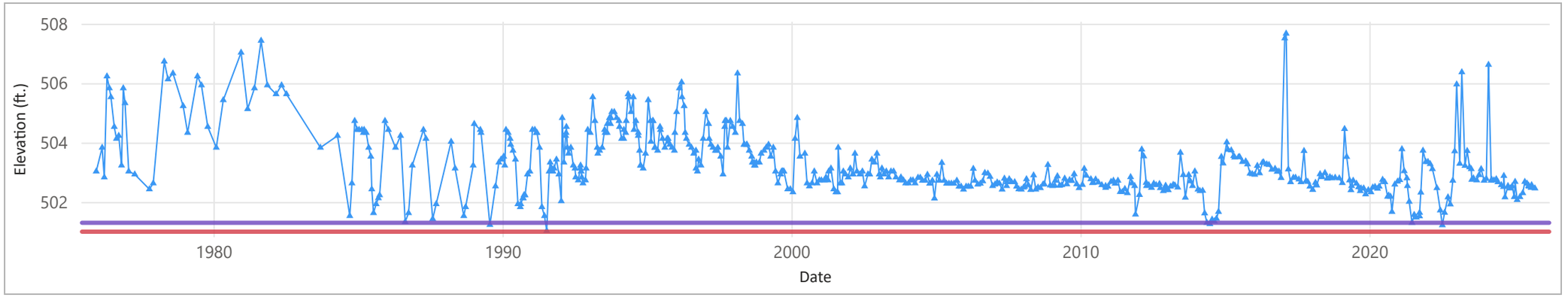
Latitude: 37.629471 Longitude: -121.757514

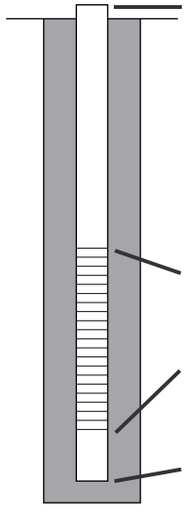


Minimum Objective: 501.30 (ft.)
Minimum Threshold: 501.00 (ft.)
Groundwater Elevation Measurement

Hydrograph of Measured Groundwater Elevation for Well 4S2E01A001

Well ID	RMS-WL	RMS-WQ	RMS-ICSW
4S2E01A001			X

Basin Type - Subbasin: Main-Mocho II
Aquifer Designation: Upper

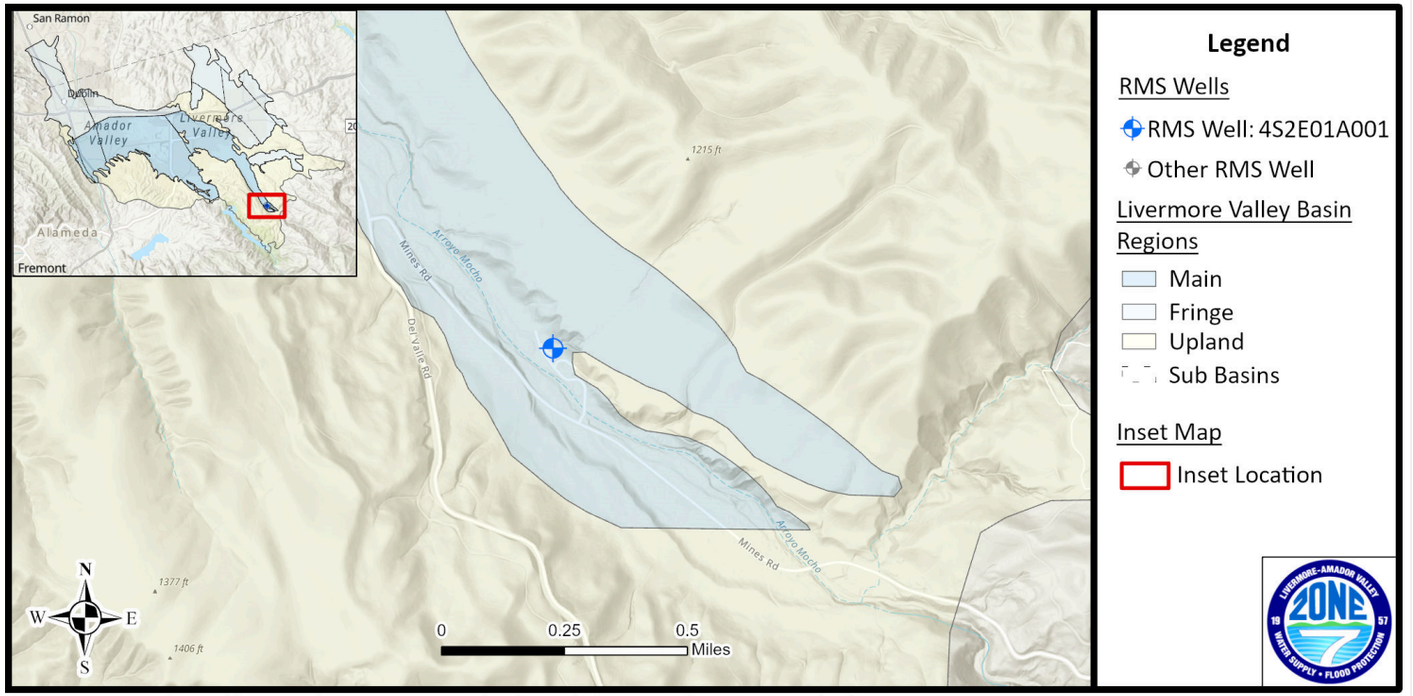


Reference Point Elevation (ft.):
819.76

Depth to Top of Screen (ft. bgs):
45.00

Depth to Bottom of Screen (ft. bgs):
130.00

Total Well Depth (ft.):
130.00



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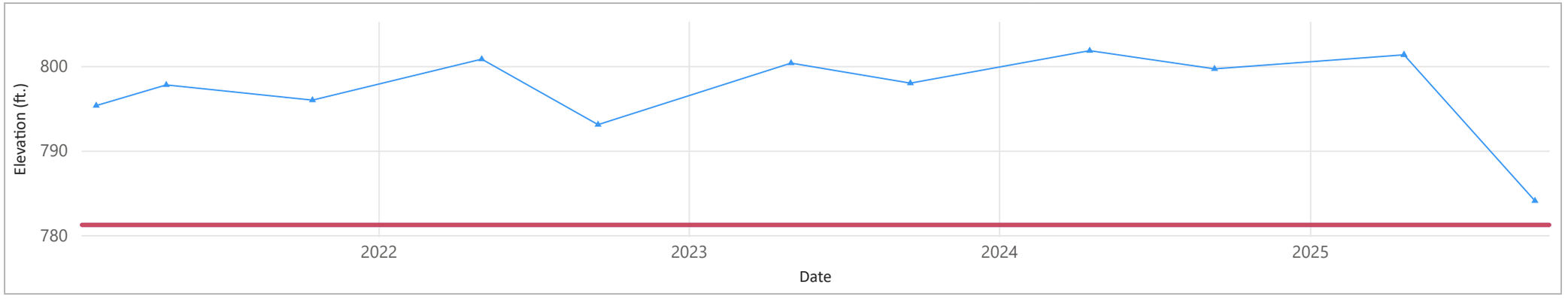
Latitude: 37.618374 Longitude: -121.695937



Minimum Objective: 781.20 (ft.)
Minimum Threshold: 781.20 (ft.)
Groundwater Elevation Measurement

Appendix D

Groundwater Storage

Supplemental Information

TABLE D-1
DESCRIPTION OF HYDROLOGIC INVENTORY COMPONENTS
LIVERMORE VALLEY GROUNDWATER BASIN

COMPONENTS	*DESCRIPTION/REMARK*	*Direct/ Indirect*	*HOW CALCULATED/MEASURED*	*ESTIMATED ACCURACY*
SUPPLY INDICES				
Rainfall	Pleasanton rainfall (Parkside Office)	Direct	Measured by Zone 7	0.5 in
Evaporation	Evaporation at Lake Del Valle Station	Direct	Collected by DWR	0.5 in
Streamflow	Arroyo Valle Streamflow if Lake Del Valle Dam did not exist	Direct	USGS Stream Gage Station AV_BLC	10 AF
Water Year Type	Indicator of Water Year in Sacramento Valley	Direct	DWR California Data Exchange Center	-
SUPPLY COMPONENTS				
NATURAL STREAM RECHARGE				
ARROYO VALLE	AV natural recharge.	Indirect	Stream Inflows - Stream Outflows	100 AF
ARROYO MOCHO	AM natural recharge.	Indirect	Stream Inflows - Stream Outflows	100 AF
ARROYO LAS POSITAS	ALP natural recharge.	Indirect	Stream Inflows - Stream Outflows	100 AF
ARTIFICIAL RECHARGE				
ARROYO VALLE	Total artificial recharge on Arroyo Valle minus Prior Rights	Indirect	Stream Inflows - Stream Outflows	100 AF
ARROYO VALLE PRIOR RIGHTS	AVBLC flow that would have recharged if no dam.	Indirect	Formula based on AVBLC flow.	100 AF
ARROYO MOCHO	Total artificial recharge on Arroyo Mocho	Indirect	Stream Inflows - Stream Outflows	100 AF
ARROYO LAS POSITAS	Total artificial recharge on Arroyo Las Positas	Indirect	Stream Inflows - Stream Outflows	100 AF
INJECTION WELL RECHARGE	Injection at Hop 6 from 1998 to 2000	Direct	Metered by Zone 7	10 AF
RAINFALL RECHARGE	Recharge from rainfall	Indirect	Calculated by Areal Recharge Model	1000 AF
PIPE LEAKAGE	Pipe leakage that recharges the GW basin	Indirect	Estimated using length and age of pipes	500 AF
APPLIED WATER RECHARGE				
URBAN MUNICIPAL (GW & SBA)	Applied recharge in urban area - delivered water (GW & SBA)	Indirect	Calculated by Areal Recharge Model	100 AF
URBAN RECYCLED WATER	Applied water recharge from urban area - recycled water	Indirect	Calculated using Wastewater Plant deliveries	10 AF
AGRICULTURAL (SBA)	Total applied recharge from 'untreated' ag sources (untreated SBA)	Indirect	Calculated by Areal Recharge Model	100 AF
AGRICULTURAL (GW)	Total applied water recharge from groundwater ag sources	Indirect	Calculated by Areal Recharge Model	100 AF
GOLF COURSES (GW)	Applied water from golf courses on groundwater	Indirect	Calculated by Areal Recharge Model	100 AF
GOLF COURSES (RW)	Applied water from golf courses from recycled water	Indirect	Calculated using Wastewater Plant deliveries	10 AF
SUBSURFACE BASIN INFLOW	Subsurface Inflow from Northern Fringe Basin	Indirect	Estimated historically groundwater contours	500 AF
DEMAND COMPONENTS				
MUNICIPAL PUMPING				
ZONE 7	Total pumping by Zone 7, including pumping to waste	Direct	Metered by Zone 7	10 AF
DSRSD	*Pumping by Zone 7 for DSRSD.*	*Direct*	*DSRSD Groundwater Pumping Quota*	*10 AF*
PLEASANTON	Pumping by Pleasanton.	Direct	Metered by Pleasanton	10 AF
CALIFORNIA WATER SERVICE	Pumping by CWS.	Direct	Metered by CWS	10 AF
SFPUC	Pumping by SF Public Utilities Commission	Direct	Metered by SFPUC	10 AF
FAIRGROUNDS	Pumping by Alameda County Fairgrounds	Indirect	Metered by Fairgrounds	10 AF
DOMESTIC	Pumping from active domestic, supply, and potable wells	Indirect	Estimated: Number of Wells x 0.5 AF/yr	50 AF
GOLF COURSES				
CASTLEWOOD GOLF COURSE	*Pumping for Castlewood Golf Course*	*Indirect*	*Estimated using historical meter data*	*50 AF*
TRI VALLEY GOLF CENTER	*Pumping for TriValley Golf Driving Range*	*Indirect*	*Calculated by Areal Recharge Model*	*50 AF*
AGRICULTURAL PUMPING	Unmetered pumping for agriculture	Indirect	Calculated by Areal Recharge Model	100 AF
MINING				
EXPORT	Total mining area releases that leave the basin	Indirect	Calculated from metered data and stream recharge rate	50 AF
EVAPORATION	Pond evaporation & rainfall.	Indirect	Calculated using lake area, evaporation, and rainfall	100 AF
PROCESSING	Mining Area processing losses	Indirect	Estimated at 700 AF/Yr	100 AF
SUBSURFACE BASIN OUTFLOW	Basin overflow leaving basin	Indirect	Formula based on GW elevation and synoptic data	100 AF

GW = Groundwater
SBA = South Bay Aqueduct
RW = Recycled Water
AF = Acre-feet

TABLE D-2
GROUNDWATER STORAGE
HYDROLOGIC INVENTORY (HI) METHOD
2025 WATER YEAR (in Acre-Feet, except where indicated)

	Total for Water Year	Sustainable Average	Percent of Sust Avg
INDICES			
Rainfall at Livermore (inches)	11.30	14.46	78%
8 Station Rainfall Index (Northern CA)(inches)	56.55	50.16	113%
Evaporation at Lake Del Valle (inches)	63.32	67.14	94%
Arroyo Valle Stream flow (AF)	10,192	21,392	48%
SUPPLY TOTAL (AF)	**16,209**	**19,800**	**82%**
Stream Recharge	**7,552**	**11,900**	**63%**
[1] Natural Stream Recharge	2,500	5,700	44%
[1] Arroyo Valle Prior Rights	1,305	900	145%
[3] Artificial Stream Recharge	3,747	5,300	71%
Injection Well Recharge	**0**	**0**	**0%**
[1] **Rainfall Recharge**	**3,845**	**4,300**	**89%**
Lake Recharge	2,529	NA	NA
Pipe Leakage	**1,405**	**1,000**	**141%**
[1] **Applied Water Recharge**	**2,407**	**1,600**	**150%**
Urban - Municipal	1,471	1,280	115%
Urban - Groundwater	70	26	269%
Urban - Recycled Water	73	0	0%
Agriculture - Municipal (SBA)	610	92	663%
Agriculture/Golf - Groundwater	136	158	86%
Agriculture/Golf - Recycled	47	44	107%
[1] **Subsurface Inflow**	**1,000**	**1,000**	**100%**
DEMAND TOTAL (AF)	**16,559**	**18,800**	**88%**
Groundwater Pumping	**10,594**	**14,100**	**75%**
Municipal Pumping	**9,285**	**12,275**	**76%**
[4] Zone 7	5,755	5,950	97%
[2] *Zone 7 pumping for DSRSD*	*645*	*645*	*100%*
GW through Demin Membranes	*583*	-	-
Demin Permeate to Z7 Distribution System	*449*	-	-
[2] City of Pleasanton	0	3,500	0%
[2] California Water Service	2,908	3,070	95%
[2] SFPUC	312	450	69%
[2] Fairgrounds	310	310	100%
[2] **Domestic Pumping**	**58**	**200**	**29%**
Agricultural and Golf Pumping	**1,251**	**625**	**200%**
[2] Agriculture	1,016	400	0%
[2] Golf Courses	235	225	104%
[2] **Mining Use**	**4,331**	**4,600**	**94%**
Mining Discharges (Export) to Stream	0	700	0%
Mining Discharges to Cope Lake	*4,214*	*NA*	*NA*
Evaporation	3,631	3,200	113%
Processing	700	700	100%
GDE Uptake	*2,048*	*1,500*	*137%*
[1] **Subsurface Overflow**	**1,634**	**100**	**1634%**
SUBTOTALS (AF)			
Sustainable Yield - Natural Recharge [sum of [1]]	9,423	13,400	70%
Sustainable Yield - Demand Components [sum of [2]]	11,449	13,400	85%
Net Natural	-2,026		
Zone 7 - Artificial Recharge (Stream) [sum of [3]]	3,747	5,300	71%
Zone 7 - Municipal Pumping [sum of [4]]	5,110	5,300	96%
Net Artificial	-1,363		
NET RECHARGE (Supply - Demand)	**-350**	**1,000**	**-35%**
TOTAL STORAGE (AF)	**2025 WY**	**2024 WY**	**Δ Storage**
Hydrologic Inventory (HI)	258,486	258,836	-350
Nodal GW Elevations (NGE)	247,883	249,529	-1,646
Average Storage: (HI + NGE)/2	253,185	254,182	-998
Available Storage: Avg Storage - Reserve (128K AF)	125,185	126,182	-998

Sustainable average includes original estimates for Sustainable Yield components (shown with *)

Natural Component

Artificial Component

TABLE D-3
HISTORICAL GROUNDWATER STORAGE
HYDROLOGIC INVENTORY (HI) METHOD
1974-2025 WATER YEARS (in Acre-Feet, except where indicated)

	WATER YEAR (Oct - Sep)																	
COMPONENTS	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**
INDICES																		
Rainfall at Livermore (in)	16.1	14.8	6.2	6.0	18.5	13.6	17.6	10.3	24.4	32.0	13.0	12.6	19.8	8.9	8.7	11.2	9.4
8 Station Rain Index (N. CA)(in)	78.6	48.8	28.3	19.0	71.6	39.1	59.6	37.6	84.8	88.5	58.1	37.8	72.1	28.6	34.9	50.1	36.0
Evap at Lake Del Valle (in)	60.9	62.7	63.5	66.0	64.2	67.7	59.7	72.1	60.5	59.7	70.2	64.9	61.1	64.0	66.9	63.6	65.9
Arroyo Valle Stream flow (AF)	30538	28307	475	177	43749	9721	45800	5817	61427	125882	25653	7282	67903	3023	1506	1988	815
Water Year Type*	W	W	C	C	W	AN	W	D	W	W	AN	D	W	C	C	C	C
SUPPLY	**18,140**	**21,437**	**11,121**	**8,683**	**24,813**	**22,213**	**23,830**	**18,821**	**29,942**	**35,412**	**15,547**	**8,784**	**20,866**	**6,670**	**8,071**	**11,170**	**10,353**
Injection Well Recharge	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Stream Recharge	**11,340**	**15,400**	**6,910**	**3,820**	**16,330**	**16,110**	**16,480**	**15,040**	**16,420**	**17,158**	**9,486**	**4,747**	**9,045**	**3,565**	**4,549**	**7,880**	**7,026**
Artificial Stream Recharge	3,509	6,750	5,695	3,190	6,442	12,266	10,211	11,918	5,952	901	0	0	0	0	1,172	4,320	4,488
Arroyo Valle	*1,439*	*4,320*	*1,875*	*1,300*	*3,002*	*5,886*	*4,541*	*6,328*	*2,442*	*0*	*0*	*0*	*0*	*0*	*0*	*139*	*304*
Arroyo Mocho	*1,670*	*1,830*	*3,220*	*1,290*	*2,840*	*5,780*	*5,270*	*5,130*	*3,290*	*901*	*0*	*0*	*0*	*0*	*1,172*	*4,181*	*4,184*
Arroyo las Positas	*400*	*600*	*600*	*600*	*600*	*600*	*400*	*460*	*220*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Natural Stream Recharge	6,060	7,110	1,100	630	8,850	2,860	4,850	2,200	8,620	14,387	8,326	3,541	8,168	2,696	2,653	2,589	2,250
Arroyo Valle	*2,400*	*2,950*	*360*	*290*	*2,450*	*1,290*	*1,750*	*840*	*2,970*	*4,893*	*2,580*	*751*	*2,831*	*527*	*679*	*458*	*418*
Arroyo Mocho	*3,160*	*3,760*	*540*	*140*	*5,900*	*1,170*	*2,500*	*880*	*4,810*	*8,514*	*4,616*	*1,716*	*4,176*	*843*	*902*	*809*	*428*
Arroyo las Positas	*500*	*400*	*200*	*200*	*500*	*400*	*600*	*480*	*840*	*980*	*1,130*	*1,074*	*1,161*	*1,326*	*1,072*	*1,322*	*1,404*
Arroyo Valle Prior Rights	1,771	1,540	115	0	1,038	984	1,419	922	1,848	1,870	1,160	1,206	877	869	724	971	288
Rainfall Recharge	**3,031**	**2,523**	**0**	**0**	**4,398**	**2,002**	**3,891**	**967**	**11,423**	**16,357**	**3,110**	**1,249**	**9,008**	**290**	**398**	**283**	**141**
Pipe Leakage	**31**	**37**	**44**	**51**	**60**	**71**	**82**	**95**	**109**	**124**	**139**	**155**	**169**	**185**	**200**	**217**	**233**
Applied Water Recharge	**2,738**	**2,477**	**3,158**	**3,022**	**2,795**	**3,041**	**2,727**	**2,089**	**1,360**	**1,344**	**2,162**	**1,884**	**1,904**	**1,860**	**2,004**	**1,630**	**1,694**
Urban - Municipal	1,074	766	1,354	1,375	1,087	1,179	810	1,284	668	690	1,253	1,027	998	1,328	1,377	1,053	1,025
Urban - Groundwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban - Recycled Water	0	0	27	16	26	13	21	7	12	8	16	6	12	8	5	14	5
Agriculture - Municipal (SBA)	74	109	157	124	95	118	147	182	140	165	208	182	232	245	289	240	265
Agriculture/Golf - Groundwater	384	280	513	525	352	388	281	241	174	139	198	210	190	137	152	140	153
Agricultural - Groundwater	384	280	513	525	352	388	281	241	174	139	198	210	190	137	152	140	153
Golf Courses - Groundwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agriculture/Golf - Recycled	0	0	64	68	75	73	73	60	54	63	62	55	61	47	63	60	64
Agricultural - Recycled Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golf Courses - Recycled Water	0	0	64	68	75	73	73	60	54	63	62	55	61	47	63	60	64
Others	1,206	1,322	1,042	915	1,160	1,270	1,394	315	312	279	425	404	411	95	118	123	182
Subsurface Basin Inflow	**1,000**	**1,000**	**1,010**	**1,790**	**1,230**	**990**	**650**	**630**	**630**	**430**	**650**	**750**	**740**	**770**	**920**	**1,160**	**1,260**
DEMAND	**18,618**	**15,929**	**15,432**	**14,636**	**12,871**	**15,819**	**15,727**	**19,349**	**18,349**	**26,220**	**19,750**	**18,506**	**22,550**	**14,575**	**17,176**	**16,143**	**16,045**
Groundwater Pumpage	**15,550**	**12,098**	**12,378**	**11,691**	**10,213**	**11,918**	**9,610**	**9,794**	**8,576**	**9,307**	**10,029**	**9,904**	**10,563**	**9,622**	**10,907**	**11,559**	**12,733**
Municipal Pumpage	**11,550**	**9,689**	**7,455**	**6,391**	**6,773**	**7,941**	**6,882**	**7,261**	**7,129**	**7,764**	**8,175**	**7,708**	**8,406**	**7,837**	**9,078**	**10,102**	**10,898**
Zone 7 (excluding DSRSD)	5,403	3,090	1,292	309	776	816	41	0	0	25	348	1,199	1,163	480	2,017	3,213	3,327
Zone 7 for DSRSD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
City of Pleasanton	2,264	2,497	1,707	3,271	2,640	3,273	2,961	3,089	3,565	3,886	3,486	3,056	3,705	3,310	3,548	3,316	3,856
Cal. Water Service	2,612	2,852	2,781	1,312	1,964	2,358	2,489	2,695	2,286	2,660	3,035	2,788	2,774	3,276	2,761	2,850	3,073
Camp Parks	769	808	980	925	796	881	819	808	713	630	647	40	0	0	0	0	0
SFWD	302	242	495	374	397	413	372	402	348	321	378	353	484	491	472	443	362
Fairgrounds	200	200	200	200	200	200	200	267	217	242	281	272	280	280	280	280	280
Domestic	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Agricultural and Golf Pumpage	**3,900**	**2,309**	**4,823**	**5,200**	**3,340**	**3,877**	**2,628**	**2,433**	**1,347**	**1,443**	**1,754**	**2,096**	**2,057**	**1,685**	**1,729**	**1,357**	**1,735**
Agriculture	3,744	2,217	4,596	4,970	3,191	3,711	2,628	2,433	1,295	1,342	1,556	1,914	1,911	1,470	1,476	1,166	1,478
SFWD	500	0	62	304	252	365	168	513	150	549	107	410	543	663	493	359	548
Concannon	6	15	20	20	20	70	250	112	0	0	68	0	60	26	59	0	0
Calculated	3,238	2,202	4,514	4,646	2,919	3,276	2,210	1,808	1,145	793	1,381	1,504	1,308	781	924	807	930
Golf Courses	156	92	227	230	149	166	0	0	52	101	198	182	146	215	253	191	257
3S/1E 1P3	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*46*
Castlewood	*156*	*92*	*227*	*230*	*149*	*166*	*0*	*0*	*52*	*101*	*198*	*182*	*146*	*215*	*253*	*191*	*211*
Tri-Valley Golf	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Mining Use	**3,068**	**3,831**	**3,054**	**2,945**	**2,658**	**3,751**	**5,586**	**9,005**	**7,613**	**13,953**	**7,481**	**7,402**	**11,387**	**4,353**	**5,869**	**4,484**	**3,312**
Stream Export	1,219	2,200	690	470	800	2,000	3,480	6,530	6,050	12,760	4,340	4,265	8,858	558	2,443	1,808	665
Discharges to Cope Lake	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Evaporation	1,149	931	1,664	1,775	1,158	1,051	1,406	1,775	863	493	2,441	2,437	1,829	3,095	2,726	1,976	1,947
Production	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Subsurface Basin Overflow	**0**	**0**	**0**	**0**	**0**	**150**	**530**	**550**	**2,160**	**2,960**	**2,240**	**1,200**	**600**	**600**	**400**	**100**	**0**
NET RECHARGE (AF)	**-478**	**5,508**	**-4,311**	**-5,953**	**11,942**	**6,394**	**8,103**	**-528**	**11,593**	**9,192**	**-4,203**	**-9,722**	**-1,684**	**-7,906**	**-9,106**	**-4,973**	**-5,692**
INVENTORY STORAGE (AF)	**211,522**	**217,030**	**212,719**	**206,766**	**218,708**	**225,102**	**233,205**	**232,677**	**244,270**	**253,462**	**249,259**	**239,537**	**237,853**	**229,947**	**220,841**	**215,868**	**210,176**

STORAGE CALCULATION	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**
INVENTORY (Rounded to TAF)	212	217	213	207	219	225	233	233	244	253	249	240	238	230	221	216	210
GW ELEVATIONS (Rounded to TAF)	213	215	226	216	210	228	239	246	241	254	258	250	240	231	217	214	210
AVERAGE STORAGE (TAF)	**212**	**216**	**219**	**211**	**214**	**227**	**236**	**239**	**243**	**254**	**253**	**245**	**239**	**230**	**219**	**215**	**210**
AVAILABLE STORAGE (TAF)	**84**	**88**	**91**	**83**	**86**	**99**	**108**	**111**	**115**	**126**	**125**	**117**	**111**	**102**	**91**	**87**	**82**

Artificial Components Natural Components

*Water Year Type (CDEC Sacramento Valley)
W = Wet; AN = Above Normal;
BN = Below Normal; D = Dry; C = Critical

TABLE D-3
HISTORICAL GROUNDWATER STORAGE
HYDROLOGIC INVENTORY (HI) METHOD
1974-2025 WATER YEARS (in Acre-Feet, except where indicated)

	WATER YEAR (Oct - Sep)														
COMPONENTS	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
INDICES															
Rainfall at Livermore (in)	11.3	11.6	21.3	11.8	21.3	20.0	15.1	25.3	13.1	14.1	11.0	11.2	17.0	13.1	19.3
8 Station Rain Index (N. CA)(in)	32.2	36.0	65.3	31.8	85.4	61.3	68.8	82.4	54.8	56.7	33.0	46.3	59.7	47.3	57.4
Evap at Lake Del Valle (in)	64.7	68.2	64.2	65.5	58.3	71.6	69.5	57.2	61.0	68.3	68.5	73.2	69.9	72.1	63.6
Arroyo Valle Stream flow (AF)	9909	11692	52831	3424	67142	51058	54115	87819	15169	18949	8156	7848	19648	11410	26930
Water Year Type*	C	C	W	C	W	W	W	W	AN	AN	D	D	BN	D	W
SUPPLY	**12,715**	**10,610**	**28,529**	**16,095**	**29,095**	**22,556**	**24,184**	**27,853**	**20,780**	**23,211**	**15,691**	**24,052**	**29,840**	**19,778**	**31,021**
Injection Well Recharge	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**652**	**1,524**	**1,146**	**1**	**0**	**0**	**0**	**0**
Stream Recharge	**8,347**	**5,247**	**14,714**	**11,838**	**13,058**	**11,109**	**12,284**	**13,603**	**10,813**	**12,842**	**8,601**	**16,195**	**21,483**	**12,885**	**21,025**
Artificial Stream Recharge	3,261	914	5,621	7,883	4,672	2,968	5,314	2,343	5,174	8,019	3,428	10,588	11,409	8,084	11,143
Arroyo Valle	*82*	*412*	*1,182*	*798*	*179*	*144*	*1,827*	*413*	*1,181*	*890*	*1,476*	*1,831*	*1,547*	*1,670*	*2,277*
Arroyo Mocho	*3,178*	*502*	*4,439*	*7,085*	*4,493*	*2,824*	*3,487*	*1,930*	*3,993*	*7,129*	*1,930*	*8,755*	*9,862*	*6,414*	*8,698*
Arroyo las Positas	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*22*	*2*	*0*	*0*	*168*
Natural Stream Recharge	4,418	3,997	8,247	3,080	7,259	7,743	6,607	10,533	5,091	4,178	4,512	4,476	8,462	3,458	9,589
Arroyo Valle	*1,215*	*970*	*2,754*	*735*	*2,818*	*1,426*	*2,753*	*4,401*	*1,796*	*1,389*	*2,440*	*2,259*	*4,397*	*1,447*	*5,980*
Arroyo Mocho	*1,883*	*1,711*	*3,903*	*1,263*	*3,144*	*5,226*	*2,670*	*4,560*	*1,833*	*1,539*	*961*	*1,279*	*2,980*	*1,082*	*2,854*
Arroyo las Positas	*1,320*	*1,315*	*1,591*	*1,082*	*1,297*	*1,091*	*1,184*	*1,572*	*1,462*	*1,250*	*1,111*	*939*	*1,085*	*929*	*755*
Arroyo Valle Prior Rights	668	337	846	876	1,127	398	362	727	548	644	660	1,131	1,612	1,343	293
Rainfall Recharge	**1,838**	**1,760**	**10,761**	**1,242**	**13,243**	**8,176**	**8,634**	**10,692**	**5,540**	**5,924**	**3,644**	**4,239**	**4,899**	**3,192**	**6,378**
Pipe Leakage	**249**	**267**	**285**	**304**	**324**	**344**	**365**	**387**	**410**	**434**	**461**	**490**	**518**	**548**	**579**
Applied Water Recharge	**602**	**1,766**	**1,440**	**1,621**	**1,480**	**2,007**	**2,221**	**1,709**	**1,743**	**1,960**	**1,985**	**2,129**	**1,940**	**2,153**	**2,039**
Urban - Municipal	222	1,288	1,108	1,252	1,060	1,467	1,632	1,472	1,549	1,743	1,770	1,888	1,749	1,926	1,834
Urban - Groundwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Urban - Recycled Water	2	0	11	14	13	18	21	15	12	21	19	30	10	14	15
Agriculture - Municipal (SBA)	242	279	177	192	257	347	401	104	57	64	59	67	66	64	63
Agriculture/Golf - Groundwater	109	133	96	100	92	100	109	68	60	67	67	73	68	73	70
Agricultural - Groundwater	109	133	96	100	92	100	109	26	11	12	11	13	12	12	12
Golf Courses - Groundwater	0	0	0	0	0	0	0	42	49	55	56	60	56	61	58
Agriculture/Golf - Recycled	26	66	48	63	58	75	58	50	65	66	69	72	47	75	58
Agricultural - Recycled Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golf Courses - Recycled Water	26	66	48	63	58	75	58	50	65	66	69	72	47	75	58
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subsurface Basin Inflow	**1,680**	**1,570**	**1,330**	**1,090**	**990**	**920**	**680**	**810**	**750**	**906**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
DEMAND	**21,104**	**17,237**	**13,555**	**15,503**	**16,064**	**20,683**	**25,574**	**25,342**	**25,691**	**26,885**	**27,357**	**23,991**	**21,531**	**24,338**	**17,828**
Groundwater Pumpage	**17,737**	**13,686**	**9,345**	**6,717**	**4,744**	**6,536**	**9,090**	**10,337**	**11,913**	**15,750**	**18,034**	**19,427**	**17,216**	**19,728**	**14,774**
Municipal Pumpage	**17,003**	**12,997**	**8,733**	**6,138**	**4,339**	**6,025**	**8,539**	**9,902**	**11,460**	**15,166**	**17,474**	**18,955**	**16,781**	**19,265**	**14,348**
Zone 7 (excluding DSRSD)	8,119	5,136	2,215	213	368	2,388	1,565	1,682	4,912	6,140	9,864	11,047	7,734	11,175	6,213
Zone 7 for DSRSD	0	0	0	0	0	0	0	0	0	0	0	0	645	645	645
City of Pleasanton	4,164	3,368	3,252	2,578	1,262	1,333	3,208	3,935	2,563	4,558	3,112	3,579	3,674	3,688	3,604
Cal. Water Service	3,966	3,744	2,570	2,626	2,053	1,551	2,947	3,595	3,271	3,567	3,707	3,458	3,979	2,911	3,166
Camp Parks	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
SFWD	408	410	414	396	370	411	477	460	380	532	472	448	423	481	436
Fairgrounds	346	336	282	325	285	343	342	230	333	369	318	423	327	365	284
Domestic	**100**	**113**	**113**	**116**	**116**	**117**	**117**	**113**	**116**	**109**	**109**	**134**	**134**	**167**	**131**
Agricultural and Golf Pumpage	**634**	**577**	**499**	**463**	**289**	**394**	**435**	**323**	**337**	**475**	**450**	**337**	**301**	**295**	**295**
Agriculture	382	355	213	218	150	212	266	73	81	231	227	119	93	92	88
SFWD	20	9	0	0	0	0	0	0	0	0	0	0	0	0	0
Concannon	11	0	0	0	0	0	0	0	0	140	143	25	0	2	0
Calculated	351	346	213	218	150	212	266	73	81	91	84	94	93	91	88
Golf Courses	252	222	286	245	139	182	169	249	256	245	223	218	208	203	207
3S/1E 1P3	*101*	*36*	*138*	*36*	*41*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Castlewood	*151*	*186*	*131*	*186*	*82*	*159*	*146*	*236*	*235*	*223*	*193*	*193*	*193*	*173*	*191*
Tri-Valley Golf	*0*	*0*	*17*	*23*	*16*	*23*	*23*	*13*	*21*	*22*	*30*	*25*	*15*	*30*	*16*
Mining Use	**3,367**	**3,551**	**4,210**	**8,786**	**11,120**	**13,381**	**15,724**	**14,255**	**13,416**	**11,010**	**9,324**	**4,564**	**4,314**	**4,610**	**3,055**
Stream Export	639	712	2,219	6,070	9,071	10,577	12,661	12,617	10,082	7,827	5,461	143	0	163	150
Discharges to Cope Lake	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Evaporation	2,028	2,139	1,291	2,016	1,349	2,104	2,363	938	2,634	2,483	3,163	3,951	3,764	3,762	2,205
Production	700	700	700	700	700	700	700	700	700	700	700	470	550	686	700
Subsurface Basin Overflow	**0**	**0**	**0**	**0**	**200**	**766**	**760**	**750**	**362**	**125**	**0**	**0**	**0**	**0**	**0**
NET RECHARGE (AF)	**-8,389**	**-6,628**	**14,974**	**592**	**13,031**	**1,873**	**-1,390**	**2,511**	**-4,911**	**-3,674**	**-11,666**	**62**	**8,309**	**-4,560**	**13,193**
INVENTORY STORAGE (AF)	**201,787**	**195,159**	**210,133**	**210,725**	**223,756**	**225,629**	**224,239**	**226,750**	**221,839**	**218,165**	**206,499**	**206,561**	**214,870**	**210,310**	**223,503**

STORAGE CALCULATION	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
INVENTORY (Rounded to TAF)	202	195	210	211	224	226	224	227	222	218	206	207	215	210	224
GW ELEVATIONS (Rounded to TAF)	195	184	211	216	226	224	223	226	223	222	204	212	221	214	237
AVERAGE STORAGE (TAF)	**198**	**190**	**211**	**213**	**225**	**225**	**223**	**226**	**222**	**220**	**205**	**210**	**218**	**212**	**230**
AVAILABLE STORAGE (TAF)	**70**	**62**	**83**	**85**	**97**	**97**	**95**	**98**	**94**	**92**	**77**	**82**	**90**	**84**	**102**

Artificial Components Natural Components

*Water Year Type (CDEC Sacramento Valley)
W = Wet; AN = Above Normal;
BN = Below Normal; D = Dry; C = Critical

TABLE D-3
HISTORICAL GROUNDWATER STORAGE
HYDROLOGIC INVENTORY (HI) METHOD
1974-2025 WATER YEARS (in Acre-Feet, except where indicated)

	WATER YEAR (Oct - Sep)														
COMPONENTS	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
INDICES															
Rainfall at Livermore (in)	17.5	9.7	10.7	11.4	14.8	16.2	8.8	10.7	6.8	13.1	15.4	25.6	12.4	17.1	10.5
8 Station Rain Index (N. CA)(in)	80.1	37.3	34.9	46.8	53.6	72.8	41.5	46.3	31.3	37.2	57.8	94.6	40.9	70.7	31.7
Evap at Lake Del Valle (in)	68.6	68.9	72.7	71.6	64.0	64.5	73.2	73.9	78.3	73.6	72.6	69.3	73.4	72.8	76.4
Arroyo Valle Stream flow (AF)	28325	2027	18059	11231	12914	28634	1557	7801	272	2217	19436	89173	2783	36944	2701
Water Year Type*	W	C	C	BN	AN	W	D	C	C	C	D	W	BN	W	D
SUPPLY	**23,960**	**14,998**	**16,258**	**18,659**	**25,382**	**27,315**	**18,442**	**20,158**	**10,452**	**18,753**	**29,018**	**38,181**	**17,943**	**23,096**	**14,021**
Injection Well Recharge	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Stream Recharge	**13,418**	**9,154**	**8,448**	**11,249**	**17,144**	**17,595**	**12,734**	**13,457**	**5,820**	**11,469**	**18,083**	**20,495**	**9,560**	**10,605**	**5,972**
Artificial Stream Recharge	4,583	4,811	2,229	3,984	6,773	4,555	8,778	7,887	3,826	3,766	8,910	9,615	6,773	2,943	2,461
Arroyo Valle	*1,216*	*2,879*	*2,229*	*2,104*	*2,459*	*768*	*3,613*	*1,916*	*924*	*3,718*	*3,983*	*3,271*	*3,778*	*2,168*	*2,045*
Arroyo Mocho	*3,205*	*1,932*	*0*	*1,880*	*4,314*	*3,671*	*5,059*	*5,961*	*2,844*	*0*	*4,927*	*6,344*	*2,995*	*775*	*416*
Arroyo las Positas	*162*	*0*	*0*	*0*	*0*	*116*	*106*	*10*	*58*	*48*	*0*	*0*	*0*	*0*	*0*
Natural Stream Recharge	6,905	3,536	5,913	6,018	10,371	11,272	3,355	4,200	1,987	6,822	8,289	10,433	1,938	6,439	2,595
Arroyo Valle	*3,043*	*1,941*	*4,030*	*3,958*	*6,909*	*8,540*	*1,676*	*2,790*	*891*	*4,567*	*4,749*	*6,053*	*740*	*3,419*	*793*
Arroyo Mocho	*3,104*	*858*	*1,077*	*970*	*2,547*	*2,293*	*1,225*	*838*	*587*	*1,748*	*2,794*	*3,775*	*590*	*2,393*	*1,072*
Arroyo las Positas	*758*	*737*	*806*	*1,090*	*915*	*439*	*454*	*572*	*509*	*507*	*746*	*605*	*608*	*627*	*730*
Arroyo Valle Prior Rights	1,930	807	306	1,247	0	1,768	601	1,370	7	881	884	447	849	1,223	916
Rainfall Recharge	**6,969**	**1,987**	**3,782**	**3,375**	**4,315**	**5,771**	**1,462**	**2,708**	**1,075**	**3,735**	**6,368**	**12,377**	**3,926**	**7,628**	**3,593**
Pipe Leakage	**610**	**642**	**675**	**708**	**742**	**776**	**811**	**847**	**884**	**921**	**958**	**996**	**1,034**	**1,146**	**1,209**
Applied Water Recharge	**1,962**	**2,214**	**2,353**	**2,327**	**2,181**	**2,172**	**2,435**	**2,147**	**1,674**	**1,629**	**2,609**	**3,313**	**2,423**	**2,717**	**2,247**
Urban - Municipal	1,747	1,983	2,124	2,064	1,894	1,849	2,061	1,750	1,229	1,143	1,523	2,156	1,393	1,778	1,250
Urban - Groundwater	0	0	0	0	0	0	0	0	0	0	61	82	67	80	62
Urban - Recycled Water	26	24	7	52	84	133	159	189	220	275	160	147	106	119	140
Agriculture - Municipal (SBA)	63	62	68	68	67	61	68	64	66	61	735	801	716	616	656
Agriculture/Golf - Groundwater	67	75	80	78	72	70	78	69	86	85	72	67	74	69	72
Agricultural - Groundwater	12	12	13	13	12	11	13	7	20	18	72	67	74	69	72
Golf Courses - Groundwater	56	63	68	65	60	59	65	62	66	67	0	0	0	0	0
Agriculture/Golf - Recycled	59	71	74	66	64	59	70	75	73	65	59	60	66	57	67
Agricultural - Recycled Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golf Courses - Recycled Water	59	71	74	66	64	59	70	75	73	65	59	60	66	57	67
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subsurface Basin Inflow	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
DEMAND	**15,169**	**18,636**	**19,269**	**23,656**	**21,091**	**20,421**	**28,880**	**25,700**	**22,604**	**12,717**	**13,457**	**14,182**	**17,456**	**19,703**	**22,055**
Groundwater Pumpage	**11,785**	**12,769**	**13,612**	**18,117**	**16,158**	**13,515**	**20,558**	**17,310**	**17,303**	**8,874**	**9,860**	**11,369**	**12,657**	**15,309**	**17,069**
Municipal Pumpage	**11,405**	**12,336**	**13,166**	**17,649**	**15,744**	**13,115**	**20,137**	**16,458**	**16,290**	**7,928**	**8,846**	**10,409**	**11,611**	**14,303**	**15,995**
Zone 7 (excluding DSRSD)	3,157	4,146	6,210	9,439	8,274	5,618	11,461	8,909	8,137	1,920	1,357	3,243	4,215	8,021	11,101
Zone 7 for DSRSD	645	645	645	645	645	646	644	646	645	645	645	645	645	645	645
City of Pleasanton	3,587	3,638	2,387	3,660	3,280	3,435	3,900	3,301	3,740	2,775	3,752	4,222	3,913	3,785	2,701
Cal. Water Service	3,106	2,971	3,143	3,123	2,844	2,673	3,333	2,770	3,085	2,012	2,575	1,878	2,389	1,296	904
Camp Parks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SFWD	467	494	492	446	417	442	482	482	398	309	286	214	253	286	322
Fairgrounds	441	443	289	335	284	301	318	350	286	268	231	208	196	270	321
Domestic	**93**	**96**	**109**	**123**	**112**	**107**	**90**	**105**	**115**	**112**	**110**	**107**	**115**	**116**	**108**
Agricultural and Golf Pumpage	**287**	**336**	**337**	**345**	**302**	**293**	**331**	**746**	**897**	**834**	**904**	**853**	**931**	**890**	**967**
Agriculture	88	87	96	95	94	85	95	486	640	590	684	655	691	674	720
SFWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concannon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calculated	88	87	96	95	94	85	95	486	640	590	684	655	691	674	720
Golf Courses	199	249	241	250	208	208	236	260	257	243	220	198	240	216	247
3S/1E 1P3	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Castlewood	*177*	*222*	*213*	*222*	*188*	*187*	*214*	*233*	*227*	*213*	*195*	*176*	*218*	*194*	*225*
Tri-Valley Golf	*22*	*27*	*28*	*28*	*20*	*21*	*22*	*27*	*30*	*30*	*25*	*22*	*22*	*22*	*22*
Mining Use	**3,385**	**4,947**	**4,452**	**5,346**	**4,934**	**6,906**	**8,322**	**8,391**	**5,302**	**3,843**	**3,597**	**2,813**	**4,236**	**3,585**	**4,840**
Stream Export	487	594	523	1,493	1,996	4,277	4,676	4,796	850	0	0	0	0	0	0
Discharges to Cope Lake	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*5,420*	*4,890*	*7,700*	*13,452*	*15,562*	*13,864*	*7,906*
Evaporation	2,198	3,653	3,230	3,153	2,238	1,929	2,946	2,895	3,752	3,143	2,897	2,113	3,536	2,885	4,140
Production	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Subsurface Basin Overflow	**0**	**921**	**1,205**	**194**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**564**	**809**	**146**
NET RECHARGE (AF)	**8,790**	**-3,639**	**-3,011**	**-4,997**	**4,290**	**6,893**	**-10,438**	**-5,542**	**-12,153**	**6,037**	**15,561**	**23,999**	**487**	**3,394**	**-8,034**
INVENTORY STORAGE (AF)	**232,293**	**228,654**	**225,643**	**220,646**	**224,936**	**231,829**	**221,391**	**215,849**	**203,696**	**209,733**	**225,294**	**249,293**	**249,780**	**253,174**	**245,140**

STORAGE CALCULATION	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
INVENTORY (Rounded to TAF)	232	229	226	221	225	232	221	216	204	210	225	249	250	253	245
GW ELEVATIONS (Rounded to TAF)	239	232	235	233	234	235	228	221	209	215	226	245	245	248	238
AVERAGE STORAGE (TAF)	**236**	**231**	**230**	**227**	**230**	**234**	**225**	**219**	**207**	**212**	**226**	**247**	**248**	**251**	**241**
AVAILABLE STORAGE (TAF)	**108**	**103**	**102**	**99**	**102**	**106**	**97**	**91**	**79**	**84**	**98**	**119**	**120**	**123**	**113**

Artificial Components Natural Components

*Water Year Type (CDEC Sacramento Valley)
W = Wet; AN = Above Normal;
BN = Below Normal; D = Dry; C = Critical

TABLE D-3
HISTORICAL GROUNDWATER STORAGE
HYDROLOGIC INVENTORY (HI) METHOD
1974-2025 WATER YEARS (in Acre-Feet, except where indicated)

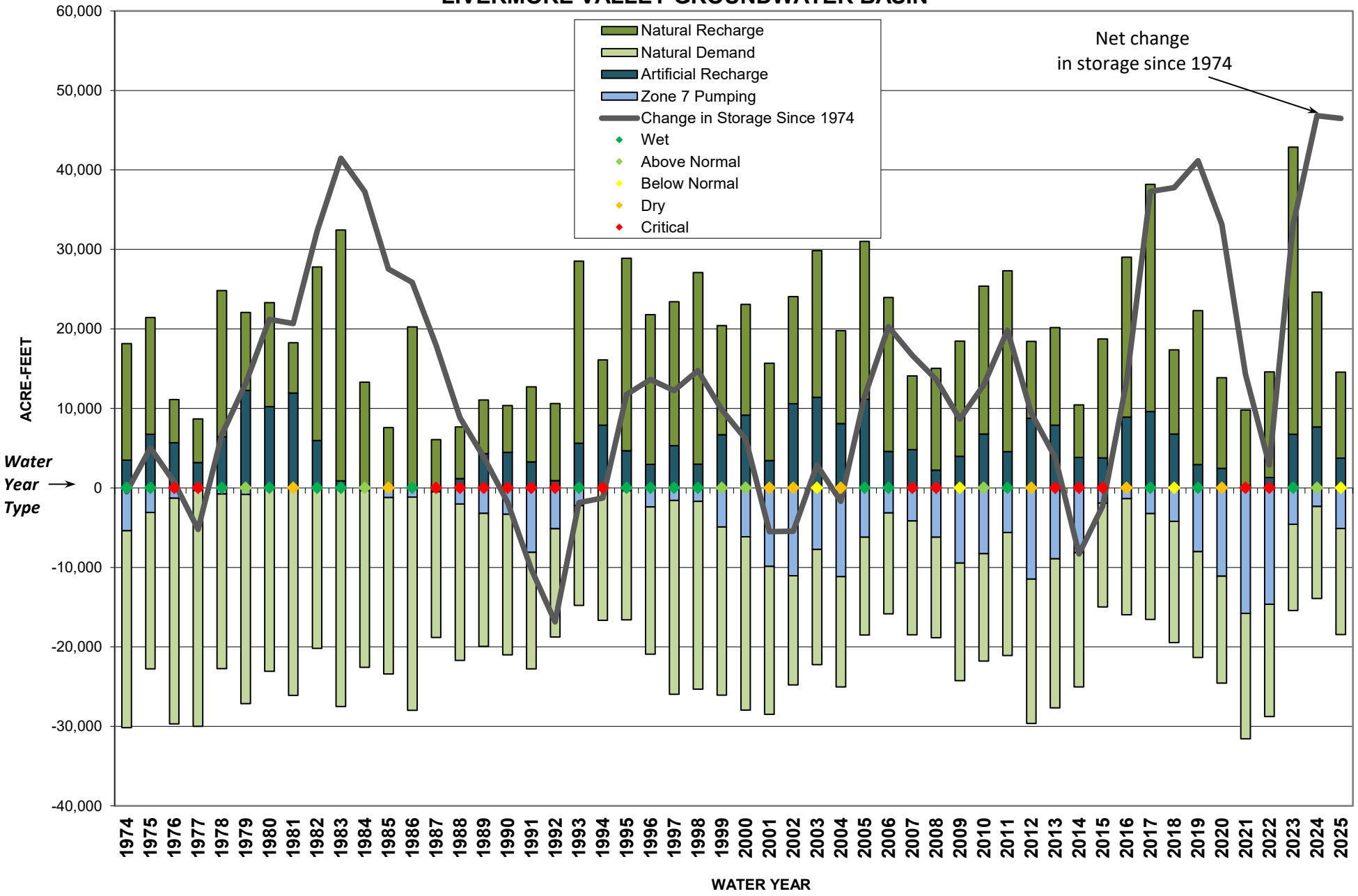
	WATER YEAR (Oct - Sep)					1974 - 2025		
COMPONENTS	2021	2022	2023	2024	2025	AVG	Sust Avg	TOTAL
INDICES								
Rainfall at Livermore (in)	5.1	11.0	24.4	14.7	11.3	14		
8 Station Rain Index (N. CA)(in)	24.0	43.0	66.6	48.2	56.6	52		
Evap at Lake Del Valle (in)	80.2	74.9	66.9	67.8	63.3	68		
Arroyo Valle Stream flow (AF)	2423	11866	106027	28182	10192	25,556		**1,328,926**
Water Year Type*	C	C	W	AN	BN			
SUPPLY	**9,803**	**14,599**	**42,872**	**24,643**	**16,209**	**20,320**	**19,800**	**1,056,645**
Injection Well Recharge	**0**	**0**	**0**	**0**	**0**	**64**	**0**	**3,322**
Stream Recharge	**2,703**	**6,172**	**24,898**	**13,530**	**7,552**	**11,835**	**11,900**	**615,407**
Artificial Stream Recharge	277	1,301	6,734	7,680	3,747	5,178	5,300	269,267
Arroyo Valle	*277*	*1,301*	*4,047*	*2,361*	*3,732*	*1,851*	*1,640*	*96,273*
Arroyo Mocho	*0*	*0*	*2,687*	*5,319*	*15*	*3,227*	*3,530*	*167,823*
Arroyo las Positas	*0*	*0*	*0*	*0*	*0*	*99*	*130*	*5,172*
Natural Stream Recharge	1,887	4,581	18,121	5,007	2,500	5,783	5,700	300,710
Arroyo Valle	*569*	*2,136*	*8,501*	*3,992*	*1,377*	*2,613*	*1,800*	*135,890*
Arroyo Mocho	*586*	*1,318*	*6,782*	*396*	*586*	*2,256*	*2,600*	*117,292*
Arroyo las Positas	*732*	*1,127*	*2,838*	*619*	*537*	*914*	*1,300*	*47,528*
Arroyo Valle Prior Rights	539	290	43	843	1,305	874	900	45,429
Rainfall Recharge	**2,818**	**3,884**	**12,623**	**5,998**	**3,845**	**4,759**	**4,300**	**247,471**
Pipe Leakage	**1,248**	**1,287**	**1,326**	**1,365**	**1,405**	**530**	**1,000**	**27,553**
Applied Water Recharge	**2,035**	**2,256**	**3,024**	**2,750**	**2,407**	**2,145**	**1,600**	**111,556**
Urban - Municipal	1,016	1,278	1,891	1,662	1,471	1,415	1,280	73,569
Urban - Groundwater	54	63	225	214	70	19	26	978
Urban - Recycled Water	148	128	107	120	73	54	0	2,829
Agriculture - Municipal (SBA)	670	669	675	616	610	247	92	12,820
Agriculture/Golf - Groundwater	79	75	91	86	136	141	158	7,321
Agricultural - Groundwater	79	75	91	86	136	120	12	6,253
Golf Courses - Groundwater	0	0	0	0	0	21	146	1,068
Agriculture/Golf - Recycled	68	42	36	52	47	59	44	3,066
Agricultural - Recycled Water	0	0	0	0	0	0	0	0
Golf Courses - Recycled Water	68	42	36	52	47	59	44	3,066
Others	0	0	0	0	0	211	0	10,973
Subsurface Basin Inflow	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**987**	**1,000**	**51,336**
DEMAND	**28,668**	**25,997**	**12,572**	**10,984**	**16,559**	**19,426**	**18,800**	**1,074,611**
Groundwater Pumpage	**23,597**	**21,500**	**9,971**	**7,134**	**10,594**	**12,895**	**14,100**	**670,546**
Municipal Pumpage	**22,430**	**20,392**	**8,885**	**6,021**	**9,285**	**11,549**	**13,275**	**600,572**
Zone 7 (excluding DSRSD)	15,795	14,641	4,578	2,347	5,110	4,614	5,300	239,950
Zone 7 for DSRSD	645	645	645	645	645	285	645	14,836
City of Pleasanton	3,802	2,587	270	0	0	3,078	3,500	160,045
Cal. Water Service	1,475	1,756	2,653	2,574	2,908	2,714	3,070	141,146
Camp Parks	0	0	0	0	0	170	0	8,819
SFWD	360	406	449	136	312	397	450	20,619
Fairgrounds	353	357	290	319	310	291	310	15,157
Domestic	**107**	**107**	**69**	**59**	**58**	**106**	**200**	**5,523**
Agricultural and Golf Pumpage	**1,059**	**1,001**	**1,017**	**1,054**	**1,251**	**1,239**	**625**	**64,452**
Agriculture	791	752	813	836	1,016	1,036	400	53,887
SFWD	0	0	0	0	0	116	0	6,015
Concannon	0	0	0	0	0	20	0	1,047
Calculated	791	752	813	836	1,016	900	400	46,825
Golf Courses	269	249	204	218	235	203	225	10,565
3S/1E 1P3	*0*	*0*	*0*	*0*	*0*	*8*	*0*	*397*
Castlewood	*242*	*219*	*179*	*196*	*213*	*181*	*205*	*9,399*
Tri-Valley Golf	*27*	*30*	*25*	*22*	*22*	*15*	*20*	*768*
Mining Use	**5,072**	**4,497**	**2,600**	**3,837**	**4,331**	**6,148**	**4,600**	**319,674**
Stream Export	0	0	0	0	0	3,023	700	157,219
Discharges to Cope Lake	*548*	*0*	*2,258*	*6,112*	*4,214*	*1,575*	*NA*	*81,925*
Evaporation	4,372	3,797	1,900	3,137	3,631	2,432	3,200	126,449
Production	700	700	700	700	700	692	700	36,006
Subsurface Basin Overflow	**0**	**0**	**0**	**13**	**1,634**	**383**	**100**	**19,939**
NET RECHARGE (AF)	**-18,865**	**-11,398**	**30,300**	**13,659**	**-350**	**894**	**1,000**	**46,485**
INVENTORY STORAGE (AF)	**226,275**	**214,877**	**245,177**	**258,836**	**258,486**	**225,382**	**13,400**	

STORAGE CALCULATION	2021	2022	2023	2024	2025
INVENTORY (Rounded to TAF)	226	215	245	259	258
GW ELEVATIONS (Rounded to TAF)	217	210	232	250	248
AVERAGE STORAGE (TAF)	**221**	**212**	**239**	**254**	**253**
AVAILABLE STORAGE (TAF)	**93**	**84**	**111**	**126**	**125**

Artificial Components Natural Components

*Water Year Type (CDEC Sacramento Valley)
W = Wet; AN = Above Normal;
BN = Below Normal; D = Dry; C = Critical

FIGURE D-1
CUMULATIVE CHANGE IN STORAGE WITH NATURAL AND ARTIFICIAL RECHARGE AND DEMAND
1974 - 2025 WATER YEARS
LIVERMORE VALLEY GROUNDWATER BASIN



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3/11/2026

Appendix E

Groundwater Quality

Supplemental Information

TABLE E-1
GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
2S1E32E001	Static-Monitor	N/A	1/14/25	ZONE7	19.1	1235	6.9	129	30	106	1.1	560	26	137	9.78	30	< 100	3.1	< 100	< 1	778	446	-	-	-
2S1E32N001	Static-Monitor	N/A	1/14/25	ZONE7	19	66	6.9	8	2	2.6	0.6	35	3	1	0.23	3.9	< 100	< 1	< 100	< 1	39	28	-	-	-
2S1E32Q001	Static-Monitor	N/A	1/15/25	ZONE7	12.6	2233	6.7	202	81	216	2.1	670	139	422	10.97	25.7	620	2	< 200	7.6	1467	838	-	-	-
2S1E33L001	Static-Monitor	N/A	1/14/25	ZONE7	12.1	1569	7.1	114	38	181	2.9	541	45	217	9.6	25.7	540	5.5	< 200	< 2	933	441	-	-	-
2S1E33P002	Static-Monitor	N/A	1/14/25	ZONE7	11.7	2042	6.9	166	74	226	2.5	829	64	319	2.39	20.3	790	< 2	< 200	6	1291	720	-	-	-
2S1E33R001	Static-Monitor	N/A	1/16/25	ZONE7	17.1	709	7.2	65	14	72	1.2	263	32	84	2.16	21	< 100	2.5	< 100	10	428	220	-	-	-
2S1W15F001	Static-Monitor	N/A	9/16/25	ZONE7	25.5	91	6.2	9	1	5.3	1.4	33	1	8	< 0.1	3.7	< 5000	< 1	4307	< 1	46	27	-	-	-
2S1W26C002	Static-Monitor	N/A	1/15/25	ZONE7	11.3	975	6.9	136	24	44	1	344	73	126	5.62	23.5	110	2.6	< 100	< 1	622	439	-	-	-
2S1W36E003	Static-Monitor	N/A	1/15/25	ZONE7	17.5	866	7	114	22	53	0.5	374	86	68	3.55	27.8	< 100	4	< 100	< 1	571	376	-	-	-
2S1W36F001	Static-Nested	N/A	1/13/25	ZONE7	17.5	664	7.5	52	20	77	0.9	390	17	32	< 0.1	16.5	240	18	< 100	< 1	408	212	-	-	-
2S2E21L001	Supply-Domestic	N/A	4/24/25	ZONE7	17.6	1424	7.8	62	39	190	1.1	373	36	218	24.5	36	500	5.6	< 10	3.3	876	316	-	-	-
2S2E27M002	Supply-Domestic	N/A	4/23/25	ZONE7	18.5	2098	7.9	52	62	320	0.4	500	149	366	13.4	36	2600	6.2	< 10	5.4	1294	385	-	-	-
2S2E27P002	Static-Monitor	N/A	1/9/25	ZONE7	17.6	4495	7.6	85	48	908	1.9	204	< 1	1432	< 0.1	25.7	30900	< 5	742	< 5	2602	410	-	-	-
2S2E28D002	Static-Monitor	N/A	1/8/25	ZONE7	18.7	371	4.3	24	6	10	16.7	< 0	30	8	25.5	13.3	100	2.6	< 100	< 1	221	85	-	-	-
2S2E28J002	Supply-Industrial	N/A	1/8/25	ZONE7	14	953	8.2	4	4	221	0.5	401	63	84	< 0.1	18.2	1510	< 1	< 100	< 1	597	26	-	-	-
2S2E28Q001	Static-Monitor	N/A	1/8/25	ZONE7	18.5	1023	7.5	32	29	152	1.6	304	83	127	4.29	27.8	650	10	< 100	< 1	622	199	-	-	-
2S2E32K002	Static-Monitor	N/A	1/9/25	ZONE7	18.2	1158	7.8	38	31	129	1.6	310	56	120	2.38	34.2	460	5.8	< 100	11	574	223	-	-	-
2S2E34E001	Static-Monitor	N/A	8/6/25	ZONE7	22.7	645	7.5	13	5	140	1.8	278	9	65	< 0.1	21	520	< 1	260	4.7	392	53	-	-	-
2S2E34Q002	Static-Monitor	N/A	1/8/25	ZONE7	20.4	1675	7.5	65	59	201	1	259	139	384	1.01	27.8	3300	3.9	< 100	< 1	1009	405	-	-	-
3S1E01F002	Static-Monitor	N/A	1/21/25	ZONE7	18.6	1496	7	107	39	111	0.5	522	27	159	4.29	40.7	200	4.5	< 100	1.5	760	428	32	14	19
3S1E01H003	Static-Monitor	N/A	4/25/25	LWRP	-	1900	-	78	46	279	1.6	-	70	313	18	31	1360.	-	-	-	1110	-	-	-	-
3S1E01H003	Static-Monitor	N/A	9/25/25	LWRP	-	1742	-	66	43	263	1.2	-	62	-	-	30.056	1190.	-	-	-	998	-	-	-	-
3S1E01L001	Static-Monitor	N/A	3/6/25	ZONE7	18.9	1081	7.4	49	24	160	2.3	433	38	117	5.25	28	1900	3.9	< 10	6.6	656	221	11	4.9	12
3S1E01P002	Static-Monitor	N/A	1/23/25	ZONE7	13.9	1439	7.4	74	49	183	1.9	469	85	227	< 0.1	20.3	2330	4.4	< 100	< 1	872	387	27	< 2	12
3S1E01P002	Static-Monitor	N/A	4/25/25	LWRP	-	1500	-	84	59	174	4.9	-	80	278	0.4	25	2450.	-	-	-	870	-	-	-	-
3S1E01P002	Static-Monitor	N/A	9/25/25	LWRP	-	1502	-	90	64	186	5.4	-	76	-	-	25.018	3400.	-	-	-	884	-	-	-	-
3S1E01P003	Supply-Unspecified	N/A	3/10/25	ZONE7	19.5	411	8.4	18	13	33	2.1	51	1	98	< 0.1	0.3	89	< 1	18	< 0.9	191	99	7.6	4.2	4.5
3S1E02J002	Static-Monitor	N/A	1/22/25	ZONE7	16.7	4923	7	356	173	701	2	643	350	1370	2.7	27.8	6700	6	< 500	5.1	3308	1603	38	< 2	41
3S1E02J003	Static-Monitor	N/A	1/22/25	ZONE7	21.6	1265	7.4	53	40	172	4	423	25	214	1.77	21.4	470	3.8	< 100	< 1	746	297	< 2	< 2	2.6
3S1E02K002	Static-Monitor	N/A	1/21/25	ZONE7	19.6	1267	7.6	23	22	220	3.2	446	48	145	7.98	22	1670	11	< 100	20	738	148	880	29	360
3S1E02M003	Static-Monitor	N/A	12/19/24	ZONE7	16	1452	7.4	72	35	217	6.5	595	51	249	5.49	21.4	1380	6.4	< 200	3.9	970	324	-	-	-
3S1E02N006	Static-Monitor	N/A	3/3/25	ZONE7	12.5	1546	6.6	82	54	200	1.3	516	87	256	0.2	21	3300	3.6	< 10	2.5	958	427	31	2.9	13
3S1E02P003	Supply-Domestic	N/A	1/29/25	ZONE7	15.1	863	7.8	39	36	67	1.8	307	46	70	4.12	21.4	440	2.4	< 100	1.8	452	245	-	-	-
3S1E02Q001	Static-Monitor	N/A	1/22/25	ZONE7	16.6	1062	7.3	49	24	126	15	400	6	149	< 0.1	21.2	930	4.2	579	< 2	587	221	< 2	< 2	< 2
3S1E02R001	Static-Monitor	N/A	1/22/25	ZONE7	19.4	1862	7.1	101	72	200	1.5	596	118	276	6.49	23.5	2090	5.1	< 100	< 1	1114	548	47	17	12
3S1E02R001	Static-Monitor	N/A	4/25/25	LWRP	-	1770	-	91	70	189	1.8	-	90	286	4.1	28	2500.	-	-	-	1030	-	-	-	-

- = Not Analyzed

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TABLE E-1
GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S1E02R001	Static-Monitor	N/A	9/25/25	LWRP	-	1679	-	88	69	202	1.5	-	78	-	-	25.758	3650.	-	-	-	980	-	-	-	-
3S1E03G002	Static-Monitor	N/A	12/18/24	ZONE7	15.8	1781	7.5	56	32	272	1.6	665	33	229	< 0.1	18.8	1520	4.4	179	< 1	971	272	-	-	-
3S1E04A001	Static-Monitor	N/A	1/21/25	ZONE7	17.5	1599	7.3	123	31	175	1.4	460	32	305	4.49	23.5	320	2.2	< 100	2	937	435	9.5	8.1	3.7
3S1E04J005	Static-Monitor	N/A	1/21/25	ZONE7	15.4	2406	7.8	23	32	530	0.3	843	172	310	0.87	18	4090	5	< 100	< 1	1505	189	35	< 2	15
3S1E04J006	Static-Monitor	N/A	1/21/25	ZONE7	16.5	2327	7.3	120	53	260	0.5	502	119	387	0.49	27	100	< 1	< 100	< 1	1216	518	6	< 2	5
3S1E04Q002	Static-Monitor	N/A	1/21/25	ZONE7	16.5	1517	7.3	76	43	188	1.6	388	85	300	0.4	20.3	1450	3.9	< 100	< 1	907	367	< 2	< 2	< 2
3S1E05K006	Static-Monitor	N/A	12/18/24	ZONE7	19	2023	7.3	130	58	255	1.4	646	206	224	9.77	20.1	1350	1.9	< 100	< 1	1257	564	-	-	-
3S1E05K007	Static-Monitor	N/A	12/18/24	ZONE7	15.8	1211	10.8	84	3	121	3.8	< 0	89	245	4.86	0.9	580	< 1	< 100	3	573	222	-	-	-
3S1E05L003	Static-Monitor	N/A	12/18/24	ZONE7	14.9	980	7.7	50	27	121	0.9	328	107	63	< 0.1	21.2	580	3.2	< 100	< 1	552	236	-	-	-
3S1E05P006	Static-Monitor	N/A	2/20/25	ZONE7	16.4	3230	7.1	230	150	460	1.1	639	963	471	9.12	30	1700	2.7	< 10	< 0.9	2660	1192	4.6	< 2	4.2
3S1E06F003	Static-Monitor	N/A	4/21/25	ZONE7	18.1	4203	7.1	290	120	510	2.2	577	688	898	< 0.1	23.1	2900	3.8	< 10	2	2816	1218	< 2	< 2	< 2
3S1E06M002	Static-Monitor	N/A	11/19/24	DSRSD	18.7	8524	7.17	-	-	-	-	-	3100	388	< 2	-	-	-	-	-	6980	-	-	-	-
3S1E06M002	Static-Monitor	N/A	4/15/25	DSRSD	17.6	8669	7.07	-	-	-	-	-	3250	384	< 2	-	-	-	-	-	7140	-	-	-	-
3S1E06N002	Static-Monitor	N/A	11/19/24	DSRSD	17.7	22680	6.86	-	-	-	-	-	1580	8290	< 2	-	-	-	-	-	16800	-	-	-	-
3S1E06N002	Static-Monitor	N/A	4/15/25	DSRSD	19.8	23650	6.85	-	-	-	-	-	1490	8510	< 2	-	-	-	-	-	19600	-	-	-	-
3S1E06N003	Static-Monitor	N/A	11/19/24	DSRSD	19	11170	7.29	-	-	-	-	-	191	3890	< 2	-	-	-	-	-	7620	-	-	-	-
3S1E06N003	Static-Monitor	N/A	4/15/25	DSRSD	19.3	11270	7.25	-	-	-	-	-	176	3800	< 2	-	-	-	-	-	7280	-	-	-	-
3S1E06N004	Static-Monitor	N/A	11/19/24	DSRSD	19.1	2535	7.46	-	-	-	-	-	676	139	1.6	-	-	-	-	-	1780	-	-	-	-
3S1E06N004	Static-Monitor	N/A	4/15/25	DSRSD	17.5	2607	7.38	-	-	-	-	-	604	145	1.6	-	-	-	-	-	1860	-	-	-	-
3S1E06N005	Static-Monitor	N/A	11/18/24	DSRSD	16.9	20460	7.57	-	-	-	-	-	7060	4740	< 2	-	-	-	-	-	18200	-	-	-	-
3S1E06N005	Static-Monitor	N/A	4/14/25	DSRSD	28.4	24420	7.39	-	-	-	-	-	6680	6690	< 2	-	-	-	-	-	17500	-	-	-	-
3S1E06N006	Static-Monitor	N/A	11/18/24	DSRSD	17.6	25460	6.94	-	-	-	-	-	1700	9370	< 2	-	-	-	-	-	17700	-	-	-	-
3S1E06N006	Static-Monitor	N/A	4/14/25	DSRSD	23.9	24260	6.9	-	-	-	-	-	1400	8970	< 2	-	-	-	-	-	20300	-	-	-	-
3S1E07B002	Static-Monitor	N/A	9/16/25	ZONE7	26.4	668	9.1	28	4	87.2	14	65	94	110	1.86	16.1	< 5000	8.1	4.6	1.51	394	87	-	-	-
3S1E07B012	Static-Monitor	N/A	12/19/24	ZONE7	16.3	11130	7	424	333	1620	2.6	307	1622	3560	< 0.1	19.5	1650	< 10	< 1000	< 10	7733	2432	-	-	-
3S1E07D001	Static-Monitor	N/A	11/18/24	DSRSD	18.8	3010	7.38	-	-	-	-	-	106	752	< 2	-	-	-	-	-	1820	-	-	-	-
3S1E07D001	Static-Monitor	N/A	4/15/25	DSRSD	21.1	3059	7.22	-	-	-	-	-	109	804	< 2	-	-	-	-	-	2320	-	-	-	-
3S1E07D002	Static-Monitor	N/A	11/18/24	DSRSD	18.9	25750	7.02	-	-	-	-	-	12100	4700	< 2	-	-	-	-	-	25000	-	-	-	-
3S1E07D002	Static-Monitor	N/A	4/15/25	DSRSD	21.9	25090	6.85	-	-	-	-	-	10900	4480	< 2	-	-	-	-	-	24600	-	-	-	-
3S1E07D003	Static-Monitor	N/A	11/18/24	DSRSD	18	20830	7.1	-	-	-	-	-	642	7610	< 2	-	-	-	-	-	13400	-	-	-	-
3S1E07D003	Static-Monitor	N/A	4/14/25	DSRSD	23.6	20580	7	-	-	-	-	-	436	7760	< 2	-	-	-	-	-	14900	-	-	-	-
3S1E07D004	Static-Monitor	N/A	11/18/24	DSRSD	18	39760	7.05	-	-	-	-	-	9880	12700	< 2	-	-	-	-	-	35400	-	-	-	-
3S1E07D004	Static-Monitor	N/A	4/14/25	DSRSD	24.6	39100	6.83	-	-	-	-	-	9400	11800	< 2	-	-	-	-	-	32500	-	-	-	-
3S1E07G007	Static-Monitor	N/A	12/18/24	ZONE7	15.7	18380	7.1	402	559	3360	3.7	469	3108	5529	< 0.1	18.8	4950	< 20	< 2000	< 20	13212	3308	-	-	-
3S1E07J005	Static-Monitor	N/A	1/20/25	ZONE7	18.7	2092	7.3	86	67	330	1.5	693	214	201	0.8	25.7	6200	3.1	< 100	< 1	1270	491	2.9	< 2	4.3
3S1E08B001	Static-Monitor	N/A	3/10/25	ZONE7	17.7	1810	7.6	95	72	240	1.4	382	279	263	< 0.1	24	2500	2.1	190	< 0.9	1164	533	< 2	< 2	< 2

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GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S1E08G004	Static-Monitor	N/A	1/21/25	ZONE7	17.4	2265	7.2	99	80	332	1.7	646	431	254	0.71	25.7	3330	2.1	< 100	3.3	1545	576	5.8	11	4.4
3S1E08H009	Static-Nested	N/A	1/28/25	ZONE7	17.4	957	7.4	50	45	65	1.7	366	60	88	4.69	23.5	630	1.7	< 100	6.5	534	310	4.1	< 2	5.1
3S1E08H010	Static-Nested	N/A	1/28/25	ZONE7	14.8	1182	7.2	50	42	123	2	402	85	113	3.74	25.7	1000	1.5	< 100	5.7	655	298	19	2.4	16
3S1E08H011	Static-Nested	N/A	1/27/25	ZONE7	16.6	1117	7.2	69	49	94	2.5	388	74	121	3.3	25.7	810	< 1	< 100	3.4	641	374	48	5.6	37
3S1E08H013	Static-Monitor	N/A	1/27/25	ZONE7	16.9	1023	7.2	65	44	64	2.2	359	62	105	3.42	23.5	530	< 1	< 100	4.4	558	343	40	3.9	27
3S1E08H018	**Supply-Municipal**	**Mocho 4**	**11/7/24**	**ZONE7**	**18.6**	**900**	**7.5**	**61**	**41**	**85**	**2.4**	**354**	**-**	**-**	**-**	**25.7**	**730**	**1.2**	**< 100**	**5.5**	**-**	**321**	**24**	**2.6**	**19**
3S1E08H018	**Supply-Municipal**	**Mocho 4**	**1/22/25**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**27**	**3.3**	**23**
3S1E08H018	**Supply-Municipal**	**Mocho 4**	**2/20/25**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**36**	**3.9**	**28**
3S1E08H018	**Supply-Municipal**	**Mocho 4**	**4/14/25**	**ZONE7**	**20.2**	**913**	**7.5**	**63**	**40**	**87**	**2.5**	**340**	**69**	**97**	**2.72**	**30**	**790**	**1.4**	**< 10**	**6.7**	**568**	**322**	**24**	**3.1**	**20**
3S1E08K001	Static-Monitor	N/A	4/21/25	ZONE7	24.4	1775	7.2	140	110	110	2.9	675	215	200	< 0.1	30	1700	1	< 10	8.9	1141	803	< 2	< 2	2.5
3S1E08K002	Static-Monitor	N/A	4/21/25	ZONE7	25.7	1423	7.4	120	75	110	3.5	626	96	152	0.45	24	520	1.9	< 10	2.4	891	609	< 2	< 2	3.5
3S1E08K003	Static-Monitor	N/A	4/21/25	ZONE7	27.7	917	7.5	46	29	98	2.3	345	75	66	0.18	20	300	3.2	< 10	2.2	508	234	< 2	< 2	< 2
3S1E09B001	**Supply-Municipal**	**Stoneridge**	**10/14/24**	**ZONE7**	**19.9**	**846**	**7.6**	**57**	**49**	**55**	**2**	**324**	**51**	**86**	**3.65**	**25.7**	**500**	**1.4**	**< 100**	**6.5**	**502**	**344**	**19**	**2.5**	**17**
3S1E09B001	**Supply-Municipal**	**Stoneridge**	**1/7/25**	**ZONE7**	**18.7**	**858**	**7.4**	**61**	**51**	**59**	**2.1**	**347**	**56**	**89**	**3.85**	**25.7**	**520**	**1.5**	**< 100**	**6**	**532**	**362**	**27**	**3.1**	**20**
3S1E09B001	**Supply-Municipal**	**Stoneridge**	**4/15/25**	**ZONE7**	**18.5**	**848**	**7.6**	**65**	**45**	**58**	**2.1**	**329**	**52**	**96**	**3.34**	**28**	**520**	**1.5**	**< 10**	**8.3**	**523**	**348**	**22**	**3**	**20**
3S1E09H010	Static-Nested	N/A	1/28/25	ZONE7	15.7	865	7.5	42	46	60	1.4	294	52	112	0.2	16.1	520	1.1	< 100	< 1	475	294	51	2.8	43
3S1E09H011	Static-Nested	N/A	1/28/25	ZONE7	17	1021	7.5	43	50	70	1.6	355	34	112	1.36	23.5	680	4.2	297	< 2	515	313	130	< 2	93
3S1E09J007	Static-Nested	N/A	1/30/25	ZONE7	15	766	7.4	52	34	63	2	264	11	107	< 0.1	16.1	510	4.5	< 200	< 2	415	270	26	< 2	< 2
3S1E09J008	Static-Nested	N/A	1/30/25	ZONE7	15.4	850	7.5	61	33	48	1.7	283	43	105	< 0.1	16.1	490	< 1	< 100	< 1	447	288	39	5.4	22
3S1E09J009	Static-Nested	N/A	1/30/25	ZONE7	15.6	839	7.5	45	48	24	1.6	305	42	61	3.13	23.5	190	< 1	< 100	5.5	410	310	11	< 2	8.3
3S1E09M003	**Supply-Municipal**	**Mocho 2**	**10/8/24**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**38**	**5.3**	**31**
3S1E09M003	**Supply-Municipal**	**Mocho 2**	**1/23/25**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**39**	**5.4**	**32**
3S1E09M003	**Supply-Municipal**	**Mocho 2**	**2/20/25**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**41**	**5.3**	**31**
3S1E09M004	**Supply-Municipal**	**Mocho 3**	**10/8/24**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**38**	**4.4**	**28**
3S1E09M004	**Supply-Municipal**	**Mocho 3**	**12/4/24**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**40**	**4.2**	**30**
3S1E09M004	**Supply-Municipal**	**Mocho 3**	**2/20/25**	**ZONE7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**47**	**4.8**	**37**
3S1E09M004	**Supply-Municipal**	**Mocho 3**	**4/15/25**	**ZONE7**	**18.1**	**998**	**7.4**	**61**	**44**	**100**	**2.2**	**353**	**78**	**125**	**2.83**	**28**	**1100**	**1.2**	**< 10**	**7**	**625**	**334**	**54**	**5.2**	**42**
3S1E09P005	Static-Monitor	N/A	1/22/25	ZONE7	11.1	724	7	58	31	56	1.9	244	58	108	0.16	16.7	460	< 1	< 100	< 1	450	273			
3S1E09P005	Static-Monitor	N/A	4/21/25	ZONE7	21.4	726	7.2	61	25	47	4.8	266	40	81	0.25	16	410	1.2	310	< 0.9	407	254	16	39	9.2
3S1E09P010	Static-Nested	N/A	1/23/25	ZONE7	13.3	788	7.1	52	33	65	1.8	234	53	108	< 0.1	19	460	< 1	< 100	< 1	447	266	30	5.5	18
3S1E09P010	Static-Nested	N/A	4/22/25	ZONE7	20.9	798	7.2	53	35	64	1.9	246	54	108	< 0.1	22	570	< 1	19	1.5	459	276	32	5	18
3S1E09P011	Static-Nested	N/A	1/23/25	ZONE7	16.1	798	7.1	67	35	48	1.6	286	51	105	0.11	19	380	< 1	< 100	1.4	468	311	37	5.2	20
3S1E09P011	Static-Nested	N/A	4/22/25	ZONE7	18.2	811	7.2	70	36	47	1.6	274	53	106	0.13	21	460	< 1	< 10	2.6	470	323	36	5.6	20
3S1E10A002	Static-Monitor	N/A	4/29/25	ZONE7	25.9	2009	7.3	82	81	220	2.1	523	126	304	11.8	33	2700	1.4	< 10	5.4	1158	539	230	< 2	80
3S1E10B008	Static-Nested	N/A	1/29/25	ZONE7	17.2	1450	7.6	64	74	110	2	490	70	150	8.61	27.8	1220	1.7	< 100	6.4	778	465	150	13	69
3S1E10B009	Static-Nested	N/A	1/29/25	ZONE7	18.4	1082	7.5	59	61	70	2	371	57	125	5.82	23.5	640	1.7	< 100	7.3	607	398	6	< 2	6.5

- = Not Analyzed

Highlighted = Representative Monitoring Site

Municipal Wells are Bold

TABLE E-1
GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S1E10B010	Static-Nested	N/A	1/29/25	ZONE7	16.1	815	7.5	41	44	35	1.5	305	41	62	3.61	21.4	280	1	< 100	7.4	412	283	< 2	< 2	< 2
3S1E10B011	Static-Nested	N/A	1/29/25	ZONE7	15.8	593	7.5	36	32	36	1.7	247	34	43	3.66	23.5	220	2.3	< 100	5.5	344	222	11	< 2	7.4
3S1E10B014	Static-Monitor	N/A	1/15/25	ZONE7	18.8	670	7.4	46	43	32	1.5	293	41	66	3.62	20.8	270	1.2	< 100	7.9	411	292	-	-	-
3S1E10B016	**Supply-Municipal**	**COL 5**	**2/18/25**	**ZONE7**	**17.9**	**639**	**7.4**	**59**	**38**	**35**	**1.8**	**303**	**40**	**56**	**-**	**28**	**320**	**1.2**	**300**	**16**	**-**	**304**	**13**	**< 2**	**9.7**
3S1E10B016	**Supply-Municipal**	**COL 5**	**8/18/25**	**ZONE7**	**19.2**	**659**	**7.6**	**46**	**44**	**34**	**1.7**	**280**	**39**	**53**	**3.49**	**28**	**320**	**< 1**	**< 10**	**12**	**399**	**298**	**9.5**	**< 2**	**7.4**
3S1E10D002	Static-Nested	N/A	4/28/25	ZONE7	17.9	1063	7.7	32	33	160	0.94	414	46	121	< 0.1	23.1	1400	11	43	< 0.9	621	216	< 2	< 2	< 2
3S1E10D003	Static-Nested	N/A	4/29/25	ZONE7	16.5	853	7.5	58	51	65	2	325	52	99	6.29	26.1	620	1.7	< 10	9.6	541	355	46	< 2	14
3S1E10D004	Static-Nested	N/A	4/28/25	ZONE7	19.3	641	7.6	32	23	84	1.2	236	42	62	1.45	26.1	590	3.6	< 10	7.7	393	175	3.7	< 2	< 2
3S1E10D005	Static-Nested	N/A	4/28/25	ZONE7	18.1	582	7.5	35	24	55	1.8	263	35	37	0.99	26.1	280	2.7	< 10	5	348	186	< 2	< 2	< 2
3S1E10D007	Static-Nested	N/A	1/30/25	ZONE7	14.9	1622	7.4	59	73	140	1.9	561	80	169	9.23	23.5	1830	1.8	< 100	11	864	448	1200	45	540
3S1E10D008	Static-Nested	N/A	1/30/25	ZONE7	14.8	1303	7.4	68	79	88	2	526	70	142	9.68	23.5	1050	1.2	< 100	6.8	775	495	440	26	230
3S1E10K002	Static-Monitor	N/A	3/10/25	ZONE7	16.4	831	7.3	64	48	47	1.9	323	44	96	2.05	22.9	440	< 1	75	1.9	492	358	74	9.4	62
3S1E10K003	**Supply-Municipal**	**COL 1**	**2/20/25**	**ZONE7**	**17**	**896**	**7.3**	**86**	**53**	**44**	**2**	**369**	**54**	**113**	**4.91**	**25**	**420**	**< 1**	**430**	**16**	**581**	**434**	**46**	**6.3**	**43**
3S1E10K003	**Supply-Municipal**	**COL 1**	**7/23/25**	**ZONE7**	**17.3**	**948**	**7.8**	**67**	**59**	**42**	**1.9**	**343**	**53**	**108**	**4.8**	**24**	**410**	**< 1**	**550**	**8.4**	**546**	**410**	**-**	**-**	**-**
3S1E10N002	Static-Nested	N/A	1/28/25	ZONE7	19.3	932	7.6	42	49	58	2	312	44	114	< 0.1	10.7	460	< 1	< 100	< 1	473	307	40	2.9	34
3S1E10N003	Static-Nested	N/A	1/28/25	ZONE7	18.9	892	7.5	36	57	59	2.4	349	41	104	1.55	13.3	460	< 1	< 100	< 1	492	325	71	5.9	58
3S1E11C003	Static-Monitor	N/A	2/20/25	ZONE7	17.2	1645	7.2	88	69	220	2.2	580	104	258	6.38	53.9	3000	3.6	4.9	7	1109	504	210	11	76
3S1E11G001	Static-Nested	N/A	8/6/25	ZONE7	19	1208	7.2	68	85	81	2.8	474	69	120	10.8	37	1000	1.6	< 10	7.2	746	520	120	14	55
3S1E11G002	Static-Nested	N/A	8/6/25	ZONE7	21.2	1016	7.5	63	60	74	2.1	373	55	121	6.26	27	760	1.2	< 10	9.8	615	404			
3S1E11M002	Static-Monitor	N/A	1/15/25	ZONE7	20	753	7.3	42	44	52	1.6	309	46	79	2.32	16.7	500	< 1	< 100	3.6	444	286	-	-	-
3S1E11M003	**Supply-Municipal**	**COL 2**	**2/18/25**	**ZONE7**	**16.3**	**808**	**7.3**	**76**	**49**	**40**	**1.8**	**348**	**50**	**91**	**-**	**26.1**	**470**	**< 1**	**150**	**11**	**-**	**390**	**19**	**4.2**	**13**
3S1E11M003	**Supply-Municipal**	**COL 2**	**8/18/25**	**ZONE7**	**18.6**	**759**	**7.5**	**65**	**44**	**34**	**1.7**	**290**	**45**	**72**	**4.18**	**26**	**370**	**< 1**	**< 10**	**8.7**	**449**	**345**	**19**	**3.1**	**16**
3S1E11P006	Supply-Domestic	N/A	2/20/25	ZONE7	18.2	714	7.6	65	32	38	1.6	256	48	85	0.92	20	360	< 1	< 10	3.8	420	294	12	3.3	15
3S1E12A002	Static-Monitor	N/A	3/6/25	ZONE7	16.7	1138	7.1	64	91	60	2.8	448	71	118	11.3	33	3900	4	< 10	7.7	712	535	170	29	89
3S1E12A002	Static-Monitor	N/A	4/25/25	LWRP	-	1090	-	63	91	59	3	-	60	128	11.5	39	170.	-	-	-	620	-	-	-	-
3S1E12A002	Static-Monitor	N/A	9/25/25	LWRP	-	1245	-	63	94	61	2.7	-	66	-	-	32.56	700.	-	-	-	728	-	-	-	-
3S1E12D002	Static-Monitor	N/A	3/6/25	ZONE7	15.4	1486	7.1	80	84	150	2.1	645	77	127	12.4	37	2300	3.9	< 10	37	931	546	110	7.6	53
3S1E12D002	Static-Monitor	N/A	4/25/25	LWRP	-	1620	-	36	38	69	1	-	67	161	13.1	35	2600.	-	-	-	970	-	-	-	-
3S1E12D002	Static-Monitor	N/A	9/25/25	LWRP	-	1658	-	89	99	172	4.3	-	70	-	-	43.306	3000.	-	-	-	1032	-	-	-	-
3S1E12G001	Static-Monitor	N/A	3/10/25	ZONE7	14.7	1107	7.1	56	75	63	2.5	405	58	101	8.29	34.9	500	1.5	42	7.7	627	449	55	20	11
3S1E12G001	Static-Monitor	N/A	4/25/25	LWRP	-	1090	-	52	72	60	2.1	-	50	123	8.1	29	580.	-	-	-	610	-	-	-	-
3S1E12G001	Static-Monitor	N/A	9/25/25	LWRP	-	1072	-	54	75	63	2.3	-	53	-	-	31.196	820.	-	-	-	620	-	-	-	-
3S1E12H004	Static-Nested	N/A	2/19/25	ZONE7	17.6	727	7.2	49	58	32	1.7	345	45	68	4.26	28	310	< 1	< 10	9.2	471	361	6.1	3.2	4.7
3S1E12H005	Static-Nested	N/A	2/19/25	ZONE7	18.4	664	7.3	44	48	29	1.8	317	41	47	2.66	30	260	< 1	< 10	22	409	308	3.8	< 2	2.1
3S1E12H006	Static-Nested	N/A	2/19/25	ZONE7	17.8	614	7.5	39	43	33	1.7	304	38	36	2.33	31	260	2.7	< 10	18	382	274	< 2	< 2	< 2
3S1E12H007	Static-Nested	N/A	2/19/25	ZONE7	17.7	484	7.6	15	12	77	1.1	227	22	33	1.53	24	340	18	< 10	3.9	304	86	< 2	< 2	< 2

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2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S1E12K002	Static-Nested	N/A	5/1/25	ZONE7	15.8	668	7.4	34	41	29	1.3	222	39	59	1.88	26.1	250	< 1	< 10	3.4	348	254	8.4	4.5	2.2
3S1E12K003	Static-Nested	N/A	5/1/25	ZONE7	20.9	678	7.6	34	42	28	1.3	233	36	60	0.77	24	250	< 1	< 10	0.98	344	258	5.6	4.5	2.2
3S1E12K004	Static-Nested	N/A	5/1/25	ZONE7	22.3	332	7.7	15	15	28	1.2	143	8	23	< 0.1	15	130	< 1	< 10	< 0.9	176	99	4.3	< 2	< 2
3S1E13P005	Static-Nested	N/A	7/7/25	ZONE7	20.5	699	7.6	50	28	58	1.7	205	56	96	0.03	16	400	< 1	27	< 0.9	407	240	3.9	2.4	2.3
3S1E13P006	Static-Nested	N/A	7/7/25	ZONE7	18.2	647	7.6	69	26	31	1.6	242	52	59	< 0.1	22	340	< 1	< 10	2.7	380	279	< 2	< 2	< 2
3S1E14B001	Supply-Industrial	N/A	2/20/25	ZONE7	20.7	717	7.5	79	30	40	1.9	291	48	84	2.3	22	370	< 1	< 10	3.4	459	321	4.1	< 2	4.6
3S1E14D002	Static-Monitor	N/A	3/10/25	ZONE7	19.4	782	7.5	63	33	57	1.8	270	50	99	< 0.1	16.1	530	< 1	200	< 0.9	454	293	4	< 2	18
3S1E15M003	Static-Monitor	N/A	1/21/25	ZONE7	20.4	817	7.1	67	33	54	1.4	272	44	88	4.29	25.7	200	< 1	< 100	< 1	466	303	9.1	5.1	6.7
3S1E16A002	**Supply-Municipal**	**Pleas 8**	**11/21/24**	**UNKN**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**30**	**3.2**	**25**
3S1E16A004	Static-Monitor	N/A	3/4/25	ZONE7	15.9	776	7.3	92	38	38	1.9	328	51	87	1.84	24	300	< 1	93	3.4	502	386	25	4.8	22
3S1E16C002	Static-Nested	N/A	1/21/25	ZONE7	15.4	807	7.2	80	35	60	1.7	296	58	108	0.97	20.3	590	< 1	< 100	2.4	513	344	40	4.6	30
3S1E16C003	Static-Nested	N/A	1/21/25	ZONE7	15.5	808	7.4	68	28	63	2.1	291	55	104	0.35	23.5	530	1.6	< 100	4.8	489	285			
3S1E16C004	Static-Nested	N/A	1/21/25	ZONE7	17.7	885	7.3	93	36	55	2	340	61	108	1.81	23.5	540	< 1	< 100	3.2	555	380			
3S1E16E004	Static-Monitor	N/A	1/23/25	ZONE7	6.8	1028	7	75	36	58	2.3	332	58	105	1.55	19.5	460	< 1	< 100	2.5	524	335	14	4	16
3S1E16L007	**Supply-Municipal**	**Pleas 6**	**11/21/24**	**UNKN**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**22**	**3.6**	**17**
3S1E16P005	Static-Monitor	N/A	1/20/25	ZONE7	16.1	434	7.2	33	18	31	2.1	177	34	30	< 0.1	7.5	170	< 1	< 100	< 1	243	156	2.9	< 2	< 2
3S1E16P005	Static-Monitor	N/A	8/6/25	ZONE7	26.2	472	7.2	35	21	34	2.2	172	30	49	< 0.1	8.5	230	< 1	< 10	< 0.9	265	173	4.1	3.3	< 2
3S1E17B004	Supply-Unspecified	N/A	1/20/25	ZONE7	16	1272	7.1	124	64	81	2.5	546	75	128	4.07	21.4	750	< 1	< 100	4.1	783	574	11	4.8	17
3S1E17D003	Static-Nested	N/A	1/22/25	ZONE7	15.5	736	8.4	5	62	58	2.1	251	62	108	< 0.1	1.1	320	< 1	< 100	< 1	437	267	2.1	< 2	5.5
3S1E17D004	Static-Nested	N/A	1/22/25	ZONE7	16.9	1170	8.5	12	4	231	0.8	307	21	221	< 0.1	15.6	2180	6.8	< 100	< 1	668	46	< 2	< 2	< 2
3S1E17D005	Static-Nested	N/A	1/22/25	ZONE7	19.9	1216	8.6	14	7	230	0.7	270	< 1	237	< 0.1	5.1	2000	20	153	< 1	647	63	17	4.9	16
3S1E17D006	Static-Nested	N/A	1/22/25	ZONE7	17.8	1277	8.7	7	4	260	0.9	233	< 1	293	< 0.1	13.1	1300	3.3	< 100	< 1	710	33	< 2	< 2	< 2
3S1E17D007	Static-Nested	N/A	1/23/25	ZONE7	17.7	1345	8.6	9	5	250	1.5	139	< 1	330	< 0.1	2.1	1540	20	< 100	< 1	671	44	< 2	< 2	< 2
3S1E17D011	Static-Monitor	N/A	1/14/25	ZONE7	17.7	1225	8.1	17	4	244	0.7	277	< 1	269	< 0.1	17.5	1950	13	< 100	< 1	691	58	-	-	-
3S1E17D012	**Supply-Municipal**	**Hopyard 9**	**10/9/24**	**ZONE7**	**17.5**	**921**	**7.5**	**80**	**44**	**65**	**2**	**363**	**58**	**99**	**3.83**	**23.5**	**570**	**1.1**	**< 100**	**6.2**	**568**	**381**			
3S1E17D012	**Supply-Municipal**	**Hopyard 9**	**1/9/25**	**ZONE7**	**17.4**	**892**	**7.5**	**75**	**47**	**57**	**1.9**	**365**	**51**	**88**	**3.76**	**21.4**	**520**	**1.1**	**< 100**	**6.2**	**538**	**381**			
3S1E17D012	**Supply-Municipal**	**Hopyard 9**	**8/18/25**	**ZONE7**	**18.3**	**901**	**7.6**	**36**	**71**	**57**	**2**	**353**	**53**	**88**	**3.7**	**24**	**570**	**1.2**	**< 10**	**6.8**	**522**	**383**			
3S1E18A006	**Supply-Municipal**	**Hopyard 6**	**10/14/24**	**ZONE7**	**17.9**	**1050**	**7.4**	**83**	**54**	**74**	**1.8**	**419**	**91**	**92**	**2.97**	**23.5**	**600**	**1.4**	**< 100**	**4.9**	**639**	**429**			
3S1E18A006	**Supply-Municipal**	**Hopyard 6**	**1/9/25**	**ZONE7**	**17**	**1065**	**7.4**	**88**	**56**	**76**	**1.9**	**425**	**94**	**102**	**3.02**	**23.5**	**600**	**1.4**	**< 100**	**4.6**	**664**	**451**	**< 2**	**< 2**	**< 2**
3S1E18A006	**Supply-Municipal**	**Hopyard 6**	**8/18/25**	**ZONE7**	**18.3**	**1073**	**7.4**	**62**	**72**	**74**	**1.9**	**423**	**94**	**100**	**3.04**	**26**	**630**	**1.5**	**< 10**	**5.3**	**652**	**452**	**< 2**	**< 2**	**< 2**
3S1E18E004	Static-Monitor	N/A	1/20/25	ZONE7	15.9	691	7.7	60	20	84	0.9	289	52	63	0.14	19.5	500	< 1	< 100	< 1	443	232	< 2	< 2	< 2
3S1E18J002	Static-Monitor	N/A	2/20/25	ZONE7	16.7	83	6.5	9	2	2.2	5.2	54	< 1	1	< 0.1	2.3	130	< 1	400	< 0.9	48	32	25	29	< 2
3S1E19A010	**Supply-Municipal**	**SFWD South (B)**	**6/11/25**	**UNKN**	-	**1350**	-	**130**	**64.3**	**57.7**	-	-	**98.6**	**124**	**2.09**	-	-	**< 2**	**< 100**	**< 10**	**799**	**644**	-	-	-
3S1E19A010	**Supply-Municipal**	**SFWD South (B)**	**9/11/25**	**ZONE7**	-	**1279**	**7.3**	**137**	**65**	**63.5**	**2.3**	**490**	**105**	**147**	**2.77**	**19.6**	**500**	**< 1**	**8.8**	**3.1**	**794**	**611**	**2.5**	**< 2**	**3.6**
3S1E19A011	**Supply-Municipal**	**SFWD North (A)**	**6/11/25**	**UNKN**	-	**1260**	-	**119**	**62.8**	**51.5**	-	-	**86.5**	**112**	**2.5**	-	-	**< 2**	**< 100**	**< 10**	**733**	**551**	-	-	-
3S1E19C004	Static-Monitor	**N/A**	**1/20/25**	**ZONE7**	**15.9**	**800**	**7.8**	**35**	**45**	**48**	**2.3**	**254**	**62**	**92**	**< 0.1**	**5.1**	**270**	**< 1**	**< 100**	**< 1**	**416**	**272**	**4.3**	**< 2**	**4.2**

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								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S1E19K001	Static-Monitor	N/A	1/20/25	ZONE7	15.9	1554	7.1	131	88	102	3.3	475	458	98	0.47	9.2	460	2.5	< 100	< 1	1126	689	< 2	< 2	2.3
3S1E20B002	Supply-Unspecified	N/A	10/7/24	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	2.5	11
3S1E20B002	Supply-Unspecified	N/A	11/4/24	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.1**	**< 2**	**9.2**
3S1E20B002	Supply-Unspecified	N/A	12/2/24	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.6**	**1.8**	**10**
3S1E20B002	Supply-Unspecified	N/A	12/9/24	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4.3**	**2**	**10**
3S1E20B002	Supply-Unspecified	N/A	1/6/25	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	1.8	9.6
3S1E20B002	Supply-Unspecified	N/A	2/3/25	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	< 1.8	6.3
3S1E20B002	Supply-Unspecified	N/A	3/3/25	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	2.5	14
3S1E20B002	Supply-Unspecified	N/A	5/5/25	FGL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2.1	12
3S1E20B002	Supply-Unspecified	N/A	6/2/25	UNKN	-	-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	-	-	-	7.4	< 4	12
3S1E20B002	Supply-Unspecified	N/A	7/1/25	UNKN	-	870	-	-	-	52	-	-	52	81	-	-	330	< 2	< 100	< 10	500	-	7.4	< 4	13
3S1E20B002	Supply-Unspecified	N/A	8/12/25	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3.7	11
3S1E20B002	Supply-Unspecified	N/A	9/18/25	BABCOCK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3	2	11
3S1E20C007	Static-Monitor	N/A	1/20/25	ZONE7	17.8	580	7.1	46	26	42	1.7	227	44	48	0.84	15.6	240	< 1	< 100	1.8	339	222	7.4	3.6	< 2
3S1E20C007	Static-Monitor	N/A	4/28/25	ZONE7	17.6	622	7.2	50	27	41	1.9	255	45	50	1.72	18	290	< 1	< 10	2.1	366	236	6.8	3.5	< 2
3S1E20C008	Static-Nested	N/A	4/28/25	ZONE7	16.3	823	7.3	79	43	39	1.9	363	45	74	4.75	23.1	240	< 1	< 10	3.4	505	374	< 2	< 2	< 2
3S1E20J004	Static-Monitor	N/A	1/20/25	ZONE7	17.3	1020	6.8	59	39	129	1	404	65	112	5.1	30	500	< 1	< 100	1	657	308	10	4.5	8.3
3S1E20M011	Static-Monitor	N/A	1/20/25	ZONE7	18	740	7.1	57	29	42	1.6	306	54	57	1.64	15.6	250	< 1	< 100	1.3	414	261	8.3	6.4	5.7
3S1E20Q002	Static-Monitor	N/A	1/20/25	ZONE7	18.5	1340	7	65	68	103	1.1	607	33	150	< 0.1	15	470	< 1	12800	< 1	734	442	< 2	< 2	< 2
3S1E22D002	Static-Monitor	N/A	1/6/25	ZONE7	12.3	886	6.7	41	39	108	0.7	288	60	109	7.46	40.7	< 100	< 1	< 100	< 1	573	263	-	-	-
3S1E23J001	Supply-Domestic	N/A	3/10/25	ZONE7	17.2	873	6.9	50	41	65	1.1	163	50	180	5.48	34	98	< 1	19	0.92	526	294	-	-	-
3S1E25C003	Static-Monitor	N/A	1/6/25	ZONE7	15.1	765	7.1	53	31	72	1.3	251	35	115	4.32	23.5	310	< 1	< 100	< 1	474	260	-	-	-
3S1E28M002	Supply-Unspecified	N/A	4/21/25	ZONE7	20.3	1308	7.5	72	50	160	0.5	516	57	161	8.41	27	600	1.1	< 10	1.8	819	386	-	-	-
3S1E29M004	Static-Monitor	N/A	12/16/24	ZONE7	11.7	1117	7	104	56	98	2.9	574	2	135	< 0.1	25.7	1050	9.2	4470	< 1	706	491	-	-	-
3S1E29P002	Static-Monitor	N/A	12/17/24	ZONE7	14.5	1036	7.3	64	61	93	1.7	546	10	92	< 0.1	20.5	800	3.3	522	< 2	611	411	-	-	-
3S1E33G005	Static-Monitor	N/A	12/17/24	ZONE7	16.7	1384	6.4	102	58	117	0.3	295	77	302	0.16	25.7	190	< 1	< 100	< 1	828	494	-	-	-
3S1W01B009	Static-Nested	N/A	12/19/24	ZONE7	18.1	848	7.3	43	20	120	1.6	346	31	97	< 0.1	21	350	4.1	135	< 1	505	189	-	-	-
3S1W01J001	Static-Monitor	N/A	11/18/24	DSRSD	19.3	2827	7.35	-	-	-	-	-	523	246	< 2	-	-	-	-	-	1880	-	-	-	-
3S1W01J001	Static-Monitor	N/A	4/15/25	DSRSD	21.1	2881	7.2	-	-	-	-	-	524	248	< 2	-	-	-	-	-	1940	-	-	-	-
3S1W01J002	Static-Monitor	N/A	11/18/24	DSRSD	18.9	3545	7.51	-	-	-	-	-	701	391	1.2	-	-	-	-	-	2290	-	-	-	-
3S1W01J002	Static-Monitor	N/A	4/15/25	DSRSD	21.2	2818	7.31	-	-	-	-	-	697	119	16	-	-	-	-	-	2010	-	-	-	-
3S1W02A002	Static-Monitor	N/A	12/16/24	ZONE7	10	1522	6.8	222	45	111	0.7	596	86	239	1.2	23.5	290	1.5	< 100	1.1	1026	739	-	-	-
3S1W12A009	Static-Monitor	N/A	11/18/24	DSRSD	19.3	7539	7.21	-	-	-	-	-	174	2500	< 2	-	-	-	-	-	4470	-	-	-	-
3S1W12A009	Static-Monitor	N/A	4/14/25	DSRSD	23.2	7574	7.1	-	-	-	-	-	163	2530	< 2	-	-	-	-	-	5380	-	-	-	-
3S1W12A010	Static-Monitor	N/A	11/18/24	DSRSD	18.7	2464	7.4	-	-	-	-	-	510	171	1.3	-	-	-	-	-	1610	-	-	-	-
3S1W12A010	Static-Monitor	N/A	4/14/25	DSRSD	25.6	2784	7.33	-	-	-	-	-	686	155	< 2	-	-	-	-	-	1860	-	-	-	-

- = Not Analyzed

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Municipal Wells are Bold

TABLE E-1
GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S1W12B002	Static-Monitor	N/A	12/16/24	ZONE7	13.6	824	6.9	95	32	68	0.7	299	142	61	1.51	30	130	< 1	< 100	< 1	583	369	-	-	-
3S1W12J001	Static-Monitor	N/A	1/13/25	ZONE7	23.2	1158	7.4	79	26	156	0.8	391	157	121	< 0.1	19.7	510	2.6	< 100	< 1	753	304	47	14	5.2
3S1W13J001	Static-Monitor	N/A	12/16/24	ZONE7	11.5	868	6.6	105	42	52	0.6	315	119	88	3	27.8	140	< 1	< 100	< 1	603	435	-	-	-
3S2E01F002	Static-Monitor	N/A	1/8/25	ZONE7	15.8	2367	7.3	105	48	329	2	290	147	585	4.53	40.7	6630	3	< 200	3.2	1420	460	-	-	-
3S2E02B002	Static-Monitor	N/A	1/13/25	ZONE7	17.1	1761	7.2	122	40	187	2.1	328	55	414	< 0.1	25.7	1730	1	137	< 1	1008	470	-	-	-
3S2E03A001	Static-Monitor	N/A	1/8/25	ZONE7	18	1159	7.6	56	32	118	1	297	72	156	6.01	32.1	1280	3.1	< 100	16	641	272	-	-	-
3S2E03K003	Static-Monitor	N/A	1/13/25	ZONE7	18	126	6.9	14	3	6.9	1.1	49	7	6	1.81	6	< 100	< 1	< 100	< 1	76	47	-	-	-
3S2E05N001	Supply-Unspecified	N/A	1/7/25	ZONE7	15.7	844	7.3	56	62	41	2.6	321	50	79	8.84	25.7	390	< 1	2200	1.8	514	395	-	-	-
3S2E07C002	Static-Monitor	N/A	3/4/25	ZONE7	18.9	1103	7.1	60	96	64	3.6	451	127	127	11.8	38.9	400	1.2	< 10	10	791	545	87	27	45
3S2E07C002	Static-Monitor	N/A	4/25/25	LWRP	-	1250	-	57	93	62	3.3	-	66	142	12.1	35	510.	-	-	-	710	-	-	-	-
3S2E07C002	Static-Monitor	N/A	9/25/25	LWRP	-	1249	-	61	100	65	3.5	-	67	-	-	35.956	740.	-	-	-	726	-	-	-	-
3S2E07H002	Static-Monitor	N/A	3/4/25	ZONE7	19.2	1108	7.2	53	71	110	2.8	424	92	92	11.3	32.1	690	< 1	< 10	< 0.9	712	424	20	13	5.4
3S2E07N002	Static-Monitor	N/A	3/3/25	ZONE7	16.7	521	7.4	28	33	29	1.4	199	34	47	1.87	25	230	< 1	< 10	3.1	304	206	6.5	5.1	< 2
3S2E07P003	**Supply-Municipal**	**CWS 24**	**5/13/25**	**BSK**	**-**	**440**	**-**	**18**	**14**	**55**	**< 2**	**-**	**16**	**36**	**3.3**	**-**	**-**	**< 2**	**< 30**	**< 10**	**270**	**100**	**< 2**	**< 2**	**< 2**
3S2E07R003	**Supply-Municipal**	**CWS 31**	**10/23/24**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4.3**	**2**	**5**
3S2E07R003	**Supply-Municipal**	**CWS 31**	**1/30/25**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4.5**	**< 2**	**4.7**
3S2E07R003	**Supply-Municipal**	**CWS 31**	**4/17/25**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4.9**	**2**	**4.8**
3S2E07R003	**Supply-Municipal**	**CWS 31**	**7/2/25**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4.8**	**2.5**	**5.5**
3S2E08F001	**Supply-Municipal**	**CWS 10**	**10/9/24**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**6.9**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**14**	**5.8**	**9.8**
3S2E08F001	**Supply-Municipal**	**CWS 10**	**11/13/24**	**UNKN**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**6.4**	**-**	**-**	**< 2**	**< 30**	**< 10**	**-**	**-**	**-**	**-**	**-**
3S2E08F001	**Supply-Municipal**	**CWS 10**	**11/20/24**	**UNKN**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**6.5**	**-**	**-**	**< 2**	**< 30**	**< 10**	**-**	**-**	**-**	**-**	**-**
3S2E08G001	**Supply-Municipal**	**CWS 19**	**5/14/25**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**10**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**23**	**9**	**14**
3S2E08H002	Static-Monitor	N/A	3/6/25	ZONE7	17.6	1154	7	41	92	83	1	408	88	127	11.7	38.9	360	< 1	33	4.4	724	481	130	29	16
3S2E08H003	Static-Nested	N/A	4/22/25	ZONE7	24.4	1206	7.2	84	90	63	1.8	418	75	145	11.1	32.1	450	< 1	< 10	7.5	7460	581	22	9	20
3S2E08H004	Static-Nested	N/A	4/22/25	ZONE7	26.4	1092	7.6	45	48	110	2.2	346	39	160	3.98	25.9	650	3	< 10	7.6	619	310	< 2	2.4	3.2
3S2E08K002	Static-Monitor	N/A	4/22/25	ZONE7	27	1062	7.3	56	81	51	2.1	363	75	124	9.78	31	410	< 1	< 10	5.6	642	474	20	21	7.4
3S2E08Q009	Static-Monitor	N/A	3/4/25	ZONE7	17.4	785	7.3	46	64	41	2.5	346	53	84	< 0.1	25	380	< 1	73	< 0.9	487	379	16	13	8.9
3S2E09Q001	**Supply-Municipal**	**CWS 9**	**10/8/24**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5.6**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**14**	**4.1**	**12**
3S2E09Q001	**Supply-Municipal**	**CWS 9**	**4/10/25**	**BSK**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15**	**4.5**	**11**
3S2E09Q004	Static-Monitor	N/A	1/6/25	ZONE7	19.8	1138	7.2	45	89	83	1.3	386	93	160	8.66	34.2	870	< 1	< 100	3.4	734	479	-	-	-
3S2E10F003	Static-Monitor	N/A	1/7/25	ZONE7	19	1542	7	83	107	112	1.2	558	100	227	9.14	30	1130	1.3	< 100	3.1	976	648	-	-	-
3S2E10Q001	Static-Monitor	N/A	1/7/25	ZONE7	17.6	1546	7	76	115	120	1.4	509	102	205	13.6	32.1	1470	< 1	< 100	1.6	963	664	-	-	-
3S2E10Q002	Static-Monitor	N/A	3/19/25	ZONE7	-	680	7.8	39	37	49	2.1	227	46	80	5.57	28.9	820	1.1	< 10	9.7	420	249	-	-	-
3S2E11C001	Static-Monitor	N/A	1/8/25	ZONE7	16	1166	7.4	98	41	96	2.5	494	44	122	6.3	27.8	400	< 1	< 100	6.8	703	414	-	-	-
3S2E12C004	Static-Monitor	N/A	3/19/25	ZONE7	-	1330	7.6	74	31	180	2.2	334	98	222	2.3	42.8	3100	1.6	< 10	12	826	313	-	-	-
3S2E12J003	Static-Monitor	N/A	3/19/25	ZONE7	-	698	7.9	42	17	74	3.3	86	64	145	0.44	28	390	1.9	< 10	< 0.9	418	175	-	-	-

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GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S2E14A003	Static-Monitor	N/A	1/9/25	ZONE7	14.4	1024	7.3	100	43	69	2.5	477	33	86	9.29	25.7	440	< 1	< 100	4.6	636	427	-	-	-
3S2E14B001	Supply-Domestic	N/A	1/8/25	ZONE7	17.2	1130	7.3	76	43	76	2	329	47	121	9.88	25.7	600	< 1	< 100	9.5	599	367	-	-	-
3S2E15E002	Supply-Irrigation	N/A	1/7/25	ZONE7	13.6	468	7.5	18	13	59	3.3	85	29	79	0.7	12.6	110	1.4	< 100	< 1	259	99	-	-	-
3S2E15R017	Static-Nested	N/A	1/7/25	ZONE7	19.6	917	7.4	43	81	42	1.9	331	65	89	10	25.7	540	1.2	< 100	7.2	556	441	-	-	-
3S2E15R018	Static-Nested	N/A	1/7/25	ZONE7	19.2	630	7.6	48	42	32	1.5	317	43	44	1.01	25.7	200	1.1	< 100	< 1	398	293	-	-	-
3S2E16A003	Supply-Irrigation	N/A	1/7/25	ZONE7	13.9	1077	7.4	51	96	52	1.5	369	89	123	9.71	27.8	430	< 1	< 100	1.7	666	522	-	-	-
3S2E16E004	Static-Monitor	N/A	1/7/25	ZONE7	17.9	604	7.1	27	42	46	2	244	47	60	1.58	17.5	280	< 1	< 100	1	369	240	-	-	-
3S2E18B001	**Supply-Municipal**	**CWS 20**	**11/7/24**	**UNKN**	-	-	-	**29**	**28**	**49**	**1.6**	-	-	-	-	-	**128**	-	**< 20**	-	-	-	-	-	-
3S2E18B001	**Supply-Municipal**	**CWS 20**	**1/30/25**	**BSK**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2.4**	**2.6**	**2.8**
3S2E18B001	**Supply-Municipal**	**CWS 20**	**2/11/25**	**UNKN**	-	-	-	**29**	**29**	**50**	**1.6**	-	-	-	-	-	**124**	-	**< 20**	-	-	-	-	-	-
3S2E18B001	**Supply-Municipal**	**CWS 20**	**4/29/25**	**BSK**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.1**	**3.2**	**3**
3S2E18B001	**Supply-Municipal**	**CWS 20**	**5/6/25**	**UNKN**	-	-	-	**30**	**30**	**50**	**1.6**	-	-	-	-	-	**121**	-	**< 20**	-	-	-	-	-	-
3S2E18B001	**Supply-Municipal**	**CWS 20**	**7/2/25**	**BSK**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3.5**	**3.6**	**3.4**
3S2E18B001	**Supply-Municipal**	**CWS 20**	**8/21/25**	**UNKN**	-	-	-	**29**	**30**	**48**	**1.6**	-	-	-	-	-	**121**	-	**< 20**	-	-	-	-	-	-
3S2E18E001	Static-Monitor	N/A	12/19/24	ZONE7	13	566	7.5	34	39	31	1.7	223	33	50	2.2	23.5	170	< 1	< 100	2.4	332	246	-	-	-
3S2E19D007	Static-Nested	N/A	3/3/25	ZONE7	15.1	1302	7.2	120	82	40	2.6	411	37	233	4.55	27	< 50	< 1	< 10	6.7	764	638	< 2	< 2	< 2
3S2E19D008	Static-Nested	N/A	3/3/25	ZONE7	16.2	891	7.3	77	50	30	1.9	272	22	145	5.52	26.1	< 50	< 1	< 10	7.9	511	398	< 2	< 2	< 2
3S2E19D009	Static-Nested	N/A	3/3/25	ZONE7	17.1	528	7.3	46	22	27	1.4	152	15	64	10.4	27	< 50	< 1	13	3.9	323	206	< 2	< 2	2.7
3S2E19D010	Static-Nested	N/A	3/4/25	ZONE7	17.6	773	7.1	59	32	38	1.7	207	91	90	9.7	28	71	< 1	< 10	2.6	485	279	5.6	7.1	3.2
3S2E19N003	Static-Nested	N/A	7/7/25	ZONE7	24.3	522	7.8	37	20	51	1.5	247	27	37	0.22	28	230	2.1	< 10	< 0.9	325	174	-	-	-
3S2E19N004	Static-Nested	N/A	7/7/25	ZONE7	21.8	578	7.9	25	12	86	1.5	237	22	63	< 0.1	17	330	34	17	< 0.9	344	111	-	-	-
3S2E20M001	Supply-Unspecified	N/A	1/6/25	ZONE7	14.3	851	7.2	65	40	70	1.6	312	63	93	2.29	20.3	270	1.3	< 100	< 1	517	327	-	-	-
3S2E21K009	Supply-Domestic	N/A	4/23/25	ZONE7	19.8	1222	7.6	54	61	100	2.2	185	12	316	5.6	28	100	1.1	< 10	1.3	689	386	-	-	-
3S2E22B001	Static-Monitor	N/A	1/7/25	ZONE7	18.9	1235	7.3	63	107	72	1.5	437	158	141	5.37	30	460	< 1	< 100	1.1	812	598	-	-	-
3S2E23E001	Static-Nested	N/A	1/7/25	ZONE7	20.1	743	7.5	39	57	49	1.7	358	41	58	3.51	21.4	420	< 1	< 100	1.9	460	332	-	-	-
3S2E23E002	Static-Nested	N/A	1/7/25	ZONE7	20.2	1059	7.6	43	63	107	2.5	391	49	153	< 0.1	23.5	2350	2.3	< 100	< 1	635	366	-	-	-
3S2E24A001	Static-Monitor	N/A	1/9/25	ZONE7	18.8	1439	7.5	111	53	126	2.3	500	71	158	24.3	23.5	810	1.1	< 100	3.3	900	495	-	-	-
3S2E26J002	Static-Monitor	N/A	1/9/25	ZONE7	17.1	1505	7.4	67	105	66	3.4	504	96	123	12	14.1	560	< 1	< 100	< 1	777	599	-	-	-
3S2E29F004	Static-Monitor	N/A	1/6/25	ZONE7	18.6	621	7.6	64	28	39	1.6	300	64	42	< 0.1	19.7	290	6.3	< 100	< 1	407	275	-	-	-
3S2E29F004	Static-Monitor	N/A	7/7/25	ZONE7	18.2	663	7.7	66	29	39	1.7	295	60	38	0.01	22	310	6.7	280	< 0.9	402	284	-	-	-
3S2E29L001	Static-Monitor	N/A	1/6/25	ZONE7	17.6	528	7.2	46	24	38	2.1	195	56	58	< 0.1	12	370	< 1	< 100	< 1	332	214	-	-	-
3S2E30C001	Supply-Unspecified	N/A	1/6/25	ZONE7	18.5	747	7.5	60	35	60	1.8	275	50	68	6.1	25.7	390	2.4	< 100	1.3	463	294	-	-	-
3S2E30D002	Static-Monitor	N/A	12/19/24	ZONE7	16.5	682	7	49	28	57	2.2	238	36	74	1.94	18	220	< 1	< 100	< 1	390	237	-	-	-
3S2E32E007	Static-Monitor	N/A	1/7/25	ZONE7	17.1	650	6.9	41	28	53	1.5	161	46	89	4.81	20.5	110	< 1	< 100	< 1	380	217	-	-	-
3S2E33C001	Static-Monitor	N/A	1/6/25	ZONE7	17	511	7	50	24	27	2.3	188	44	60	0.11	14.1	180	< 1	< 100	< 1	315	224	-	-	-
3S2E33G001	Static-Monitor	N/A	1/6/25	ZONE7	15.2	558	7.2	39	22	43	1.9	174	56	73	1.3	12.4	290	1.2	< 100	< 1	339	188	-	-	-

- = Not Analyzed

Highlighted = Representative Monitoring Site

Municipal Wells are Bold

TABLE E-1
GROUNDWATER WELL QUALITY RESULTS FOR SELECT METALS, MINERALS AND PFAS
2025 WATER YEAR

SITE ID	Well Type	Municipal Well Name	DATE	By	TEMP °C	EC umhos/cm	pH	Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
								Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
3S2E33G001	Static-Monitor	N/A	7/7/25	ZONE7	19.2	565	7.4	37	22	44	2.5	193	44	38	0.13	15	620	1.2	< 10	< 0.9	299	183	-	-	-
3S2E33G001	Static-Monitor	N/A	8/6/25	ZONE7	24.1	552	7.4	37	21	39	2.5	217	47	44	< 0.1	16	560	1.3	< 10	< 0.9	314	178	-	-	-
3S2E33K001	Static-Monitor	N/A	12/12/24	VA	16.6	1170	7.73	-	-	-	-	-	-	290	0.68	-	-	-	-	-	1170	-	-	-	-
4S3E06E004	Supply-Domestic	N/A	4/21/25	ZONE7	19.7	2229	8	27	57	360	3.4	414	33	551	0.86	16	4300	1.4	< 10	1.9	1255	302	-	-	-

- = Not Analyzed
Highlighted = Representative Monitoring Site
Municipal Wells are Bold

Table E-2
SURFACE WATER QUALITY RESULTS
2025 WATER YEAR

							Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard
SITE ID	Date	Time	FLOW (cfs)	TEMP. °C	SC mS/cm	pH	Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L
ADLLV	2/25/2025	13:30	23.8*	18	1170	8.1	86	46	150	2.6	406	144	158	0.71	15	1400	2.7	17	1.2	806	404
ADVP	12/11/2024	10:33	2.8	8.4	451	7.7	40	22	34	2.4	204	36	29	< 0.1	7.5	180	1.2	< 100	< 1	272	191
ADVP	2/25/2025	13:07	2.9	18.4	401	8	33	18	32	2.1	166	32	40	< 0.1	5.6	160	1.2	32	3.3	245	156
ADVP	6/17/2025	14:57	1.7	NA	474	7.7	30	20	37	1.7	155	34	50	< 0.1	2.5	220	1.4	12	< 0.9	252	157
ADVP	9/18/2025	15:02	1.6	22.2	418	7.7	28	18	38.1	1.9	158	27	37	< 0.1	6.5	230	1.66	15	< 1	235	145
ALP_ELCH	10/3/2024	14:55	1.2	20	1345	8.2	71	47	181	2.8	423	93	216	1.7	23.5	2670	3.2	< 100	< 1	853	371
ALP_ELCH	2/25/2025	12:05	4.2	15.8	1570	8.4	73	51	240	2.3	470	107	285	2.12	18	4600	3.3	< 10	3.1	1023	392
ALPL	10/3/2024	14:10	0.0	20	1346	8.1	73	48	170	2	422	87	213	3.4	30	2610	2.4	< 100	2.4	850	380
ALPL	2/25/2025	10:28	0.0	15	1590	8	74	51	240	2	486	98	306	3.11	22	4600	2.4	< 10	3.6	1049	395
AMNL	3/13/2025	10:15	13.6	10.7	801	8	37	82	34	2.5	450	78	33	< 0.1	8.6	540	1.1	< 10	1.2	500	430
AMP	10/3/2024	15:40	1.0	21.6	1441	8.3	74	47	211	3.6	389	92	270	1.47	21.4	1960	3.6	< 100	< 1	921	379
AMP	2/25/2025	12:30	3.7	16.7	1524	8.3	71	49	230	2.5	464	102	287	1.84	15	4200	3.4	11	2.6	997	379
AVNL	12/11/2024	11:35	5.8	10	471	7.7	25	16	56	3.2	114	34	76	0.34	15	130	1.4	< 100	< 1	283	128
AVNL	2/25/2025	11:13	6.4	15.1	346	7.8	24	13	32	2.1	122	36	36	0.29	13.1	190	1.4	51	0.95	218	114
AVNL	6/17/2025	15:45	10.4	NA	263	7.8	16	9	22	1.5	86	21	23	< 0.1	8.8	100	2	31	< 0.9	144	76
AVNL	9/18/2025	16:04	10.4	22.4	455	7.7	18	13	55.1	2.4	92	23	80	< 0.1	13.1	110	2.06	0.00	< 1	250	99

* Daily mean flow

TABLE E-3
MINING POND WATER QUALITY RESULTS FOR SELECT METALS AND MINERALS
2025 WATER YEAR

			TEMP	EC		Mineral Constituents (mg/L)									Select Metals (ug/L)				TDS	Hard	PFAS (ng/L)		
SITE ID	DATE	By	°C	umhos/cm	pH	Ca	Mg	Na	K	HCO3	SO4	Cl	NO3N	SiO2	B	As	Fe	Cr	mg/L	mg/L	PFOS	PFOA	PFHxS
MA-C001	9/23/25	ZONE7	-	1796	9.8	18	110	187.8	4.3	181	113	439	< 0.1	8.6	880	13.77	< 0.5	< 1	1077	497	-	-	-
MA-K015	9/24/25	ZONE7	24.6	657	8.6	30	31	57.1	3.4	195	61	74	< 0.1	8.6	< 500	3.15	< 0.5	< 1	370	201	2.9	3.2	< 2
MA-K018	9/24/25	ZONE7	24.1	411	8	26	17	33	2	152	29	34	< 0.1	4.9	< 500	1.82	8.2	< 1	222	134	-	-	-
MA-K028	9/23/25	ZONE7	-	1068	8.9	22	71	102.2	2.8	304	80	161	< 0.1	10.6	1020	3.38	8.9	< 1	622	347	120	10	55
MA-K028	3/11/25	ZONE7	15.9	1002	8.3	34	67	92	2.7	324	71	140	0.34	12	920	3	20	0.95	584	361	85	10	49
MA-K030	9/23/25	ZONE7	-	646	9.3	20	42	51.7	3	152	47	98	< 0.1	12.3	< 500	4.13	9.7	< 1	377	222	6.4	6.2	9.5
MA-K030	3/11/25	ZONE7	15.3	662	8.3	44	40	43	2.6	239	48	82	< 0.1	13.1	310	2.1	< 10	2.7	393	275	8.5	5.8	7
MA-K037	9/23/25	ZONE7	-	800	8.9	26	54	63.2	2.8	231	58	116	< 0.1	4.3	560	4.02	< 0.5	< 1	455	288	27	6.1	24
MA-K037	3/11/25	ZONE7	14.5	797	8.4	32	55	62	2.8	255	56	112	< 0.1	6.4	560	4	< 10	1.4	456	306	< 2	< 2	< 2
MA-P010	9/24/25	ZONE7	25.1	586	9	20	38	56.7	2.6	253	14	66	< 0.1	7.1	< 500	4.77	45.5	< 1	336	205	-	-	-
MA-P012	9/24/25	ZONE7	23.6	419	8	27	17	31.6	2	172	28	32	< 0.1	5.4	< 500	1.66	1.7	< 1	229	137	-	-	-
MA-P027	9/24/25	ZONE7	24.6	680	8.5	29	29	62.9	1.5	152	56	105	< 0.1	9.1	< 500	1.67	0.8	< 1	371	190	-	-	-
MA-P028	9/24/25	ZONE7	24.3	416	8.4	26	17	32.5	1.9	148	31	37	< 0.1	9.7	< 500	1.53	< 0.5	< 1	231	137	-	-	-
MA-P041	9/24/25	ZONE7	24	426	8.2	27	17	33.3	2.1	156	31	39	< 0.1	9.4	< 500	1.47	5.7	< 1	237	138	-	-	-
MA-P042	9/24/25	ZONE7	24	693	8.2	40	30	54.7	2	166	56	110	< 0.1	13.9	< 500	2.67	6	< 1	391	224	2.1	2.6	3.8
MA-P044	9/24/25	ZONE7	24.6	689	8.3	33	29	60.4	2.1	181	57	98	< 0.1	8.6	< 500	1.99	1.7	< 1	381	203	-	-	-
MA-P046	9/24/25	ZONE7	23.2	796	8.1	55	33	59.3	2.2	255	54	97	0.8	13.9	< 500	1.06	2.9	< 1	445	273	-	-	-
MA-R004	9/23/25	ZONE7	-	665	8.2	42	35	46.6	2.5	215	44	94	< 0.1	16.2	< 500	1.63	2.7	< 1	389	249	-	-	-
MA-R021	9/23/25	ZONE7	-	928	8.9	18	69	81.1	3	254	40	169	< 0.1	< 1.1	500	7.06	< 0.5	< 1	524	330	-	-	-
MA-R022	9/23/25	ZONE7	-	651	8.7	36	39	47.3	1.9	193	42	95	< 0.1	18.3	< 500	1.85	7.1	< 1	384	253	-	-	-
MA-R023	9/23/25	ZONE7	-	677	8.4	45	34	47.2	2.6	211	43	92	< 0.1	16.1	< 500	1.15	2	< 1	389	254	-	-	-
MA-R024A	9/23/25	ZONE7	-	651	8.3	51	31	45.3	2.3	196	45	88	0.32	15.6	< 500	< 1	2.9	1.37	380	256	-	-	-
MA-R028	9/23/25	ZONE7	-	692	8.1	52	37	37.5	2	229	40	85	2.12	21.8	< 500	< 1	< 0.5	2.17	400	282	6.3	4.3	5.6

TABLE E-4
MAIN BASIN SALT LOADING
2025 WATER YEAR

INFLOW COMPONENTS	SURFACE WATER			RECHARGED WATER			SALT LOAD
	Volume Applied (AF)	TDS Conc (mg/L)	% Recharged	Volume Recharged (AF)	TDS Conc (mg/L)	Salt Load (Tons)	(Tons per TAF of Rch)
NATURAL STREAM RECHARGE	**6,833**	**456**	**37%**	**2,500**	**456**	**1,548**	**620**
Arroyo Valle	**2,391**	**244**	**58%**	**1,377**	**244**	**457**	**330**
Arroyo Mocho	1,136	500	52%	**586**	**500**	**398**	**680**
Arroyo Las Positas	3,306	950	16%	**537**	**950**	**693**	**1,290**
ARROYO VALLE PRIOR RIGHTS	**10,192**	**190**	**13%**	**1,305**	**190**	**337**	**260**
ARTIFICIAL STREAM RECHARGE	**6,072**	**190**	**62%**	**3,747**	**190**	**967**	**260**
Arroyo Valle	6,069	190	61%	**3,732**	**190**	**963**	**260**
Arroyo Mocho	2	180	682%	**15**	**180**	**4**	**270**
Arroyo Las Positas	0	180	0%	**0**	**180**	**0**	**0**
INJECTION WELL RECHARGE	**-**	**-**	**-**	**0**	**0**	**0**	**0**
RAINFALL RECHARGE	**18,550**	**0**	**21%**	**3,845**	**0**	**0**	**0**
LAKE RECHARGE	-	-	-	*2,529*	*385*	*1,323*	*520*
LEAKAGE	**-**	**-**	**-**	**1,405**	**500**	**954**	**680**
APPLIED WATER RECHARGE	**17,578**	**301**	**14%**	**2,406**	**2,199**	**7,188**	**2,990**
Urban - Municipal	12,902	275	11%	1,471	2,416	4,828	3,280
Urban - Groundwater	462	446	15%	70	2,952	280	4,010
Urban - Recycled Water	364	654	20%	73	3,264	323	4,430
Agricultural - Municipal (SBA)	2,790	243	22%	610	1,111	921	1,510
Agricultural - Groundwater	827	589	16%	136	3,587	662	4,870
Golf Courses - Groundwater	0	688	0%	0	0	0	0
Golf Courses - Recycled Water	233	551	20%	47	2,756	174	3,730
SUBSURFACE BASIN INFLOW				**1,000**	**1,530**	**2,078**	**2,080**
TOTAL INFLOW				**16,208**	**594**	**13,072**	**810**

OUTFLOW COMPONENTS		WATER EXTRACTED			SALT REMOVED
		Volume Removed (AF)	TDS Conc (mg/L)	Salt Removed (Tons)	(Tons/TAF of Export)
MUNICIPAL PUMPAGE		**9,285**	**505**	**6,364**	**690**
Zone 7 Wells - Hop, Stone, COL		**5,000**	**529**	**3,592**	**720**
Zone 7 Wells - Mocho		**755**	**573**	**588**	**780**
Demin Salts Exported from Valley	*(subset of Zone 7 - Mocho)*	*119*	*2,240*	*363*	*3,040*
Other		**3,530**	**455**	**2,184**	**620**
DOMESTIC		**58**	**450**	**35**	**600**
AGRICULTURAL PUMPAGE (all salt is reapplied)		**1,016**	**589**	**813**	**800**
MINING USE		**4,331**	**62**	**366**	**80**
Stream Export		0	385	0	0
	Discharge to Cope	*4,214*	*385*	*2,204*	*520*
Evaporation		3,631	0	0	0
Processing Losses		700	385	366	520
GROUNDWATER BASIN OVERFLOW		**1,634**	**720**	**1,598**	**980**
TOTAL OUTFLOW		**16,559**	**418**	**9,393**	**570**

NET IN 2025 WY	**-351**	**-7,717**	**3,679**	

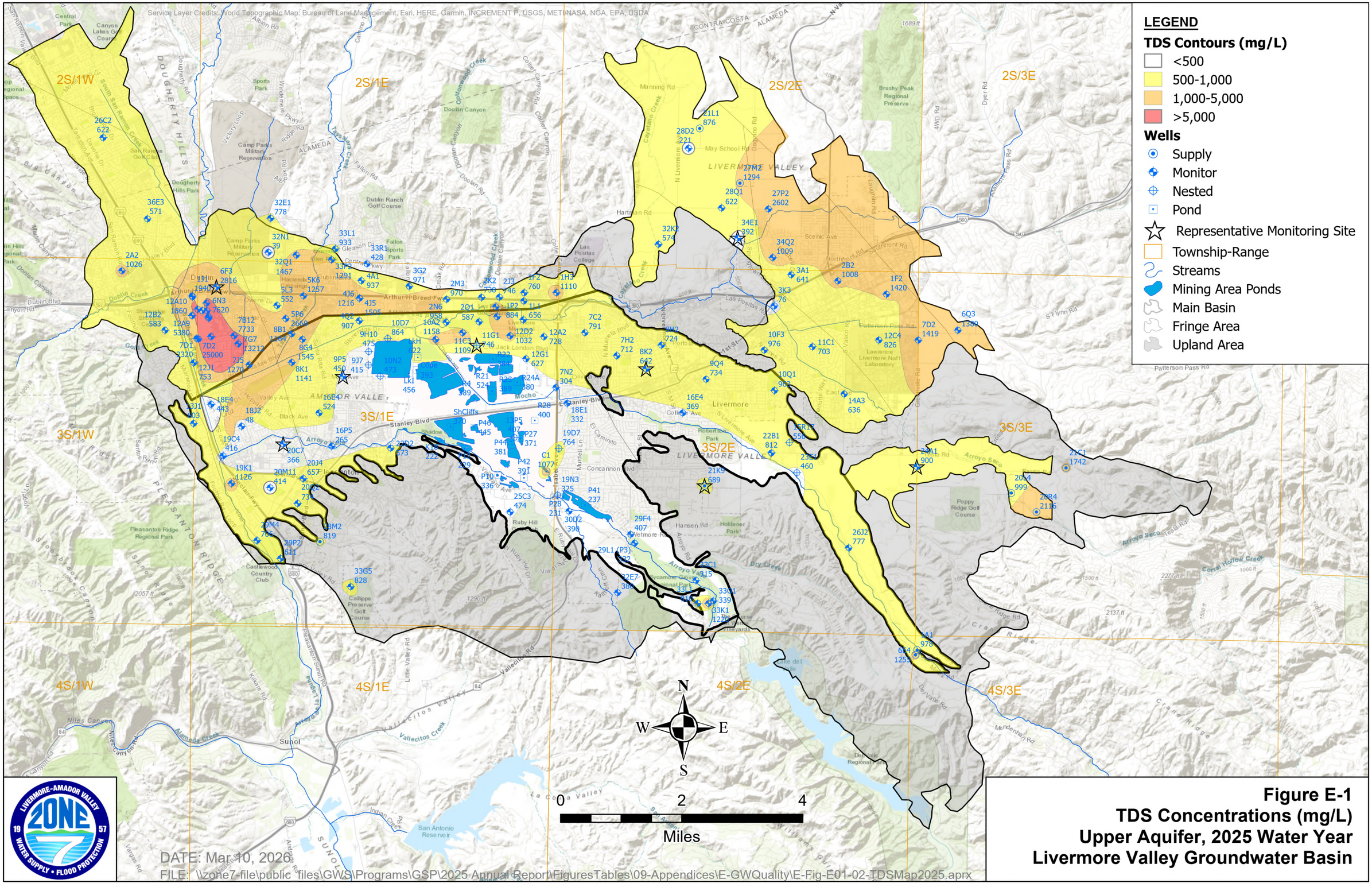

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Figure E-1
TDS Concentrations (mg/L)
Upper Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Map: Bureau of Land Management, Esri, HERE, Garmin, INCREM

ABBREVIATIONS FOR MUNICIPAL WELLS

COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
CWS = Cal Water Service
St = Stoneridge (Zone 7)
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

TDS Contours (mg/L)
- <500
- 500-1,000
- 1,000-5,000
- >5,000

Wells
- Supply
- Monitor
- Nested

- Pond
- Representative Monitoring Site
- Streams
- Township/Range
- Mining Area Ponds
- Main Basin
- Fringe Area
- Upland Area

2S/1W 2S/2E 3S/1W 3S/1E 3S/2E 3S/3E 4S/1W 4S/1E 4S/2E 4S/3E

N W E S

0 2 4
Miles

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Figure E-2
TDS Concentrations (mg/L)
Lower Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

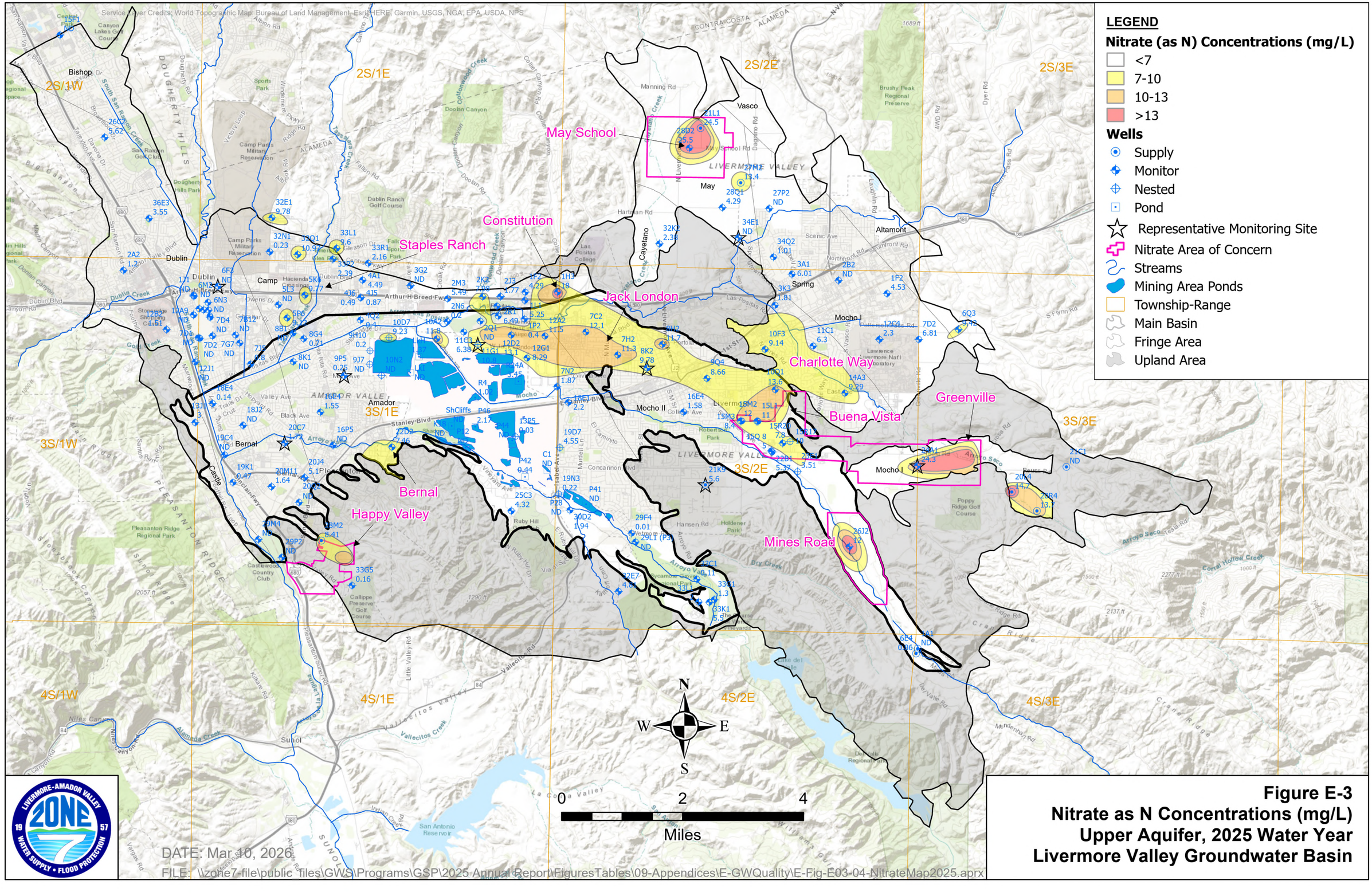

Figure E-3
Nitrate as N Concentrations (mg/L)
Upper Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

ABBREVIATIONS FOR MUNICIPAL WELLS
COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
CWS = Cal Water Service
St = Stoneridge (Zone 7)
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

Nitrate (as N) Concentrations (mg/L)
- <7
- 7-10
- 10-13
- >13

Wells
- Supply
- Monitor
- Nested
- Pond

- Representative Monitoring Site
- Nitrate Area of Concern
- Streams
- Mining Area Ponds
- Township-Range
- Main Basin
- Fringe Area
- Upland Area
- SubBasins

Constitution
Staples Ranch
Jack London
May School
Charlotte Way
Greenville
Buena Vista
Mines Road
Bernal
Happy Valley

2S/1W
2S/2E
3S/1W
3S/1E
3S/2E
3S/3E
4S/1W
4S/1E
4S/2E
4S/3E

N
W
E
S

0 2 4
Miles

DATE: Feb 27, 2026
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Figure E-4
Nitrate as N Concentrations (mg/L)
Lower Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Map: Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

Concentration shown based on 2024 WY result

LEGEND

Boron Concentrations (ug/L)

- <1,000
- 1,000-1,400
- 1,400-3,000
- >3,000
- Supply
- Monitor
- Nested
- Pond
- Representative Monitoring Site
- Streams
- Mining Area Ponds
- Township-Range
- Main Basin
- Fringe Area
- Upland Area

N

W E

S

0 2 4

Miles

DATE: Feb 27, 2026

FILE: P:\GWS\Programs\GSP\2025 Annual Report\FiguresTables\09-Appendices\E-GWQuality\E-Fig-E05-06-BoronMap2025.aprx

Figure E-5
Boron Concentrations (µg/L)
Upper Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Map: Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

ABBREVIATIONS FOR MUNICIPAL WELLS
COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
CWS = Cal Water Service
St = Stoneridge (Zone 7)
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

Boron Concentrations (ug/L)

- <1,000
- 1,000-1,400
- 1,400-3,000
- >3,000
- Supply
- Monitor
- Nested
- Supply-Municipal
- Supply-Industrial
- Representative Monitoring Site
- Streams
- Mining Area Ponds
- Township-Range
- Main Basin
- Fringe Area
- Upland Area
- SubBasins
- Concentration shown based on 2024 WY result

N
W E
S

0 2 4
Miles

DATE: Mar 10, 2026
FILE: \\zone7-file\public files\GWS\Programs\GSP\2025 Annual Report\FiguresTables\09-Appendices\E-GWQuality\E-Fig-E05-06-BoronMap2025.aprx

Figure E-6
Boron Concentrations (µg/L)
Lower Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

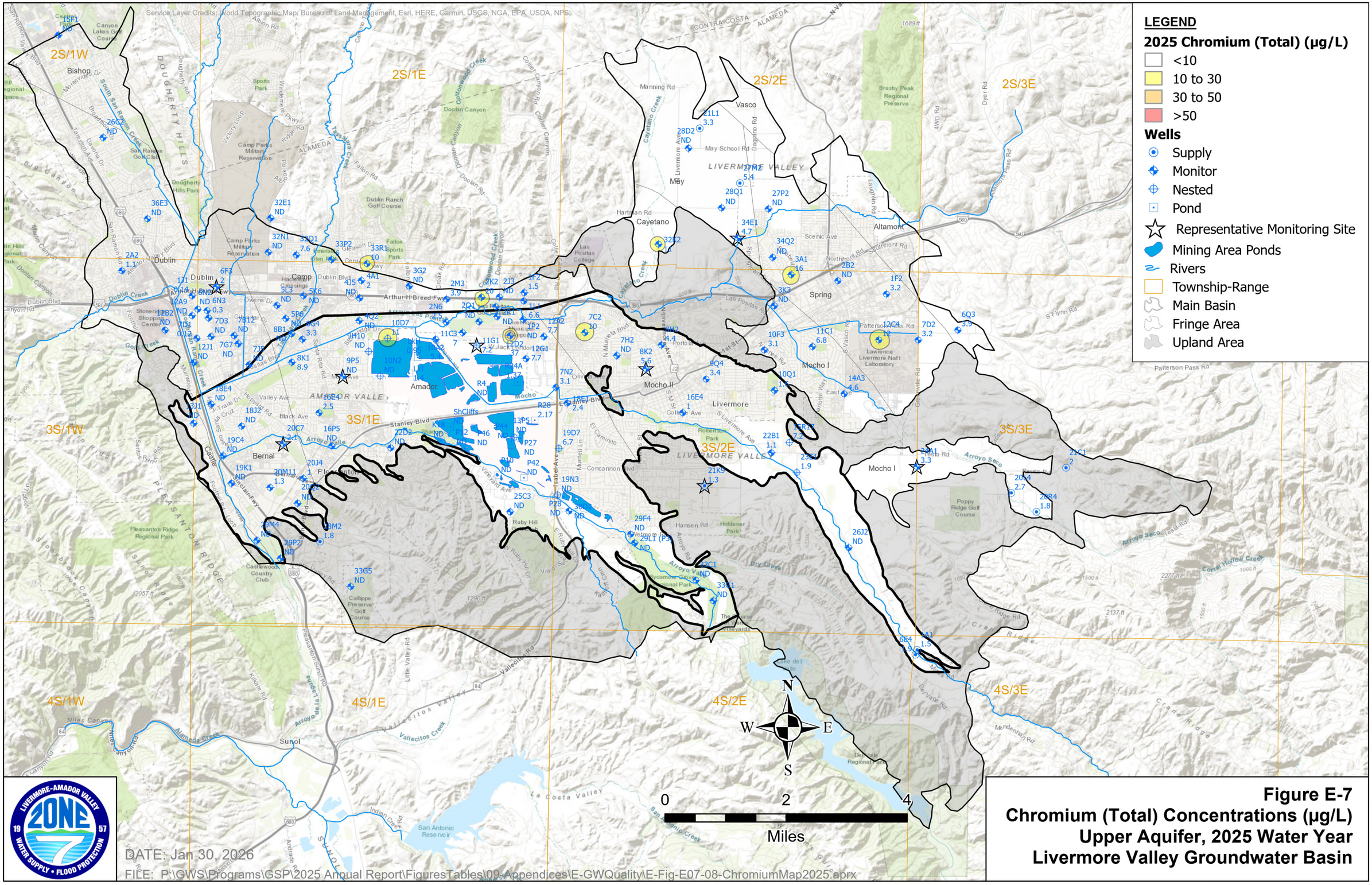

Figure E-7
Chromium (Total) Concentrations (µg/L)
Upper Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

ABBREVIATIONS FOR MUNICIPAL WELLS
COL = Chain of Lakes (Zone 7)
M = Mocho (Zone 7)
H = Hopyard (Zone 7)
CWS = Cal Water Service
St = Stoneridge (Zone 7)
P = Pleasanton
SF = San Francisco Public Utilities Commission

LEGEND

2025 Chromium (Total) (µg/L)
- <10
- 10 to 30
- 30 to 50
- >50

Wells
- Supply
- Monitor
- Nested
- Supply-Municipal
- Pond

- Representative Monitoring Site
- Mining Area Ponds
- Rivers
- Township-Range
- Main Basin
- Fringe Area
- Upland Area

N
W E
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0 2 4
Miles

DATE: Jan 30, 2026
FILE: P:\GWS\Programs\GSP\2025 Annual Report\FiguresTables\09_Appendices\E-GWQuality\E-Fig-E07-08-ChromiumMap2025.aprx

Figure E-8
Chromium (Total) Concentrations (µg/L)
Lower Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Map: Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

Notes:
- Wells 8G4, 18J2, 19K1, 16P5, 4Q2, and 8G4 were added to PFAS sampling program for the 2025 WY

- The upper aquifer extends from the ground surface down to approximately 100 feet below ground surface in the Bernal Subarea

-Municipal production wells do not produce groundwater from the upper aquifer.

Concentration shown based on 2024 WY result

Added to 2025 WY PFAS Sampling Program

LEGEND

PFOS Concentrations (ng/L)
- 4-39 ppt
- 40-70 ppt
- >70 ppt

Wells
- Supply
- Monitor
- Nested
- Pond
- Streams
- Mining Area Ponds
- Township-Range
- Main Basin
- Fringe Area
- Upland Area
- PFAS Investigation Site (RWQCB)

Abbreviations:
ng/L: Nanogram per Liter
ppt: Parts Per Thousand
ND: Non-Detect
RWQCB: Regional Water Quality Control Board

2S/1W 2S/2E 2S/3E 3S/1W 3S/1E 3S/2E 3S/3E 4S/1W 4S/1E 4S/2E 4S/3E

Bishop Dublin Camp Pleasanton Sunol Livermore Vasco May Cayetano Altamont Spring Amador Valley Mocho I Mocho II Bernal

N W E S

0 2 4 Miles

DATE: March 12, 2026
FILE: H:\GSP\AnnualReports\E-Fig-E09-10-PFOSMap2025_rev.aprx

Figure E-9
PFOS Concentrations (ng/L)
Upper Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin

Service Layer Credits: World Topographic Map: Bureau of Land Management, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

Concentration shown based on 2024 WY result.

LEGEND

PFOS Concentrations (ng/L)
- 4-39 ppt
- 40-70 ppt
- >70 ppt

Wells
- Supply
- Monitor
- Nested
- Supply-Municipal
- Supply-Industrial
- Pond
- Streams
- Township-Range
- Mining Area Ponds
- Main Basin
- Fringe Area
- Upland Area
- PFAS Investigation Site (RWQCB)

Abbreviations:
ng/L: Nanogram per Liter
ppt: Parts per Thousand
ND: Non-Detect
RWQCB: Regional Water Quality Control Board

N
W E
S

0 2 4
Miles

DATE: Feb 27, 2026
FILE: P:\GWS\Programs\GSP\2025 Annual Report\FiguresTables\09-Appendices\E-GWQuality\E-Fig-E09-10-PFOSMap2025.aprx

Figure E-10
PFOS Concentrations (ng/L)
Lower Aquifer, 2025 Water Year
Livermore Valley Groundwater Basin