

Salinas Valley Groundwater Basin
Upper Valley Aquifer Subbasin
Water Year 2024 Annual Report
Submitted in Support of Groundwater Sustainability Plan Implementation



Prepared by:



MONTGOMERY
& ASSOCIATES

Water Resource Consultants

CONTENTS

ABBREVIATIONS AND ACRONYMS	iv
EXECUTIVE SUMMARY	ES-1
1 INTRODUCTION.....	1
1.1 Purpose	1
1.2 Upper Valley Aquifer Subbasin Groundwater Sustainability Plan.....	1
1.3 Annual Report Organization	2
2 SUBBASIN SETTING	4
2.1 Principal Aquifers and Aquitards	6
2.2 Natural Groundwater Recharge and Discharge	6
2.3 Precipitation and Water Year Type.....	6
2.4 Water Year Context for Water Use and Groundwater Management	7
2.4.1 Reservoir Operations and Streamflow	8
2.4.2 Water Use and Management	10
3 2024 DATA AND SUBBASIN CONDITIONS.....	12
3.1 Water Supply and Use.....	12
3.1.1 Groundwater Extraction	12
3.1.2 Surface Water Supply	15
3.1.3 Recycled Water Supply	15
3.1.4 Total Water Use	15
3.2 Groundwater Elevations	17
3.2.1 Groundwater Elevation Contours	21
3.2.2 Groundwater Elevation Hydrographs.....	24
3.3 Change in Groundwater Storage.....	26
3.4 Groundwater Quality	31
3.5 Subsidence	34
3.6 Depletion of Interconnected Surface Water	36
4 ANNUAL PROGRESS TOWARD IMPLEMENTATION OF THE GSP	38
4.1 Groundwater Management Activities.....	38
4.1.1 Progress on General Administration: GSA Policies and Operations	38
4.1.2 Progress on Interested Parties Coordination and Outreach.....	42
4.1.3 Progress on Data Expansion and SGMA Compliance	45
4.1.4 Progress on Management Actions and Projects	51
4.2 Sustainable Management Criteria	54
4.2.1 Chronic Lowering of Groundwater Levels SMC	55
4.2.2 Reduction in Groundwater Storage SMC.....	60
4.2.3 Degraded Groundwater Quality SMC	60
4.2.4 Land Subsidence SMC	65
4.2.5 Depletion of Interconnected Surface Water SMC	67

5 CONCLUSION	70
REFERENCES	71

LIST OF TABLES

Table 3-1. Groundwater Extraction by Water Use Sector	13
Table 3-2. Total Water Use by Water Use Sector	16
Table 3-3. Groundwater Elevation Data.....	19
Table 3-4. Parameters Used for Estimating Annual Change in Groundwater Storage	26
Table 3-5. Annual Exceedances of the Regulatory Standard for the Upper Valley Subbasin Constituents of Concern	32
Table 3-6. Shallow Groundwater Elevation Data	36
Table 4-1. Progress on General Administrative Tasks Within Work Plan as of December 2024	40
Table 4-2. Progress on Interested Parties Coordination and Outreach as of December 2024	43
Table 4-3. Progress on Data Expansion and SGMA Compliance as of December 2024.....	46
Table 4-4. Plan for Addressing RCAs	49
Table 4-5. Progress on Projects and Management Actions as of December 2024.....	53
Table 4-7. Current Annual Precipitation, Average Annual Precipitation After GSP Implementation, and Average Annual Projected Precipitation.....	55
Table 4-8. Groundwater Elevation Data, Minimum Thresholds, and Measurable Objectives	56
Table 4-9. Minimum Thresholds and Measureable Objectives for Degradation of Groundwater Quality.....	62
Table 4-10. Shallow Groundwater Elevation Data, ISW Minimum Thresholds, and ISW Measurable Objectives	67

LIST OF FIGURES

Figure 1-1. Upper Valley Aquifer Subbasin.....	3
Figure 2-1. MCWRA Assessment Zones	5
Figure 2-2. WY 2024 and Historical Average Rainfall at King City.....	7
Figure 2-3. Nacimiento Reservoir Water Surface Elevation and Storage Volume in WY 2024.....	9
Figure 2-4. San Antonio Reservoir Water Surface Elevation and Storage Volume in WY 2024	10
Figure 3-1. General Location and Volume of Groundwater Extractions.....	14
Figure 3-2. Total Water Use by Water Use Sector Since WY 2020	16
Figure 3-3. Locations of Representative Groundwater Elevation Monitoring Sites	18
Figure 3-4. Annual Change in Fall Groundwater Elevations in Representative Monitoring Sites.....	20
Figure 3-5. Seasonal Low Groundwater Elevation Contour Map for the Upper Valley Subbasin.....	22
Figure 3-6. Seasonal High Groundwater Elevation Contour Map for the Upper Valley Subbasin.....	23
Figure 3-7. Groundwater Elevation Hydrographs for Selected Monitoring Wells	25
Figure 3-8. Fall 2023 Groundwater Elevation Contour Map.....	27
Figure 3-9. Estimated Annual Change in Groundwater Storage	28

Figure 3-10. Groundwater Use and Annual and Cumulative Change in Groundwater Storage	30
Figure 3-11. Wells with COC Concentrations Above the Regulatory Standard.....	33
Figure 3-12. Annual Subsidence	35
Figure 3-13. Annual Change in Shallow Groundwater Elevations in ISW Representative Monitoring Sites	37
Figure 4-2. Groundwater Elevations Compared to the Minimum Thresholds and Measurable Objectives ..	57
Figure 4-3. Groundwater Elevation and Storage Exceedances Compared to the Undesirable Result	59
Figure 4-4. Groundwater Quality Minimum Threshold Exceedances Compared to the Undesirable Result.....	64
Figure 4-5. Maximum Measured Subsidence Compared to the Undesirable Result.....	66
Figure 4-6. Shallow Groundwater Elevation Exceedances Compared to the Undesirable Result	69

Appendices

Appendix A. Technical Memorandum on Hydrogeologic Conceptual Model Update for the Upper Valley Subbasin

Appendix B. Hydrographs of Representative Monitoring Site Wells

Appendix C. 2024 Annual Report Groundwater Quality Data

ABBREVIATIONS AND ACRONYMS

AC	Advisory Committee
AEM	airborne electric magnetic
AF	acre-feet
AF/yr	acre-feet per year
CCRWQCB	Central Coast Regional Water Quality Control Board
CCWG	Central Coast Wetlands Group
cfs	cubic feet per second
COC(s)	Constituent(s) of concern
CSIP	Castroville Seawater Intrusion Project
DDW	Division of Drinking Water
DMS	Data Management System
D-TAC	Drought Operations Technical Advisory Committee
DWR	California Department of Water Resources
eWRIMS	Electronic Water Rights Information Management System
FY	Fiscal Year
GDE	Groundwater Dependent Ecosystem
GEMS	Groundwater Extraction Management System
GSA	Groundwater Sustainability Agency
GSP or Plan	Groundwater Sustainability Plan
GTAC	Groundwater Technical Advisory Committee
HCM	Hydrogeologic Conceptual Model
HOA	Home Owner Association
ILRP	Irrigated Lands Regulatory Program
InSAR	Interferometric Synthetic-Aperture Radar
ISW	interconnected surface water
MBAS	foaming agents
MCL	Maximum Contaminant Level
MCWRA	Monterey County Water Resources Agency
mg/L	milligrams per liter
NOAA	National Oceanographic and Atmospheric Administration
RCA(s)	Recommended Corrective Action(s)
RMS	Representative Monitoring Site
SGMA	Sustainable Groundwater Management Act
SLOFCWCD	San Luis Obispo County Flood Control and Water Conservation District
SMC	Sustainable Management Criteria/Criterion
SMCL	Secondary Maximum Contaminant Level
SRDF	Salinas River Diversion Facility
Subbasin	Upper Valley Aquifer Subbasin
SVBGSA	Salinas Valley Basin Groundwater Sustainability Agency

SVIHM.....Salinas Valley Integrated Hydrologic Model
SWRCB.....State Water Resources Control Board
ug/Lmicrograms per liter
UMHOS/CM.....micromhos/centimeter
WACWater Awareness Committee
WYWater Year

EXECUTIVE SUMMARY

Following the Salinas Valley Basin Groundwater Sustainability Agency's (SVBGSA) 2022 adoption and submittal of its Groundwater Sustainability Plan (GSP or Plan), the Sustainable Groundwater Management Act (SGMA) requires the SVBGSA to submit an annual report for the Salinas Valley Upper Valley Aquifer Subbasin (Upper Valley Subbasin or Subbasin) each year by April 1 to the California Department of Water Resources (DWR). This Annual Report summarizes data collected in Water Year (WY) 2024 from October 1, 2023, to September 30, 2024. On April 27, 2023, DWR approved the Upper Valley Subbasin GSP with 7 Recommended Corrective Actions (RCAs).

As described in the GSP, DWR designates the Subbasin as medium priority. The Upper Valley Subbasin GSP aims to balance the needs of all water users in the Subbasin while complying with SGMA.

In WY 2024, a series of winter storms brought higher precipitation than the historical average for the second consecutive year. WY 2024 is classified as a wet-normal year.

The groundwater data for WY 2024 are summarized below:

- Groundwater extractions for WY 2024 were approximately 105,370 acre-feet (AF).
- On average, groundwater elevations rose by approximately 0.9 feet during this wet-normal water year, rising in 9 out of 16 Representative Monitoring Site (RMS) wells. In relation to the GSP Sustainable Management Criteria (SMC), 9 RMS wells had groundwater elevations above their measurable objectives, 6 wells had elevations between their measurable objectives and minimum thresholds, and 1 well had an elevation below its minimum threshold.
- There were 5 groundwater quality constituent(s) of concern (COCs) that exceeded their minimum thresholds in WY 2024; none of them were determined to be due to Groundwater Sustainability Agency (GSA) groundwater management action or inaction. SVBGSA is in the process of assessing the relationship between groundwater quality and extraction, and plans to include the analysis in the GSP 2027 Periodic Evaluation.
- No subsidence was detected in the Subbasin.
- All 4 shallow wells used to monitor interconnected surface water (ISW) show groundwater elevations between the minimum thresholds and measurable objectives.

As a result, the Upper Valley Subbasin had no undesirable results in WY 2024.

The SVBGSA has taken the following actions to implement the GSP:

- **General Administration – GSA Policies and Operations:** General administrative activities and meetings continued throughout the year. SVBGSA enhanced budget and financial reporting through a revised format and initiated a Groundwater Sustainability Fee 5-year evaluation. With the SGM Round 2 Implementation Grant for the Salinas Valley, grant administration also became a key focus.
- **Interested Parties Coordination and Outreach:** SVBGSA continued to regularly engage interested parties through the Upper Valley Subbasin Implementation Committee and Advisory Committee and through coordination with partner agencies. In addition, SVBGSA increased efforts to reach out to domestic well owners by initiating the Dry Well Notification Program and contributing to the Water Awareness Committee (WAC) to disseminate information and resources about domestic water conservation. SVBGSA also held 5 Valley-wide workshops on Our Water Future in the Salinas Valley geared towards the general public.
- **Data Expansion and SGMA Compliance:** SVBGSA and partner agencies focused on filling data gaps to establish a strong basis for planning. Main workstreams included Monterey County Water Resources Agency (MCWRA) beginning desktop data collection for a Well Registration Program, MCWRA development of a Groundwater Monitoring Program, and adoption of Ordinance 5246 in October 2024. SVBGSA continued to work with the Central Coast Wetlands Group (CCWG) to complete a Groundwater Dependent Ecosystem (GDE) Identification and GDE Monitoring Standard Operating Procedure. SVBGSA updated the hydrogeologic conceptual model (HCM) of the Subbasin with new data.
- **Projects and Management Actions:** SVBGSA continued to move forward with several actions that support groundwater sustainability. This year, SVBGSA convened the SMC Technical Advisory Committee for the Forebay and Upper Valley Subbasins, continued to partner with FlowWest to assess groundwater benefits of the Salinas River Stream Maintenance Program, held Valley-wide demand management workshops, and supported irrigation efficiency through partnering with the University of California Cooperative Extension and other local agencies. MCWRA continued to develop the Salinas River Operations Habitat Conservation Plan.

1 INTRODUCTION

1.1 Purpose

The 2014 California Sustainable Groundwater Management Act (SGMA) requires that following adoption of a Groundwater Sustainability Plan (GSP), Groundwater Sustainability Agencies (GSAs) annually report on the condition of the basin and show that the GSP is being implemented in a manner that will likely achieve the sustainability goal for the basin. This report fulfills that requirement for the Salinas Valley – Upper Valley Aquifer Subbasin (Upper Valley Subbasin or Subbasin) for Water Year (WY) 2024.

SVBGSA submitted the Upper Valley Subbasin GSP on January 24, 2022, and on April 27, 2023, DWR approved the Upper Valley Subbasin GSP with 7 RCAs. The sustainability goal of the Upper Valley Subbasin is to manage groundwater resources for long-term community, financial, and environmental benefits to the Subbasin’s residents and businesses. The goal of this GSP is to ensure long-term viable water supplies while maintaining the unique cultural, community, and business aspects of the Subbasin. It is the express goal of this GSP to balance the needs of all water users in the Subbasin.

This is the fourth annual report for the Subbasin and includes monitoring data for WY 2024, which is from October 1, 2023, to September 30, 2024. It compares WY 2024 data to Sustainable Management Criteria (SMC) as a measure of the Subbasin’s groundwater conditions with respect to the sustainability goal that must be reached by the end of 2042.

1.2 Upper Valley Aquifer Subbasin Groundwater Sustainability Plan

In 2017, local GSA-eligible entities formed the Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) to develop and implement the GSPs for the Salinas Valley. SVBGSA is a Joint Powers Authority with membership comprising the County of Monterey, Monterey County Water Resources Agency (MCWRA), City of Salinas, City of Soledad, City of Gonzales, City of King, Castroville Community Services District, and Monterey One Water (M1W).

The SVBGSA developed the GSP for the Upper Valley Subbasin—for which the SVBGSA has exclusive jurisdiction—identified as California Department of Water Resources (DWR) subbasin 3-004.05. DWR has designated the Upper Valley Subbasin as a medium priority basin.

SVBGSA developed the GSP for the Upper Valley Subbasin in concert with the 5 other Salinas Valley Subbasin GSPs that fall partially or entirely under its jurisdiction: the 180/400-Foot Subbasin (180/400 Subbasin, DWR subbasin 3-004.01), the Eastside Aquifer Subbasin (Eastside Subbasin, DWR subbasin 3-004.02), the Forebay Aquifer Subbasin (Forebay Subbasin, DWR subbasin 3-004.04), the Langley Area Subbasin (Langley Subbasin, DWR subbasin 3-004.09),

and the Monterey Subbasin (DWR subbasin 3-004.10). This Annual Report covers all the 237,670 acres of the Upper Valley Subbasin, as shown on Figure 1-1.

1.3 Annual Report Organization

This Annual Report meets all requirements of GSP Regulations §356.2. It first summarizes the subbasin setting, including the precipitation and water year context for water use and management. Then, it outlines the subbasin conditions, including groundwater extractions, surface water use, total water use, groundwater elevations, change in groundwater storage, and groundwater quality. Finally, the Annual Report relays annual progress toward GSP implementation by reporting on actions taken to implement the GSP and progress toward SMC interim milestones.

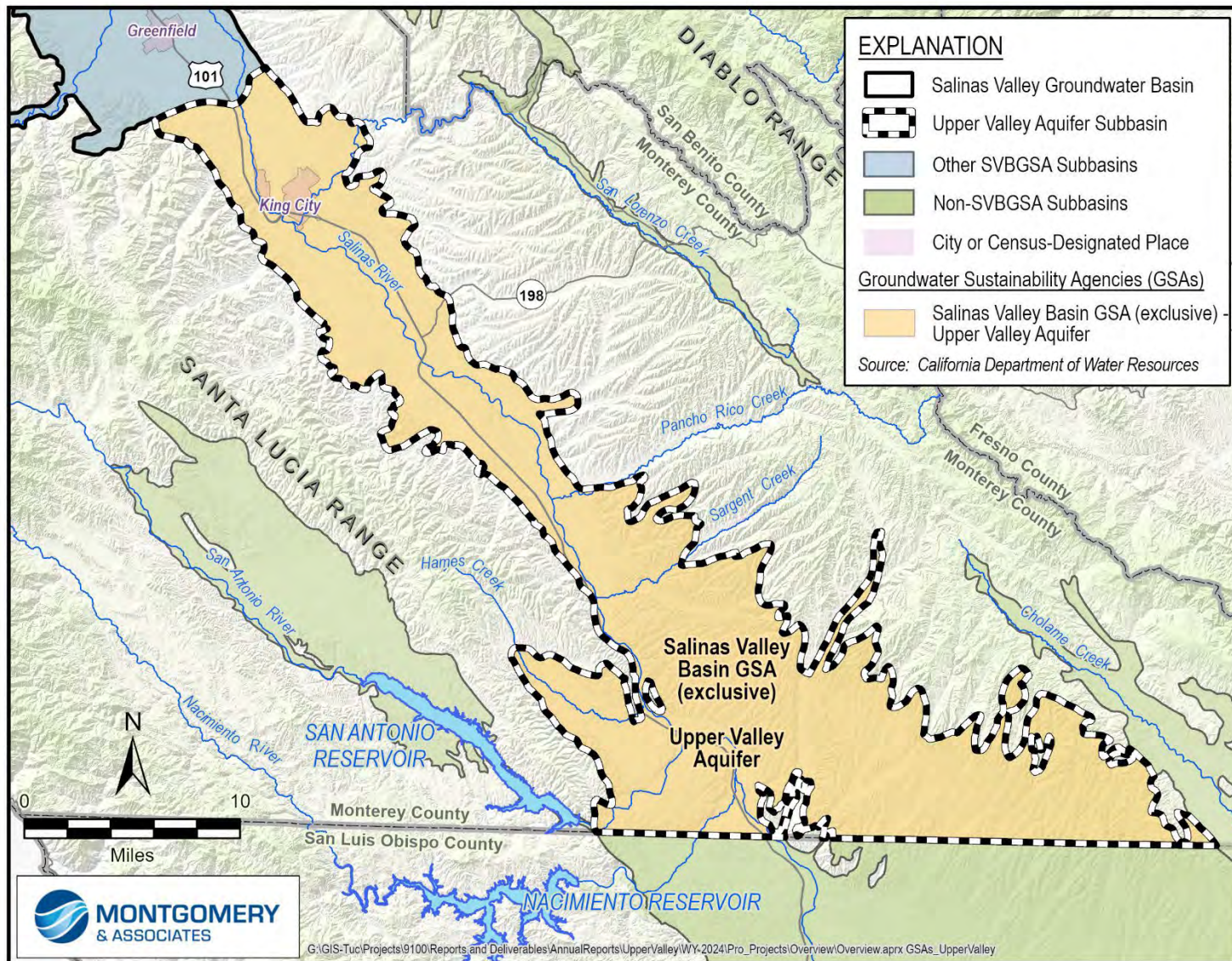


Figure 1-1. Upper Valley Aquifer Subbasin

2 SUBBASIN SETTING

The Upper Valley Subbasin is located in southeastern Monterey County and in the southern portion of the Salinas Valley. The Salinas River runs through the Upper Valley Subbasin and the releases from San Antonio and Nacimiento Reservoirs drain into the Salinas River near the southwestern corner of the Subbasin. The only municipality in the Subbasin is King City. The Subbasin encompasses most of MCWRA's Upper Valley Subarea, and extends to double the total acreage of the Upper Valley Subarea as shown on Figure 2-1. The geology of the Upper Valley Subbasin is characterized by alluvium, terrace deposits, and the Paso Robles Formation. The eastern boundary of the Subbasin is marked by the contact between the alluvium and Paso Robles Formation with the rocks of the Gabilan Range's Pancho Rico and Monterey Formations (DWR, 2004; Jennings *et al.*, 2010; Rosenberg, 2001). The western boundary of the Upper Valley Subbasin is the contact between the alluvium and the sedimentary rocks of the Monterey Formation in the Santa Lucia Range. The Subbasin's northwestern boundary with the Forebay Subbasin is south of the town of Greenfield and generally coincides with the narrowing of the Valley floor and shallowing of the base of the groundwater basin (DWR, 2004). The southern boundary with San Luis Obispo County and the Paso Robles Area Subbasin represents a jurisdictional divide between Monterey County and San Luis Obispo County.

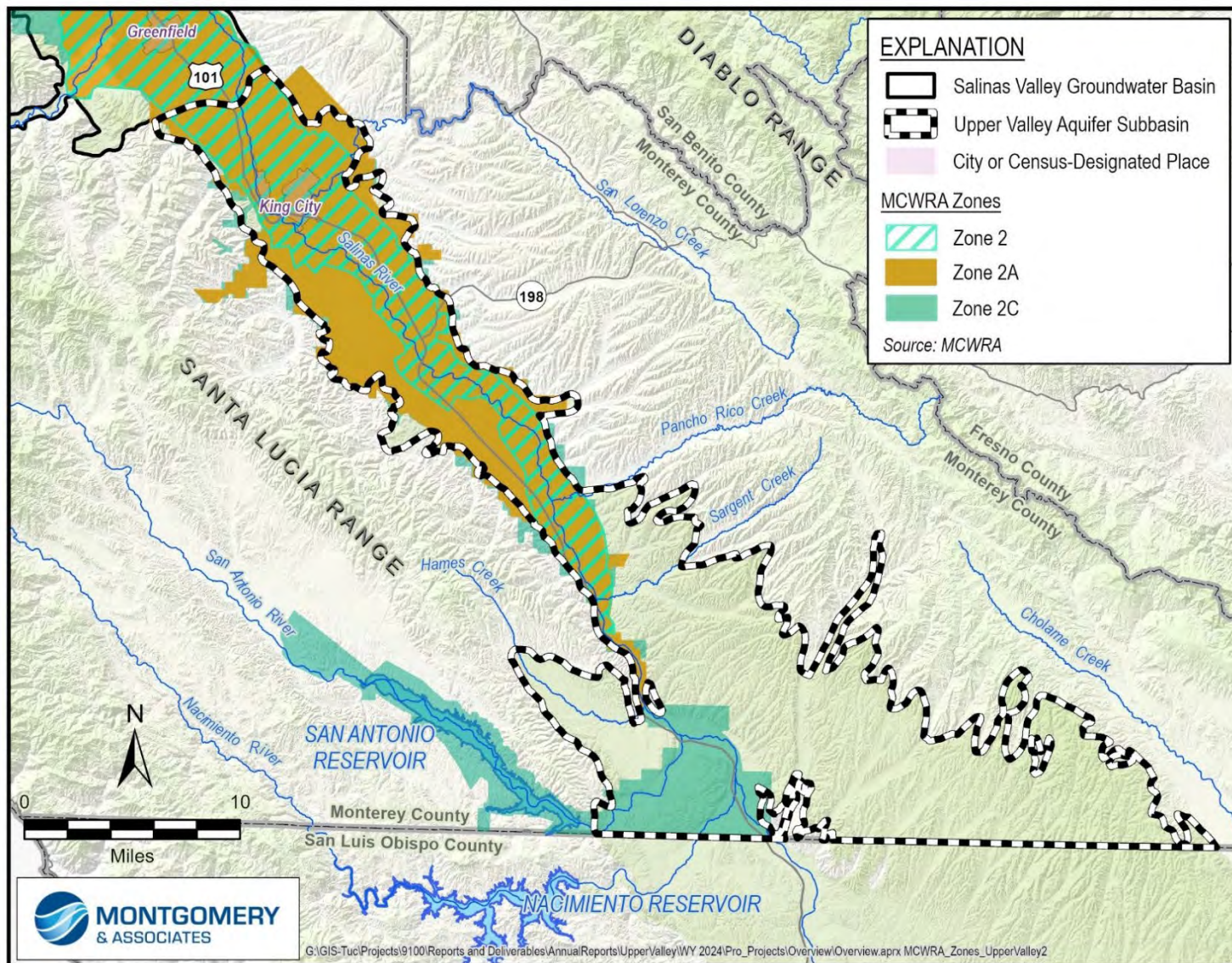


Figure 2-1. MCWRA Assessment Zones

2.1 Principal Aquifers and Aquitards

The Upper Valley Subbasin's principal aquifer is defined as the Basin Fill Aquifer, and is represented by alluvium and the Paso Robles Formation. There is no laterally extensive aquitard separating these units. However, parts of the Paso Robles Formation have increased clay content, which may impact hydraulic connectivity between these units. The recent Hydrogeologic Conceptual Model (HCM) update, which is summarized in Appendix A, also delineated the Unnamed Sandstone. It is a clastic sedimentary unit beneath the Paso Robles Formation and laterally extensive across the southern wider area of the Subbasin based on geologic maps and higher resistivity Airborne Electromagnetic (AEM) resistivity data. This unit has no defined aquifer properties or data, and will be managed with the Paso Robles Formation. The Basin Fill Aquifer is still the principal aquifer for the Subbasin, but differing permeabilities and clay contents will be taken into consideration for analyses.

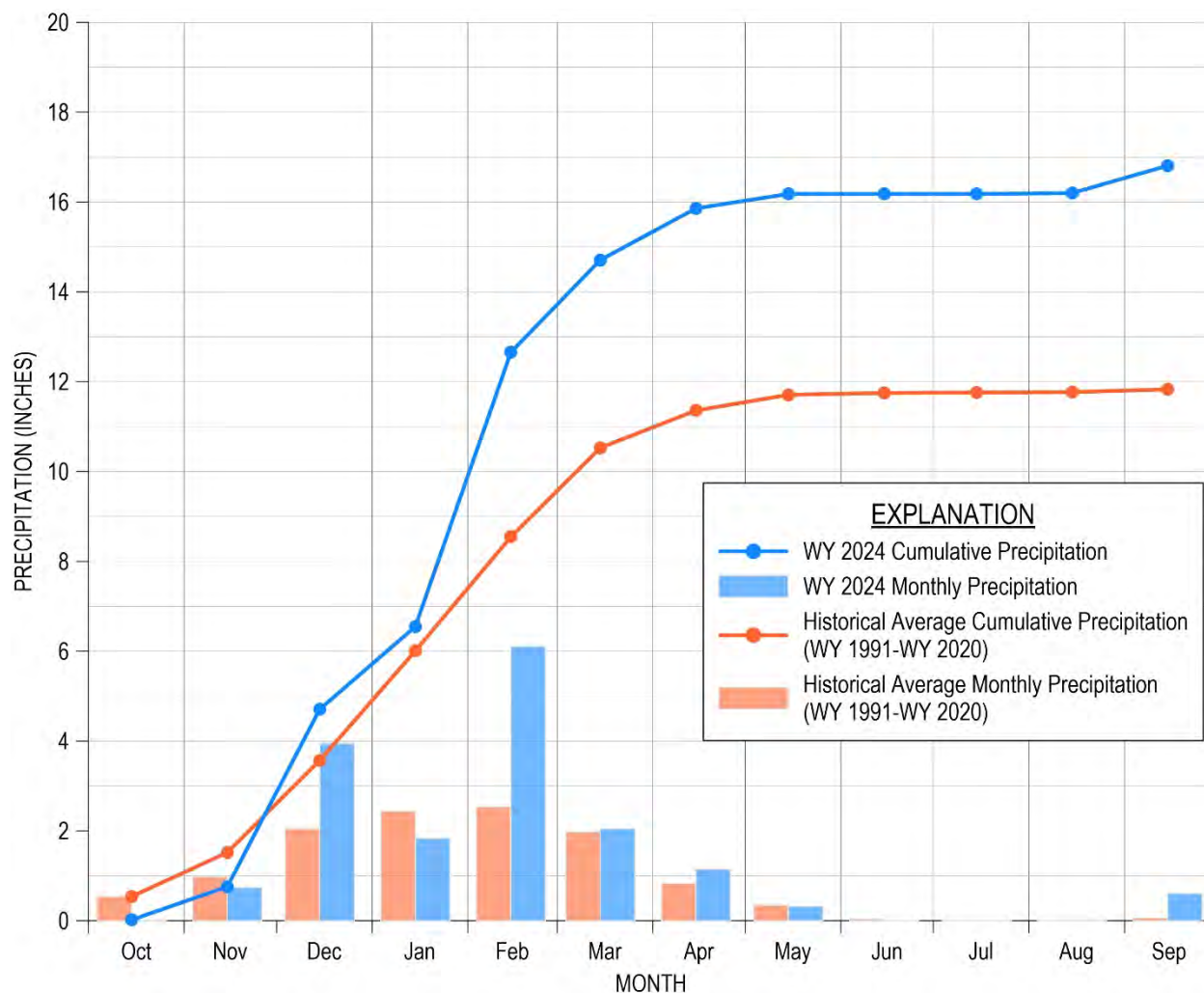
2.2 Natural Groundwater Recharge and Discharge

Groundwater can discharge from the aquifers where surface water and groundwater are interconnected. There are potential locations of interconnected surface water (ISW) mainly along the Salinas River and partially along some of its tributaries. In these areas groundwater dependent ecosystems (GDEs) may depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface and may discharge groundwater through evapotranspiration. Natural groundwater recharge occurs through deep percolation of surface water, excess applied irrigation water, and precipitation.

2.3 Precipitation and Water Year Type

Figure 2-2 shows the monthly and cumulative precipitation in WY 2024 compared to the historical average precipitation based over the most recent 30-year period ending in a decade (WY 1991 to WY 2020), as determined by MCWRA, at King City. In WY 2024, the gage at King City (NOAA Station USC00044555) recorded cumulative precipitation above the historical normal level starting in December. Monthly precipitation was also above normal in February mainly due to large storm events. The water year total was 16.8 inches which is higher than the historical average of 11.8 inches.

SVBGSA adopts the methodology used by MCWRA for determining the water year type. MCWRA assigns a water year type of either dry, dry-normal, normal, wet-normal, or wet based on an indexing of annual mean flows at the USGS stream gage on the Arroyo Seco River near Soledad (USGS Gage 11152000) (MCWRA, 2005). Using the MCWRA method, WY 2024 was a wet-normal year in the Salinas Valley.



(Adapted from MCWRA, November 2024a)

Figure 2-2. WY 2024 and Historical Average Rainfall at King City

2.4 Water Year Context for Water Use and Groundwater Management

Many factors affect groundwater use and management. In the Salinas Valley, MCWRA operates the Nacimiento and San Antonio Reservoirs for multiple purposes, including flood control, groundwater recharge, and re-diversion of stored reservoir water for delivery to the Castroville Seawater Intrusion Project (CSIP) as an in-lieu irrigation supply in the seawater intruded area. Reservoir operation, the amount of surface water diverted to CSIP at the Salinas River Diversion Facility (SRDF), and CSIP deliveries from recycled water provide context for water use and management in the Salinas Valley. In addition, SVBGSA asked the subbasin implementation committees for their observations on how their operations and water use were affected by factors such as temperature, pests, flooding, and/or market conditions. While the experiences of

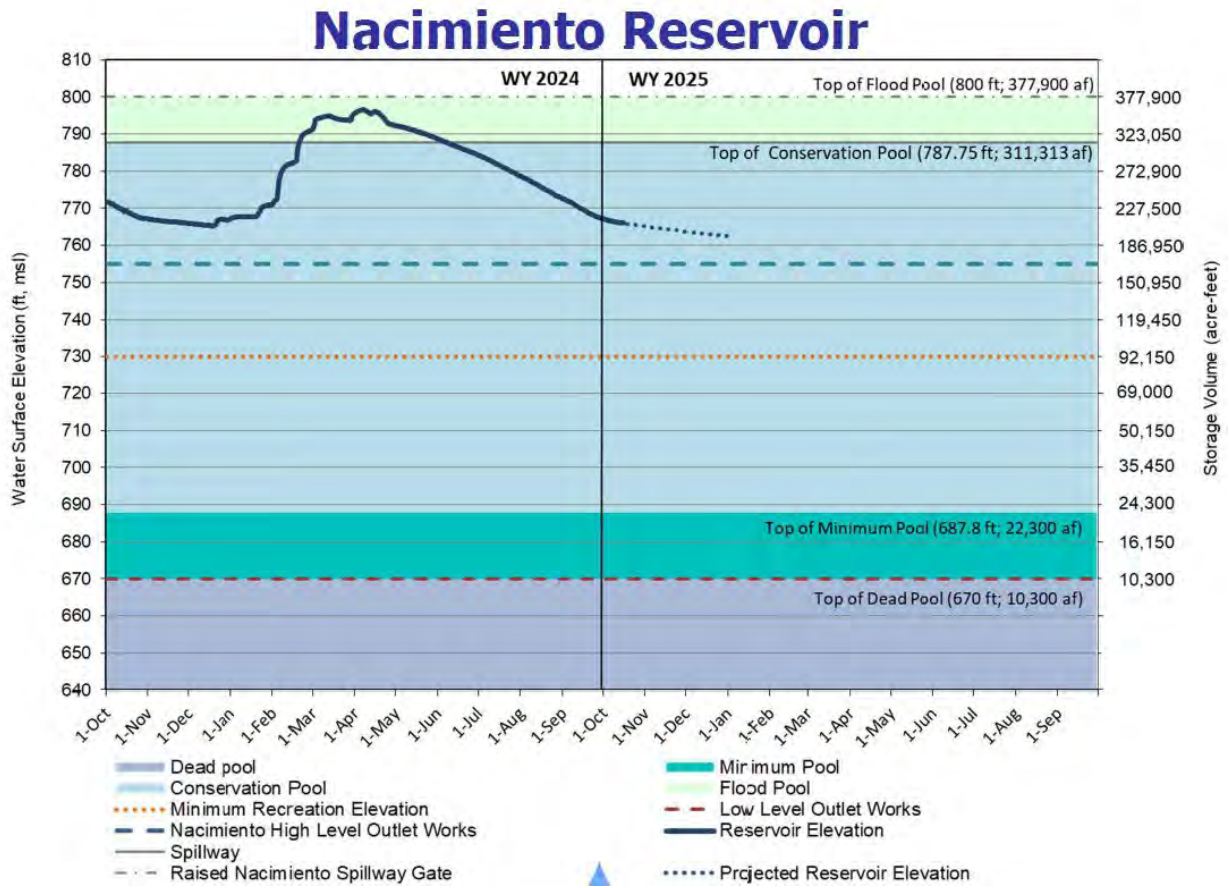
subbasin committee members are not necessarily representative of all groundwater users, they provide important context for interpreting water use fluctuations and trends.

2.4.1 Reservoir Operations and Streamflow

Reservoir elevations and storage are critical factors MCWRA considers in determining releases from Nacimiento and San Antonio Reservoirs. Figure 2-3 and Figure 2-4 show reservoir elevations and storage from WY 2024 to the beginning of WY 2025 for the Nacimiento and San Antonio Reservoirs, respectively. With the above-normal precipitation that occurred during WY 2024, the storage increased during the wet season and in February the reservoir elevation in Nacimiento rose into the flood pool. Then, during the conservation release season, storage decreased, and at the end of the water year was about the same as at the beginning.

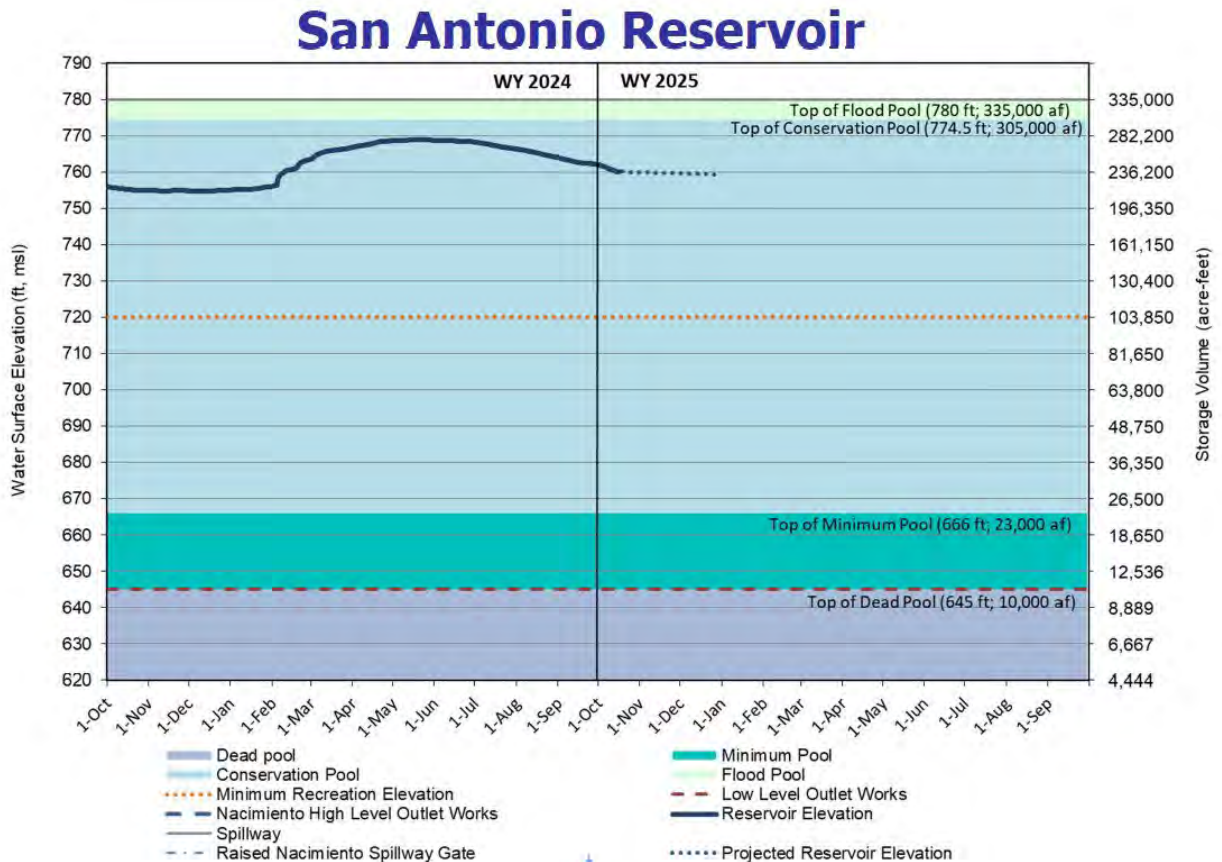
Figure 2-3 shows that from the beginning to the end of WY 2024, Nacimiento Reservoir storage decreased from 64% to 57% of capacity, ending at 215,590 AF of water in storage. Figure 2-4 shows that San Antonio Reservoir storage increased from 66% to 73% of capacity, ending at 244,900 AF of water in storage.

During WY 2024, releases were made from Nacimiento and San Antonio Reservoirs for water conservation to provide stored reservoir water for groundwater recharge to the Salinas Valley Groundwater Basin and operation of the SRDF. Operation of the SRDF began May 10, 2024, and continued through the remainder of WY 2024. Releases during WY 2024 were made in accordance with existing regulations and agreements to provide for fish and wildlife habitat. The timing and quantity of reservoir releases accounted for natural flows in the Salinas River in addition to considerations for minimizing impacts on reservoir levels during peak recreational periods, to the extent possible.



(MCWRA, 2024b)

Figure 2-3. Nacimientto Reservoir Water Surface Elevation and Storage Volume in WY 2024



(MCWRA, 2024b)

Figure 2-4. San Antonio Reservoir Water Surface Elevation and Storage Volume in WY 2024

2.4.2 Water Use and Management

In 2024, the Governor’s State of Emergency that was in place for drought conditions was lifted for Monterey County. Therefore, SVBGSA is no longer required to review well permits under Executive Order N-7-22. The County of Monterey’s well permit application and review process otherwise remains the same.

Subbasin implementation committees noted that during WY 2024, several factors affected water use and management, in particular the following:

- **Precipitation and Temperature** can affect groundwater use. Growers noted that the additional spring rains meant that some vineyards in the southern end of the Valley did not have to start irrigating as early as usual. They often start in January and this year delayed irrigation to May. Row crops operated as usual.
- **State urban mandates** affect water use within drinking water systems subject to the following mandates (State Water Resources Control Board [SWRCB], 2024a):

- 1.1. **For urban water suppliers, statewide Level 2 demand reduction actions not required:** The requirement for urban water suppliers to implement demand-reduction actions that correspond to at least Level 2 of their water shortage contingency plans has not been in effect during WY2024.
- 1.2. **For commercial, institutional, and Home Owner Association (HOA) common areas, the decorative grass watering emergency ban has expired:** The Emergency Regulation to Ban Decorative Grass Watering (non-functional turf irrigation) in commercial, industrial, and institutional areas, including HOA common areas expired by operation of law on June 5, 2024. In October 2023, however, the California State Legislature passed [Assembly Bill 1572](#), which phases in a ban on decorative grass watering in commercial, industrial, and institutional areas permanently.
- 1.3. **Emergency prohibition on wasteful water uses has expired:** The Emergency Regulation to Prohibit Wasteful Water Uses (such as refilling fountains without recirculating pumps, overwatering landscapes, watering grass within 48 hours of rainfall, etc.) expired on December 21, 2023.

3 2024 DATA AND SUBBASIN CONDITIONS

This section details the Subbasin conditions and WY 2024 data, or the most recent data available. Monitoring data—which SVBGSA stores in a data management system (DMS)—are included in this Annual Report and are submitted to DWR.

3.1 Water Supply and Use

Within the Subbasin, most of the water is used for agricultural purposes, then for urban and industrial use, then for rural domestic use, with a relatively small amount used by wetlands and native vegetation.

The water supply in the Upper Valley Subbasin is a combination of groundwater, surface water, and some recycled water. Groundwater is the main water source in the Subbasin. Some growers also report surface water use to the SWRCB. Recycled water is used in the San Ardo Oil Field, where Chevron U.S.A. Inc. operates a reverse osmosis plant that treats a portion of the produced water generated during oil production.

3.1.1 Groundwater Extraction

Urban and agricultural groundwater extractions are compiled using MCWRA’s Groundwater Extraction Management System (GEMS), through which groundwater extraction is reported for wells with an internal discharge pipe diameter greater than 3 inches within Zones 2, 2A, and 2B. However, these zones only cover half of the total acreage of the Subbasin as shown on Figure 2-1. Based on MCWRA Ordinance 5426 adopted in 2024, future annual reports will include groundwater extraction data for the entire Upper Valley Subbasin inclusive of non-de minimis wells, as reported to MCWRA.

Table 3-1 presents groundwater extractions by water use sector, including the accuracy of measurement in the Upper Valley Subbasin. Urban water use data from MCWRA aggregates municipal wells, small public water systems, and industrial wells. Agricultural water use accounted for 97% of groundwater extraction in 2024; urban and industrial water uses accounted for 3%. Both agricultural and urban pumping is reported by MCWRA from October 1 through September 30, starting in WY 2024 based on MCWRA Ordinance 5426. No groundwater was extracted for managed wetlands or managed recharge. Extracted groundwater used by natural vegetation is assumed to be small and was not estimated for this report.

Starting this year, a rural domestic pumping estimate is included for the Upper Valley Subbasin to maintain consistency with the other subbasins. It is estimated using the number of drinking water connections based on data compiled for water systems and 2024 County of Monterey parcel data. To estimate water use, the approximate number of connections is multiplied by a constant pumping rate of 0.35 acre-feet per year (AF/yr) per connection across all subbasins.

The total reported groundwater extraction in WY 2024, a wet-normal water year, was 105,370 acre-feet per year (AF/yr) in the Subbasin. Of this total extraction, approximately 1,310 AF of agricultural pumping and 170 AF of urban pumping were estimated because MCWRA has yet to receive 2024 data from several pumpers. Because the pumping total is for the Upper Valley Subbasin and not the MCWRA Upper Valley Subarea, the total differs from what MCWRA publishes in their annual Groundwater Extraction Summary Reports. Figure 3-1 illustrates the general location and volume of groundwater extractions in the Subbasin.

Table 3-1. Groundwater Extraction by Water Use Sector

Water Use Sector	Groundwater Extraction	Method of Measurement	Accuracy of Measurement
Rural Domestic	320	Estimated	N/A
Urban (including industrial)	2,600	MCWRA's Groundwater Monitoring Program allows reporting using methods water flowmeter, electrical meter, hour meter, or other approved measuring devices that are part of an existing "Alternative Compliance Plan.". For 2024, 83% of extractions were calculated using a flowmeter, 16% electrical meter and 1%-hour meter.	MCWRA Ordinance 5426 requires flowmeter calibration every five years, and that flowmeters be accurate to within +/- 10% after installation. The same ordinance requires annual pump efficiency tests. SVBGSA assumes an electrical meter accuracy of +/- 5%.
Agricultural	102,390		
Managed Wetlands	0	N/A	N/A
Managed Recharge	0	N/A	N/A
Natural Vegetation	0	<i>De minimis</i> and not estimated.	Unknown
TOTAL	105,379		

In AF/yr

N/A = Not Applicable.

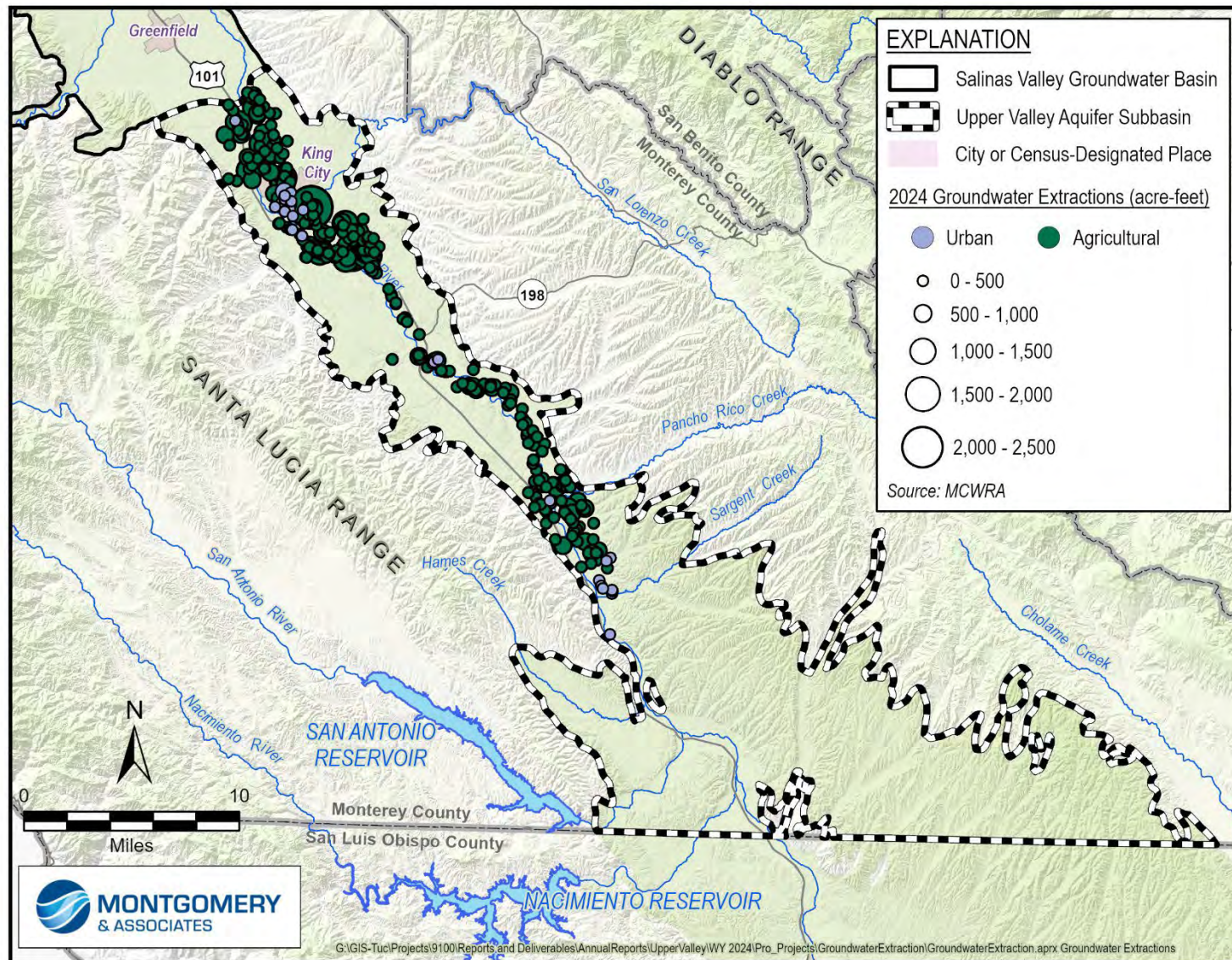


Figure 3-1. General Location and Volume of Groundwater Extractions

3.1.2 Surface Water Supply

Salinas River Watershed diversion data are obtained from the SWRCB Electronic Water Rights Information Management System (eWRIMS) website (SWRCB, 2024b). The data are reported annually and include diversions from the Salinas River and its tributaries. Surface water diversions reported to eWRIMS were approximately 46,540 AF/yr in WY 2024. All surface water is used for irrigation and is reported as a Statement of Diversion and Use.

3.1.3 Recycled Water Supply

Chevron U.S.A. Inc. operates a reverse osmosis plant in the San Ardo Oil Field. A portion of the produced water generated during oil production is treated by the reverse osmosis plant and further treated by constructed wetlands. The effluent is then discharged to a groundwater recharge basin pursuant to a permit issued by the Central Coast Regional Water Quality Control Board (CCRWQCB). Effluent discharged into the recharge basin was approximately 2,010 AF/yr in WY 2024.

3.1.4 Total Water Use

Total water use is the sum of groundwater extractions, surface water, and recycled water use and is summarized in Table 3-2.

Many growers and residents have noted that some agricultural water use is reported both to SWRCB as Salinas River diversions and to MCWRA as groundwater pumping. To avoid double counting, all surface water reported as a Statement of Diversion and Use is excluded from the total water use count for the Subbasin. Therefore, in WY 2024, total surface water use for the Subbasin is adjusted from the 46,540 AF/yr reported in eWRIMS to 0 AF/yr. It is possible that not all of the 46,540 AF/yr of surface water diversions excluded are being reported to both SWRCB and MCWRA, in which case total water use may be up to that amount greater than calculated here. This accounting is done to calculate the total water use and is not meant to imply that SVBGSA classifies any or all the reported diversions as groundwater. SVBGSA will continue to work with stakeholders to refine the method used to resolve double counting.

Total water use was 107,380 AF/yr in WY 2024, as shown in Table 3-2. Figure 3-2 shows the total water use by water use sector and water type since WY 2020. Total water use estimates for WYs 2020-2023 have been adjusted to include the rural domestic pumping estimate.

Table 3-2. Total Water Use by Water Use Sector

Water Use Sector	Groundwater Extraction	Surface Water Use	Recycled Water	Method of Measurement	Accuracy of Measurement
Rural Domestic	320	0	0	Estimated	N/A
Urban (including industrial)	2,660	0	2,010	Direct	Estimated to be +/- 5%
Agricultural	102,390	0	0	Direct	Estimated to be +/- 5%
Managed Wetlands	0	0	0	N/A	N/A
Managed Recharge	0	0	0	N/A	N/A
Natural Vegetation	Unknown	Unknown	Unknown	N/A	N/A
SUBTOTALS	105,370	0	2,010		
TOTAL	107,380				

In AF/yr

Note: To avoid double counting with groundwater pumping reported to MCWRA, Statement of Diversion and Use surface water diversions reported in Section 3.1.2 are subtracted from the total water use.

N/A = Not Applicable

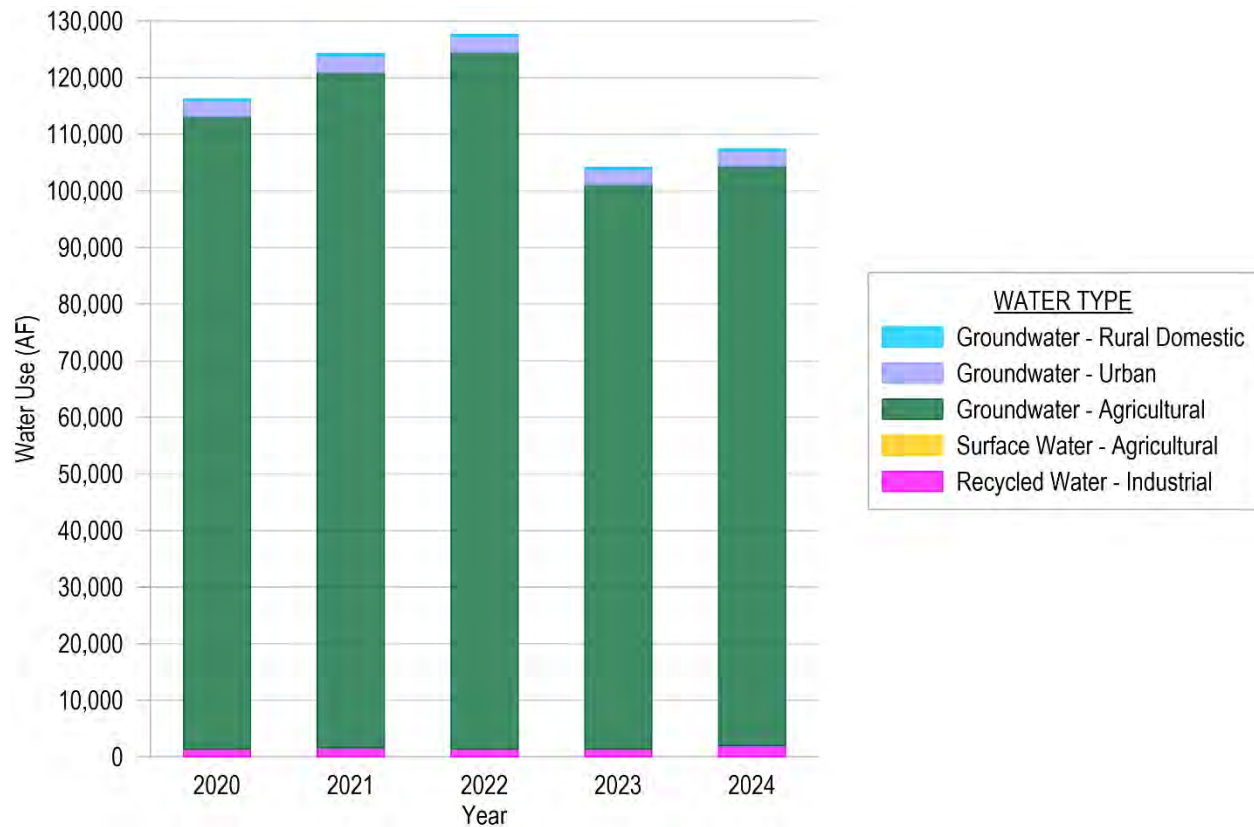


Figure 3-2. Total Water Use by Water Use Sector Since WY 2020

3.2 Groundwater Elevations

The groundwater elevation monitoring network in the Upper Valley Subbasin consists of 16 representative monitoring site (RMS) wells that currently monitored by MCWRA and are shown on Figure 3-3. This figure also includes 3 wells that SVBGSA will add to the RMS monitoring network for next year's annual report. In November 2024, SVBGSA installed 2 new wells—a shallow well in the alluvium (UV-ISW-1) and a deeper well in the Paso Robles Formation (UV-GWL-1)—near the unincorporated community of Bradley. Both wells will have pressure transducers installed. SVGBSA also added an existing well to the RMS network (24S/10E-25H50) that is yet to be monitored. These 3 wells will be monitored by MCWRA and their groundwater elevations will be reported starting next annual report. SVBGSA is working to fill the remaining data gaps in the monitoring network with additional wells.

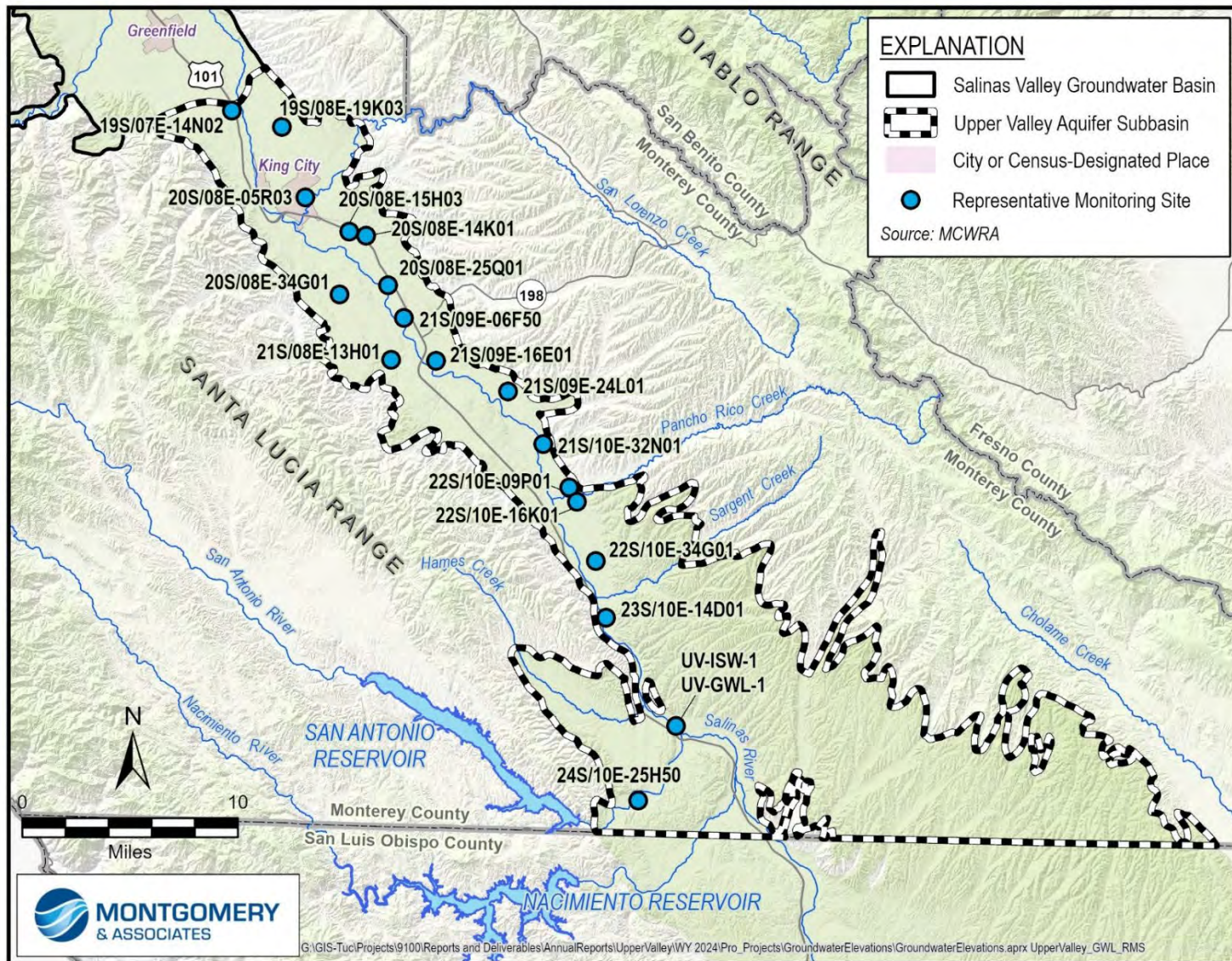


Figure 3-3. Locations of Representative Groundwater Elevation Monitoring Sites

WY 2024 groundwater elevation data are presented in Table 3-3. In accordance with the GSP, this report uses groundwater elevations measured in August to represent the seasonal low and fall to represent the seasonal high. Fall groundwater elevation measurements are collected by MCWRA during November and December. During these months, groundwater conditions are relatively neutral since they are generally not heavily influenced by either summer irrigation pumping or winter rainfall recharge. Fall groundwater elevations are used to estimate annual changes in groundwater elevations and to compare to SMC, as described in Section 4.2.1. Table 3-3 lists the approximate annual change in groundwater levels for the RMS wells that are shown on Figure 3-4. The annual change was calculated from fall 2023 to fall 2024, both of which were wet years. This figure shows that groundwater elevations rose in 9 RMS and remained stable or slightly declined in 7 wells. On average, groundwater elevations increased by approximately 0.9 feet with a range of -1.1 to 5.5 feet.

Table 3-3. Groundwater Elevation Data

Monitoring Site	August 2024 Groundwater Elevation	Fall 2024 Groundwater Elevation	Annual Change (Fall 2023 to Fall 2024)
19S/07E-14N02	236.8	241.8	-0.6
19S/08E-19K03	Not Sampled	253.8	0.7
20S/08E-05R03	Not Sampled	272	1.5
20S/08E-14K01	Not Sampled	296.2	2.2
20S/08E-15H03	Not Sampled	293.9	2.5
20S/08E-25Q01	Not Sampled	314.6	0.7
20S/08E-34G01	358.4	358.3	-0.4
21S/08E-13H01	395.3	395.4	5.5
21S/09E-06F50	322.1	321.3	-0.7
21S/09E-16E01	340	340.6	-1.0
21S/09E-24L01	Not Sampled	367.5	-0.9
21S/10E-32N01	384.2	382.8	-1.1
22S/10E-09P01	401	403.9	1.9
22S/10E-16K01	402.3	407.7	3.7
22S/10E-34G01	Not Sampled	428.3	0.2
23S/10E-14D01	443.3	442.7	-0.1

In feet, NAVD88

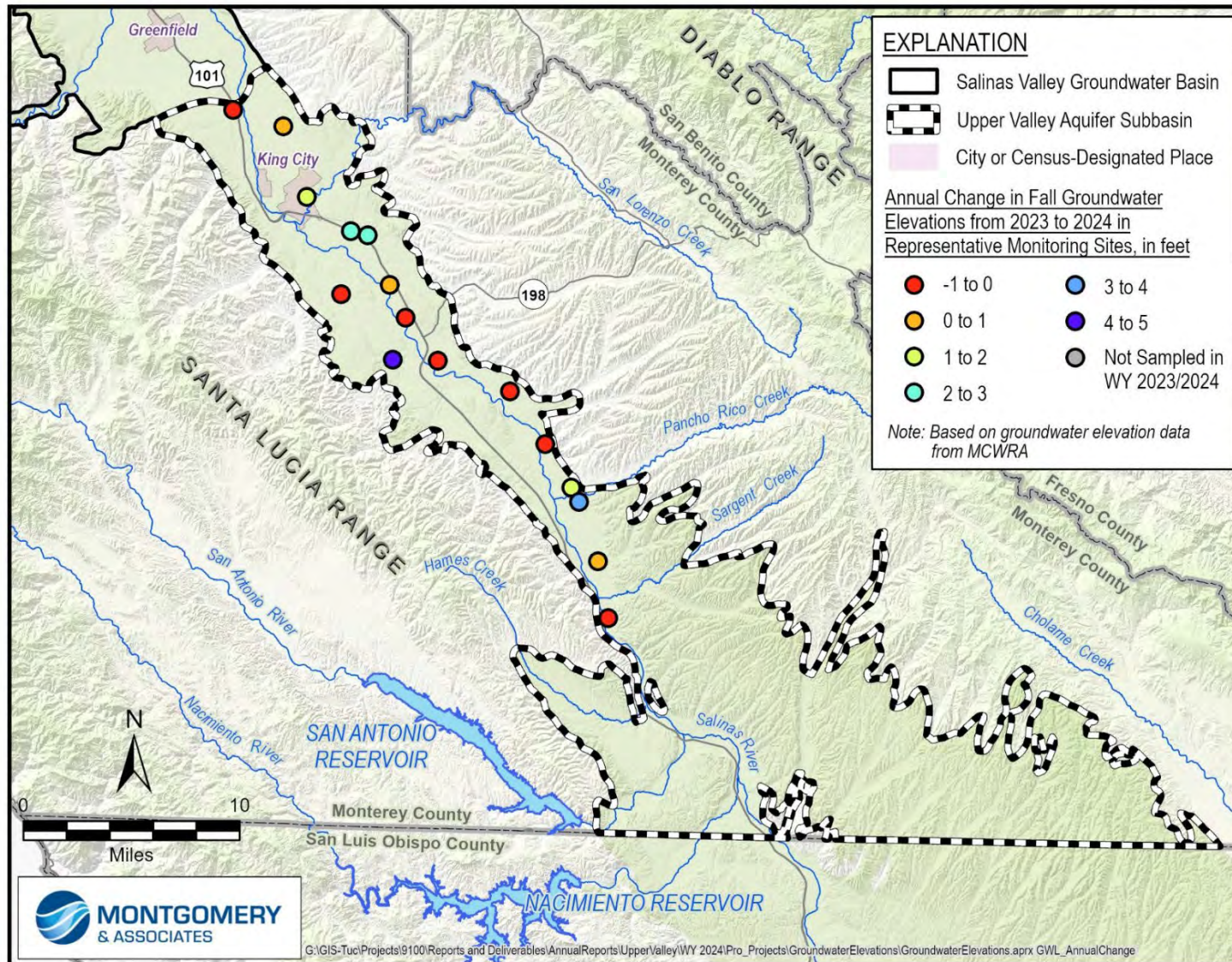


Figure 3-4. Annual Change in Fall Groundwater Elevations in Representative Monitoring Sites

3.2.1 Groundwater Elevation Contours

SVBGSA developed groundwater elevation contour maps for August 2024—which represents seasonal low conditions—and received fall 2024 maps from MCWRA. While the fall contours are considered neutral and the true seasonal high usually occurs between January and March (MCWRA, 2015), the GSP adopts fall groundwater elevations as the seasonal high for SGMA compliance because GSP monitoring is based on MCWRA’s existing monitoring. Additionally, fall elevations provide a more useful comparison year to year.

MCWRA contours only extend up to the MCWRA boundary of the Upper Valley Subarea, which covers the northern half of the Upper Valley Subbasin as shown on Figure 2-1. MCWRA’s current groundwater elevation monitoring program does not include wells located outside their Subarea boundary. To help fill this spatial data gap, SVBGSA has completed UV-ISW-1 in the alluvium and UV-GWL-1 in the Paso Robles Formation near the unincorporated community of Bradley. Groundwater elevations for UV-ISW-1 collected during well development were used to extend contours up to Bradley. Groundwater elevations south of Bradley were interpolated using Paso Robles Area Subbasin data. Groundwater elevation data for the Paso Robles Area Subbasin are collected by the San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD). SLOFCWCD collects seasonal high measurements in April and seasonal low measurements in October. MCWRA’s monthly program August data were used to produce the seasonal low groundwater elevation contours for the Upper Valley Subbasin. The October SLOFCWCD groundwater elevation data were used to approximate the contours south of Bradley.

Groundwater elevation contours for seasonal low and high groundwater conditions in the Upper Valley Subbasin are shown on Figure 3-5 and Figure 3-6, respectively. The contours indicate that groundwater flow directions are similar in the Upper Valley Subbasin during both seasonal low and seasonal high conditions, with groundwater elevations decreasing from the south to northwest. A slight groundwater elevation depression occurred in vicinity of King City during the fall.

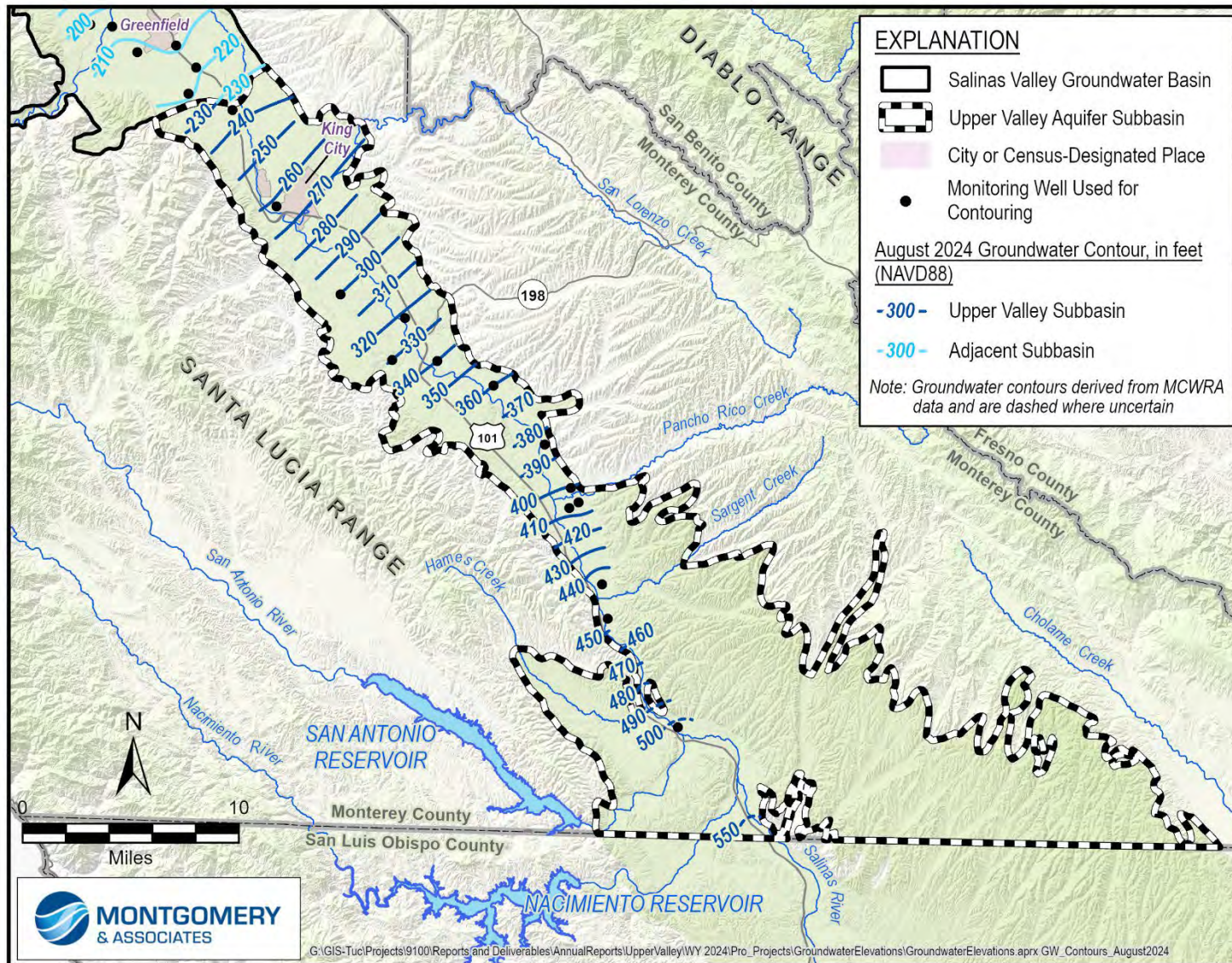


Figure 3-5. Seasonal Low Groundwater Elevation Contour Map for the Upper Valley Subbasin

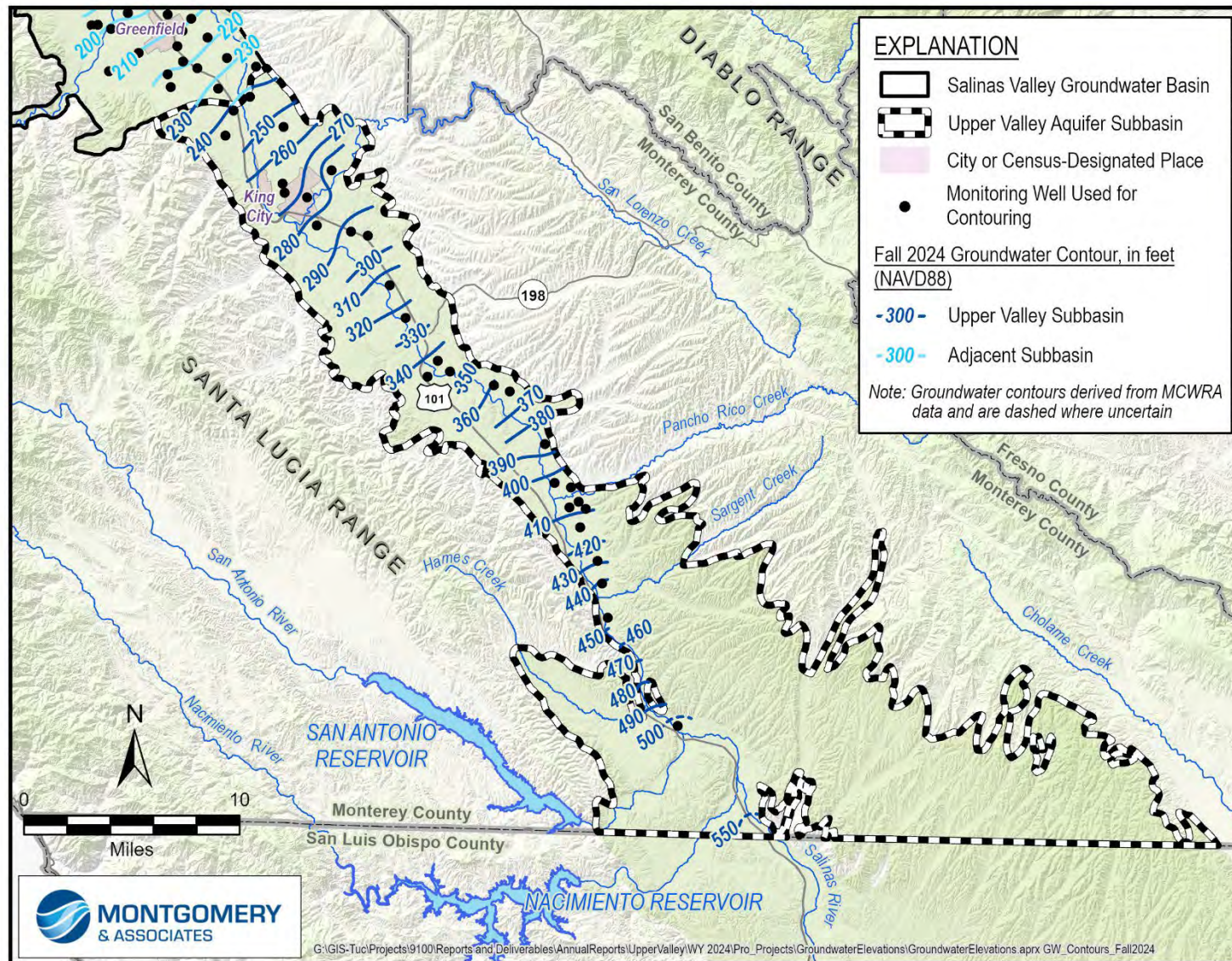


Figure 3-6. Seasonal High Groundwater Elevation Contour Map for the Upper Valley Subbasin

3.2.2 Groundwater Elevation Hydrographs

Temporal trends in groundwater elevations can be assessed with hydrographs that plot changes in groundwater elevations over time. Hydrographs for selected monitoring wells within the principal aquifer of the Upper Valley Subbasin are shown on Figure 3-7. These hydrographs are selected to show characteristic trends in groundwater elevation in the aquifer. The hydrographs indicate that groundwater elevations in the principal aquifer have generally remained stable throughout the Subbasin, dropping during periods of drought but later rebounding again. During the wet-normal conditions of WY 2024, groundwater elevations increased in a little over half the wells. Groundwater elevations in a well (20S/08E-34G01) that is drilled deeper in the principal aquifer were declining for several years but have remained stable since WY 2022. Hydrographs for all RMS wells are included in Appendix B.

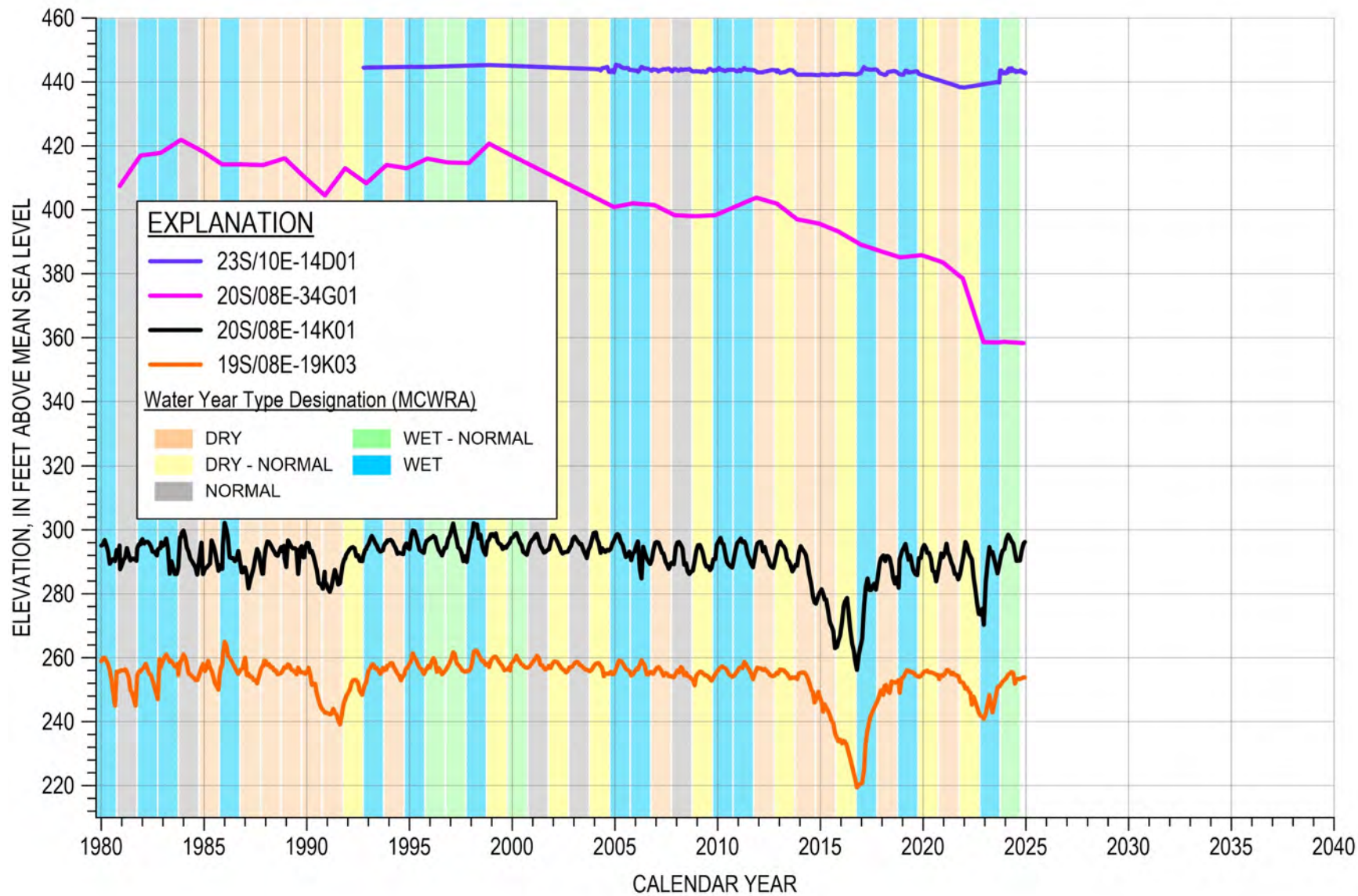


Figure 3-7. Groundwater Elevation Hydrographs for Selected Monitoring Wells

3.3 Change in Groundwater Storage

The Upper Valley Subbasin GSP adopted the concept of change in usable groundwater storage, defined as the annual average increase or decrease in groundwater that can be safely used for municipal, industrial, or agricultural purposes.

The annual change in storage calculation is based on the groundwater elevation contours adapted by SVBGSA using MCWRA data for fall 2023 and fall 2024. Fall measurements occur at the end of the irrigation season and before groundwater levels increase due to seasonal recharge by winter rains. These measurements record annual changes in storage reflective of groundwater recharge and withdrawals in the Subbasin.

Average annual change in groundwater elevations in the Upper Valley Subbasin from WY 2023 to WY 2024 is estimated by subtracting the fall 2023 groundwater elevations shown on Figure 3-8 from the fall 2024 groundwater elevations presented on Figure 3-6. The average change in groundwater elevations calculated this way is slightly different than those reported in Section 3.2, because it includes interpolated values. This change is then multiplied by the storage coefficient for the Basin Fill Aquifer of the Upper Valley Subbasin. The County of Monterey's State of the Basin Report approximates the storage coefficient to 0.10 for the Upper Valley Subarea (Brown and Caldwell, 2015).

The spatially estimated change in storage due to groundwater elevation changes across the Upper Valley Subbasin is shown on Figure 3-9. Groundwater storage increased in most of the Subbasin during WY 2024. Since the groundwater elevation contours do not extend across the entire Subbasin due to lack of data, storage change is not calculated in the areas that are not contoured, as indicated by the areas without color on Figure 3-9.

The components used for estimating change in groundwater storage due to groundwater elevation changes are shown in Table 3-4. Annual groundwater storage change due to changes in groundwater elevation from fall 2023 to fall 2024 increased by approximately 3,500 AF for the portion of the Upper Valley Subbasin (Figure 2-1). There is little known pumping in non-contoured areas within the Subbasin, therefore the actual change in storage may be higher or lower depending on average change in groundwater levels in the non-contoured area.

Table 3-4. Parameters Used for Estimating Annual Change in Groundwater Storage

Component	Values
Area of contoured portion of Subbasin (acres)	64,400
Storage coefficient	0.10
Average change in groundwater elevations (feet)	0.55
Total annual change in groundwater storage (AF/yr)	3,500

Note: Negative values indicate loss, positive values indicate gain.

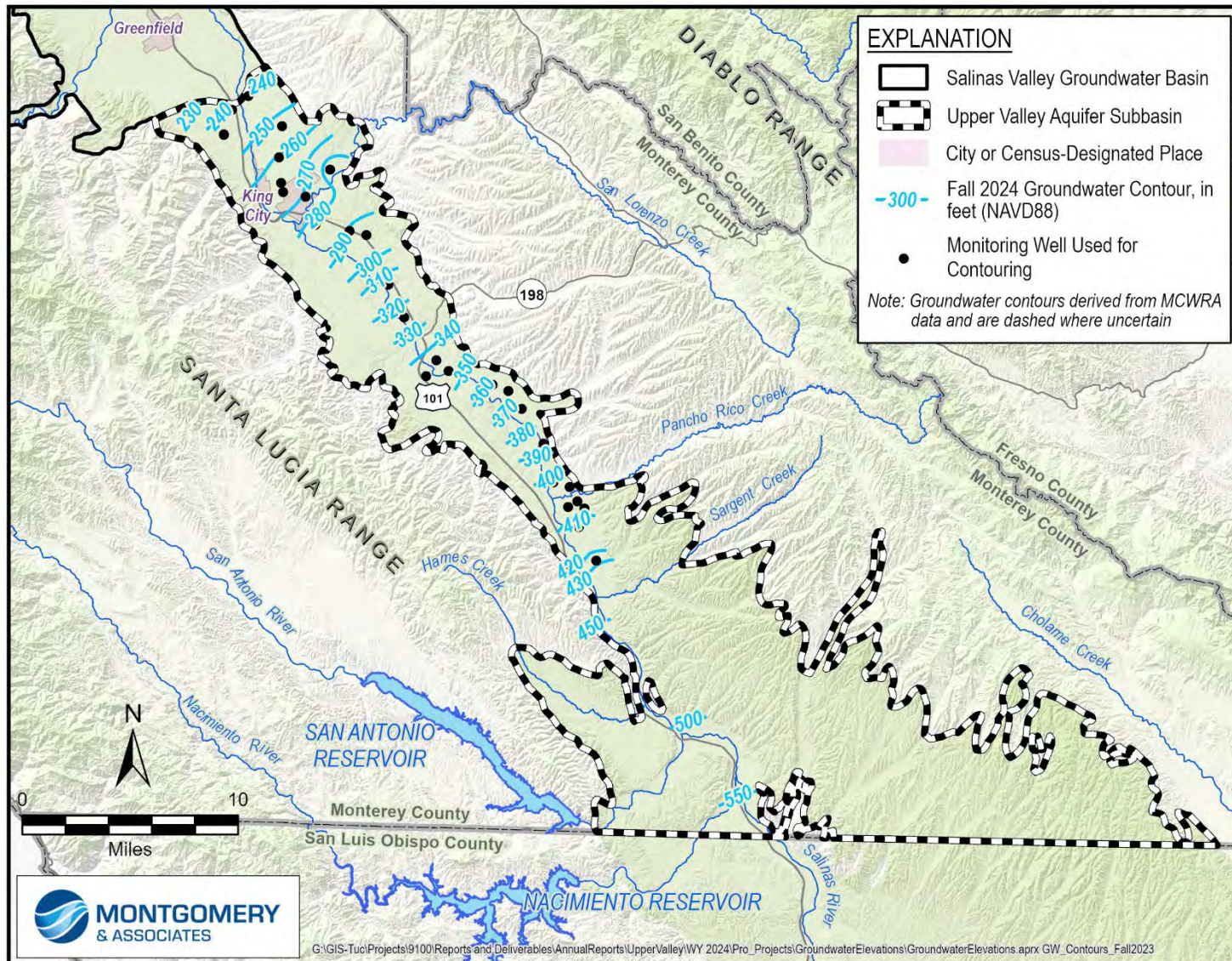


Figure 3-8. Fall 2023 Groundwater Elevation Contour Map

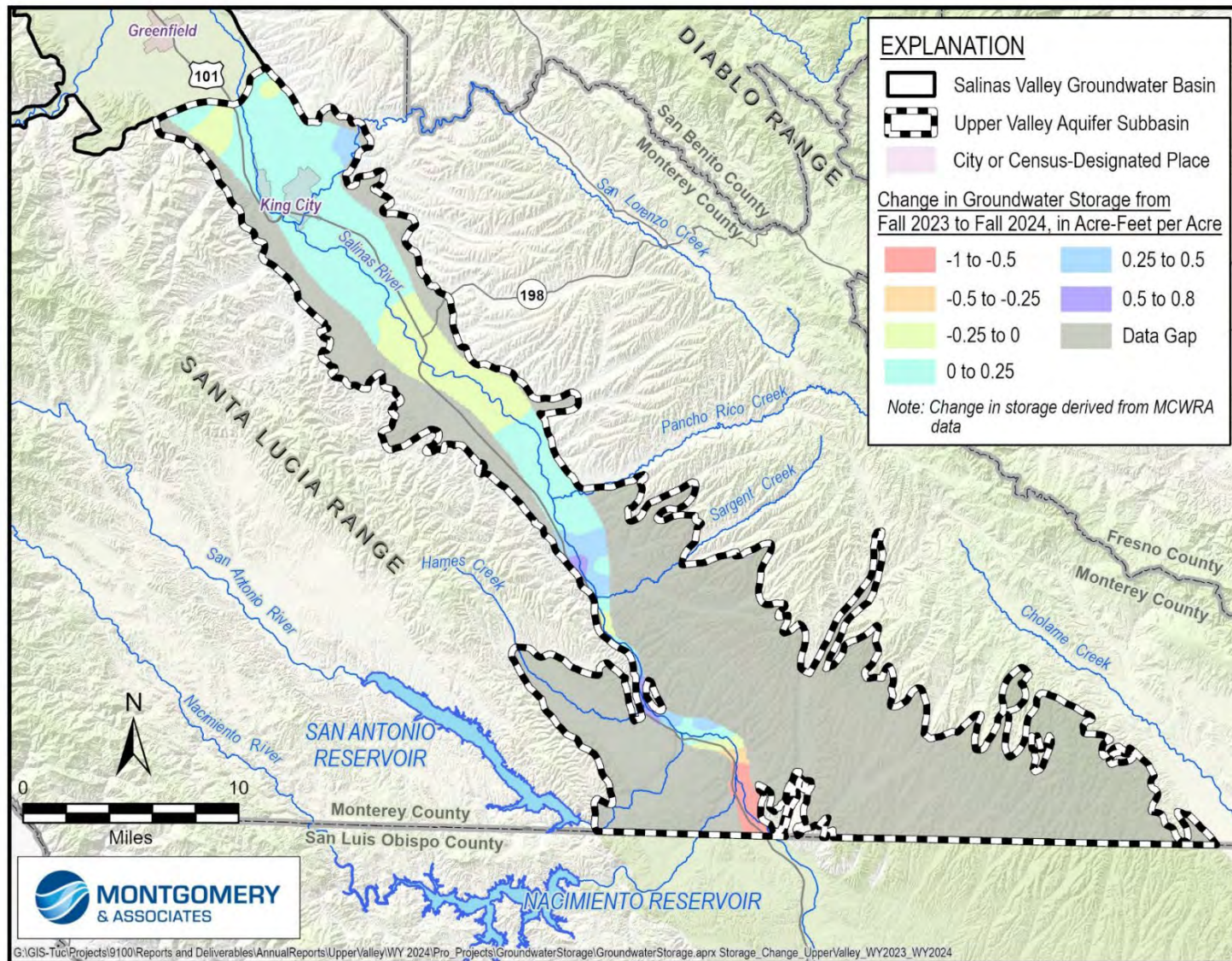


Figure 3-9. Estimated Annual Change in Groundwater Storage

GSP Regulations also require that annual and cumulative changes in groundwater storage and groundwater use along with water year type data are plotted together, as shown on Figure 3-10. The annual and cumulative groundwater storage changes included on Figure 3-10 are based on average groundwater elevation changes for the area of the Subbasin that overlaps with MCWRA's Upper Valley Subarea (Figure 2-1). This figure includes groundwater extraction from 1995 to 2024, 1995 to 2016 average historical extraction, and the 2070 projected extraction from Chapter 6 of the GSP. Although WY 2024 was the second consecutive year with wetter conditions, pumping increased slightly since the previous year, but is lower than the historical average and projected pumping. The orange line illustrates cumulative storage change since 1944 (e.g., zero represents groundwater conditions in 1944, and each year the annual change in storage is added to produce the cumulative change in storage). The green line represents the annual change in storage from the previous year, so the 1995 annual change in storage value is based on change in storage from 1994. From WY 2023 to WY 2024, groundwater storage increased slightly from the large increase in storage that occurred during WY 2023, as shown by the green line, bringing the cumulative change in storage since 1944 to about -20,500 AF, as shown by the orange line.

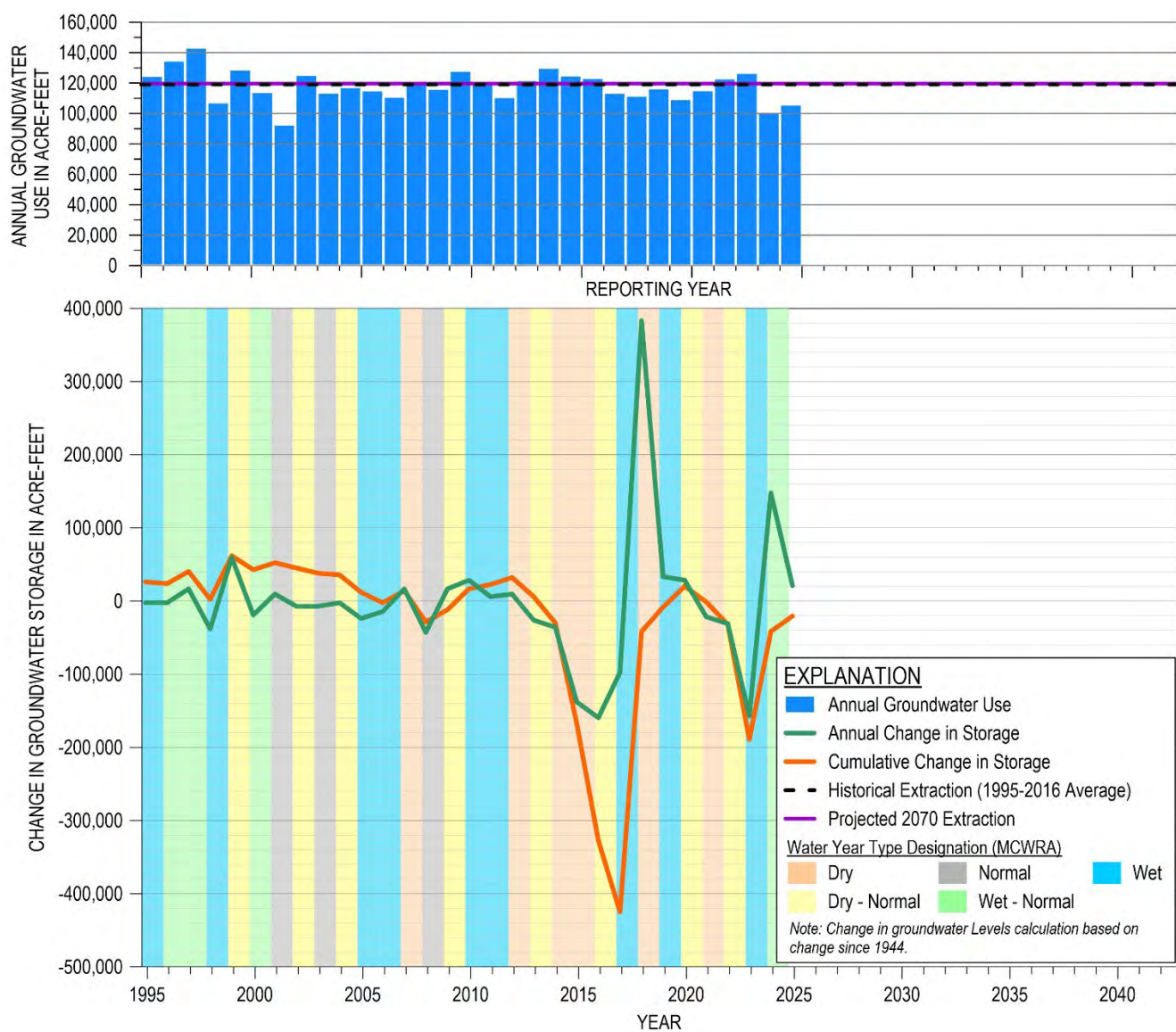


Figure 3-10. Groundwater Use and Annual and Cumulative Change in Groundwater Storage

3.4 Groundwater Quality

Degradation of groundwater quality is measured in 3 sets of wells: public water system supply wells, on-farm domestic wells, and irrigation wells. Data collected by SWRCB Division of Drinking Water (DDW) is used to evaluate groundwater quality in public water system supply wells. Under the Irrigated Lands Regulatory Program (ILRP), which is regulated by the CCRWQCB, water quality is monitored for on-farm domestic wells and irrigation wells. Water quality data for both programs can be found on SWRCB's Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System (SWRCB, 2024b). However, through collaboration with the CCRWQCB and Central Coast Water Quality Preservation, Inc., after the submittal of the WY 2023 Annual Report it was determined that the GAMA groundwater information system is missing ILRP data. Therefore, in this annual report and future reports produced by the SVBGSA, water quality in ILRP wells is evaluated using data directly from the CCRWQCB. The constituents of concern (COCs) for public water system supply wells and domestic wells have a Maximum Contaminant Level (MCL) or Secondary Maximum Contaminant Level (SMCL) established by the State's Title 22 Regulations. The COCs for irrigation wells include those that may lead to reduced crop production and are outlined in the Basin Plan for CCRWQCB (CCRWQCB, 2019). As discussed in the GSP, each set of wells has its own COCs and only the most recent sample for each COC and each well are considered. In addition, the 2019 baseline that forms the basis for the minimum thresholds and measurable objectives were adjusted for ILRP wells based on the more complete dataset provided by the CCRWQCB. The wells used to monitor groundwater quality have been updated. In addition, the 2019 baseline that forms the basis for the minimum thresholds and measurable objectives was adjusted for ILRP wells based on the more complete dataset provided by the CCRWQCB and are further described in Section 4.2.3.1.

Table 3-5 shows the number of wells that were sampled in 2024 and that have chemical concentrations above the regulatory standard for the COCs in the Upper Valley Subbasin. Figure 3-11 shows that groundwater samples from 45 wells had concentrations exceeding the regulatory standard for 6 COCs, with 15 wells having multiple exceedances. The COCs with concentrations above the regulatory standard include gross alpha radioactivity, iron, manganese, nitrate+nitrite, and specific conductance. Appendix C includes the 2024 water quality data that were used in this Annual Report.

Table 3-5. Annual Exceedances of the Regulatory Standard for the Upper Valley Subbasin Constituents of Concern

Constituent of Concern (COC)	Regulatory Exceedance Standard	Standard Units	Number of Wells Sampled for COC in 2024	Number of Wells Exceeding Regulatory Standard in 2024
DDW Wells				
Aluminum	1000 (MCL) 200 (SMCL)	UG/L	6	0
Arsenic	10	MG/L	7	0
Barium	1	MG/L	6	0
Boron	1	MG/L	0	0
Carbon tetrachloride	0.5	UG/L	7	0
Dichloromethane (Methylene Chloride)	5	UG/L	7	0
Foaming Agents (MBAS)	0	MG/L	6	0
Gross Alpha radioactivity	15	pCi/L	5	1
Iron	300	UG/L	9	4
Manganese	50	UG/L	7	2
Nitrate (as nitrogen)	10	MG/L	27	0
Specific Conductance	1600	UMHOS/CM	9	1
Sulfate	500	MG/L	8	0
Total Dissolved Solids	1000	MG/L	9	0
Uranium	20	pCi/L	6	0
ILRP On-Farm Domestic Wells				
Chloride	250	MG/L	0	0
Nitrate (as nitrogen)	10	MG/L	0	0
Nitrate + Nitrite (sum as nitrogen)	10	MG/L	40	20
Specific Conductance	1600	UMHOS/CM	40	17
Sulfate	500	MG/L	0	0
Total Dissolved Solids	500	MG/L	0	0
ILRP Irrigation Supply Wells				
Chloride	350	MG/L	0	0

mg/L- milligram/Liter

pCi/L – Picocuries/Liter

ug/L - micrograms/Liter

UMHOS/CM - micromhos/centimeter

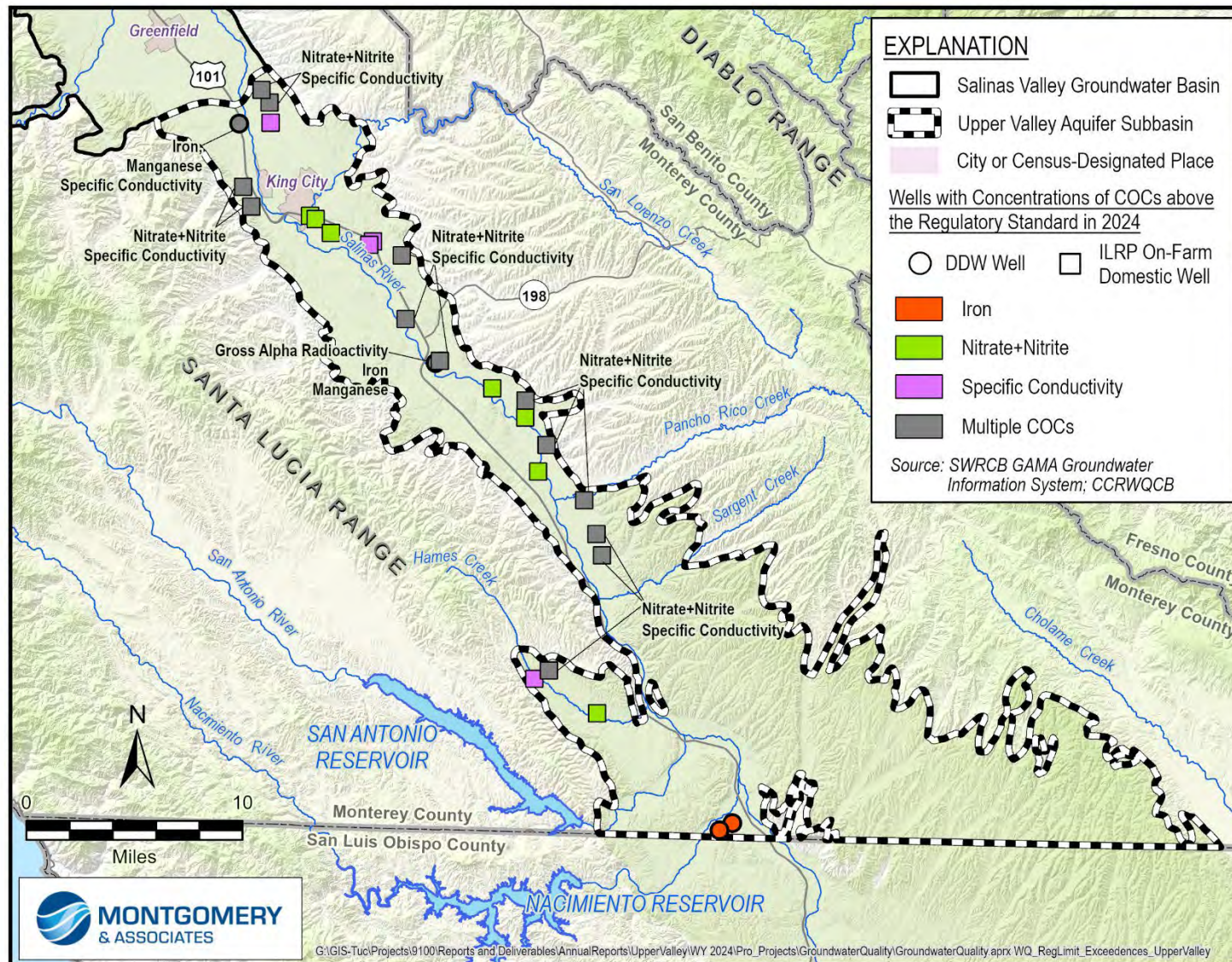


Figure 3-11. Wells with COC Concentrations Above the Regulatory Standard

3.5 Subsidence

Subsidence is measured using Interferometric Synthetic-Aperture Radar (InSAR) data. These data are provided by DWR on the SGMA data viewer portal (DWR, 2024). Figure 3-12 shows the annual subsidence for the Upper Valley Subbasin from October 2023 to October 2024. Data continue to show negligible subsidence. All land movement was within the estimated measurement error of +/- 0.1 foot.

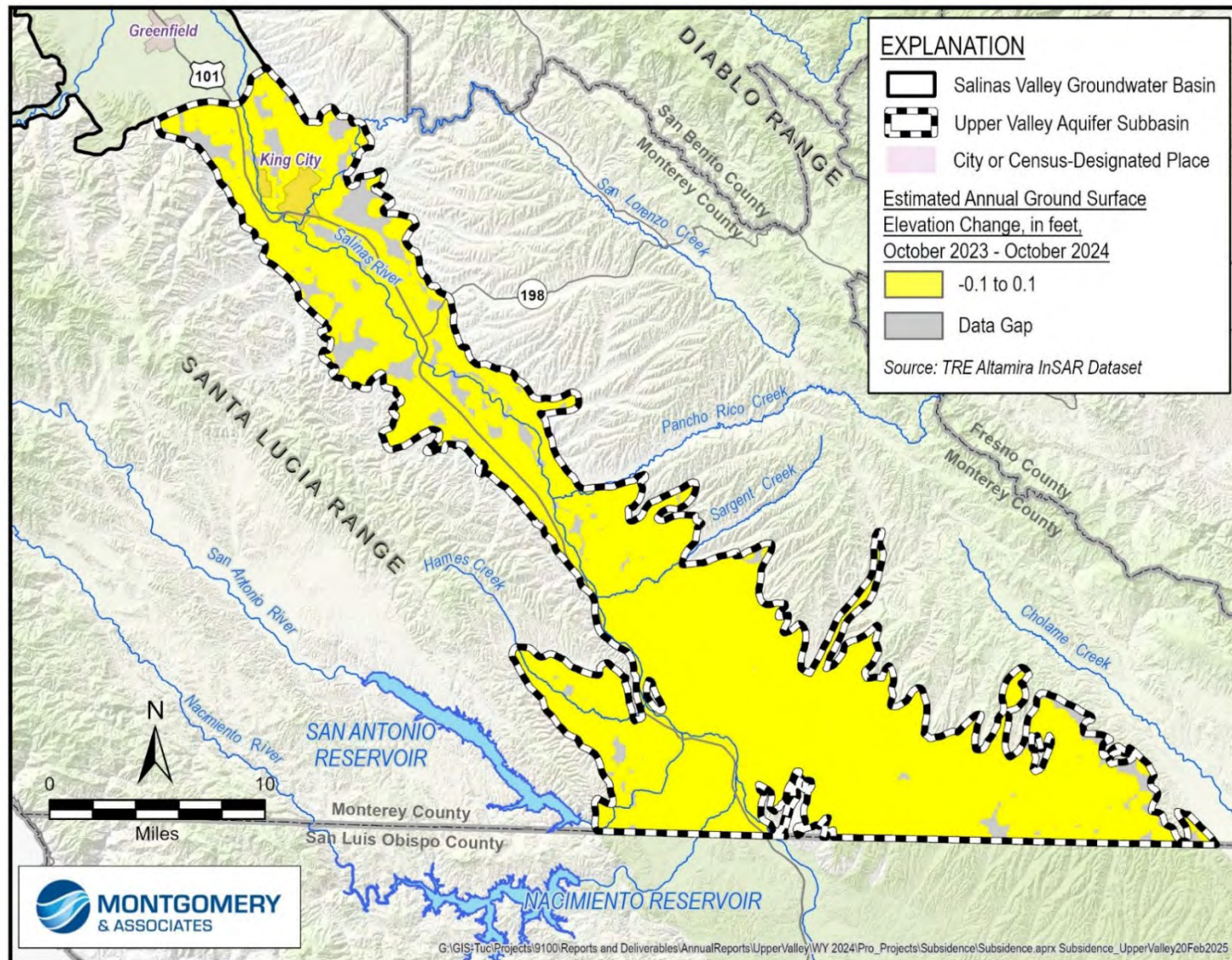


Figure 3-12. Annual Subsidence

3.6 Depletion of Interconnected Surface Water

As described in Section 4.4.5.1 of the GSP, there are locations of ISW mainly along the Salinas River and along some of its tributaries. ISW is monitored using shallow groundwater elevations near locations of ISW as a proxy for depletion of ISW due to pumping. Seepage from a stream to the underlying aquifer is proportional to the difference between water elevation in the stream and groundwater elevations at locations away from the stream. Assuming the elevation in the stream is relatively stable, changes in interconnectivity between the stream and the underlying aquifer are determined by changes in groundwater levels in the aquifer. The hydraulic gradient between the stream and aquifer decreases when groundwater levels in the aquifer rise, thus resulting in decreased ISW depletions. ISW depletions increase when groundwater elevations decline. The proxy relationship is established in Section 8.10.2.1.1 of the GSP.

The ISW monitoring network consists of 4 shallow wells, which are all RMS wells. One well (20S/08E-25Q01) was added to the ISW RMS network to provide more spatial coverage along the Salinas River. This well was already part of the groundwater elevation monitoring network. The current RMS wells will be supplemented with a new shallow well that was installed along the Salinas River near Bradley. Table 3-6 lists the 2023 and 2024 shallow groundwater elevations and the annual change in shallow groundwater elevations for the ISW monitoring wells in the Subbasin. Shallow groundwater elevations increased in 2 of the monitoring wells and decreased in the 2 other monitoring wells. This could indicate that there was less depletion of ISW in the northern part of the Subbasin than in the more southern parts in WY 2024 compared to WY 2023. Figure 3-13 shows the locations of the ISW RMS wells.

SVBGSA is working to fill data gaps in the monitoring network with additional wells.

Table 3-6. Shallow Groundwater Elevation Data

Monitoring Well	WY 2023 Groundwater Elevation	WY 2024 Groundwater Elevation Data	Annual Change
19S/07E-14H01	243.5	243.7	0.2
20S/08E-25Q01	313.9	314.6	0.7
21S/09E-16E01	341.6	340.6	-1.0
23S/10E-14D01	442.8	442.7	-0.1

In feet, NAVD88

N/A = Not Applicable

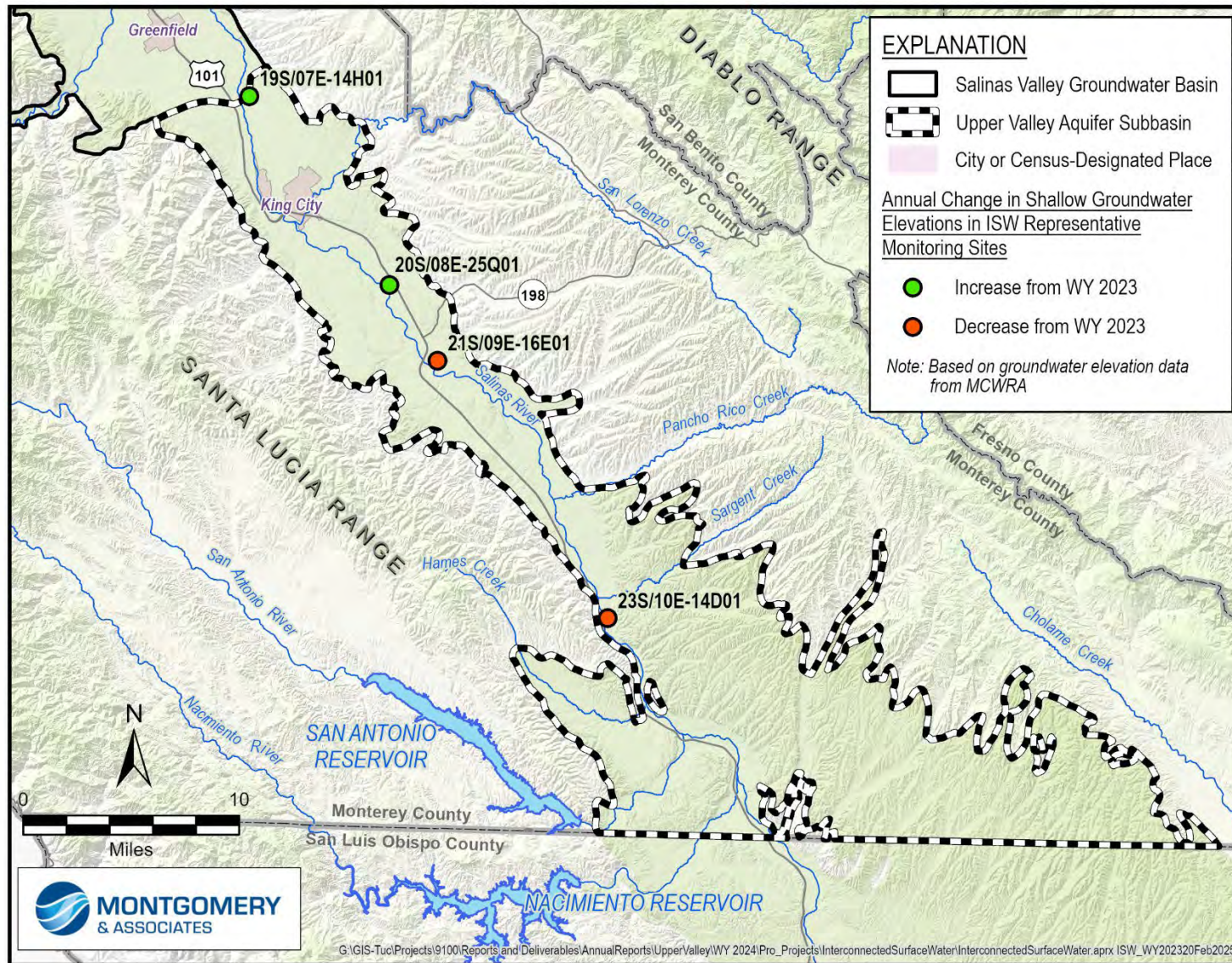


Figure 3-13. Annual Change in Shallow Groundwater Elevations in ISW Representative Monitoring Sites

4 ANNUAL PROGRESS TOWARD IMPLEMENTATION OF THE GSP

This year SVBGSA increased efforts in several areas. To better align with the Agency’s work plan and summarize recent updates, this section reports on activities conducted throughout WY 2024 to the end of calendar year 2024—i.e., October 2023 to December 2024—with the entire period referred to as 2024. Sections are included for each of the following 4 categories in the work plan:

- General Administration
- Interested Parties Coordination and Outreach
- Data Expansion and SGMA Compliance
- Projects and Management Actions

4.1 Groundwater Management Activities

4.1.1 Progress on General Administration: GSA Policies and Operations

SVBGSA carried out general administrative activities in support of SGMA compliance, data expansion communications and outreach, and assessment of projects and management actions. SVBGSA has a contract with Regional Government Services (RGS), which provides administrative and financial staffing services. In addition to managing a range of governance, financial, and communication activities, a special effort was put into administrative process improvements and board development.

From October 2023 to December 2024, in alignment with the SVBGSA work plan, 13 Board of Directors meetings and multiple Board committee meetings, including 5 Executive Committee and 8 Budget Finance Committee meetings, were conducted to ensure effective decision-making and oversight. Grant administration remained a key focus, with management of the SGM Round 2 Implementation Grant for the Salinas Valley underway. A Groundwater Sustainability Fee 5-year evaluation by Hansford Economic Consulting was initiated, including stakeholder input through Advisory Committee and Board meetings. The work commenced in April 2024 and concluded in Fall 2024, with potential recommendations for fee changes implemented in Fiscal Year (FY) 2026.

Financial oversight and budget preparation were enhanced through a revised format for budget and financial reports, introduced in October 2023. The FY 2025 work plan, approved in March 2024, comprised greater detail and included projections for FY 2026-FY 2027. Additionally, the Board approved three new financial policies, revisions to one existing policy, and a comprehensive Bylaws amendment that included an addition of Code of Conduct.

The Subbasin Implementation Committees Membership Program was developed, establishing guidelines for selecting and appointing members to the SVBGSA Subbasin Implementation Committees, followed by a successful solicitation of committee members for the next 2-year term.

Multiple administrative improvements were actively pursued, including an assessment of clerical tasks and staffing support. A Board ad-hoc committee was formed to evaluate services provided by RGS and conduct a performance review of General Manager in August and September 2024. Board development initiatives included a governance training session in June 2024 and the establishment of an online resource library for board members.

Overall, these accomplishments reflect a commitment to strong governance, financial responsibility, and transparent communication in support of the agency's strategic goals.

Progress according to individual General Administrative tasks within the work plan are summarized in Table 4-1.

Table 4-1. Progress on General Administrative Tasks Within Work Plan as of December 2024

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments (from October 2023 to December 2024)
Organize and Conduct Agency Board and Committee Activities	Manage Board of Directors (BOD, or Board), Executive Committee, Budget and Finance Committee Activities			x		Ongoing; the Board of Directors meets monthly; the Board met 13 times, Executive Committee met 5 times, and the Budget and Finance Committee met 8 times.
Provide Grant Administration	Manage SGM Round 1, SGM R2 SVBGSA and SGM R2 MCWDGSA Implementation Grants			x		Ongoing
Prepare Regulatory Fee Study Update	Develop scope of work, timeline and process				x	Joint Advisory Committee and Board meeting to provide input for scope held in October, survey conducted and shared with AC in December, Board made a final decision in January 2024. Agreement with HEC executed in March 2024.
	Conduct Sustainable Groundwater Fee 5-Yr Evaluation and prepare memorandum. Manage the process, outreach and implementation			x		Technical Memorandum by HEC accepted by the Board in Nov 2024. Advisory Committee developed a recommendation for the Board in regard to implementing the Fee changes in FY 2026. Decision on which recommendations to implement anticipated to be made in Spring 2025.
Manage Budget Preparation and Financial Reporting	Improve the format and process for financial reports			x		New budget and financial report format developed in October. Bi-monthly financial reports produced going forward. Continuing to assess and include enhancements for greater transparency
	Prepare work plan and annual draft budget		x			FY 2026 work plan to be prepared for Board review in Feb/Mar 2025.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments (from October 2023 to December 2024)
Provide Administrative Oversight	Review and update Agency policies			x		Ongoing to ensure relevancy
	Assess and improve administrative processes			x		Ongoing
	Determine appropriate staffing support for administrative services			x		Ad-Hoc committee convened to assist Board in evaluating the services provided by RGS. Board conducted GM evaluation in October 2024. Process for GM performance and RGS services review under discussion by Executive Committee.
Coordinate Board Development	Engage Board and staff in Agency vision and values discussion				x	Prepared a Code of Conduct that is included in Amended Bylaws, approved by Board in August 2024.
	Assess structure, goals and purpose of all committees			x		Developed Subbasin Implementation Committee Membership Program, conducted solicitation for new term. Committee members appointed by Board in September 2024. Advisory Committee structure and role under review.
	Develop Board development strategy			x		Conducted a Board governance training in June 2024. Board resource library available on svbgsa.org. Second training planned for later in FY.
Manage Communications	Develop Agency communications strategy				x	Developed a communications strategy to be implemented by Miller Maxfield in FY 2025 and FY 2026.
	Develop work plan to support the communications strategy			x		Developed in alignment with FY 2025 work plan. Periodic updates of the work to be brought to Board.
	Revamp and enhance Agency website			x		Ongoing

4.1.2 Progress on Interested Parties Coordination and Outreach

During 2024, SVBGSA continued to coordinate with partner agencies, conduct extensive engagement of stakeholders, and outreach on groundwater and SGMA activities. The Upper Valley Implementation Committee met 6 times during the year.

SVBGSA and MCWRA continued to strengthen collaboration further, particularly with monitoring and data activities and the tasks under the Round 1 and 2 SGM Implementation Grants. SVBGSA also held other ongoing meetings with County of Monterey Environmental Health Bureau, land use jurisdictions, and Preservation, Inc., who assists growers with Irrigated Lands Regulatory Program compliance.

Conducting periodic outreach with small water systems, domestic well owners, Disadvantaged Communities (DACs), growers not currently involved, and other stakeholders on topics such as groundwater, SGMA, and SVBGSA remains a challenge, given such a diverse audience and the complexity of the issues. SVBGSA worked with Miller Maxfield, a local communications firm, to develop a communication strategy to expand the reach and enhance the narrative. Miller Maxfield assisted with improving the website, preparing outreach materials, and utilizing social media to effectively engage more people. SVBGSA actively participated in the Water Awareness Committee (WAC) to disseminate information and resources about SVBGSA, groundwater management, and domestic water use efficiencies. This included, among other things, having a booth at the Monterey County Fair with other WAC member agencies.

As part of SVBGSA efforts on advancing the demand management dialogue, 5 Our Water Future in the Salinas Valley workshops were held in Spring 2024 at different locations in the Salinas Valley. These workshops, jointly planned and executed by Dave Ceppos, Miller Maxfield, and Montgomery & Associates, were widely advertised and geared toward the general public. Along with presentations by guest speakers and having lively discussions with them, participants engaged in a water management exercise to illustrate key concepts. For these events, the Marcom Awards honored Miller Maxfield and SVBGSA with Gold in Public Relations: Special Event 2024 recognition.

Progress on individual Interested Parties and Outreach tasks within the work plan are summarized in Table 4-2.

Table 4-2. Progress on Interested Parties Coordination and Outreach as of December 2024

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments (includes meetings from October 2023 to December 2024)
Utilize SVBGSA Committees and Partnerships for informing constituents	Host Advisory Committee (AC)			x		AC meets bi-monthly or as needed to provide community input to the BOD; held 7 AC meetings
	Host Subbasin Implementation Committees			x		Held 6 Upper Valley Committee meetings
	Host Groundwater Technical Advisory Committee (GTAC)			x		Meets as needed; held 5 GTAC meetings
	Coordinate meetings with partner agencies: MCWRA, M1W, MCWD GSA, ASGSA, MCEHB, Water Quality Coordination Group, Land Use Coordination Group			x		Regularly met with partner agencies regularly for general coordination and on specific work streams.
	Develop scientific communication materials and outreach materials for events			x		In partnership with Miller Maxfield, developed materials for County Fair and North Monterey County Community Resource Festival
Engage with Underrepresented and Disadvantaged Communities	Review 2020 DAC engagement strategy and develop implementation plan through 2027		x			Developing implementation plan in support of SGM R2 grant scope. Initiated planning for Water Leadership Institute with EDF and RCDC
	Form AC DAC Working Group		x			Developing implementation plan in support of SGM R2 grant scope.
	Translation of SVBGSA website and key information			x		Activated translation feature on svbgsa.org
Enhance Partnerships with Domestic Well Owners	Support Dry Well Notification Program			x		Information about the Dry Well Notification Program distributed to interested parties and shared via social media channels
	Water Awareness Committee/ Conservation Communication			x		Staff participates and contributes to the WAC. Held booth at Monterey County Fair WAC Water Showcase on August 31, 2024.
	Domestic Well Owner Outreach/ Water Use Efficiency Resources		x			Planning for development of Rural Residents Water Efficiency Pilot Program.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments (includes meetings from October 2023 to December 2024)
Develop and Support Website for Central Coast Ag Water BMPs	Engage with partner agencies and contract with website developer to create website					<p>Work under way with RCDMC, RCDSC, PVWMA, SVBGSA and UCCE collaborating on website development and content.</p> <p>Executed contract with TreeTop Web Design for building the website. Draft website has been created and partners are adding content.</p>

4.1.3 Progress on Data Expansion and SGMA Compliance

Along with annual SGMA compliance tasks, SVBGSA and partner agencies focused heavily on filling data gaps and groundwater modeling this year to establish a solid basis for planning projects and management actions. Main workstreams included the following:

- **Groundwater Monitoring Program with Well Registration and Groundwater Extraction Monitoring Expansion:** SVBGSA collaborated with MCWRA on the development of a Groundwater Monitoring Program. MCWRA adopted Ordinance 5246 in October 2024. The Ordinance updates the previous groundwater extraction monitoring program, expands extraction reporting to the SVBGSA geographic boundaries, expands well registration to all types of wells in the SVBGSA geographic boundaries, aligns the extraction reporting period with the water year, and shifts the extraction reporting timeline earlier to make data available for SGMA annual reports. MCWRA furthered the existing well registration program with desktop data collection to summarize the locations and depths of all wells with existing information from public records. The data will be used for outreach to well owners to register their wells. WY 2024 extraction data was provided by MCWRA in time to be included in the WY 2024 Annual Report.
- **GDE Verification:** The GDE Working Group continued providing input to SVBGSA and the Central Coast Wetlands Group (CCWG) about the methodology to identify GDEs and an approach to monitor and assess impacts to GDE health. CCWG completed a GDE identification and GDE Monitoring Standard Operating Procedure.
- **HCM Update:** In preparation for the GSP 2027 Periodic Evaluation and groundwater flow model updates, Montgomery & Associates updated the Subbasin's HCM. Based on new information that has become available since the development of the GSP, such as the AEM data, priorities were identified to adjust the conceptualization according to the new data and, if needed, new analyses. The data, methods, and key findings are summarized in Appendix A.

One challenge was the continued delay in the completion of the final Valley-wide Salinas Valley Integrated Hydrologic Model (SVIHM) under development by USGS. The public release of the Valley-wide model is now anticipated in early 2025.

Additional SGMA compliance activities during 2024 included updating SVBGSA's Data Management System and web map, submitting monitoring data to DWR, and completing annual reports.

Progress on individual Data Expansion and SGMA Compliance tasks within the work plan is summarized in Table 4-3. The approach and progress on RCAs were described in the WY 2023 Annual Report, and the progress towards addressing them is summarized in Table 4-4.

Table 4-3. Progress on Data Expansion and SGMA Compliance as of December 2024

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Develop Well Registration Program	Conduct desktop data collection			x		MCWRA completed the desktop analysis for existing well records in 180/400 and is in progress for the remaining subbasins.
	Develop well registration program, policies and procedures			x		MCWRA ordinance (No. 5426) was passed for the Groundwater Monitoring Program (GMP) which includes expansion of groundwater extraction monitoring and well registration. MCWRA has also developed a GMP Manual. Service agreement, along with annual task orders (between MCWRA and SVBGSA) is being prepared to formalize the partnership.
	Develop well registration program report (implementation plan)		x			Preparing a summary report of well registration data and data gaps.
	Conduct outreach and data solicitation			x		MCWRA and SVBGSA developing outreach strategy and schedule to inform various interest groups and general public. General outreach about the GMP has begun, specific activities to individual target groups are being planned.
	Conduct data management options evaluation		x			MCWRA is scoping and planning well registration data management systems options.
Expand and Enhance Groundwater Extraction Monitoring	Development and adoption of regulatory framework in collaboration with MCWRA				x	MCWRA ordinance (No. 5426) was passed for the GMP which includes expansion of groundwater extraction monitoring and well registration. MCWRA has also developed a GMP Manual.
	Conduct feasibility study for extraction data collection			x		Five growers participated in a feasibility study for using satellite data to estimate net groundwater extraction. Cal Poly collected and processed data and produced a report.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
						"Well bubblers" are used to measure groundwater elevation and might be helpful to pair with extraction data. 1 domestic well owner and 3 agricultural well owners have agreed to test the tool.
	Develop groundwater extraction monitoring expansion and enhancement implementation report			x		Preparing a summary report of groundwater extraction monitoring expansion and data gaps
	Develop groundwater extraction monitoring policies and/or procedures			x		Service agreement, along with annual task orders (between MCWRA and SVBGSA) are being prepared to formalize the partnership.
	Conduct groundwater extraction monitoring field work and data collection		x			Service agreement, along with annual task orders (between MCWRA and SVBGSA) are being prepared to formalize the partnership
Expand Groundwater Level Monitoring Network	Well design, bid assist, construction management, & monitoring activities			x		M&A completed technical specifications for the monitoring wells and provides on-site technical oversight during drilling
	Well construction			x		Well construction of 2 monitoring wells is completed in the Upper Valley Subbasin. 4 more are planned.
Test Aquifer Properties	Fill aquifer properties data gap(s)		x			Reviewed Monterey County permit files for existing reports. Working with landowners to plan tests.
Prepare Hydrogeologic Conceptual Model (HCM) for GSP 5-year Evaluation	Refine and incorporate new data into HCMs			x		The refined HCM (incorporating AEM data) for Upper Valley Subbasin has been finished and presented. M&A is completing the final memos.
	Prepare valley-wide HCM report			x		Refined HCMs will be incorporated into a valley-wide report.
Verify GDEs	Develop methodology with CCWG				x	GDE Working Group convened seven times to provide CCWG and SVBGSA input. Additional subject matter experts were consulted for their input on the methodology. Methodology was presented at the June Advisory Committee meeting.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
	Conduct field reconnaissance to verify presence		x			Work planned for 2025
Host and Manage DMS	Manage and update DMS concurrent with annual report preparation			x		Upload of new water year data into DMS in progress
Maintain, Enhance and Update Groundwater Models	Provide USGS model oversight			x		Anticipate completion of Model in early 2025.
	Manage USGS Tech Services Agreement			x		SVBGSA fiscal contribution.
	Plan and implement groundwater model updates		x			Upon completion of the model updates, new versions will be used to evaluate PMAs
	Review/update completed model and prepare a summary report	x				
Prepare Annual Reports	Gather input from ICs			x		Input requested from all committees for WY 2024 conditions and narrative.
	Prepare, submit and present annual reports			x		M&A is working on preparing WY 2024 Annual Reports due to DWR by April 1.
	Provide options and recommendation for AR process to BOD				x	Inform BOD on the role of subbasin implementation committees in the preparation of annual reports.
Address RCAs	Review RCAs and develop strategies for addressing them			x		RCAs and proposed strategies for addressing them were presented to the subbasin implementation committees for their review and input. Respective activities will be included in the Work Plans for FY 2025 and beyond.
Review Well Permits (as needed)	Review Well Permits (as needed)			x		EO N-7-23 no longer in place.
Carry out Other GSP Implementation Actions	Prepare Water Quality Coordination Update Report		x			Coordination initiated with County through Basin Investigation.
	Prepare Land Use Update Report		x			

Table 4-4. Plan for Addressing RCAs

No.	RCA	Action to Address	Status
1	Conduct necessary investigations or studies to understand the degree to which groundwater extraction affects groundwater quality in the Subbasin.	<ul style="list-style-type: none"> SVBGSA will conduct analysis of 2015 groundwater quality in relation to groundwater levels and extraction. 	<ul style="list-style-type: none"> Met with DWR in 2023 to gain clarification on DWR expectations. Plan to conduct analysis in Fall 2025.
2	Investigate the connectivity of the upper saturated zone to the principal aquifer to determine if a continuous upper saturated zone connects to the principal aquifer.	<ul style="list-style-type: none"> SVBGSA will use the shallow wells installed for ISW and GDEs to assess connections between shallow groundwater and primary aquifers. 	<ul style="list-style-type: none"> To be completed by 2027 Periodic Evaluation.
3	Conduct necessary field reconnaissance for GDE identification. Update future iterations of the GSP with the results of the field studies to identify GDEs in the Subbasin.	<ul style="list-style-type: none"> SVBGSA will work with Central Coast Wetlands Group to map potential GDEs and conduct field reconnaissance. 	<ul style="list-style-type: none"> SVBGSA is developing an approach and methods in other subbasins, and will expand this work to Upper Valley with SGM Round 2 Implementation Grant.
4	Provide more information about how the proposed minimum thresholds for the chronic lowering groundwater levels may impact beneficial uses and users. Specifically, work to obtain additional well information and consider the impact of the selected minimum threshold levels on supply wells. The consideration should identify the degree/extent of potential impact including the percentage, number and location of potentially impacted wells at the proposed minimum thresholds for chronic lowering of groundwater levels.	<ul style="list-style-type: none"> SVBGSA will provide more information to beneficial uses and users, with an initial focus on outreach to domestic well owners. SVBGSA is developing a valley-wide well registration database SVBGSA will re-assess impacts after the database is complete. 	<ul style="list-style-type: none"> Underway and will increase with R2 Grant Funding. Underway with MCWRA. To be completed when well registration database complete, no later than 2027.
5	Revise the definition of undesirable results so that exceedances of minimum thresholds caused by groundwater extraction, whether the GSA has implemented pumping regulations or not, are considered in the assessment of undesirable results in the Subbasin.	<ul style="list-style-type: none"> SVBGSA will review conditions and provide explanation when exceedances occur. SVBGSA will revise undesirable result in next amendment to include pumping impacts regardless of GSA action. SVBGSA will provide a more thorough analysis in 2027 Periodic Evaluation. 	<ul style="list-style-type: none"> Underway with this Annual Report. Planned for 2027 Periodic Evaluation. Planned for 2027 Periodic Evaluation.
6	Provide the rationale for using 2019 concentration data instead of 2015 concentration data as the baseline for setting minimum thresholds for degraded water quality.	<ul style="list-style-type: none"> SVBGSA will evaluate if using 2015 leads to different SMC, and based on results may reconsider SMC if needed or provide rationale. 	<ul style="list-style-type: none"> Planned for Fall 2025.
7	Department staff understand that estimating the location, quantity, and timing of stream depletion due to ongoing, Subbasin-wide pumping is a complex task and that developing suitable tools may take additional time; however, it is critical for the Department's ongoing and future evaluations of whether GSP implementation is on track to achieve sustainable groundwater management. The	<ul style="list-style-type: none"> SVBGSA will review forthcoming DWR guidance and refine SMC based on it, as appropriate for the Subbasin. 	<ul style="list-style-type: none"> Awaiting DWR guidance on ISW.

No.	RCA	Action to Address	Status
	<p>Department plans to provide guidance on methods and approaches to evaluate the rate, timing, and volume of depletions of interconnected surface water and support for establishing specific sustainable management criteria in the near future. This guidance is intended to assist GSAs to sustainably manage depletions of interconnected surface water.</p> <p>In addition, the GSA should work to address the following items by the first periodic update:</p> <ul style="list-style-type: none"> a. Establish sustainable management criteria for all conditions within the Subbasin regardless of whether conservation releases are occurring or not. b. Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions. c. Continue to fill data gaps, collect additional monitoring data, and implement the current strategy to manage depletions of interconnected surface water and define segments of interconnectivity and timing. d. Prioritize collaborating and coordinating with local, state, and federal regulatory agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping induced surface water depletion within the GSA's jurisdictional area. 		

4.1.4 Progress on Management Actions and Projects

Management actions and projects identified in the GSP are sufficient for maintaining sustainability in the Upper Valley Subbasin throughout the 50-year SGMA planning horizon; however, not all need to be implemented. Planning at the subbasin level while coordinating multi-subbasin projects and at a Valley-wide scale is an ongoing challenge within the Salinas Valley. While this Annual Report focuses on strategies to maintain sustainability in the Upper Valley Subbasin, SVBGSA staff, the Advisory Committee, and the Board of Directors continue to coordinate between subbasins. Projects and management actions will be integrated with those of the other Salinas Valley subbasins as appropriate during GSP implementation. Impacts on other subbasins will be analyzed and considered as part of prioritization and design. Prior to implementation, projects and management actions will be evaluated in the context of this Subbasin and the entire Valley.

The Upper Valley Subbasin has had sufficient RMS wells with groundwater levels above the minimum thresholds to avoid undesirable results. However, groundwater levels are not consistently at measurable objective goals and the Subbasin experiences severe declines during multi-year droughts and when there are consecutive years without summer reservoir releases. SVBGSA and MCWRA are moving forward with some actions that will positively impact groundwater conditions.

During 2024, SVBGSA and partner agencies and organizations moved forward on several key workstreams:

- **SMC TAC:** Since the Upper Valley Subbasin is not currently experiencing undesirable results, the SMC TAC is establishing action levels that indicate management actions or projects may be needed. Through 3 meetings this year, the SMC TAC developed short-term and long-term action levels for the Groundwater Level SMC. With the results of this Annual Report, the SMC TAC will pilot application of the action levels, adjust as needed, and move on to setting action levels for the other SMC. For more information on the Groundwater Level SMC Action Levels and data analysis to be taken if an Action Level is exceeded, see <https://svbgsa.org/upper-valley-subbasin/>.
- **Multi-benefit Stream Channel Improvements:** SVBGSA continued to partner with the Resource Conservation District of Monterey County, who continued to work with project partners to maintain the river corridor, map and remove *Arundo donax*, and estimation of associated water savings. SVBGSA continued to support FlowWest to assess groundwater benefits of vegetation removal and sediment management under the Salinas River Stream Maintenance Program. This modeling work will help quantify the groundwater recharge benefits.

- **Valley-wide Demand Management Workshops:** Building on the Situation Assessment completed the prior year, this year SVBGSA worked with Dave Ceppos from California State University Sacramento Consensus and Collaboration Program, M&A, and Miller Maxfield to hold 5 workshops on Planning for Uncertainty across the Valley. The workshops were aimed at engaging the public in understanding and visioning a wide variety of actions that can help plan for uncertainty. These workshops shared a wide variety of conservation and demand management actions, which preface subbasin-specific dialogues.
- **Irrigation Efficiency:** SVBGSA’s approach to promoting irrigation efficiency is through supporting existing agricultural extension efforts for efficient agricultural irrigation. The goal is for the extension programs to promote voluntary actions that will result in reduced demand. SVBGSA partnered with the University of California Cooperative Extension, a neighboring GSA Pajaro Valley Water Management Agency and local Resource Conservation Districts to develop a website on water-efficient agricultural practices appropriate for the Central Coast. The website is under development and will be published during WY 2025.
- **Habitat Conservation Plan (HCP) and Reservoir Reoperation:** MCWRA continued to develop the Salinas River Operations HCP, working together with interested parties through the HCP TAC. The goals of the Salinas River Operations HCP are to restore the balance between natural resource conservation and water resources management by improving habitat conservation efforts in the Salinas River watershed; encouraging sustainable water resources operations; and maintaining and enhancing riverine processes while meeting the needs of agricultural, urban, and domestic water users in the watershed. As the HCP TAC considers potential reservoir reoperation scenarios, the SVBGSA is participating to help analyze impacts to groundwater recharge along the Salinas River and/or the relationship to GSP interconnected surface water SMC goals. The Sustainability Strategy includes Reservoir Reoperation as a feasibility analysis that will be undertaken with the SGM Round 2 Implementation Grant. It will build on the HCP TAC work to assess the effects of alternative reservoir operations on SMC.

This year, the Drought Technical Advisory Committee (D-TAC) led by MCWRA was not triggered.

Table 4-5 summarizes SVBGSA’s work to implement Management Action and Project tasks within the Work Plan.

Table 4-5. Progress on Projects and Management Actions as of December 2024

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Develop and Support Website for Central Coast Ag Water BMPs	Engage with partner agencies and contract with website developer to create website			x		Work under way with RCDMC, RCDSC, PVWMA, SVBGSA and UCCE collaborating on website development and content. Executed contract with TreeTop Web Design for building the website. Draft website has been created and partners are adding content.
Assess Groundwater Benefits of Salinas River Stream Maintenance Programs	Model the program impact to recharge and conduct stakeholder outreach			x		Executed agreement with FlowWest and initiated coordination meetings with RCDMC, MCWRA and M&A which continue as HEC-RAS model is updated and various flow scenarios are investigated.
Assess and Develop Demand Management	Conduct DM dialogue process			x		Subbasin focused work started in 180/400 and Eastside. Contracted with ERA Economics to include economic analysis.
	Conduct legal analysis of DM			x		Staff is working with special counsel to prepare a legal white paper that has been routed for peer review. Final draft anticipated to be available in March 2025.
Work with SMC TACs on PMAs in Forebay and Upper Valley	Establish triggers for PMAs in Upper Valley Subbasin (by SMC TAC)			x		Board appointed SMC TAC convened 3 times to discuss ideas for "action levels". Draft approach for groundwater levels was shared with subbasin committee. Next meeting scheduled for April 2025
Refine Sustainability Strategy	Assist with implementation of sustainability strategies and projects/management actions (PMAs)			x		Sustainability strategy and PMAs under review and discussion by subbasin committees

4.2 Sustainable Management Criteria

The Upper Valley Aquifer Subbasin GSP includes descriptions of significant and unreasonable conditions, minimum thresholds, interim milestones, measurable objectives, and undesirable results for each of DWR's 5 sustainability indicators. The SVBGSA developed and defined significant and unreasonable conditions based on public meetings, local interested party input and staff discussions. The SMC are individual criterion that will each be met independently and simultaneously. A comparison of the data presented in Section 3 and the SMC criteria are included for each sustainability indicator in the following sections.

Significant and unreasonable conditions occur due to inadequate groundwater management and qualitatively describe groundwater conditions deemed insufficient by the Upper Valley Subbasin Planning Committee. Minimum thresholds are quantitative indicators of the Subbasin's locally defined significant and unreasonable conditions. An undesirable result is a combination of minimum threshold exceedances that shows a significant and unreasonable condition across the Subbasin as a whole. Measurable objectives are the goals that reflect the Subbasin's desired groundwater conditions for each sustainability indicator and provide operational flexibility above the minimum thresholds. The GSP and annual reports must demonstrate that groundwater management will not only avoid undesirable results, but will enable the Subbasin to be at the measurable objectives by 2042. DWR uses interim milestones every 5 years to review progress from current conditions to measurable objectives.

Since the GSP addresses long-term groundwater sustainability, some of the metrics for the sustainability indicators may not be applicable in each individual future year. The GSP is developed to avoid undesirable results—under average hydrogeologic conditions—with long-term, deliberate groundwater management. Average hydrogeologic conditions are the anticipated future groundwater conditions in the Subbasin, averaged over the planning horizon and accounting for anticipated climate change. Pursuant to SGMA Regulations (California Water Code §10721(w)(1)), "Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods." Therefore, groundwater levels may temporarily exceed minimum thresholds during prolonged droughts, which could be more extreme than those that have been anticipated based on historical data and anticipated climate change conditions. Such temporary exceedances do not constitute an undesirable result. Future groundwater conditions are based on historical precipitation, evapotranspiration, and streamflow, as well as reasonably anticipated climate change and sea level rise. The average hydrogeologic conditions include reasonably anticipated wet and dry periods.

Table 4-7 lists the projected average annual precipitation at the King City Airports for 2030 and 2070, accounting for reasonable future climatic change (DWR, 2018). These projections are based on climate datasets developed for modeled future projections for the GSP. This table also includes the historical average precipitation, average measured precipitation since GSP implementation, and the current annual precipitation total for WY 2024. The WY 2024 precipitation was above the average precipitation since GSP implementation that is used to represent the average hydrologic conditions for the Subbasin. Average precipitation since GSP implementation has not risen to the anticipated future average conditions. For the second consecutive year, the Subbasin experienced high precipitation and recharge from rivers, resulting from wetter conditions following the wet WY 2023. WY 2024 was classified as a wet-normal year, and therefore it is more likely that groundwater levels were high or remained stable and less likely that minimum thresholds are exceeded.

Table 4-6. Current Annual Precipitation, Average Annual Precipitation After GSP Implementation, and Average Annual Projected Precipitation

	King City Airport
Current (WY 2024)	16.8
Historical Average (WY 1991-2020)	11.8
Average After GSP Implementation	12.6
2030 Projected Average	10.4
2070 Projected Average	10.8

In inches

4.2.1 Chronic Lowering of Groundwater Levels SMC

4.2.1.1 Minimum Thresholds

Section 8.6.2.1 of the Upper Valley Subbasin GSP describes the information and methodology used to establish minimum thresholds for chronic lowering of groundwater levels. In the Upper Valley Subbasin, the minimum thresholds were set to 5 feet below the lowest groundwater elevation between 2012 and 2016 at each representative monitoring well. The minimum threshold values for each well within the groundwater elevation monitoring network are provided in Table 4-8. Fall groundwater elevation data are color coded on this table: red cells mean the groundwater elevation is below the minimum threshold, yellow cells mean the groundwater elevation is above the minimum threshold but below the measurable objective, and green cells mean the groundwater elevation is above the measurable objective. Groundwater elevations are also compared against the groundwater level SMC on Figure 4-2. The red cells in Table 4-8

show that of the 16 groundwater level monitoring RMS wells, 1 wells in the Subbasin exceeded their minimum threshold in WY 2024.

The SMC for RMS well 21S/09E-06F50 were revised to account for the refinement of its reference point elevation. The new SMC are listed below in Table 4-8.

Table 4-7. Groundwater Elevation Data, Minimum Thresholds, and Measurable Objectives

Below Minimum Threshold		Above Minimum Threshold		Above Measurable Objective
Monitoring Site	Minimum Threshold	WY 2024 Groundwater Elevation	Interim Milestone at Year 2027	Measurable Objective (Goal to Reach at 2042)
19S/07E-14N02	187.7	241.8	233.9	232.6
19S/08E-19K03	215.5	253.8	255.2	256.1
20S/08E-05R03	226.0	272.0	270.0	270.2
20S/08E-14K01	258.4	296.2	294.2	294.6
20S/08E-15H03	247.0	293.9	290.5	290.4
20S/08E-25Q01	309.7	314.6	314.8	316.7
20S/08E-34G01	384.1	358.3	390.3	403.8
21S/08E-13H01	387.9*	395.4	397.1	397.1*
21S/09E-06F50	316.1	321.3	323.9	325.9*
21S/09E-16E01	330.0	340.6	345.4	344.7
21S/09E-24L01	352.5	367.5	362.5	364.7
21S/10E-32N01	368.0	382.8	377.4	378.1
22S/10E-09P01	383.6	403.9	401.2	401.7
22S/10E-16K01	375.5	407.7	400.3	400.8
22S/10E-34G01	419.4	428.3	424.7	425.0
23S/10E-14D01	437.2	442.7	442.7	443.3

In feet, NAVD88

*Groundwater elevation was estimated.

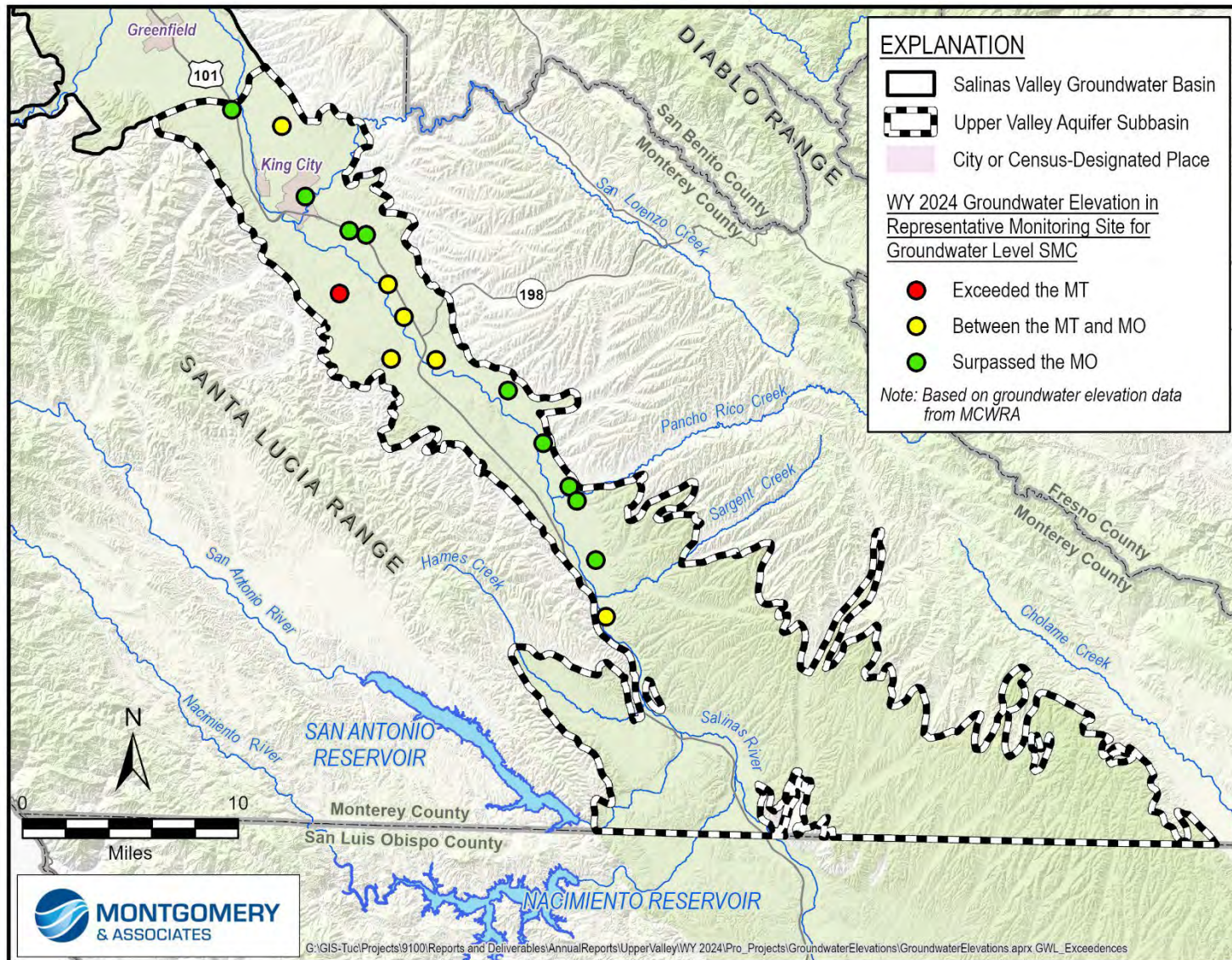


Figure 4-1. Groundwater Elevations Compared to the Minimum Thresholds and Measurable Objectives

4.2.1.2 Measurable Objectives and Interim Milestones

The measurable objectives for chronic lowering of groundwater levels represent target groundwater elevations that are higher than the minimum thresholds. These measurable objectives provide operational flexibility to ensure that the Subbasin can be managed sustainably over a reasonable range of hydrologic variability. Measurable objectives for the chronic lowering of groundwater levels are summarized in Table 4-8. In WY 2024, 9 RMS wells had groundwater elevations higher than their measurable objective and are represented by the green cells in Table 4-8.

To show progress toward measurable objectives, DWR requires assessment of interim milestones at 5-year intervals. The 2027 interim milestones for groundwater elevations are also shown in Table 4-8. The WY 2024 groundwater elevations in 10 wells are already equal to or higher than the 2027 interim milestones.

4.2.1.3 Undesirable Result

The chronic lowering of groundwater levels undesirable result is a quantitative combination of groundwater elevation minimum threshold exceedances. For the Subbasin, the groundwater elevation undesirable result is:

More than 15% of the groundwater elevation minimum thresholds are exceeded.

Table 4-8 shows that 6% of the RMS wells were below their minimum threshold but these exceedances do not lead to an undesirable result. Groundwater elevation minimum threshold exceedances, compared with the undesirable result, are shown on Figure 4-3. If a value is in the shaded red area, it would constitute an undesirable result. This graph is updated annually with new data to demonstrate the current status of the sustainability indicator. Last year's minimum threshold exceedances were revised to account for the SMC revision of well 21S/09E-06F50. All RMS wells had a fall 2024 groundwater elevation measurement, but starting next year, undesirable results will be assessed based only on the RMS wells that have a fall measurement.

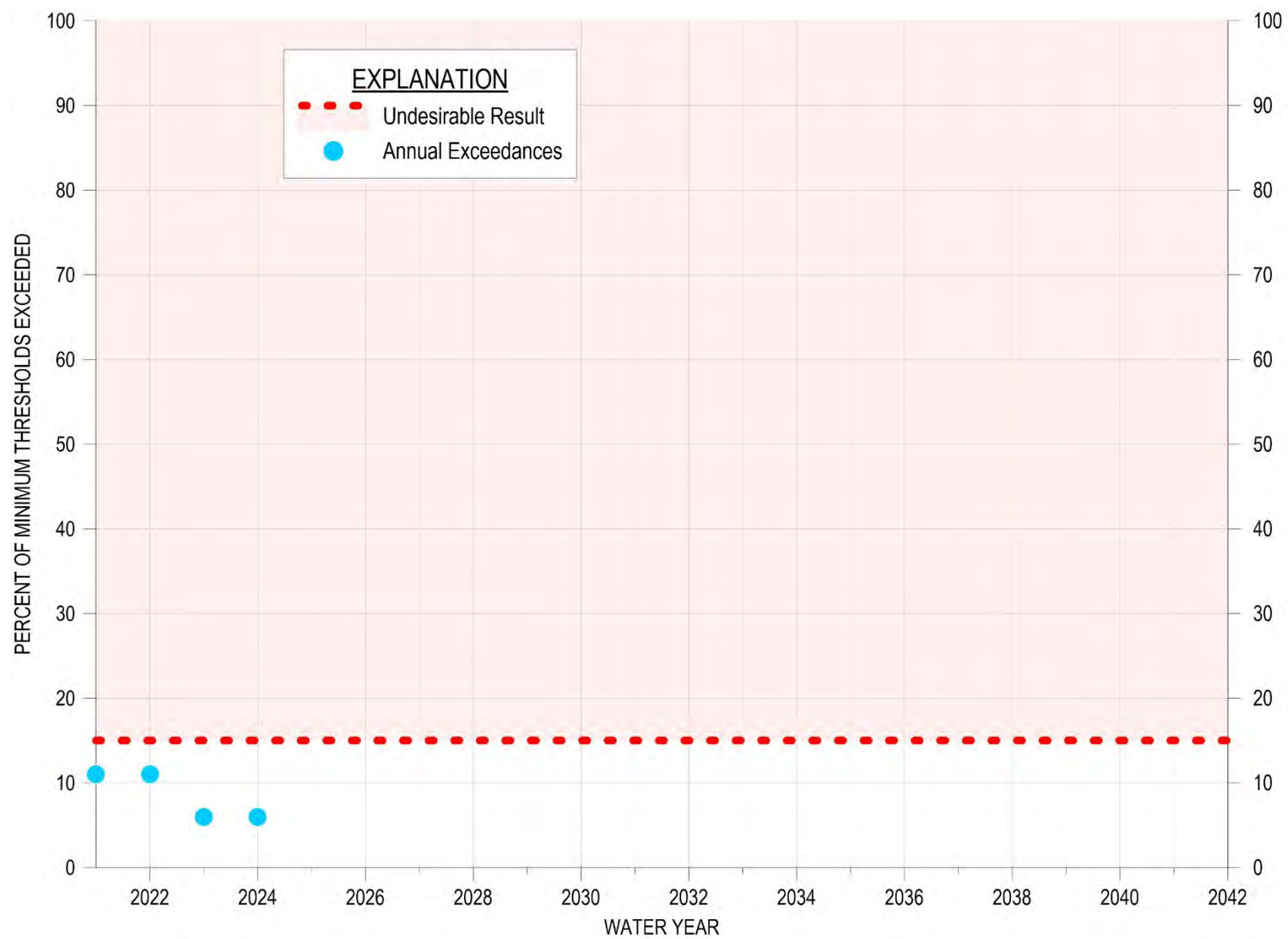


Figure 4-2. Groundwater Elevation and Storage Exceedances Compared to the Undesirable Result

4.2.2 Reduction in Groundwater Storage SMC

4.2.2.1 Minimum Thresholds

The reduction in groundwater storage SMC is established by proxy using groundwater elevations. The minimum thresholds for reduction in groundwater storage are measured using groundwater elevations as proxies; therefore, the minimum thresholds are identical to the minimum thresholds for groundwater level RMS wells, which are described in Section 4.2.1.1.

4.2.2.2 Measurable Objective and Interim Milestones

The measurable objectives and interim milestones for reduction in groundwater storage are the same as those for groundwater elevations that are described in Section 4.2.1.2.

4.2.2.3 Undesirable Result

The criteria used to define undesirable results for reduction of groundwater storage are based on minimum thresholds established for chronic lowering of groundwater levels. The reduction of storage undesirable result is:

More than 15% of groundwater elevation minimum thresholds are exceeded. The undesirable result for reduction in groundwater storage is established by proxy using groundwater elevations.

Based on the groundwater elevation data presented in Section 4.2.1, less than 15% of wells exceeded their minimum thresholds. The WY 2024 groundwater storage SMC as measured by proxy using groundwater elevations do not cause an undesirable result as shown on Figure 4-3.

4.2.3 Degraded Groundwater Quality SMC

4.2.3.1 Minimum Thresholds

The degraded groundwater quality minimum thresholds were established for each COC based on the number of supply wells monitored that had higher concentrations than the regulatory standards for drinking water and irrigation water during the most recent sampling event. Section 8.8.2.1 of the Upper Valley Subbasin GSP describes the information and methodology used to establish minimum thresholds for degraded groundwater quality. The minimum threshold values for each COC for the wells in the groundwater quality monitoring network are provided in Table 4-9. The minimum threshold for chloride, nitrate, specific conductance, sulfate, and total dissolved solids were adjusted for the ILRP on-farm domestic wells to account for the additional ILRP data provided by CCRWQCB. No other minimum threshold for the ILRP wells were revised.

Table 4-9 also shows the wells with concentrations higher than the regulatory standard in WY 2024 discussed in Section 3.4 and the running total of wells with concentrations higher than the regulatory standard, which are used to assess the SMC. Only the most recent sample for each COC at each well is used for the running total. The minimum thresholds are set to no additional wells with concentrations higher than the regulatory standard for each constituent, as compared to the 2019 baseline. The SMC are based on the total number of wells in order to assess subbasin-wide conditions; therefore, if a single well rises above a COC's regulatory standard and another falls below, there is no change in the number of wells with concentrations above the regulatory standard. These conditions were determined to be significant and unreasonable because COC concentrations above the regulatory standard may cause a financial burden on groundwater users. Public water systems with COC concentrations above the MCL or SMCL are required to add treatment to the drinking water supplies or drill new wells. Agricultural wells with COCs that significantly reduce crop production may reduce grower's yields and profits.

Given that the GSP established a minimum threshold for each COC, there is an exceedance of the minimum threshold if there are more wells with concentrations above the regulatory standard than there were in 2019. The last column in Table 4-9 includes the number of wells above the 2019 baseline that had higher concentrations than the regulatory standard. If a COC has more wells with concentrations above the regulatory standard than the minimum threshold, it is highlighted in orange to indicate an exceedance. The negative numbers in the last column indicate a drop in the total number of wells with concentrations above the regulatory limit, as compared to 2019 when the minimum threshold was established. In WY 2024, there were 5 COCs that exceeded their groundwater quality minimum thresholds.

Compared to WY 2023, the DDW wells minimum threshold for foaming agents (MBAS) is no longer exceeded but continues to be exceeded for manganese. Additionally, the minimum threshold for gross alpha radioactivity has been exceeded in WY 2024. For the ILRP wells, the constituents that exceeded the minimum threshold in WY 2023 also exceeded the minimum threshold in WY 2024.

Table 4-8. Minimum Thresholds and Measureable Objectives for Degradation of Groundwater Quality

Constituent of Concern (COC)	Minimum Threshold/ Measureable Objective (existing exceedances of Regulatory Standard in 2019)	Number of Wells Sampled in 2024 with Concentrations Above the Regulatory Standard	Total Number of Wells with Concentrations Above the Regulatory Standard in Most Recent Sample	Number of Wells with Concentrations above Minimum Threshold (negative if fewer than MT)
DDW Wells				
Aluminum	2	0	0	-2
Arsenic	0	0	0	0
Barium	1	0	0	-1
Boron	2	0	2	0
Carbon tetrachloride	1	0	0	-1
Dichloromethane (Methylene Chloride)	1	0	0	-1
Foaming Agents (MBAS)	3	0	0	-3
Gross Alpha radioactivity	1	1	2	1
Iron	9	4	8	-1
Manganese	9	2	10	1
Nitrate (as nitrogen)	1	0	1	0
Specific Conductance	4	1	4	0
Sulfate	3	0	2	-1
Total Dissolved Solids	6	0	4	-2
Uranium	1	0	1	0
ILRP On-Farm Domestic Wells				
Chloride	10	0	10	0
Nitrate (as nitrogen)	44	0	44	0
Nitrate + Nitrite (sum as nitrogen)	12	20	29	17
Specific Conductance	56	17	66	10
Sulfate	37	0	37	0
Total Dissolved Solids	51	0	53	2
ILRP Irrigation Wells				
Chloride	13	0	13	0

4.2.3.2 Measurable Objectives and Interim Milestones

The measurable objectives for degradation of groundwater quality represent a target number of wells with COC concentrations above the regulatory standard and are set at the 2019 baseline to aim for no degradation. SGMA does not require the improvement of groundwater quality; therefore, the Upper Valley GSP includes measurable objectives identical to the minimum thresholds, as defined in Table 4-9. Interim milestones are also set at the minimum threshold

levels. Although there were 5 groundwater quality minimum threshold exceedances in WY 2024, they have not been determined to be due to a GSA groundwater management action or inaction. SVBGSA will complete this analysis, as well as the baseline analysis to address the RCAs, for the 2027 GSP Periodic Evaluation.

4.2.3.3 Undesirable Result

The degradation of groundwater quality undesirable result is a quantitative combination of groundwater quality minimum threshold exceedances. Any groundwater quality degradation as a direct result of GSP implementation is unacceptable. Some groundwater quality changes are expected to occur independent of SGMA activities; because these changes are not related to SGMA activities they do not constitute an undesirable result. The degradation of groundwater quality undesirable result is:

Future or new minimum thresholds exceedances are caused by a direct result of GSA groundwater management action(s), including projects or management actions and regulation of groundwater extraction.

As described in the WY 2023 Annual Report and Table 4-4, DWR approved the GSP with 7 RCAs, 3 of which related to groundwater quality. To address these, SVBGSA will compare the 2019 baseline for the water quality minimum threshold to 2015, and will conduct an analysis of 2015 groundwater quality in relation to groundwater levels and extraction. Additionally, SVBGSA intends to revise the definition of the water quality undesirable result in the next amendment to include exceedances of minimum thresholds caused by groundwater extraction that modifies pre-2015 groundwater conditions, regardless of GSA action or inaction. An analysis of 2024 exceedances is not conducted at this time since the baseline analyses have not been completed; however, SVBGSA will share and discuss minimum threshold exceedances with the Water Quality Coordination Group.

Table 4-9 shows 5 constituents exceeded their minimum threshold in WY 2024. Since SVBGSA has yet to implement any projects or management actions in the Subbasin, these exceedances are not determined to be due to GSA actions. At this time, the groundwater quality exceedances are not considered an undesirable result; however, an assessment of exceedances presented here and in previous annual reports should be done after the initial analysis to address the RCA. The groundwater quality minimum threshold exceedances, compared with the undesirable result, are shown on Figure 4-4. If exceedances of the minimum threshold are determined to be due to a GSA groundwater management action or inaction, it would constitute an undesirable result. This graph is updated annually with new data to demonstrate the current status of the sustainability indicator.

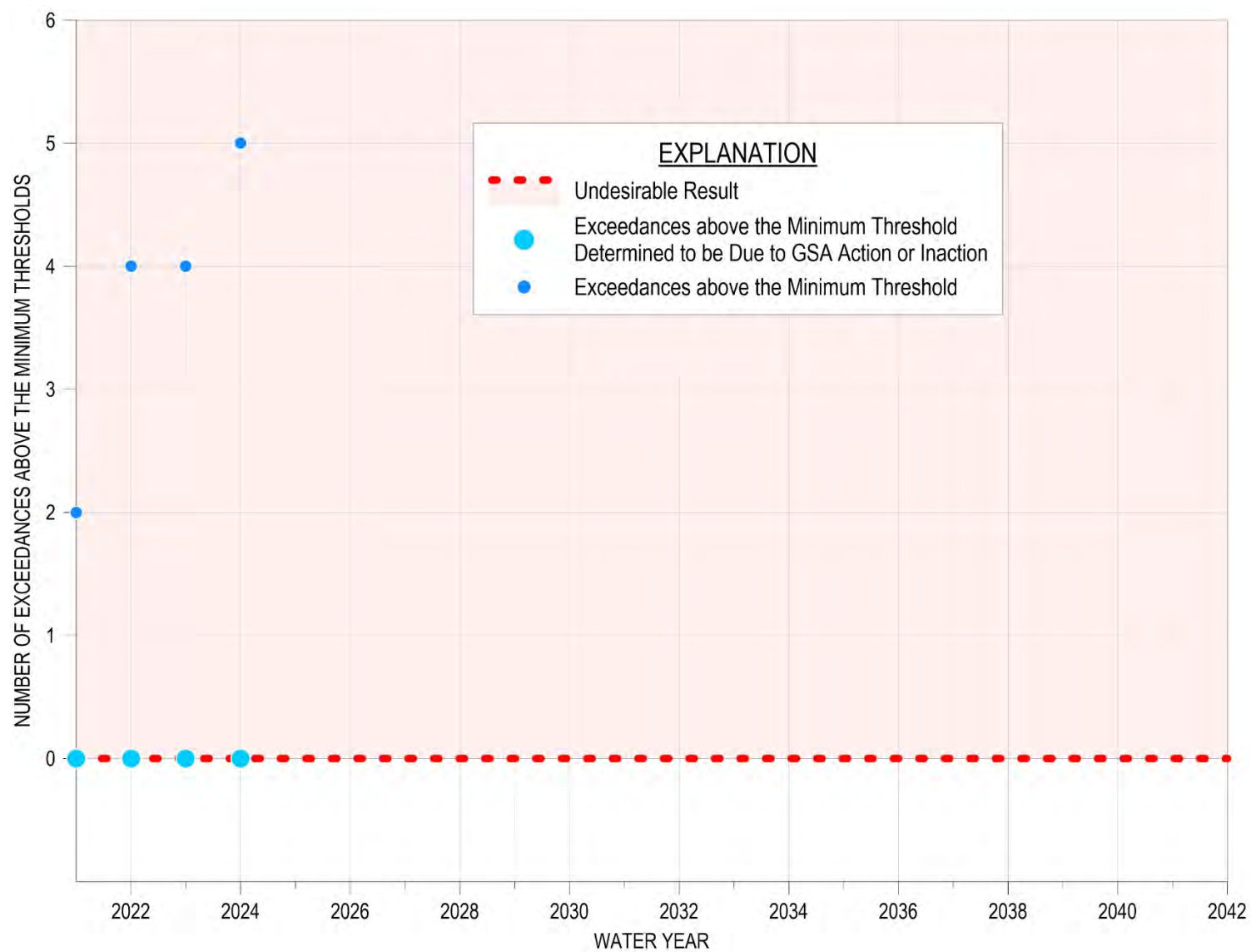


Figure 4-3. Groundwater Quality Minimum Threshold Exceedances Compared to the Undesirable Result

4.2.4 Land Subsidence SMC

4.2.4.1 Minimum Thresholds

Accounting for measurement errors in the InSAR data, the minimum threshold for land subsidence in the GSP is zero net long-term subsidence, with no more than 0.1 foot per year of estimated land movement to account for InSAR errors. Section 8.9.2.1 of the Upper Valley Aquifer Subbasin GSP describes the information and methodology used to establish minimum thresholds for subsidence. A single minimum threshold is set for the entire Subbasin. Annual subsidence data from October 2023 to October 2024 demonstrated less than the minimum threshold of 0.1 foot/year, as shown on Figure 3-12.

4.2.4.2 Measurable Objectives and Interim Milestones

The measurable objectives for land subsidence represent target subsidence rates in the Subbasin. Because the minimum thresholds of zero net long-term subsidence are the best achievable outcome, the measurable objectives are identical to the minimum thresholds: zero net long-term subsidence, with no more than 0.1 foot per year of estimated land movement to account for InSAR errors. Figure 3-13 demonstrates that data from October 2023 to October 2024 showed less than the measurable objective of no more than 0.1 foot per year of measured subsidence is being met. The interim milestones are identical to minimum threshold of 0.1 foot per year. The latest subsidence data shows that the 2027 subsidence interim milestone is already being met.

4.2.4.3 Undesirable Result

The land subsidence undesirable result is a quantitative combination of subsidence minimum threshold exceedances. For the Upper Valley Subbasin, no long-term subsidence is acceptable. Therefore, the land subsidence undesirable result is:

There is an exceedance of the minimum threshold for land subsidence due to lowered groundwater elevations.

Data from October 2023 to October 2024 showed subsidence was below the minimum threshold of 0.1 foot per year. The latest land subsidence data, therefore, does not lead to an undesirable result. Maximum annual measured subsidence in the Subbasin, compared with the subsidence undesirable results, is shown on Figure 4-5. If a value is in the shaded red area, it would constitute an undesirable result. This graph is updated annually with new data to demonstrate the current status of the sustainability indicator.

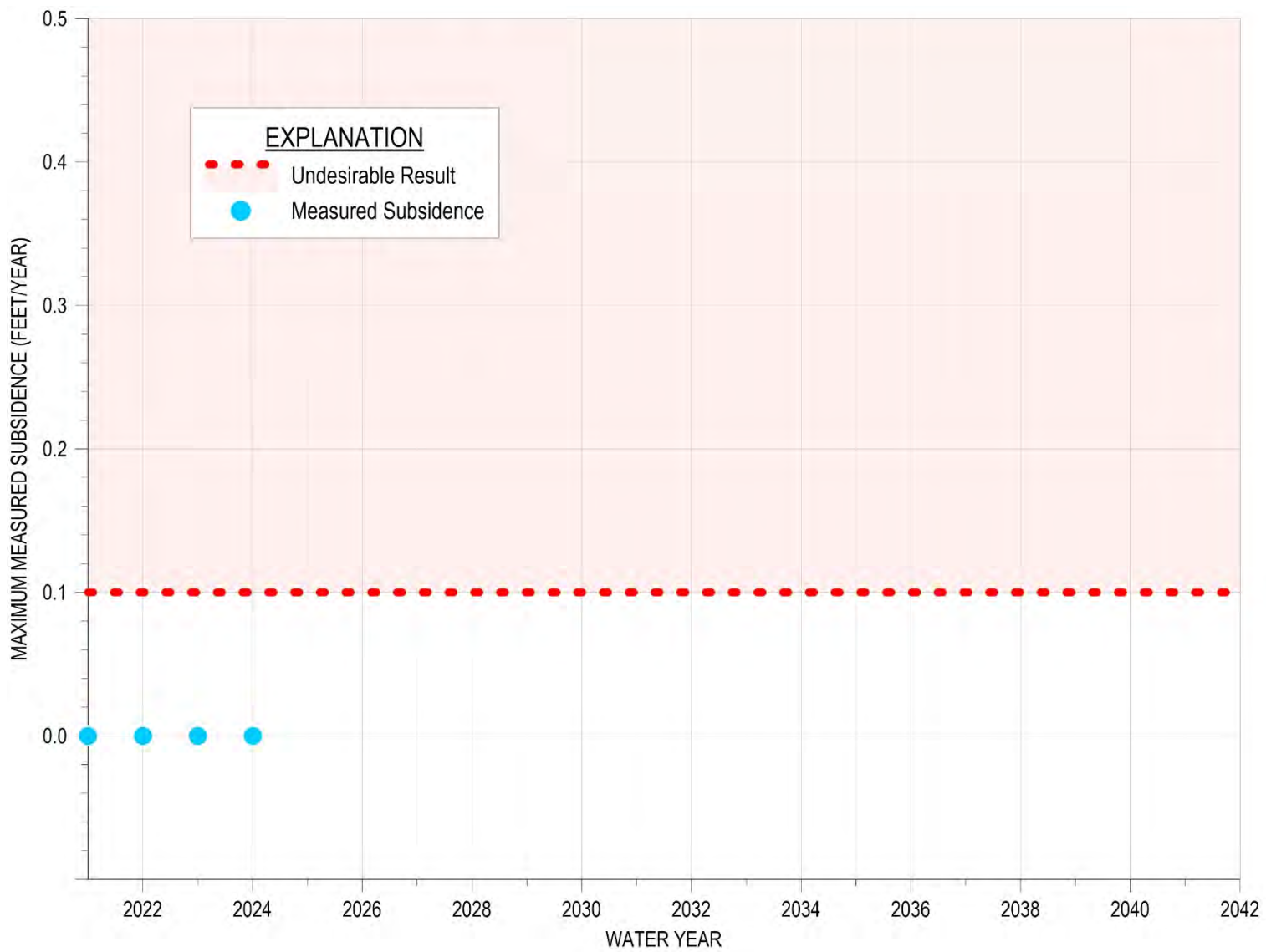


Figure 4-4. Maximum Measured Subsidence Compared to the Undesirable Result

4.2.5 Depletion of Interconnected Surface Water SMC

4.2.5.1 Minimum Thresholds

As described in Section 8.10.2.1 of the GSP, the minimum thresholds for depletion of ISW due to pumping are established by proxy using shallow groundwater elevations and are established to maintain consistency with chronic lowering of groundwater elevation and reduction in groundwater storage minimum thresholds. ISW minimum thresholds were set to 2016 shallow groundwater elevations and are included in Table 4-10. Shallow groundwater elevation data are color coded on this table: red cells mean the groundwater elevation is below the minimum threshold, yellow cells mean the groundwater elevation is above the minimum threshold but below the measurable objective, and green cells mean the groundwater elevation is above the measurable objective. In WY 2024, none of the existing monitoring wells were below their minimum threshold. The ISW SMC for 20S/08E-25Q01, which was added to the ISW RMS monitoring network starting in WY 2024, is the same as its groundwater level SMC since this well was already a groundwater level RMS well.

Minimum thresholds are not established for times when flow in a river is due to conservation releases from a reservoir. Conservation releases are meant in part to recharge the Salinas Valley groundwater basin; therefore, depletion of conservation releases is a desired outcome and the minimum thresholds and measurable objectives do not apply to these flows. As described in the WY 2023 Annual Report, DWR approved the GSP with an RCA related to the ISW SMC, which noted that SVBGSA should establish SMC for all conditions within the Subbasin regardless of whether conservation releases are occurring or not. SVBGSA will use DWR's forthcoming guidance on ISW review the SMC.

Table 4-9. Shallow Groundwater Elevation Data, ISW Minimum Thresholds, and ISW Measurable Objectives

Below Minimum Threshold		Above Minimum Threshold		Above Measurable Objective
Monitoring Site	Minimum Threshold	WY 2024 Groundwater Elevation	Interim Milestone at Year 2027	Measurable Objective (Goal to Reach at 2042)
19S/07E-14H01	213.7	243.7	249.4	250.0*
20S/08E-25Q01**	309.7	314.6	345.0	316.7
21S/09E-16E01**	330.0	340.6	345.4	344.7
23S/10E-14D01**	437.2	442.7	442.7	443.3

In feet, NAVD88

*Groundwater elevation estimated.

**Monitoring well is also an RMS for chronic lowering of groundwater elevations, and SMC for groundwater level and ISW are identical.

4.2.5.2 Measurable Objectives and Interim Milestones

The measurable objectives for depletion of ISW target groundwater elevations that are higher than the minimum thresholds. The measurable objectives are established to maintain consistency with the chronic lowering of groundwater elevation and reduction in groundwater storage minimum thresholds, which are also established based on groundwater elevations. The measurable objectives for existing monitoring wells are listed in Table 4-10 and are set to 2011 shallow groundwater elevations. None of the wells surpassed their measurable objective in WY 2024.

Table 4-10 also lists the 2027 interim milestones. To show progress toward measurable objectives, DWR assesses interim milestones at 5-year intervals. In WY 2024, the groundwater elevations for 1 RMS well reached its 2027 interim milestone.

4.2.5.3 Undesirable Result

The depletion of ISW undesirable result is a quantitative combination of minimum threshold exceedances. The undesirable result for depletion of ISW is:

There is an exceedance of the minimum threshold in a shallow groundwater monitoring well used to monitor interconnected surface water.

Streamflow depletion in the Subbasin is complicated by many factors, such as reservoir releases, recharge of the aquifer from streamflow, losses to vegetation, and evapotranspiration (ET). The ISW SMC applies to depletion of ISW from groundwater use. For SGMA compliance purposes, the default assumption is that any depletions of surface water beyond the level of depletion that occurred prior to 2016, as evidenced by reduction in groundwater levels, represent depletions that are significant and unreasonable. Any additional depletions of surface water flows caused by groundwater conditions in excess of conditions as they were in 2016 would likely be an undesirable result that must be addressed under SGMA. There is currently no biological opinion or habitat conservation plan that indicates additional protection is needed for species protected under the Endangered Species Act; however, if it is determined that additional protection is needed and streamflow loss is due not to surface water flows but to groundwater extraction, SVBGSA will adapt as necessary to adhere to environmental laws.

Table 4-10 shows that there are no exceedances of the ISW minimum thresholds; therefore, the WY 2024 shallow groundwater elevations do not cause an undesirable result. The ISW minimum threshold exceedances, compared with the undesirable result, are shown on Figure 4-6. If a value is in the shaded red area, it would constitute an undesirable result. This graph is updated annually with new data to demonstrate the current status of the sustainability indicator.

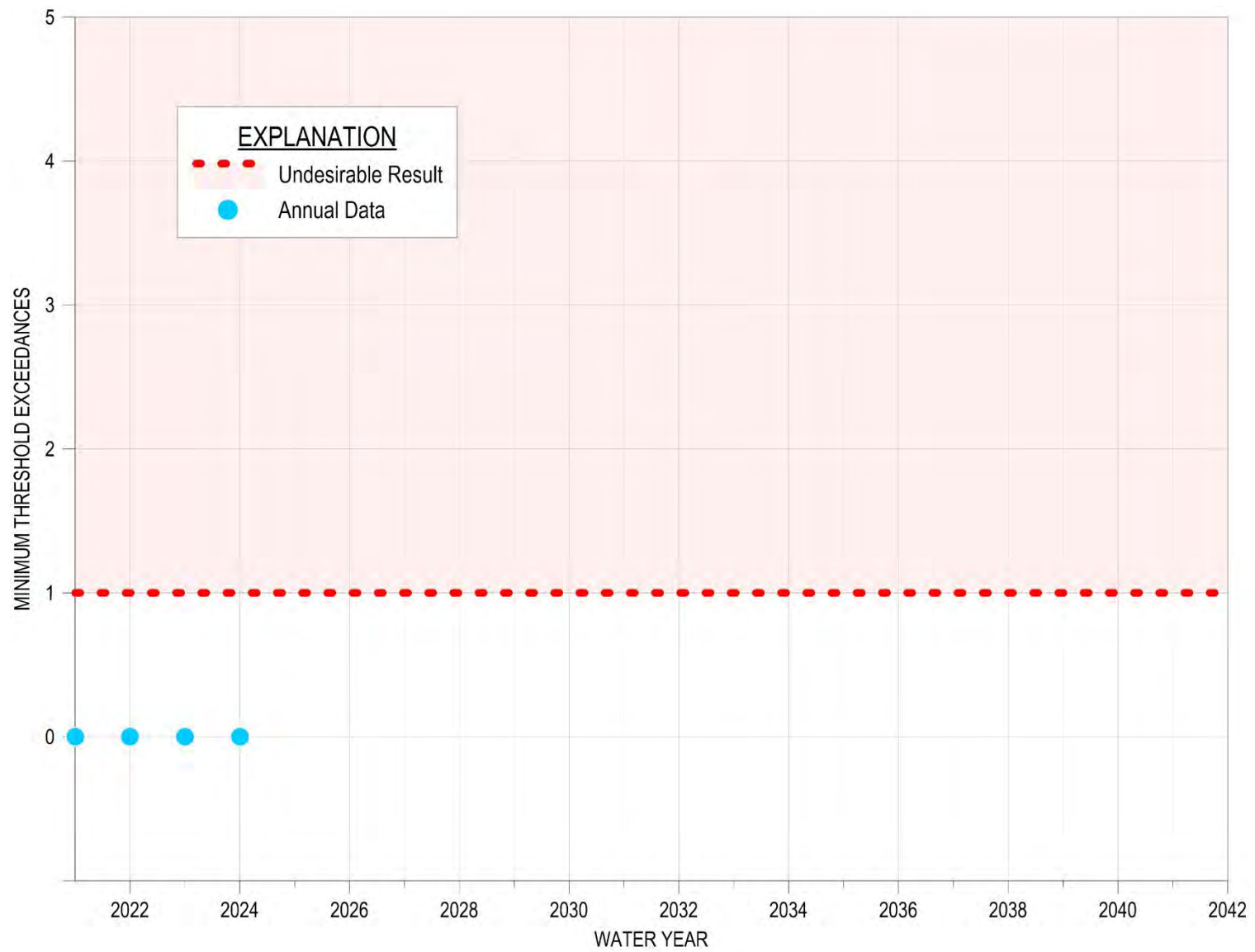


Figure 4-5. Shallow Groundwater Elevation Exceedances Compared to the Undesirable Result

5 CONCLUSION

This 2024 Annual Report updates data and information for the Upper Valley Subbasin GSP from WY 2023 to WY 2024 with the best available data. It covers GSP implementation activities from October 1, 2023, through December 31, 2024, to better align with the SVBGSA's work plan and summarize recent updates. All GSP implementation and annual reporting meets the regulations set forth in the SGMA GSP Regulations.

Results show that after this second consecutive wet water year groundwater conditions have either remained stable or improved slightly since WY 2023. Groundwater elevations increased in WY 2024 in 9 out of 16 RMS wells, resulting in 9 wells with elevations above their measurable objectives, 6 wells with elevations between their minimum thresholds and measurable objectives, and 1 well with an elevation below its minimum threshold. Change in groundwater storage, as calculated based on groundwater elevation changes, increased from WY 2023 to WY 2024. Groundwater quality data showed 5 exceedances of minimum thresholds, none of which were caused by a direct result of GSA groundwater management action or inaction. Negligible subsidence was observed in the Subbasin in WY 2024. Finally, all 4 existing shallow wells used to monitor depletion of ISW due to pumping were above their minimum thresholds but below their measurable objectives.

Since GSP submittal, the SVBGSA has continued to actively engage stakeholders and coordinate with partner agencies. The SVBGSA continues to convene its subbasin committees, Advisory Committee, and Board of Directors, and this year convened the SMC TAC for the Forebay and Upper Valley Subbasins. Receipt of SGM Round 2 Implementation Grant for the Forebay, Upper Valley, Eastside, and Langley Subbasins is significantly helping advance GSP implementation activities.

REFERENCES

- Brown and Caldwell. 2015. State of the Salinas River Groundwater Basin - Hydrology Report. Monterey County Water Resources Agency Water Reports. http://digitalcommons.csumb.edu/hornbeck_cgb_6_a/21.
- California Department of Water Resources (DWR). 2004. Bulletin 118 Interim Update 2004; Salinas Valley Groundwater Basin, Upper Valley Aquifer Subbasin. https://water.ca.gov/-/media/DWR-Website/WebPages/Programs/Groundwater-Management/Bulletin-118/Files/2003-BasinDescriptions/3_004_05_UpperValleyAquiferSubbasin.pdf.
- _____. 2018. Guidance for Climate Change Data During Groundwater Sustainability Plan Development. 101 p. https://water.ca.gov/-/media/DWR-Website/WebPages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/BestManagement-Practices-and-Guidance-Documents/Files/Resource-Guide-ClimateChange-Guidance_v8_ay_19.pdf.
- _____. 2024. SGMA Data Viewer: Land Subsidence. <https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#landsub>.
- CCRWQCB (Central Coast Regional Water Quality Control Board). 2019. Water Quality Control Plan for the Central Coast Basin, June 2019 Edition. California Environmental Protection Agency. https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/docs/2019_basin_plan_r3_complete_webaccess.pdf
- Jennings, C.W., with modifications by C. Gutierrez, W. Bryant, G. Saucedo, and C. Wills, 2010. Geologic map of California: California Geological Survey, Geologic Data Map No. 2, scale 1:750,000. <https://www.conservation.ca.gov/cgs/publications/geologic-map-of-california>.
- MCWRA (Monterey County Water Resources Agency). 2005. Salinas Valley Water Project Flow Prescription for Steelhead Trout in the Salinas River.
- _____. 2015. CASGEM Monitoring Plan for High and Medium Priority Basins in the Salinas Valley Groundwater Basin.
- _____. 2024a. Salinas Valley Water Conditions: Fourth Quarter of Water Year 2023-2024. <https://www.countyofmonterey.gov/home/showpublisheddocument/136802/638670927643830000>
- _____. 2024b. Reservoir Elevation and Storage. Received 7 January.
- Monterey County Agricultural Commissioner. 2023. Agricultural Commissioner's Office Releases March Storm Agriculture Damage Survey Results.
- Rosenberg, Lewis I. 2001. Digital Geologic Map of Monterey County, California, 1934-2001. Monterey County (Calif.) Planning Department. <http://purl.stanford.edu/cm427jp1187>.

State Water Resources Control Board (SWRCB). 2024a. Water Conservation Portal - Emergency Conservation Regulation. Downloaded 11/4/2024. Available at:
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/regs/emergency_regulation.html#reg.

_____. 2024b. Electronic Water Rights Information Management System (eWRIMS). Accessed January 27, 2024.
<https://ciwqs.waterboards.ca.gov/ciwqs/ewrims/reportingDiversionDownloadPublicSetup.do>.

_____. 2024c. Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System Website. Accessed January 27, 2024.
<https://gamagroundwater.waterboards.ca.gov/gama/datadownload>.

Appendix A

Technical Memorandum on Hydrogeologic Conceptual Model Update for the Upper Valley Subbasin



TECHNICAL MEMORANDUM

DATE: March 20, 2025 **PROJECT #:** 9100.68

TO: Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA)

FROM: Victoria Hermosilla, P.G., Tiffani Cáñez

REVIEWED BY: Abby Ostovar, Ph.D;

PROJECT: Salinas Valley Hydrogeological Conceptual Model (HCM) Updates

SUBJECT: Upper Valley Aquifer Subbasin HCM Update: Data, Methods, and Findings

INTRODUCTION

Since submittal of the Upper Valley Aquifer Subbasin (Upper Valley Subbasin or Subbasin) Groundwater Sustainability Plan (GSP) in 2022, SVBGSA and partner agencies have analyzed new information and filled data gaps identified in the GSP. With this information, Montgomery & Associates (M&A) updated the Hydrogeologic Conceptual Model (HCM) for the Subbasin to better inform management decisions and prepare for the upcoming 5-year Periodic Evaluation. M&A worked with key partners to acquire data and review analyses, including Monterey County Water Resources Agency (MCWRA). The updated HCM expands and strengthens the understanding of the Subbasin presented in the 2022 GSP to guide SGMA implementation with greater accuracy. This HCM update focused on improving the subsurface understanding of the Upper Valley Subbasin within the expanded boundary defined in the California Department of Water Resources (DWR) 2016 Bulletin 118, which shifted the southern boundary from between San Ardo and Bradley down to the Monterey County line. This extended it to include many portions of the foothills based on the surficial-mapped presence of the Paso Robles Formation. These areas had not previously been linked to the narrow river corridor that historically characterized Upper Valley Subbasin. The previous Subbasin boundaries have aligned more with the MCWRA Assessment Zones shown on Figure 1. Concurrently, the updated HCM refines the geologic model that forms the basis for the groundwater flow modeling.

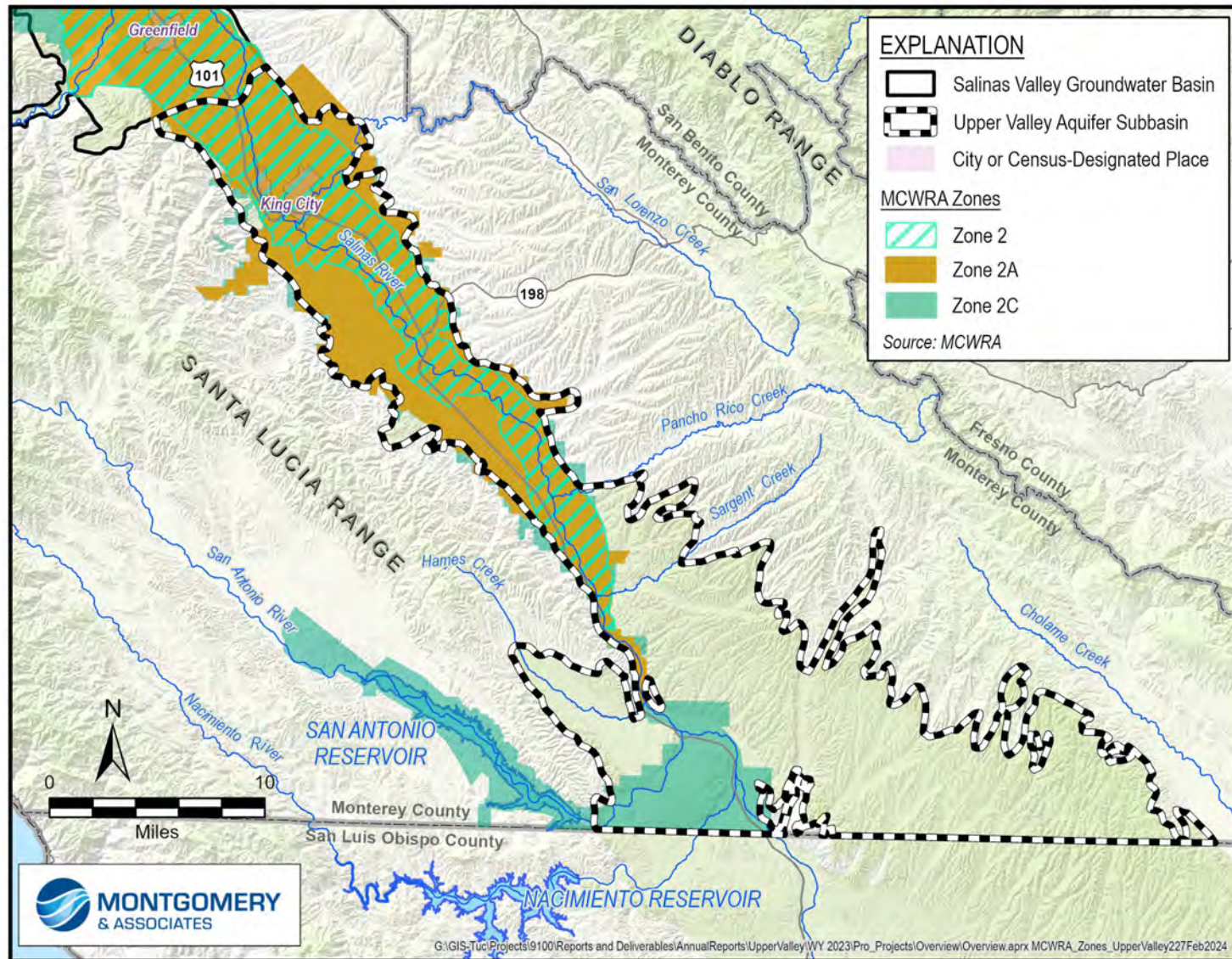


Figure 1. MCWRA Assessment Zones in Upper Valley Subbasin

The HCM update focused on key areas where new data indicated an updated understanding was needed. The primary updates to the HCM included:

- Revising what constitutes the bedrock and delineating the respective surface to define the bottom of the Subbasin
- Refining the extents and character of the Paso Robles Formation within the expanded Subbasin boundary
- Incorporating the Unnamed Sandstone into the geologic framework for the Subbasin and making accommodation to guide the groundwater modeling framework

This memo summarizes the data used, the analyses and methods employed, and the findings for the updated Upper Valley Subbasin HCM.

DATA

The data used to update the HCM are detailed in the following subsections.

Published Cross Sections and Reports

The 2022 GSP summarized published cross sections and reports. For this HCM update, the following reports and cross sections were reviewed again, compared with new data and information, and incorporated into the revised HCM.

- *Geology of the Southern Salinas Valley Area, California* (Durham, 1974)
- *Two-Dimensional and Three-Dimensional Digital Flow Models of the Salinas Valley Ground-Water Basin, California* (Durbin, et al., 1978)
- *State of the Salinas Rive Groundwater Basin – Hydrology Report* (Brown & Caldwell, 2015)
- *Final Report – Paso Robles Groundwater Basin Study, Phase 2 – Numerical Model Development, Calibration, and Application* (Fugro West, et al., 2005)

Well Completion Reports

Well Completion Reports (WCRs) helped refine geologic interpretations and included important information such as driller-observed lithology, screen intervals, and date of well installation. Some WCRs were more detailed than others with more frequent lithologic descriptions, electric logs (e-logs), and other construction or water level details.

M&A obtained WCRs through the California Department of Water Resources (DWR) Online System for Well Completion Reports (OSWCR) database, the County of Monterey Health Department, Monterey County Water Resources Agency, other collaborating partner agencies, and private entities. In particular, MCWRA provided hundreds of WCRs that were mostly supplementary to other geophysical data, but in some regions they were the only data available.

Numerical Groundwater Flow Model Layers

Previous and current groundwater flow models reflect various conceptual understandings of the Subbasin. Models reviewed for the HCM update included:

- The provisional Salinas Valley Integrated Hydrologic Model (SVIHM). The Salinas Valley Geologic Framework (Sweetkind, 2023) defines the spatial extent, depth, and distribution of geologic material textures for the provisional SVIHM. This geologic dataset was developed by the U.S. Geological Survey (USGS) to cover the entire Salinas Valley and includes a geological framework with key documentation. The SVIHM covers the northern portion of the Upper Valley Subbasin, and primarily along the Salinas River corridor.
- The final Paso Robles Groundwater Model. The Paso Robles Groundwater Model was developed as a planning tool to quantitatively evaluate future water trends in the Paso Robles Basin (Fugro West, *et al.*, 2005). The foundational hydrogeologic conceptual model defines the spatial extent, depth, and distribution of geologic material textures. The Paso Robles Groundwater Model covers much of the expanded Subbasin area in Monterey County outside of the Salinas River corridor.

These models were primarily used to compare and refine the depths and thicknesses of the hydrostratigraphic layers for the Salinas Valley Groundwater Basin HCM update.

Geophysical Data

Airborne Electromagnetic (AEM) resistivity data was the primary type of geophysical data used in this HCM update. The DWR collected these data in 2020 as part of the DWR Survey Area 1 (DWR, 2020). These data provide a broad coverage of general lithologic trends.

AEM surveys measure the resistivity of materials, both solid and liquid, in the subsurface over large areas. Lower resistivity materials include clays, silts, and groundwater with high total dissolved solids (TDS) concentrations. Higher resistivity materials include sands and gravels, some types of bedrock, and groundwater with lower TDS concentrations. AEM data are useful for filling gaps between known data points such as wells. This effort focused on reviewing and analyzing the lower resistivities at various target depths where the bedrock was expected.

Geologic Maps

Geologic maps provide a visual representation of the rocks, formations, and structures encountered at land surface. The primary map used for this HCM update was Digital Geologic Map of Monterey County, California, 1934-2001 (Rosenberg, 2001). This geologic map anchored other data to the various lithologic units during the HCM update .

METHODS

Geologic modeling and visualization software was used to update the Subbasin hydrostratigraphy through the following steps, starting with the data with the most confidence:

1. Integrating and reviewing the data using Leapfrog Geo software
2. Prioritizing data based on reliability and availability
3. Selecting the best data to define the new hydrostratigraphic layers
4. Interpolating the data to create new hydrostratigraphic layers within Leapfrog Geo software

Geologic Modeling Software

Developed by Seequent, Leapfrog Geo software was the primary 3D modeling and visualization software used to relate and analyze the different types of data described above. All data were imported into the software, methodically reviewed, and compared to each other.

Data Prioritization

Various data have differing levels of confidence. The list below demonstrates the general hierarchy of confidence in the various data types used in this analysis:

1. Geologic Maps
2. Published Cross Sections and Reports
3. Borehole Logs (WCRs)
4. AEM data
5. Groundwater Flow Models

Concurrently using multiple data sources can improve confidence in geologic interpretations. For example, confidence in AEM data can be significantly improved when it is combined and coordinated with geologic maps or borehole logs.

Data are not uniformly distributed throughout the Subbasin. Wells and associated WCRs are more concentrated in areas with more infrastructure, whereas AEM flightlines generally cover areas with less or no infrastructure. Therefore, hydrogeologic interpretations are more strongly influenced by the availability of data in different areas.

Hydrogeologic interpretations initially focused on areas with a higher density of multiple data types to cross validate data. Developing confidence in any data type allowed analyses using those data to expand horizontally and vertically and revise the HCM as needed.

The decision-making procedures for updating the HCM generally used the following guidelines. These guidelines do not represent a decision-making hierarchy, rather they are a group of guidelines that interact in various ways based on circumstances in each particular area.

- Newer geologic maps were prioritized over older geologic maps.
- Newer published cross sections were prioritized over older published cross sections, unless there was higher confidence in older cross sections based on the author and how the sections correlated with other data.
- Geologic maps provided anchor locations for the geologic surface contacts including bedrock outcrops where available.
- The hydrostratigraphy was refined by jointly using AEM data, WCRs, and published cross sections in places where the various data types overlapped. This strengthened confidence in AEM data interpretation.
- Where AEM data and cross sections did not align, well logs used to develop the cross section were reviewed and used in conjunction with the AEM data.
- AEM data were the primary data source for hydrostratigraphic interpretation in areas with limited borehole data.
- Published cross sections were used where AEM data were not available and correlated with the nearest AEM data.
- WCRs were used as verification and interpolation points for key priority areas.
- Areas with no other nearby data relied on the SVIHM geologic model or SWI Model layers to interpolate the hydrostratigraphic layers.

Figure 2 shows a prime example of an analysis that encompasses many types of data and shows how they are correlated to provide a more cohesive understanding of the hydrostratigraphy of the Basin. The cross section on Figure 2 was exported from the Leapfrog geologic model and spans the 180/400-Foot Aquifer Subbasin, the Monterey Subbasin, and the Seaside Subbasin. Hydrostratigraphy in the north (left on Figure 1) is based on WCRs with finer sediments

highlighted in blue. Hydrostratigraphy in the center of Figure 1 is based on AEM data, with finer sediments highlighted in blue. A previously published map of the Monterey Formation (HydroMetrics, 2009) provided structural data in the south, as well as locations of surface outcrops of Monterey Formation highlighted with yellow disks. Published cross sections, e-logs, and surface geology maps are not shown on the figure; however, in this location they were also reviewed for confirmation of other data. Through careful analysis and integration of all data types, a new bedrock surface was developed, shown in pink mesh and green contour lines on Figure 2. This figure best illustrates the data synthesis methodology applied to each subbasin within the Salinas Valley Groundwater Basin, and should be viewed as a conceptual depiction of the types of data and decision processes used to update the Upper Valley Subbasin HCM.

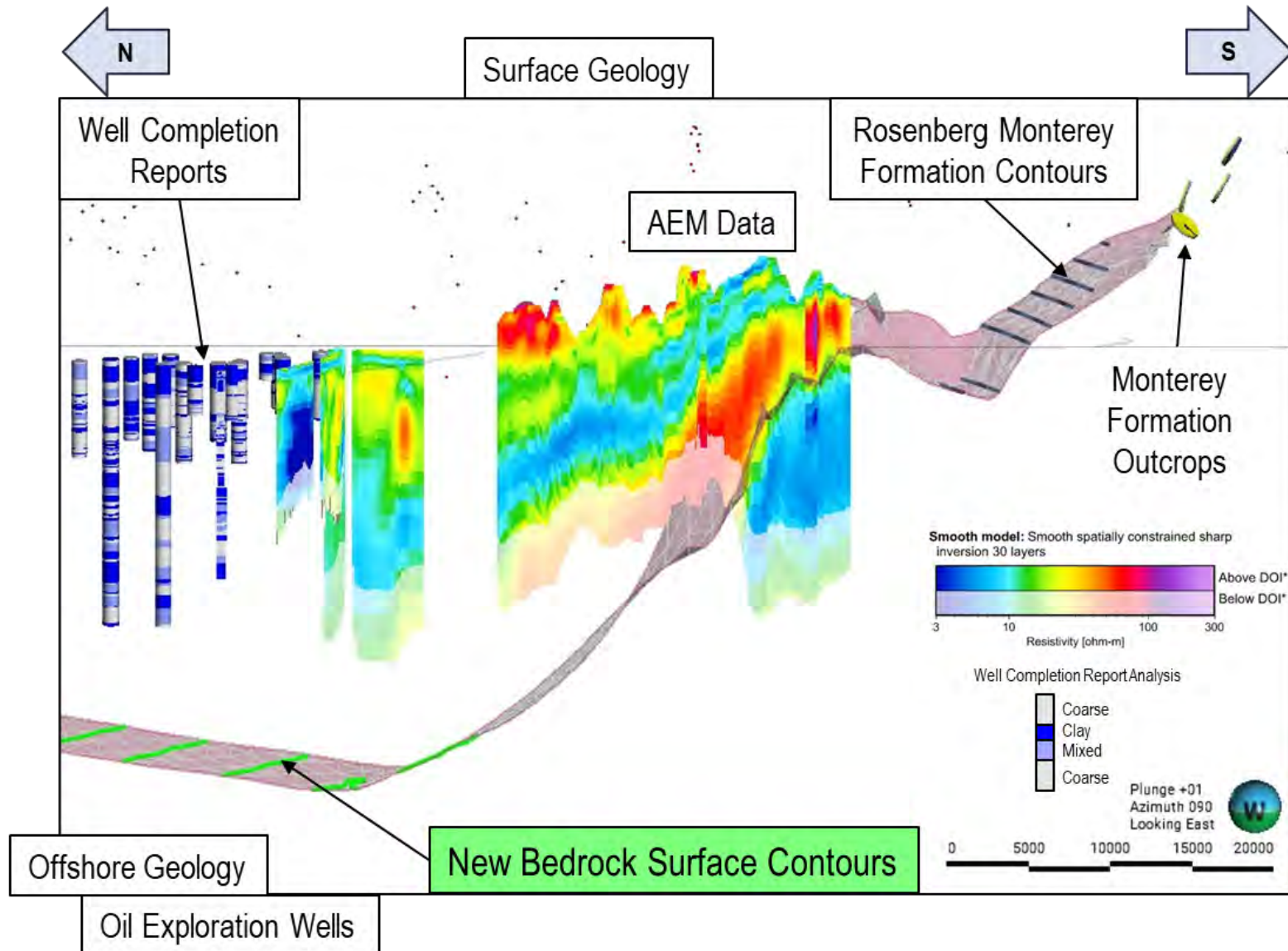


Figure 2. Example of Different Types of Data Juxtaposed in Leapfrog Geo Software to Delineate Updated Bedrock Surface

Across the Subbasin, hydrostratigraphic decision making was prioritized from deepest layers to shallowest layers. The bedrock surface was the first priority and was modified using AEM data and surface geology maps. After revising the bedrock surface, the HCM was revised focusing on the geologic formations that comprise the principal aquifer through delineating the Alluvial sediments, the Paso Robles Formation, and the newly included Unnamed Sandstone.

RESULTS/FINDINGS

Results of the 3 primary HCM updates listed in the introduction are detailed below.

Bedrock Surface

Principal Data Used: surface geology maps, AEM data, published cross sections

Understanding the depth and geometry of the bedrock helps determine the available aquifer space for groundwater storage in the Upper Valley Subbasin. The previous conceptualization of the bedrock was based on the findings of Durham (1974), various oil exploration studies, and Durbin, *et al.* (1978). Identifying the contact with crystalline rocks was the primary focus of Durham (1974) and the oil exploration studies, while Durbin *et al.*, (1978) focused on the “usable” portion of the groundwater basin and constrained the Upper Valley to a narrow corridor along the Salinas River. Both of these approaches show a shallowing and narrowing of the Basin from northwest to southeast, mirroring large structural influences through this region. Historically, defining the bedrock surface with respect to groundwater production outside of the river corridor has not been extensively explored.

The updated conceptual understanding brings together the previous sources of information with newly available AEM data to define the bedrock across the whole Subbasin. The northernmost areas of the Subbasin define the bedrock as the contact with either the Monterey Formation along the Santa Lucia Range or the crystalline rocks of the Gabilan Range. Both of these formations are low permeability and generally non-water bearing, thereby comprising a combined bedrock to define the Basin bottom. This aligns with the combined bedrock layer in the SVIHM which comprises the Monterey Formation and Gabilan granites (Sweetkind, 2023). The southernmost areas of the Subbasin rely on the work conducted by Fugro West *et al.*, (2005) in the adjacent Paso Robles Subbasin, which defines the Basin bottom as the contact with the Pancho Rico Formation. The Paso Robles Subbasin geologic and numerical models do not include the Pancho Rico Formation as part of its water-bearing formations because of its low permeability and high saline content if groundwater is present (Fugro West *et al.*, 2005).

AEM data were used to verify the locations and depths of the Monterey Formation, crystalline rocks, and Pancho Rico Formation, where previously published cross sections had defined them. These formations constitute the generally non-water-producing formations in the Subbasin.

Then, the AEM transects between the northernmost and southernmost locations of verified data were used to delineate the top of the bedrock surface that demarcates the overlying water-producing sediments from the underlying non-water-producing formations. This linked the Pancho Rico Formation to the previously defined bedrock for the rest of the Salinas Valley Groundwater Basin. Therefore, the Pancho Rico Formation is grouped into the combined bedrock layer that defines the Subbasin bottom. The bedrock surface is now conceptualized to be shallower than that in the SVIHM since it includes the Pancho Rico Formation.

Figure 3 demonstrates as an example of how published cross sections and AEM data were used together to define the bedrock surface. The figure shows an AEM transect north of King City where the alluvium is represented by the hotter colors indicating high-resistivity data, and the cooler colors symbolize the less resistive Paso Robles and Pancho Rico Formations. In this Subbasin, the AEM data do not always show a clear distinction between the Paso Robles and Pancho Rico Formations. This is due to the higher clay content within the Paso Robles Formation and the higher salinity in the Pancho Rico Formation, which can sometimes muddle the resistivity signal. To help identify the top of the Pancho Rico Formation, published cross sections were used as a starting point to anchor the AEM data, then interpolated outward. The cross sections developed by Durham (1974) were primarily used in the northern portion of the Subbasin. Based on Durham (1974), the contact between the Paso Robles and Pancho Rico Formations occurs at an elevation of approximately -400 feet (NAVD88) in this area as indicated by the dashed line on Figure 3. This contact was refined with AEM data to update the surface of the Pancho Rico Formation and, accordingly, the Subbasin bottom.

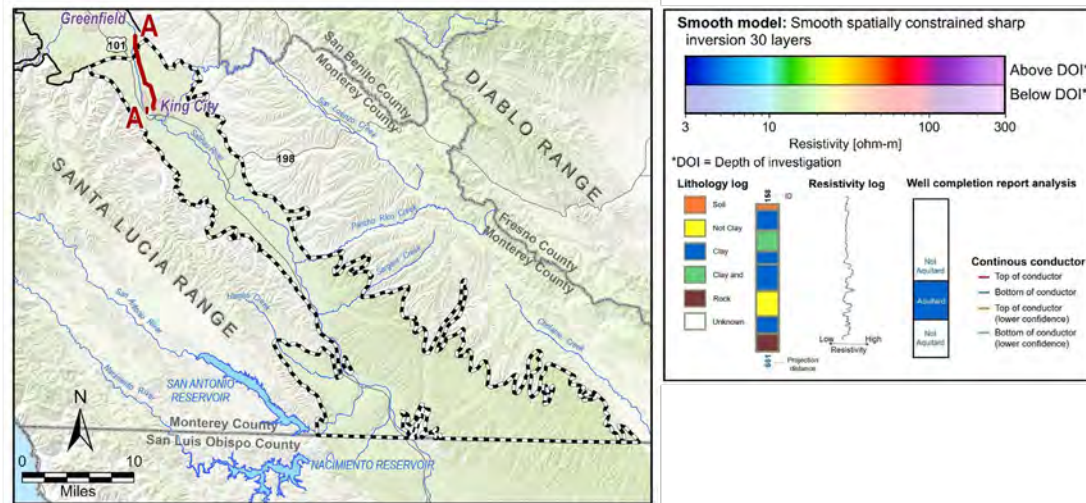
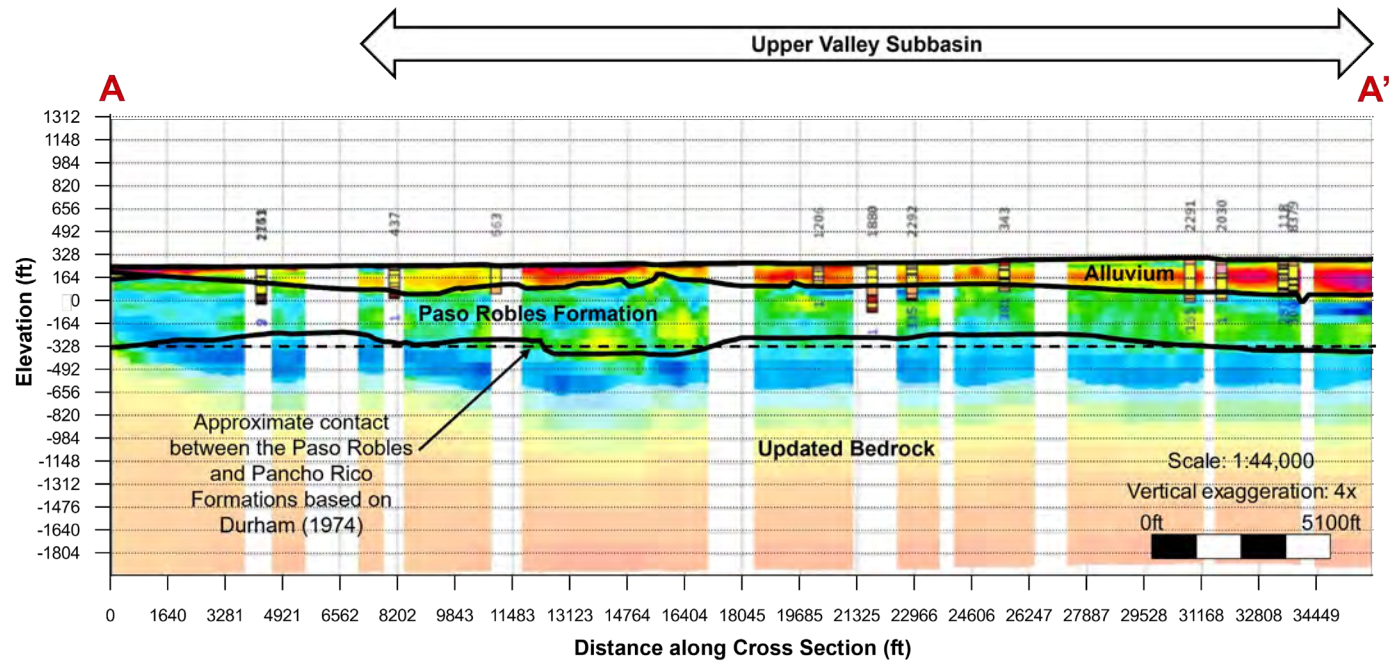


Figure 3. Updated Conceptual Understanding of Bedrock Surface and Key Data Used

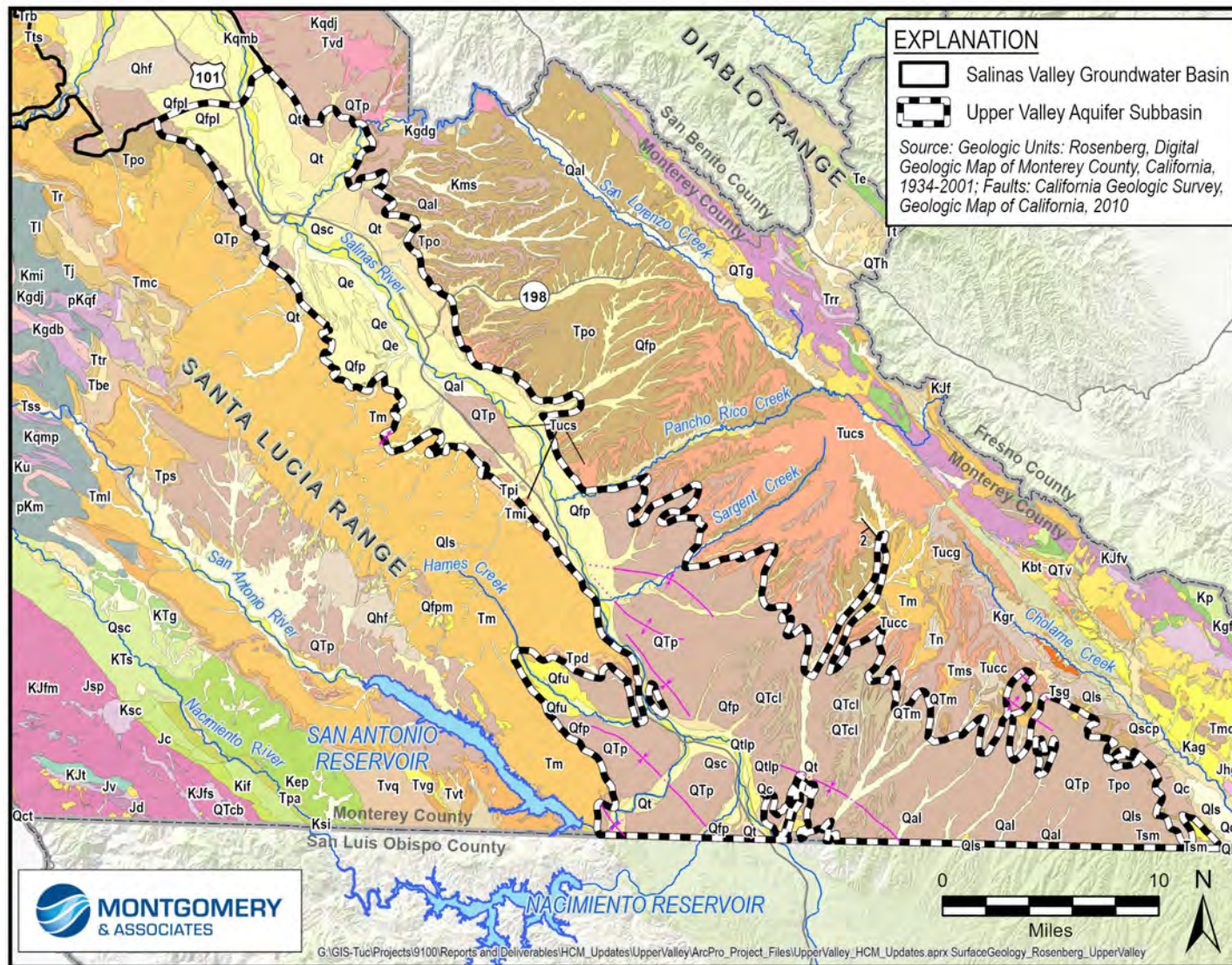
Refining the Paso Robles Formation in the Expanded SGMA Area

Principal Data Used: surface geology maps, AEM data, published cross sections

The previous conceptualization of the Upper Valley Subbasin focused on the shallow alluvium along the river corridor in the northernmost areas, as this is where most of the groundwater production occurs. Previous reports noted the underlying geology but did not delineate their extents or depths as these were not pertinent to the bulk of groundwater wells in the area. The SGMA boundary expansion southward to the county boundary is tied to the mapped extent of the Paso Robles Formation to the east and west. The Paso Robles Formation is a primary component of hydrostratigraphy throughout the subbasins under SVBGSA's jurisdiction and the adjacent Paso Robles Subbasin, and its expanded inclusion in the Upper Valley Subbasin acknowledges the Paso Robles Formation's significance in groundwater management.

The 2022 GSP defines the Subbasin as having 1 principal aquifer, which consists of the alluvium and the Paso Robles Formation as there is no consistent clay layer that separates these 2 water-bearing units. However, gaining a better understanding of the Paso Robles Formation within the expanded area is an important component to understanding the Subbasin as a whole. Figure 4 illustrates the surface geology of southern Monterey County and can be used to explain the expansion of the Subbasin's boundary in relation to SGMA. This figure shows the alluvium (Qt) as pastel yellow colors and the Paso Robles Formation (QTp, QTcl, QTm, and QTpc) as the taupe color. To the west along the Santa Lucia Range, both formations generally terminate at the Monterey Formation (Tmi, Tm, Tml), represented by the pastel orange color. The Subbasin boundary to the east is roughly delineated by the contact of the alluvium or Paso Robles Formation against the Pancho Rico Formation (Tpo, Tpi, Tpd, and Tps) or the Unnamed Sandstone (Tucs, Tucc), yellow-brown and pastel coral, respectively.

The updated conceptualization of the Paso Robles Formation in the Subbasin was refined using surface maps to guide the areal extent and AEM data to guide the vertical extents. In the expanded area of the Subbasin, the Paso Robles Formation and underlying sedimentary sequence generally dip to the west. The Paso Robles Formation unconformably overlies the Unnamed Sandstone or the bedrock units, depending on where it is encountered in the Subbasin. In other locations, the bottom of the Paso Robles Formation could not be identified in the AEM data due to its variable clay content, or the limited AEM depth of investigation throughout the Subbasin. Reasonable estimates of its thickness were determined based on published reports. Figure 5 shows an AEM transect across the southern area of the Upper Valley Subbasin where the Paso Robles Formation is at the surface. This transect demonstrates the variable thickness and clay content of the Paso Robles Formation. The higher clay content in the Paso Robles Formation, and thus lower hydraulic conductivity, potentially impacts hydraulic connectivity with the overlying alluvium by impeding groundwater flows. It is important to note that for this HCM update, the Paso Robles Formation was identified laterally and vertically, but identifying extensive clay deposition within the formation was not a priority at this time.



(from Jennings, et al., 2020; Rosenberg, 2001)

Figure 4. Surface Geology of the Upper Valley Subbasin and Southern Monterey County

FIGURE 4 EXPLANATION
QUATERNARY

Qal	Alluvial deposits, undifferentiated
Qhf	Alluvial fan deposits, Holocene
Qfpl	Alluvial fans, late Pleistocene
Qfpm	Alluvial fans, middle Pleistocene
Qb	Basin deposits
Qct	Coastal terraces
Qc	Colluvium
Qd	Dune deposits
Qe	Eolian deposits
Qfp	Flood-plain deposits, undifferentiated
Qt	Fluvial terrace deposits, undifferentiated
Qtlp	Fluvial terrace deposits, late Pleistocene
Qls	Landslide deposits
Qfu	Pleistocene alluvial fans, undifferentiated
Qscp	Sandstone and conglomerate
Qsc	Stream channel deposits

QUATERNARY-TERTIARY

QTp	Paso Robles Formation, undifferentiated
QTcl	Paso Robles Formation, clay
QTm	Paso Robles Formation, marl
QTg	Paso Robles Formation, gravel
QTpc	Paso Robles Formation, clay and gravel
QTcs	Sedimentary rocks of Crystal Knob
QTcb	Basalt of Crystal Knob
QTV	Varian Ranch beds
QTh	Hans Grieve Formation

TERTIARY

Tucc	Unnamed clastic sedimentary unit
Tucs	Unnamed clastic sedimentary unit

Tucg	Unnamed clastic sedimentary unit
Te	Etchegoin Formation
Tpd	Pancho Rico Formation
Tpd	Pancho Rico Formation, diatomite
Tpo	Pancho Rico Formation, mudstone
Tps	Pancho Rico Formation, sandstone
Tpi	Pancho Rico Formation, siltstone
Tsm	Santa Margarita Sandstone
Tm	Monterey Formation, siliceous
Tmi	Monterey Formation, siltstone
Tml	Monterey Formation, semi-siliceous
Tmc	Monterey Formation, clay shale
Tmd	Monterey Formation, Devilwater member
Tms	Unnamed clastic sediments, marine sandstone
Tn	Unnamed clastic sediments, red beds
Tsg	Unnamed conglomerate and sandstone
Trb	Red beds
Tls	Marine sandstone
Trr	Reef Ridge Shale
Tt	Tembler Sandstone
Tvr	Rhyolite breccia and obsidian
Tvd	Dacitic felsite
Tvt	Vaqueros Formation
Tvg	Vaqueros Formation
Tvq	Vaqueros Formation
Tbe	Berry Formation
Tlr	The Rocks Sandstone
TL	Lucia Shale
TJ	Junipero Sandstone
Tlj	Tejon Formation

Tpa	Piedras Altas Formation
Tr	Reliz Canyon Formation
Tss	Unnamed marine sandstone
CRETACEOUS	
KTs	Marine clastic sedimentary rocks
KTg	Marine clastic sedimentary rocks
Kep	El Piojo Formation
Ksi	Shut-in Formation
Kif	Italian Flat Formation
Ksc	Steve Creek Formation
Ku	Unnamed sedimentary rocks, eastern facies
Kgf	Gravelly Flat Formation
Kp	Panoche Formation
Kgr	Granitic rocks, undifferentiated
Kgdg	Granodiorite of Gloria Road
Kgdb	Granodiorite-quartz diorite of Bear Mountain
Kgdj	Quartz diorite-granodiorite of Johnson Canyon
Kgdj	Porphyritic granodiorite of Junipero Serra Peak
Kqmb	Quartz monzonite of Bickmore Canyon
Kqmp	Quartz monzonite of Pinyon Peak
Kbt	Biotite tonalite
Kag	Aplitic granite
Kmi	Gabbro and diorite (Santa Lucia Range)
Kms	Schist of Sierra de Salinas
JURASSIC-CRETACEOUS	
KJt	Toro Formation
KJf	Franciscan complex, undifferentiated
KJfs	Franciscan complex, graywacke
KJfv	Franciscan complex, greenstone
KJfm	Franciscan complex, melange










JURASSIC

Jd	Diabase and diorite
Jhg	Hornblende quartz gabbro of Gold Hill
Jsp	Serpentinite
Jv	Mafic volcanic rocks
Jc	Radiolarian chert

PRE-CRETACEOUS

pKm	Marble
pKqf	Quartzofeldspathic rocks

GEOLOGIC FEATURES

	anticline, certain
	plunging anticline, certain
	anticline, concealed
	plunging anticline, concealed
	syncline, certain
	syncline, concealed
	fold axis, certain
	fold axis, concealed
	Strike and dip

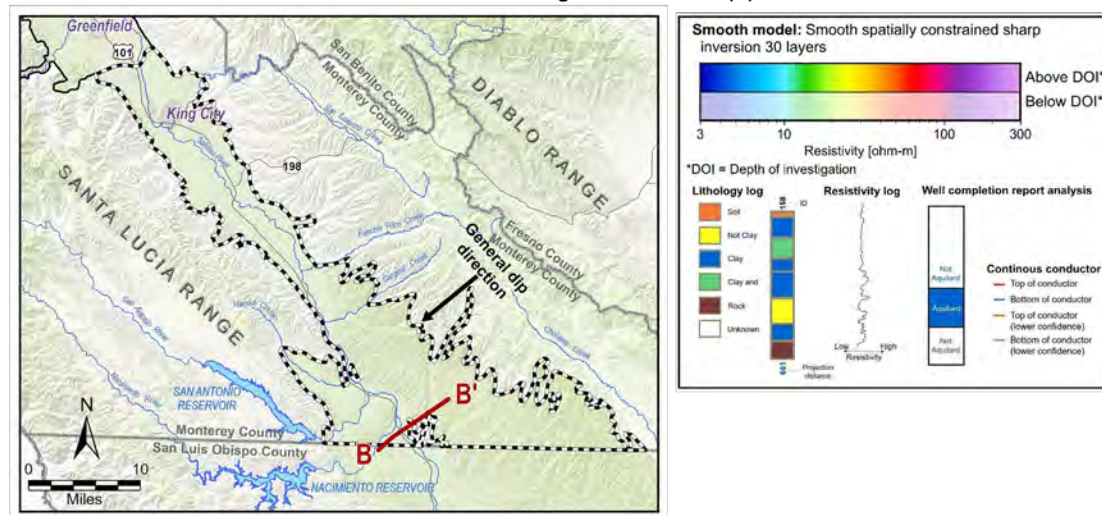
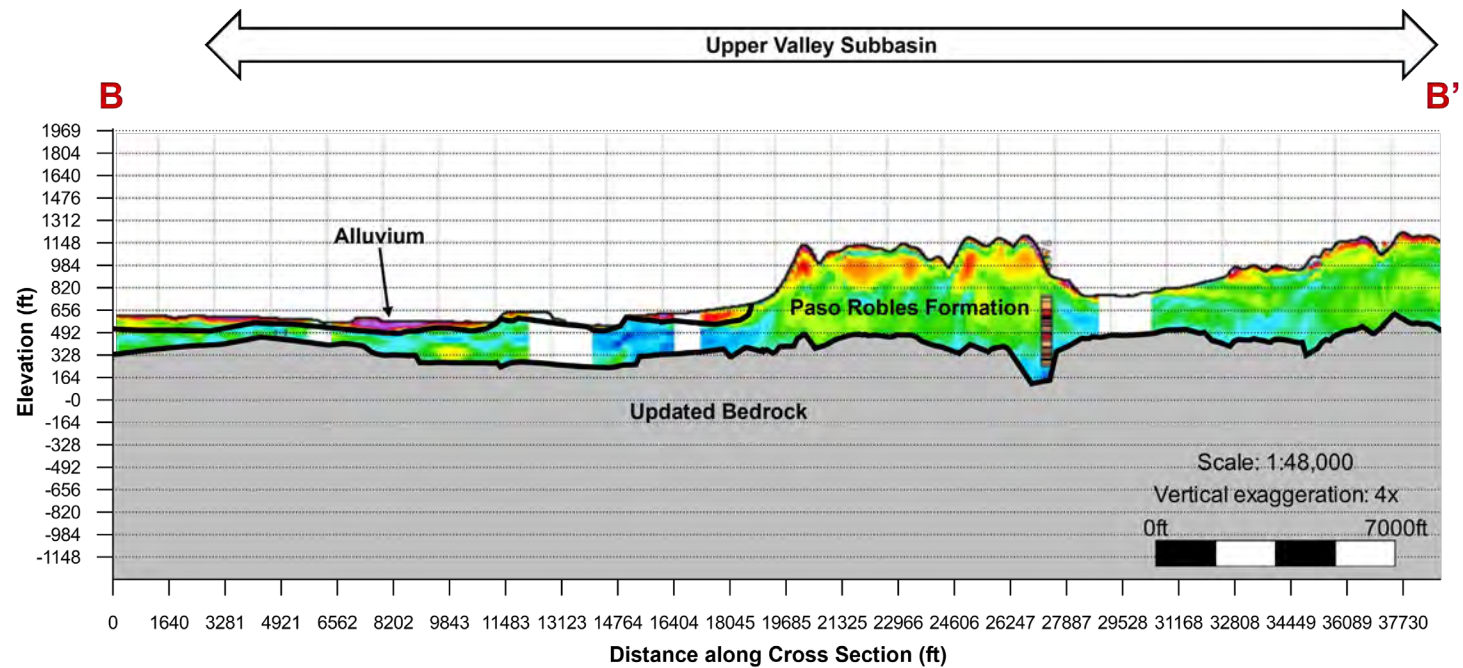


Figure 5. Key Data Demonstrating Variability of Paso Robles Formation within the Upper Valley Subbasin

Inclusion of the Unnamed Sandstone

Key Data Used: AEM data, surface geology maps

Prior to the expansion of the southern half of the Upper Valley Subbasin to the county line, the Unnamed Sandstone was not associated with the Subbasin. With the expanded boundary, portions of the Unnamed Sandstone are now included at the margins, but the unit is also exposed in the center of the Subbasin due to the general westerly dipping nature of the sedimentary sequence that includes the Monterey Formation stratigraphically up to the Paso Robles Formation. The portions of this formation that are included within the Subbasin boundary, designated by the symbol TuCs, are shown on Figure 4. This formation has been identified and described at other locations within the Coastal California sedimentary sequence, and in the Subbasin is situated between the Paso Robles and Pancho Rico Formations.

Although the Unnamed Sandstone is not as extensive on the surface as other formations within the Upper Valley Subbasin, AEM data indicate that it is present in more areas in the Subbasin than previously understood. Figure 6 displays an east-west AEM transect that meets the Subbasin's southeastern boundary. Along this transect, the Unnamed Sandstone is exposed at the surface on the easternmost side (based on surface geology) and then dips to the west beneath the Paso Robles Formation (based on AEM data). The Unnamed Sandstone is distinguished by the higher-resistivity data represented by the larger yellow patch in the transect (Figure 6).

A sliver of the Unnamed Sandstone is mapped along the main river corridor where most of the wells in the Subbasin are found, however there are no known wells completed in this unit. Figure 7 shows a northwest-southeast AEM transect that intersects with the Unnamed Sandstone across the middle of the river corridor. The surficial high-resistivity data represents the alluvial sediments that overlay the Paso Robles Formation, demarcated by the cooler colors indicative of lower resistivity data. The Paso Robles Formation is underlain by another set of high-resistivity data depicting the Unnamed Sandstone. The thickness of the Unnamed Sandstone here shows the westerly-dipping sedimentary sequence, first observed along the eastern margins of the Subbasin, and continuing underneath the Paso Robles Formation even to the center of the Subbasin. This suggests that although the mapped outcrops of the Unnamed Sandstone unit are minimal within the Subbasin boundary, the areal extent of the unit is significant.

The updated understanding of the Unnamed Sandstone is as a separate geologic unit due to its mapped outcrops and distinctly separate resistivity profile in the subsurface. However, there are no aquifer test data or wells completed within the Unnamed Sandstone that could provide hydrologic data or information about it. Therefore, for SGMA purposes, it will be modeled and managed as part of the Paso Robles Formation in the Subbasin.

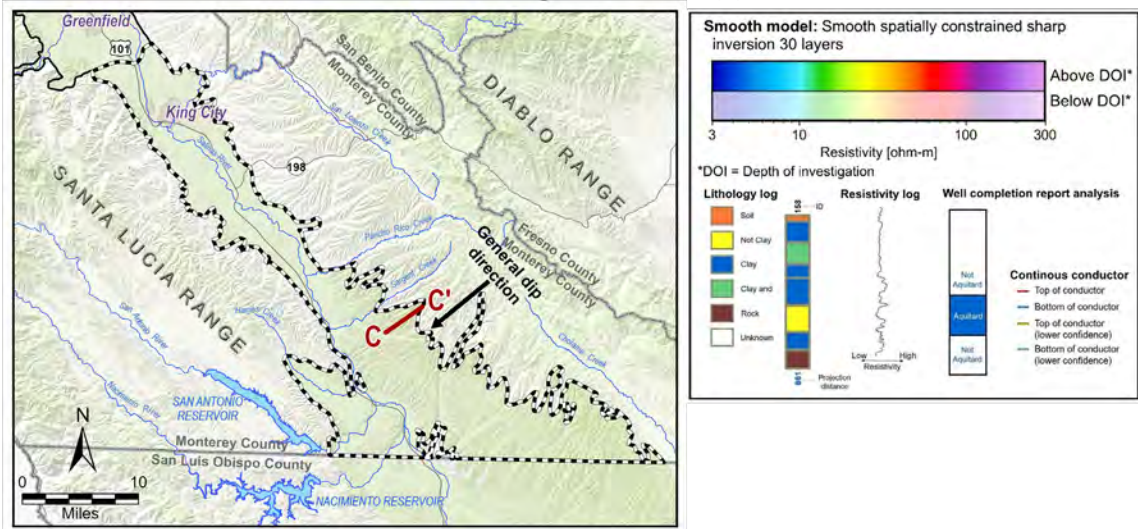
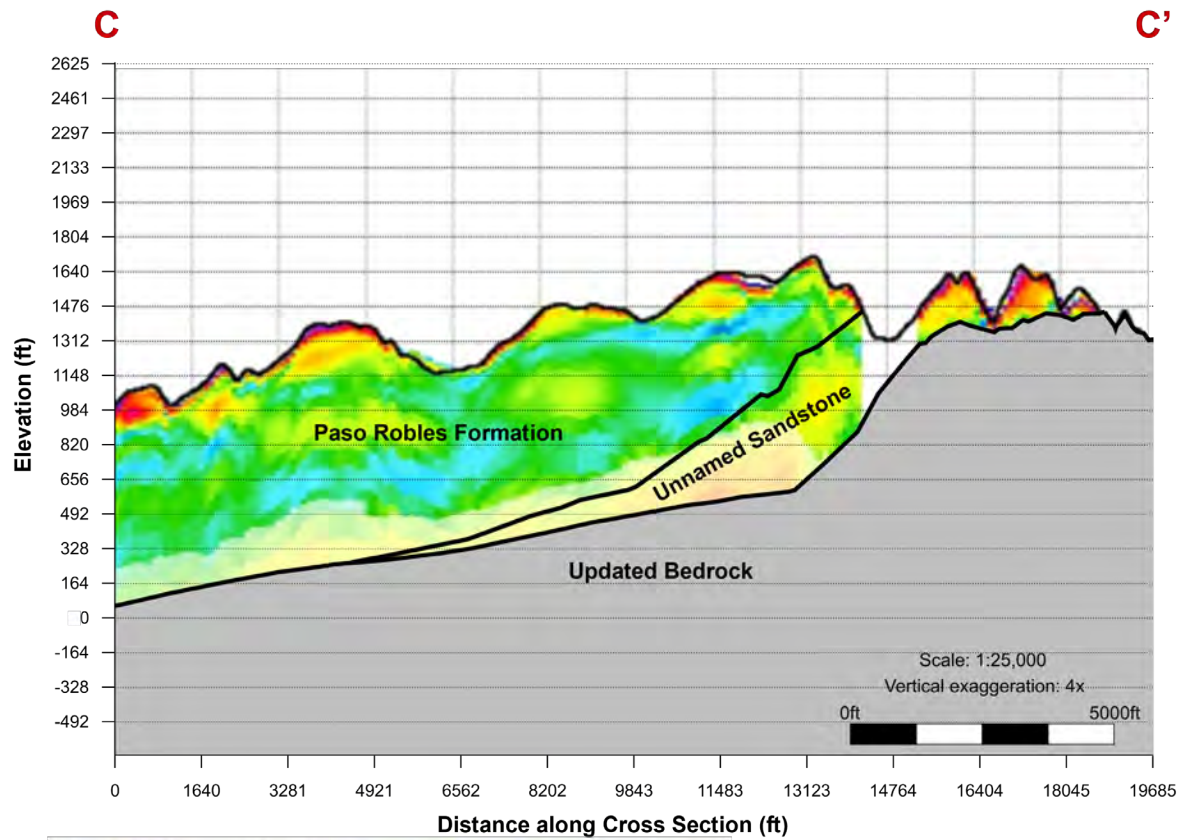


Figure 6. Example 1 of the Updated Conceptual Understanding of the Unnamed Sandstone and AEM Transect

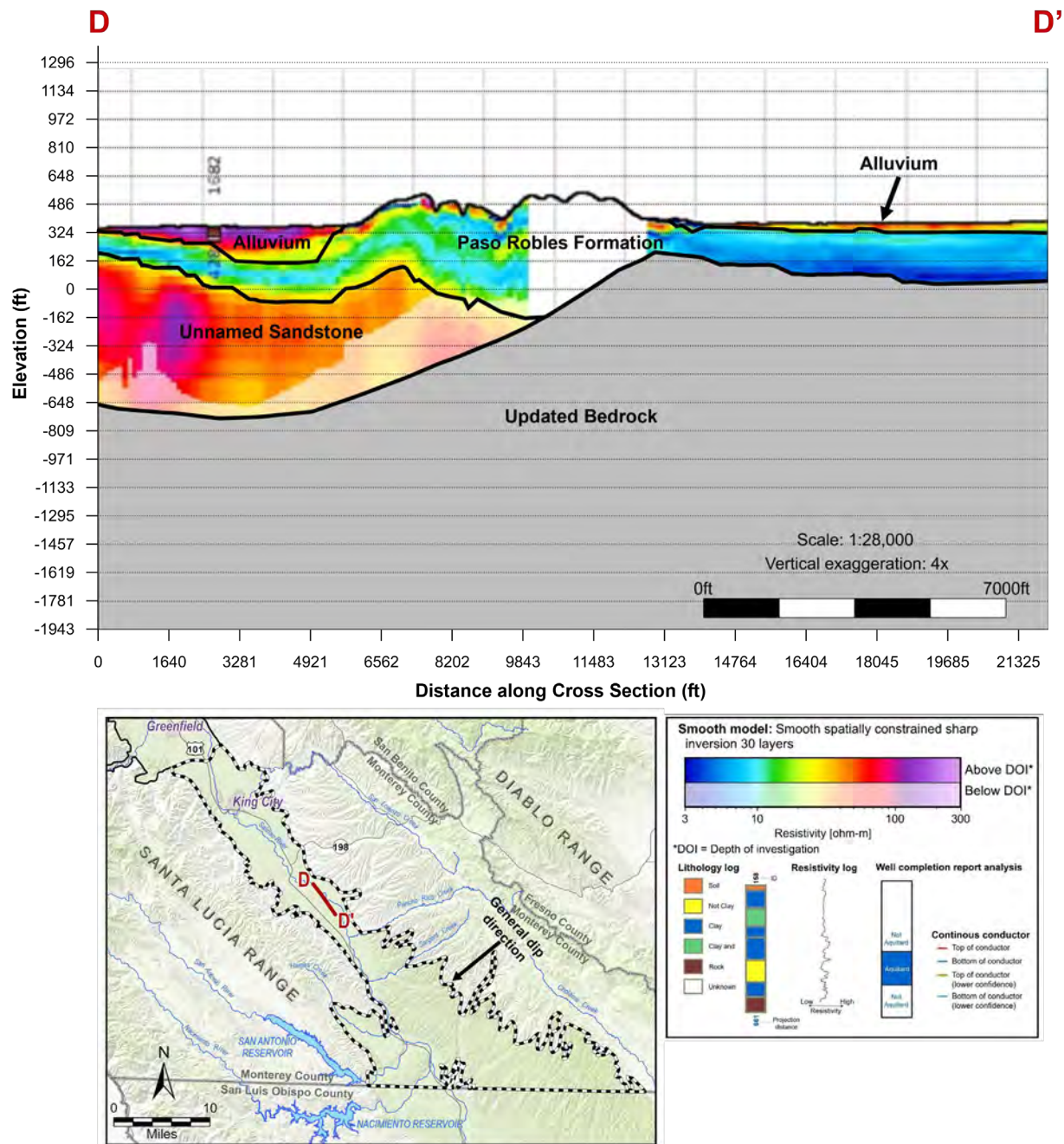


Figure 7. Example 2 of the Updated Conceptual Understanding of the Unnamed Sandstone and AEM Transect

CONCLUSIONS

The Upper Valley Subbasin HCM presented in the GSP was developed using the best available data and information at the time. This HCM update uses the best available data and information procured since GSP development and provides clear refinements for the Subbasin overall.

The following are principal updates to the Upper Valley Subbasin HCM:

- The bedrock surface that delineates the bottom of the Subbasin has been updated to include the Pancho Rico Formation along with the established Monterey Formation and crystalline rocks. Therefore, the bedrock surface has also been found to be shallower than previously understood. These 3 formations mark the top of the non-water-bearing sediments, depending on location within the Subbasin.
- The Paso Robles Formation is generally westerly dipping in the expanded area of the Subbasin and was refined with AEM data to delineate its depth, thickness, clay content, and contact with other formations throughout the Subbasin.
- The Unnamed Sandstone follows the westerly dipping trend of the Paso Robles Formation and is now recognized as an extensive and distinct geologic formation in the Subbasin. However, it lacks hydrogeologic data and will be grouped with the Paso Robles Formation for groundwater flow modeling and management purposes, subject to future refinements as additional data acquisition may warrant.

REFERENCES

- Dartnell, P., Maier, K.L., Erdey, M.D., Dieter, B.E., Golden, N.E., Johnson, S.Y., Hartwell, S.R., Cochrane, G.R., Ritchie, A.C., Finlayson, D.P., Kvitek, R.G., Sliter, R.W., Greene, H.G., Davenport, C.W., Endris, C.A., and Krigsman, L.M. (P. Dartnell and S.A. Cochran, eds.), 2016, California State Waters Map Series — Monterey Canyon and Vicinity, California: U.S. Geological Survey Open-File Report 2016–1072, 48 p., 10 sheets, scale 1:24,000. Available at: <http://dx.doi.org/10.3133/ofr20161072>.
- Durbin, Timothy J., G.W. Kapple, and J.R. Freckleton. 1978. Two-Dimensional and Three-Dimensional Digital Flow Models of the Salinas Valley Ground-Water Basin, California. U.S. Geological Survey. Water Resources Investigations Report 78-113. Prepared in cooperation with the U.S. Army Corps of Engineers. 134 p.
- Durham, D.L. 1974. *Geology of the Southern Salinas Valley Area, California*. U.S. Geological Survey Professional Paper 819, 1974, 117p.
- DWR (Department of Water Resources). 2003. California's Ground Water. Bulletin 118. Update 2003. Available at: http://wdl.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin_118/Bulletin_118_2003.pdf.
- _____. 2016a. California's Groundwater. Bulletin 118 Interim Update 2016. Available at: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/B118-Interim-Update-2016.pdf>.
- _____. 2020. Survey Area 1 – Salinas Valley Data Report and Appendices. DWR Airborne Electromagnetic (AEM) Surveys Data. Available at: <https://data.cnra.ca.gov/dataset/aem>.
- Fugro West, ETIC Engineering, Inc., and Cleath and Associates. 2005. Final Report – Paso Robles Groundwater Basin Study, Phase 2 – Numerical Model Development, Calibration, and Application. Available at: <https://www.slocounty.ca.gov/departments/groundwater-sustainability/forms-documents/paso-robles-groundwater-basin/archived-documents/2005-02-prgb-study,-phase-ii>.
- Jennings, C.W., with modifications by C. Gutierrez, W. Bryant, G. Saucedo, and C. Wills, 2010. Geologic map of California: California Geological Survey, Geologic Data Map No. 2, scale 1:750,000. <https://maps.conservation.ca.gov/cgs/gmc/app/>.
- MCWRA. 2025. Assessment Zones, GIS Data. Available at: <https://montereycountyopendata-12017-01-13t232948815z-montereyco.opendata.arcgis.com/>.

Rosenberg, Lewis I. 2001. Digital Geologic Map of Monterey County, California, 1934-2001. Monterey County (Calif.) Planning Department. Incorporated as Sheet 1 of: Geologic Resources and Constraints, Monterey County, California, A Technical Report for the Monterey County 21st Century General Plan Update Program. Available at: <http://purl.stanford.edu/cm427jp1187>.

SVBGSA. 2022. Salinas Valley: Upper Vallery Aquifer Subbasin Groundwater Sustainability Plan. Available at: <https://svbgsa.org/wp-content/uploads/2022/04/Upper-Valley-Whole-GSP-Report-Only-20220414.pdf>.

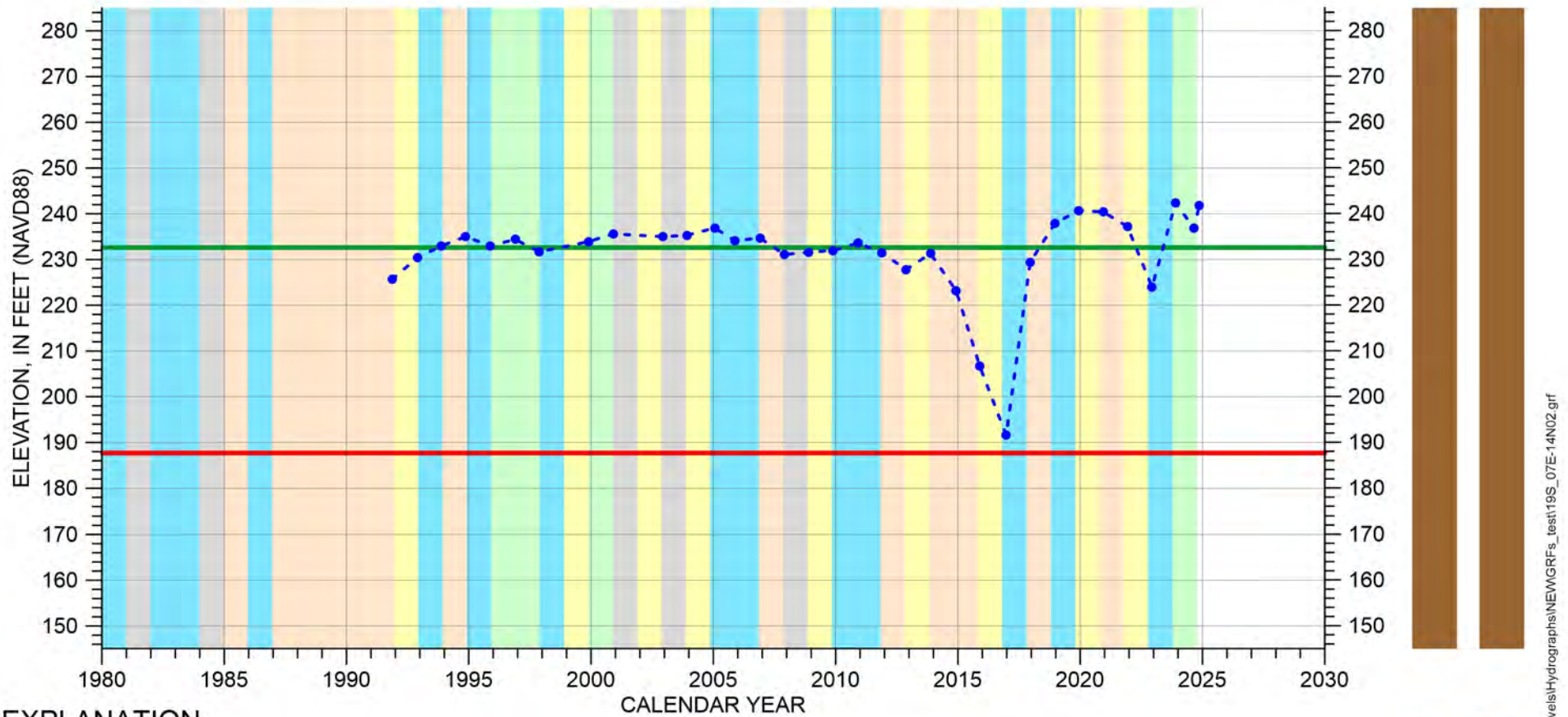
Sweetkind, D.S. 2023. Digital data for the Salinas Valley Geological Framework, California: U.S. Geological Survey data release. Available at: <https://doi.org/10.5066/P9IL8VBD>

Appendix B

Hydrographs of Representative Monitoring Site Wells

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 19S/07E-14N02

Upper Valley Aquifer Subbasin

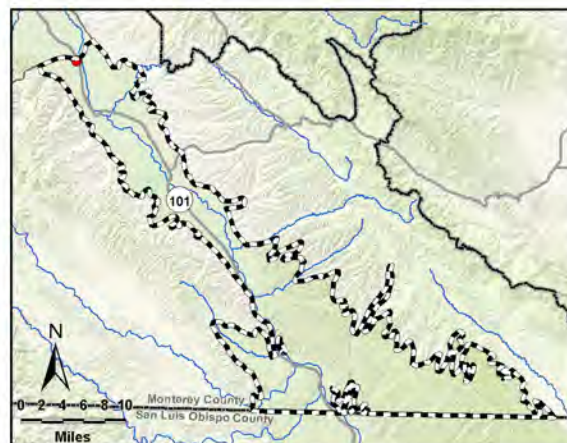


EXPLANATION

- Groundwater Elevation
- Suspect Measurement
- Land Surface (321.7 FT MSL)
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- DRY
- DRY - NORMAL
- NORMAL
- WET - NORMAL
- WET

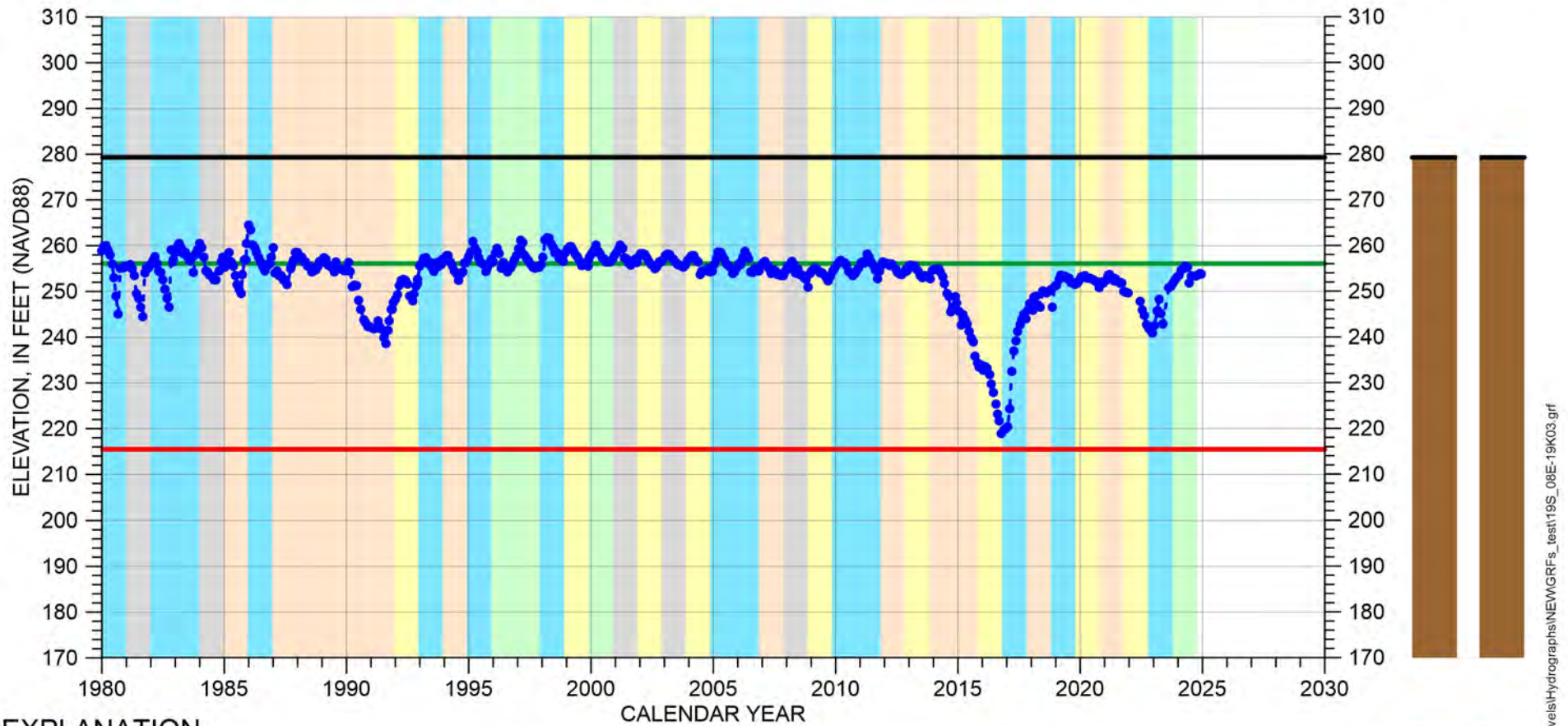


Perforated interval
unknown

Well bottom
72 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 19S/08E-19K03

Upper Valley Aquifer Subbasin

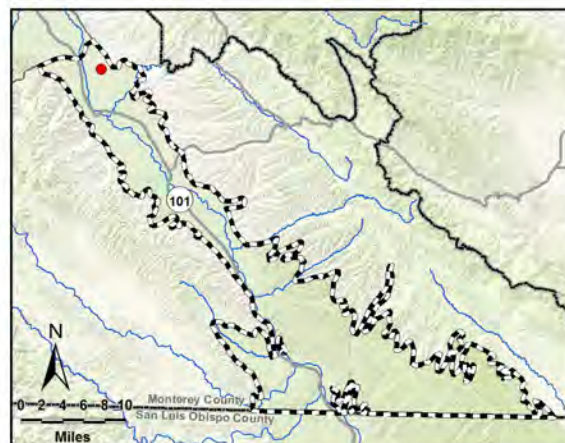


EXPLANATION

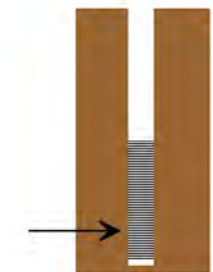
- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |

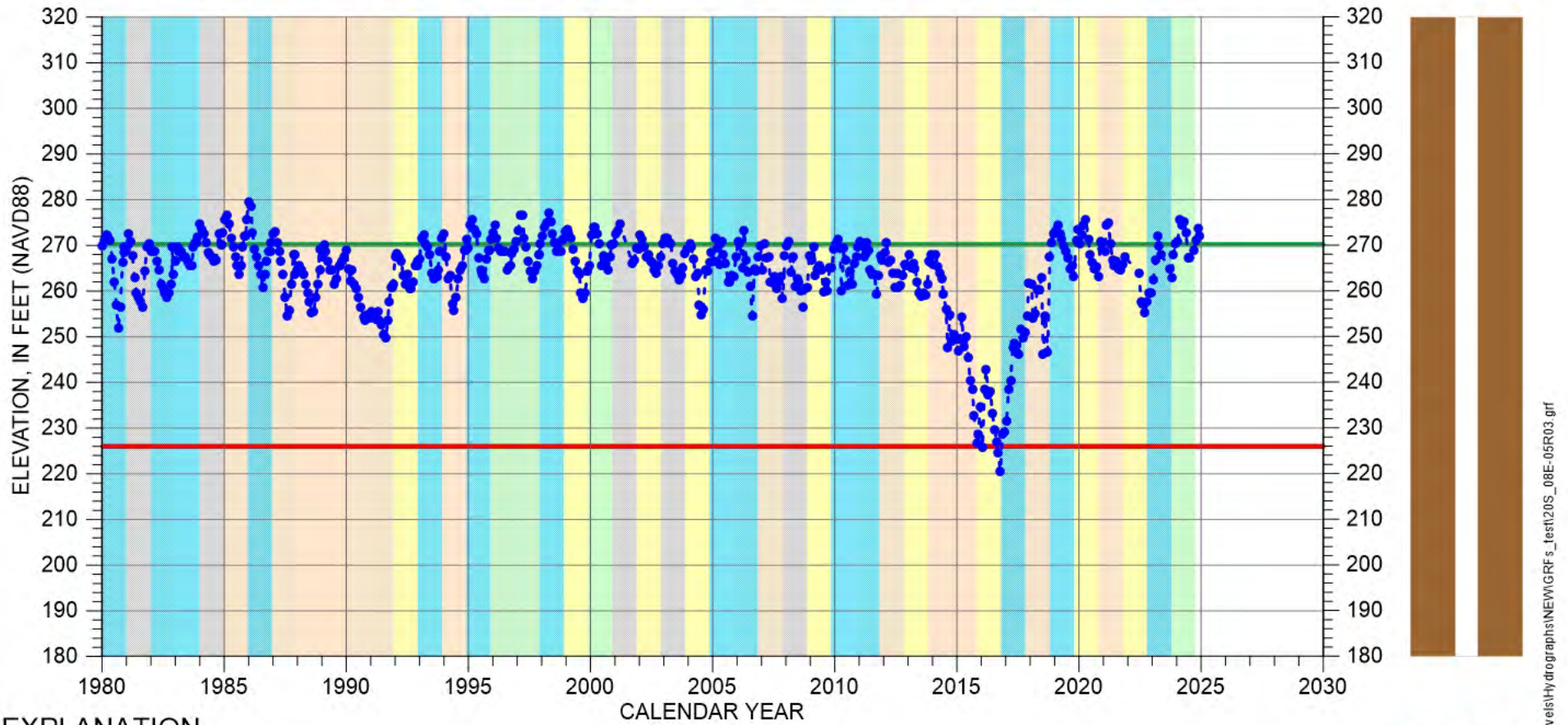


Perforated from
149 to 101 feet msl



HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 20S/08E-05R03

Upper Valley Aquifer Subbasin

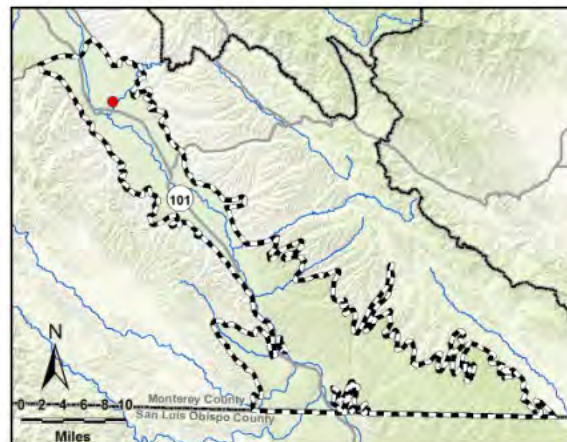


EXPLANATION

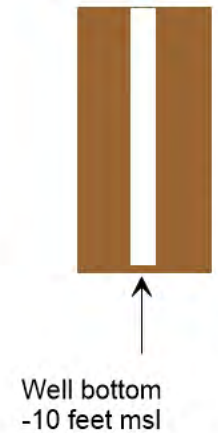
- Groundwater Elevation
- Suspect Measurement
- Land Surface (339.7 FT MSL)
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- DRY
- DRY - NORMAL
- NORMAL
- WET - NORMAL
- WET

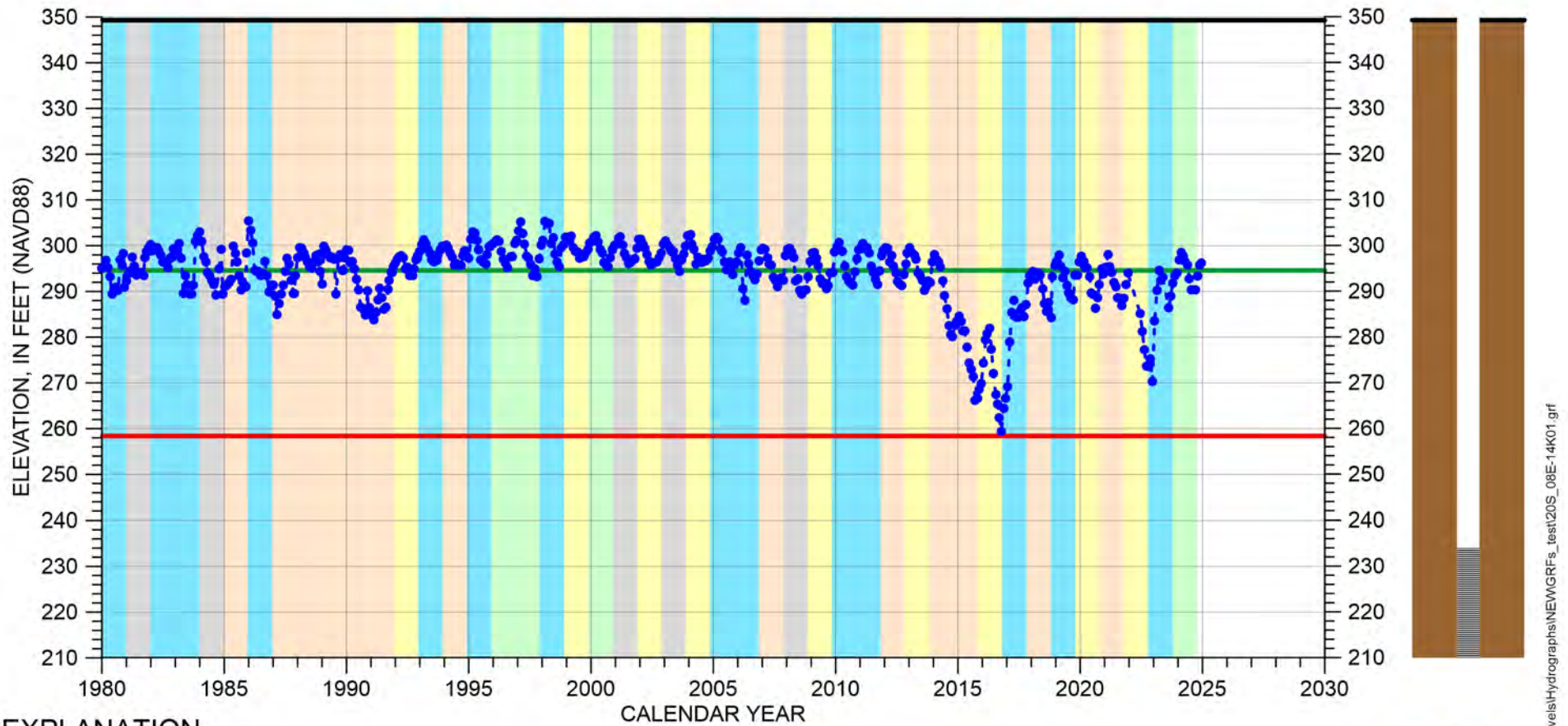


Perforated interval
unknown



HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 20S/08E-14K01

Upper Valley Aquifer Subbasin

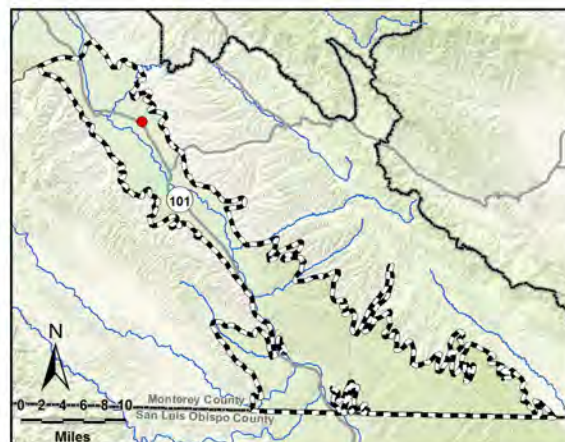


EXPLANATION

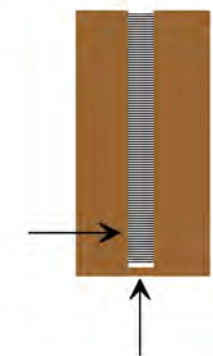
- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |

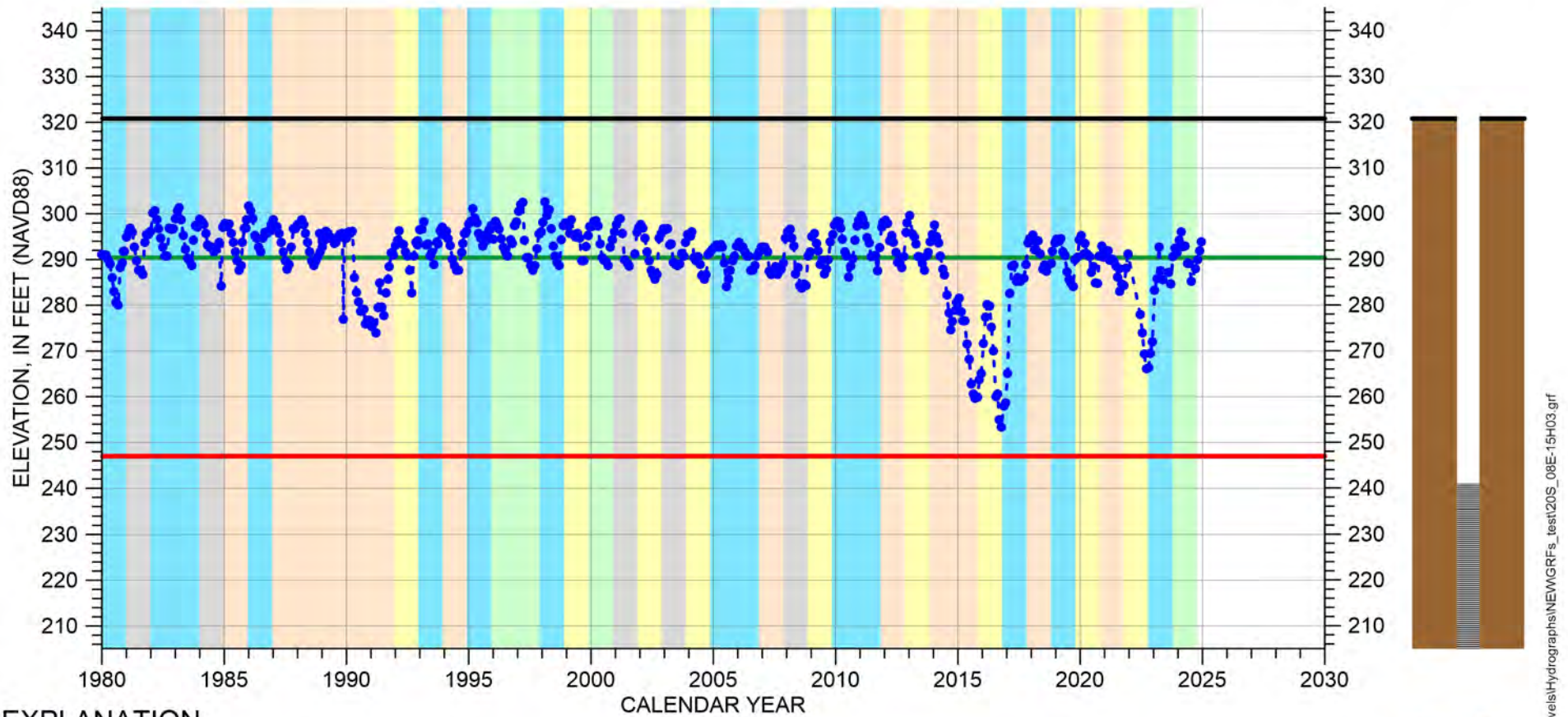


Multiple perforated intervals from 234 to 144 feet msl



HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 20S/08E-15H03

Upper Valley Aquifer Subbasin

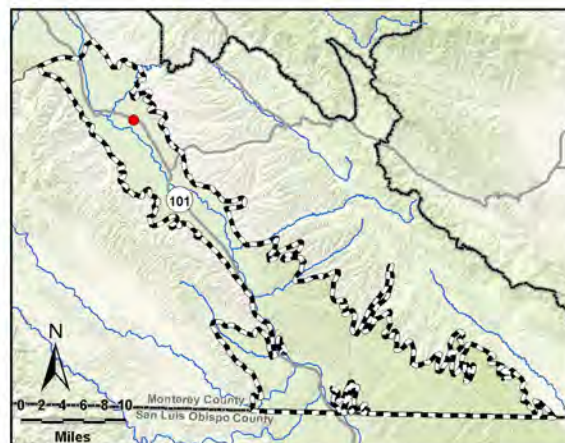


EXPLANATION

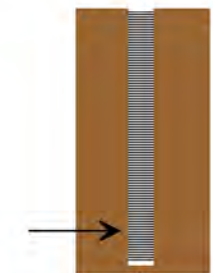
- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



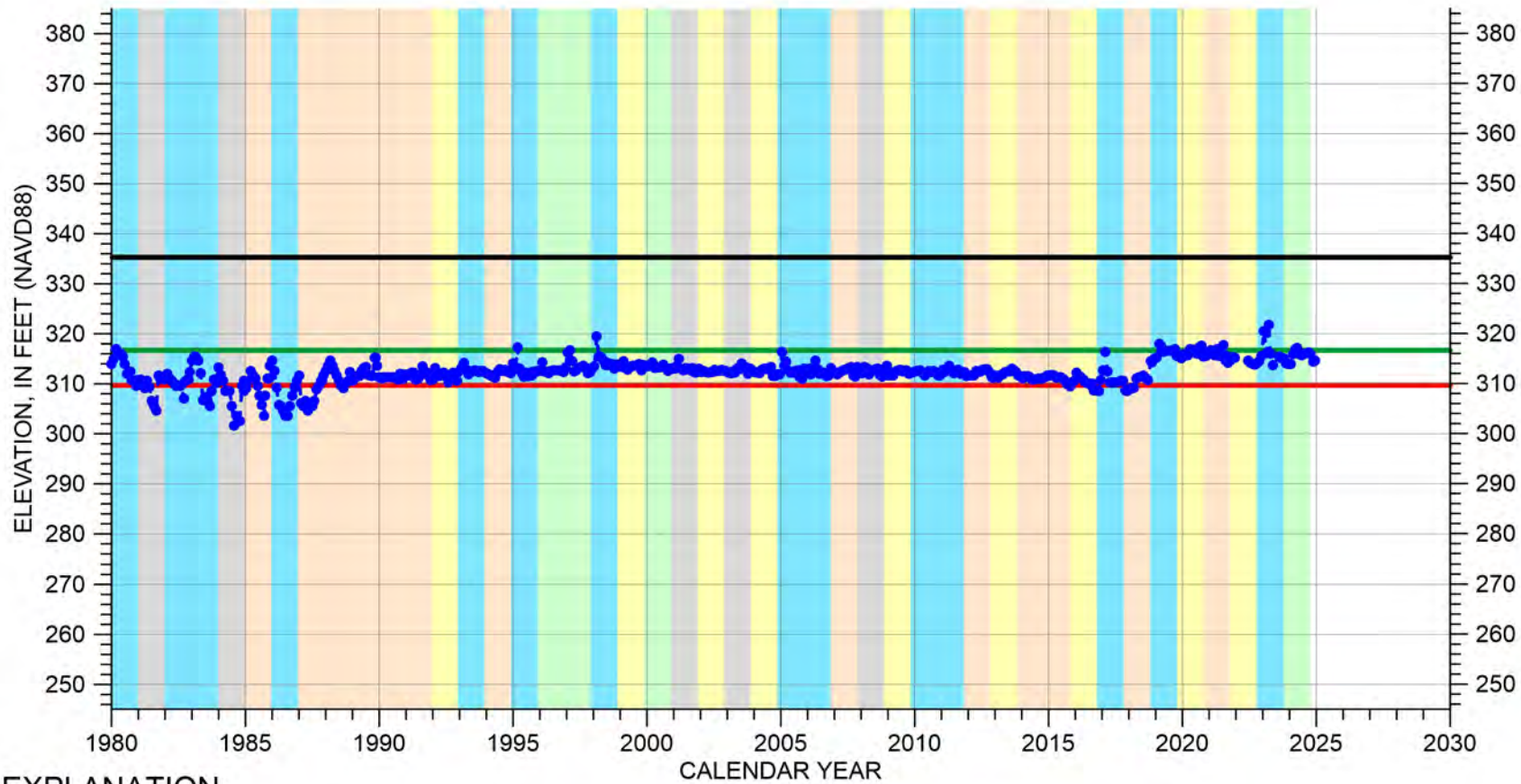
Perforated from
241 to 159 feet msl



Well bottom
151 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 20S/08E-25Q01

Upper Valley Aquifer Subbasin

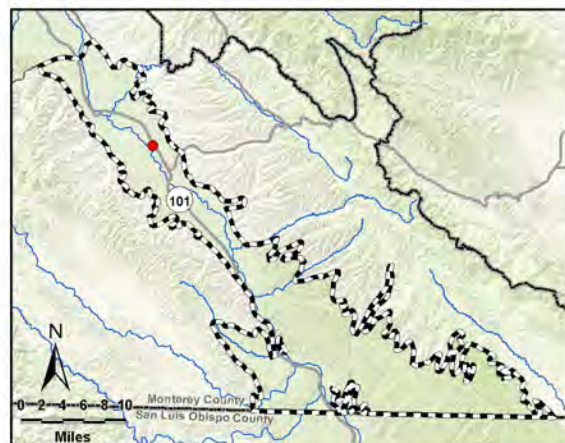


EXPLANATION

- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

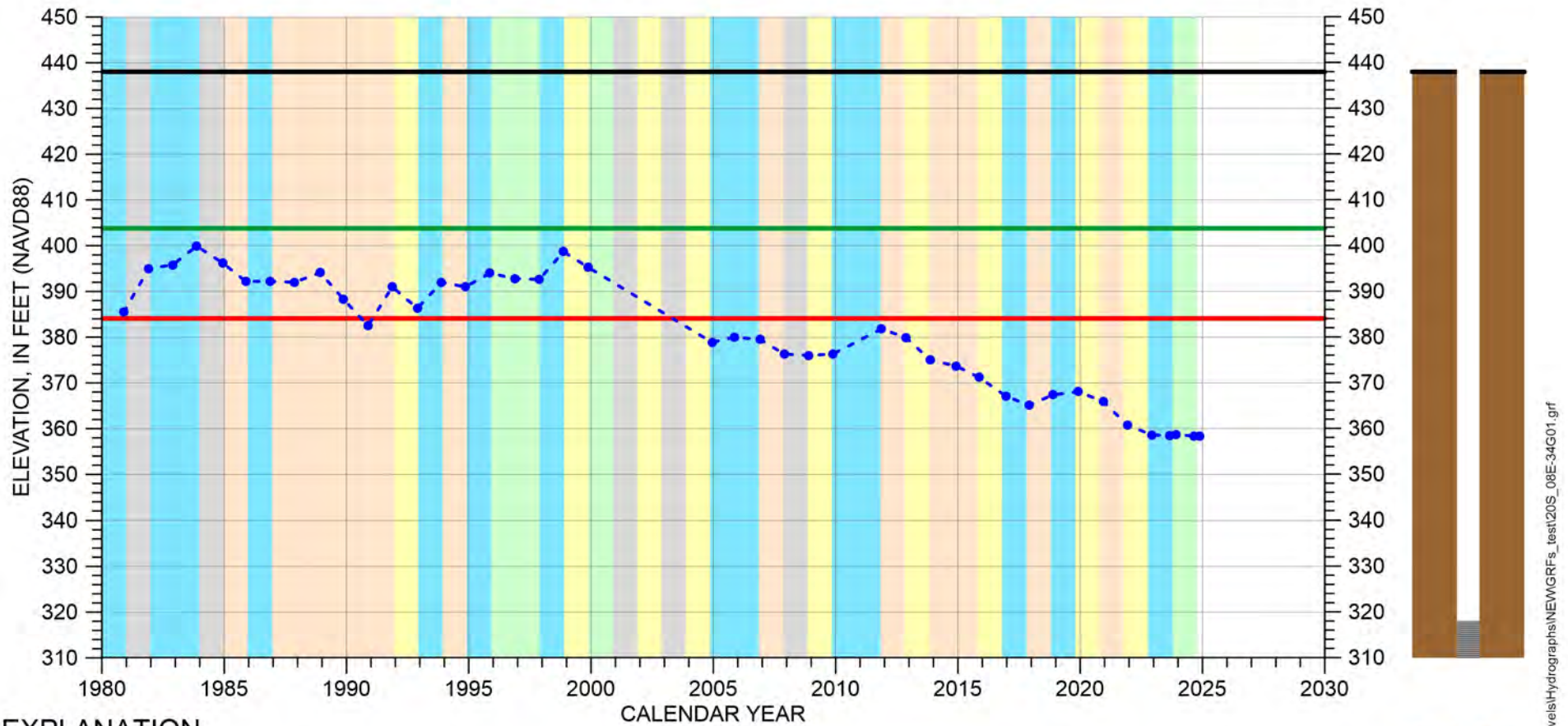
WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 20S/08E-34G01

Upper Valley Aquifer Subbasin

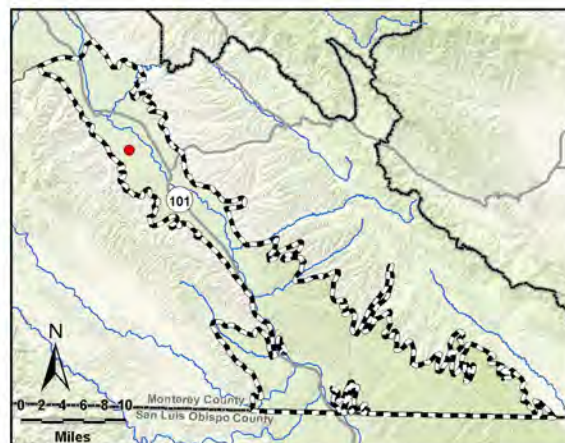


EXPLANATION

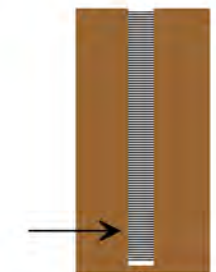
- - - Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



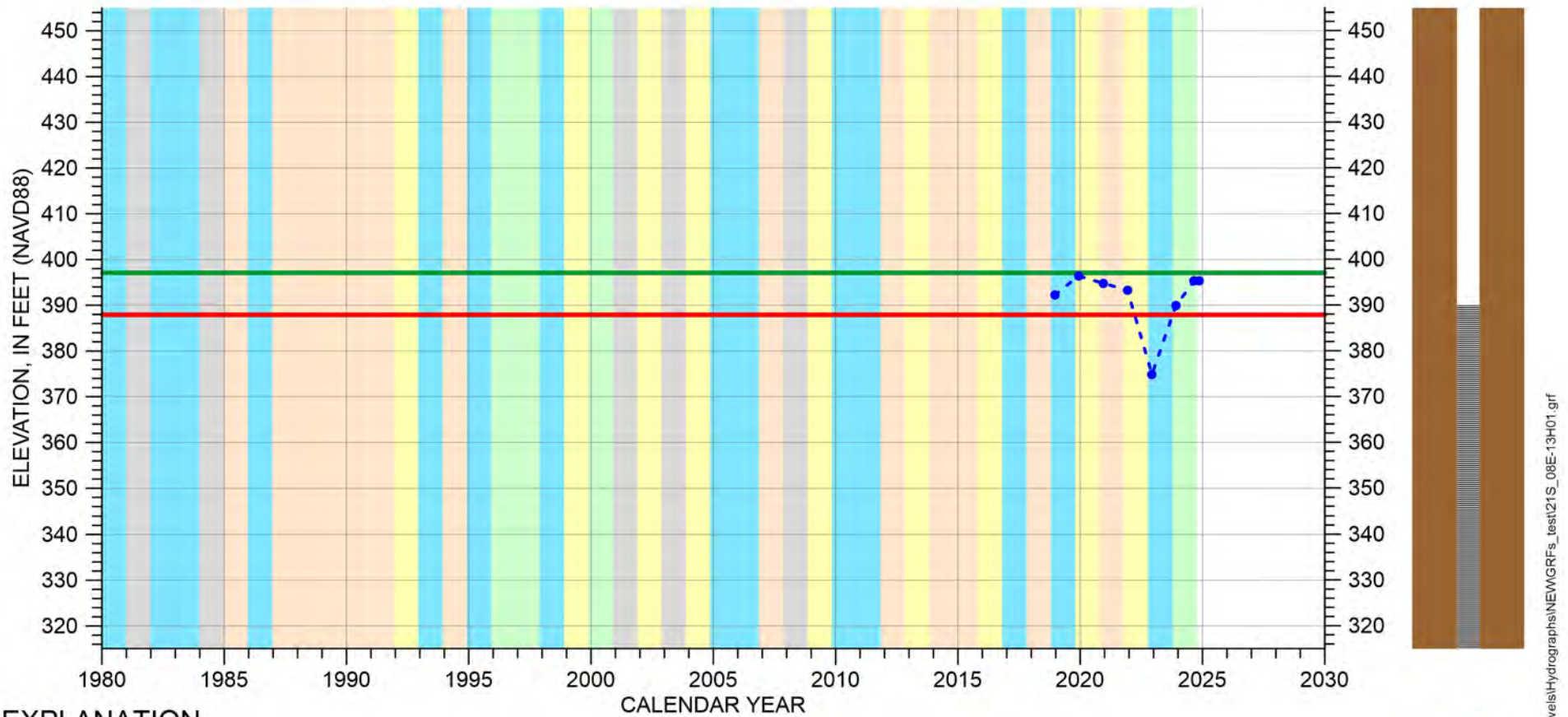
Multiple perforated intervals from 318 to 14 feet msl



Well bottom 6 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 21S/08E-13H01

Upper Valley Aquifer Subbasin

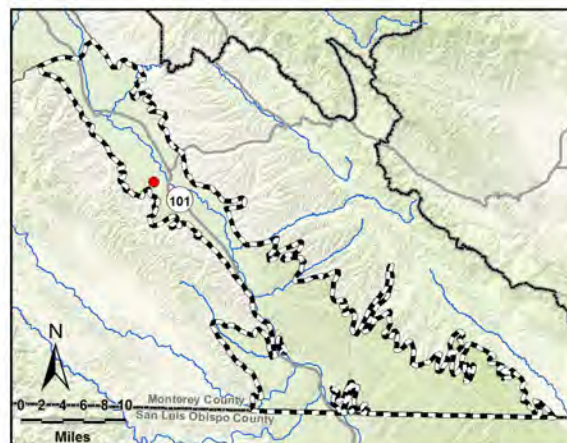


EXPLANATION

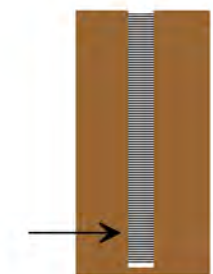
- - - Groundwater Elevation
- Suspect Measurement
- Land Surface (480.4 FT MSL)
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



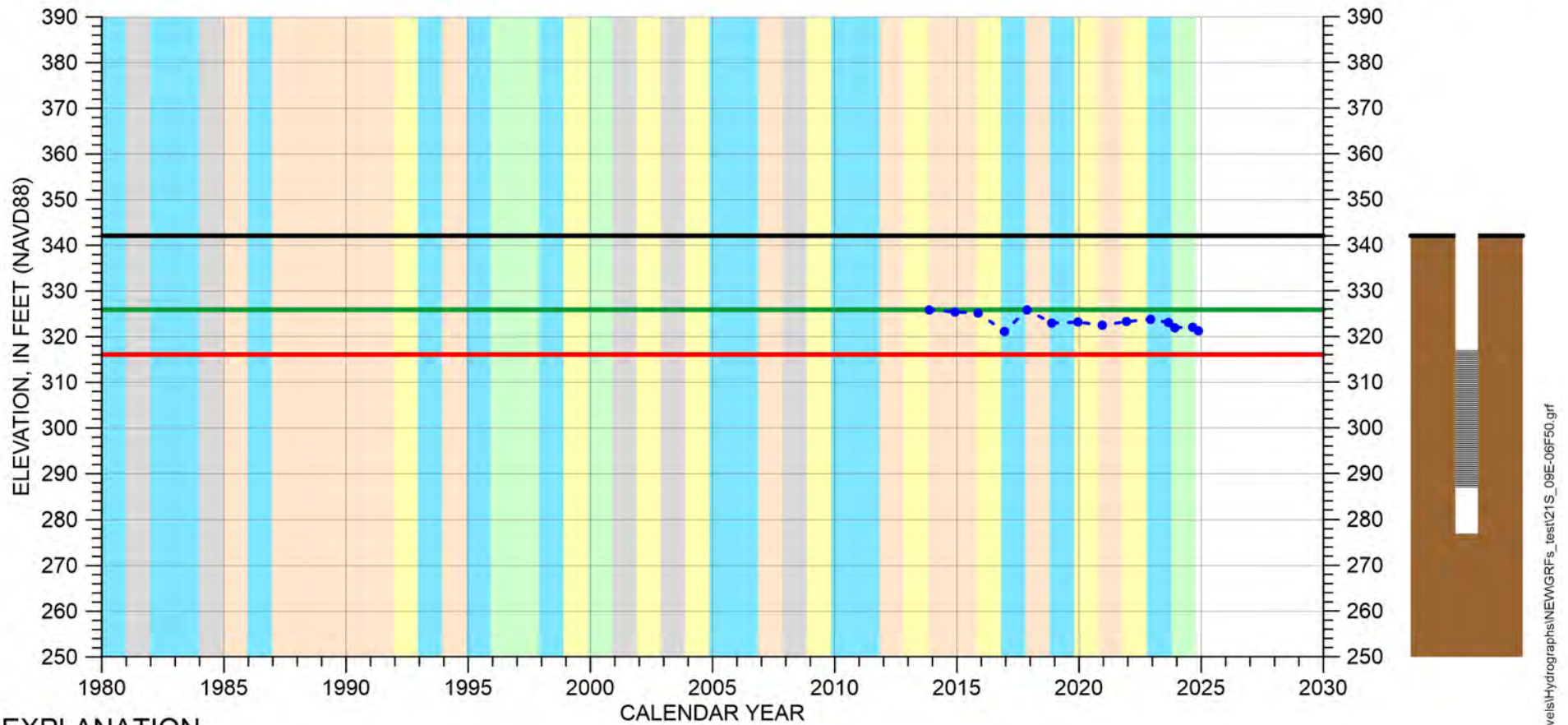
Perforated from
390 to 0.4 feet msl



Well bottom
-10 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 21S/09E-06F50

Upper Valley Aquifer Subbasin

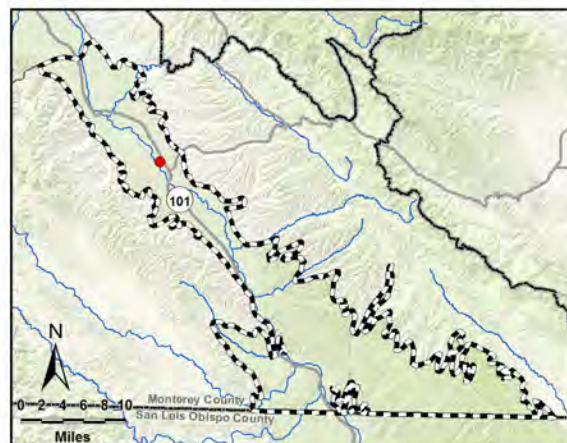


EXPLANATION

- - - Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

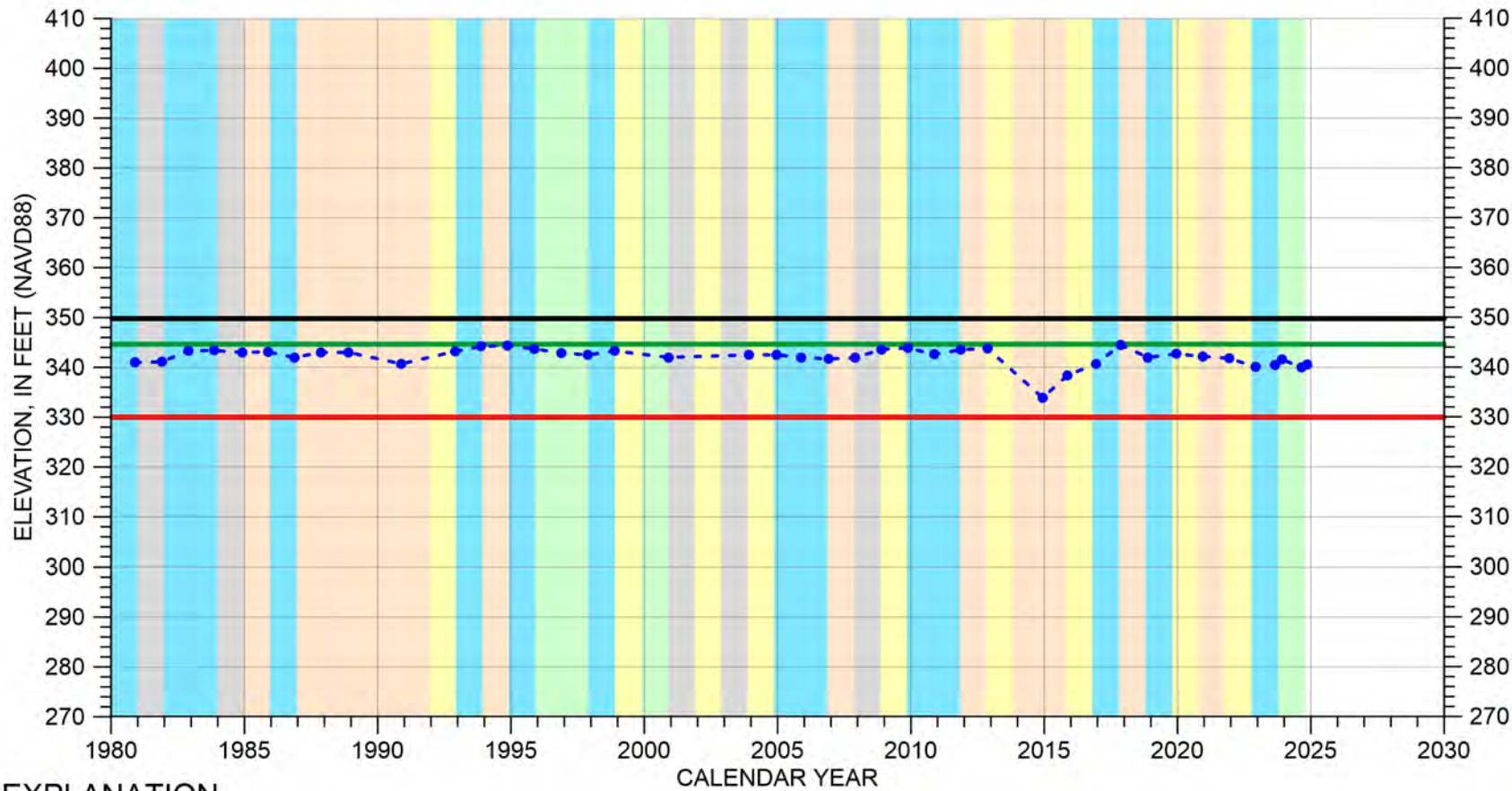
WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 21S/09E-16E01

Upper Valley Aquifer Subbasin



EXPLANATION

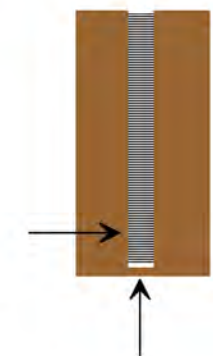
- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



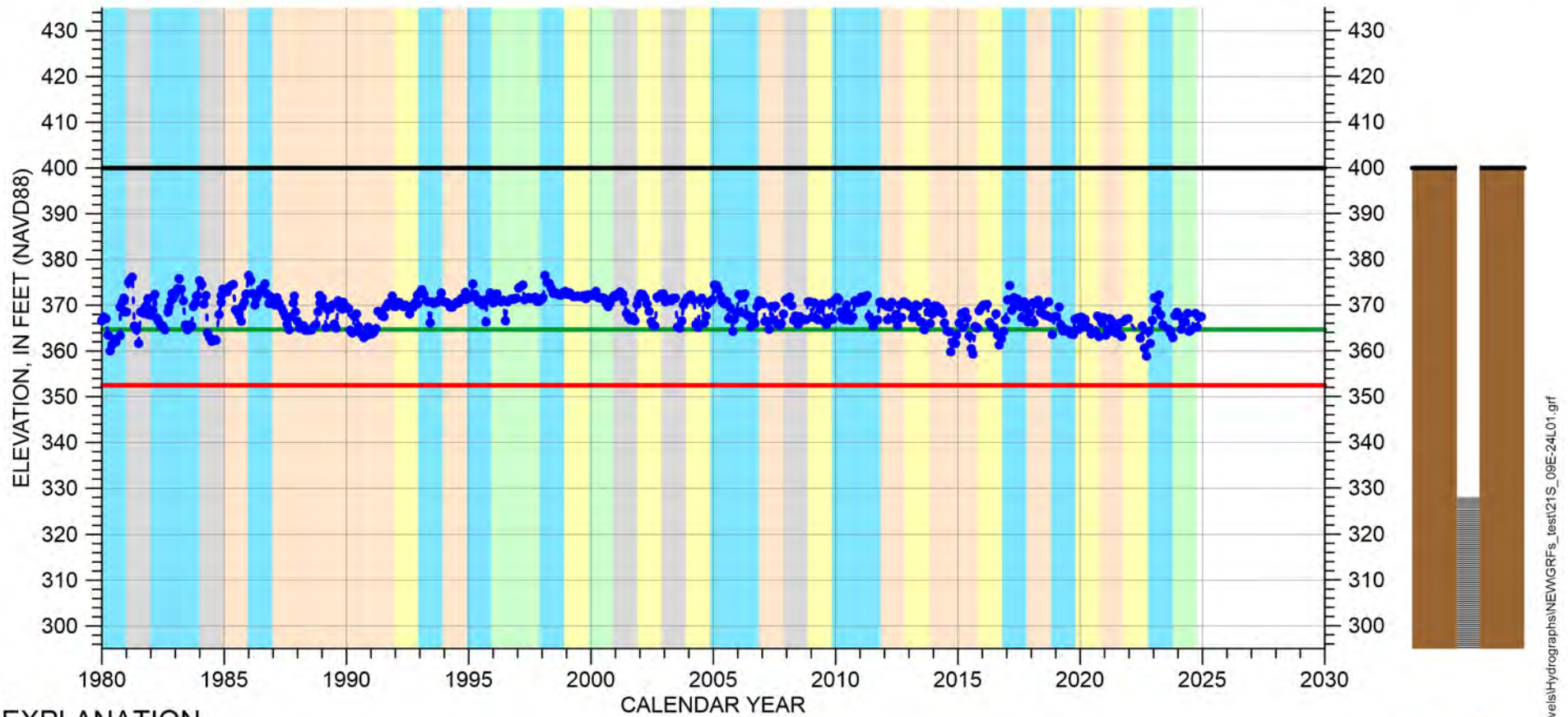
Multiple perforated intervals from 310 to 250 feet msl



Well bottom 250 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 21S/09E-24L01

Upper Valley Aquifer Subbasin

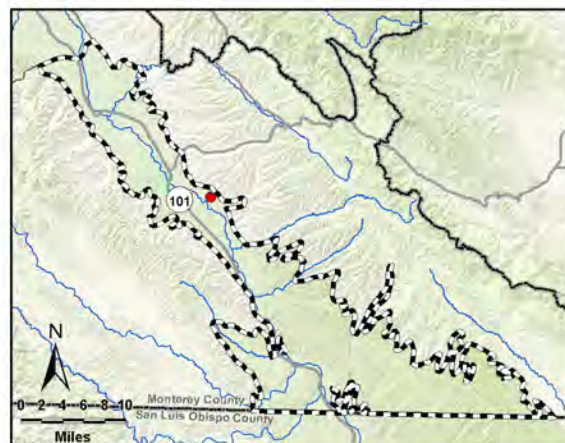


EXPLANATION

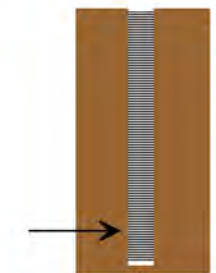
- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



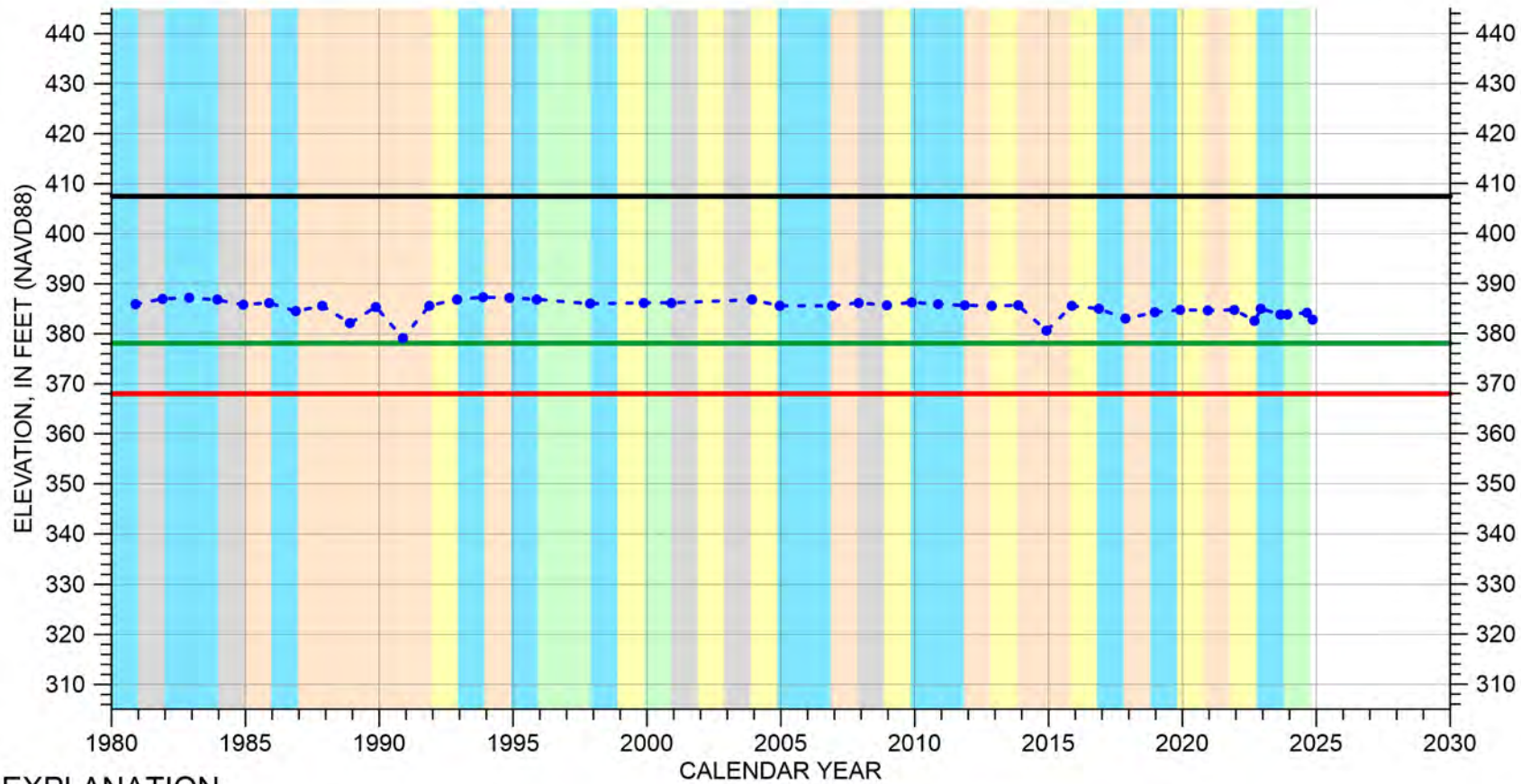
Perforated from
328 to 294 feet msl



Well bottom
280 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 21S/10E-32N01

Upper Valley Aquifer Subbasin

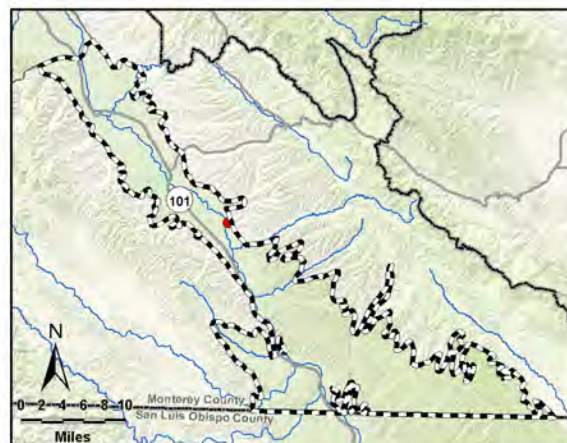


EXPLANATION

- - - Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |

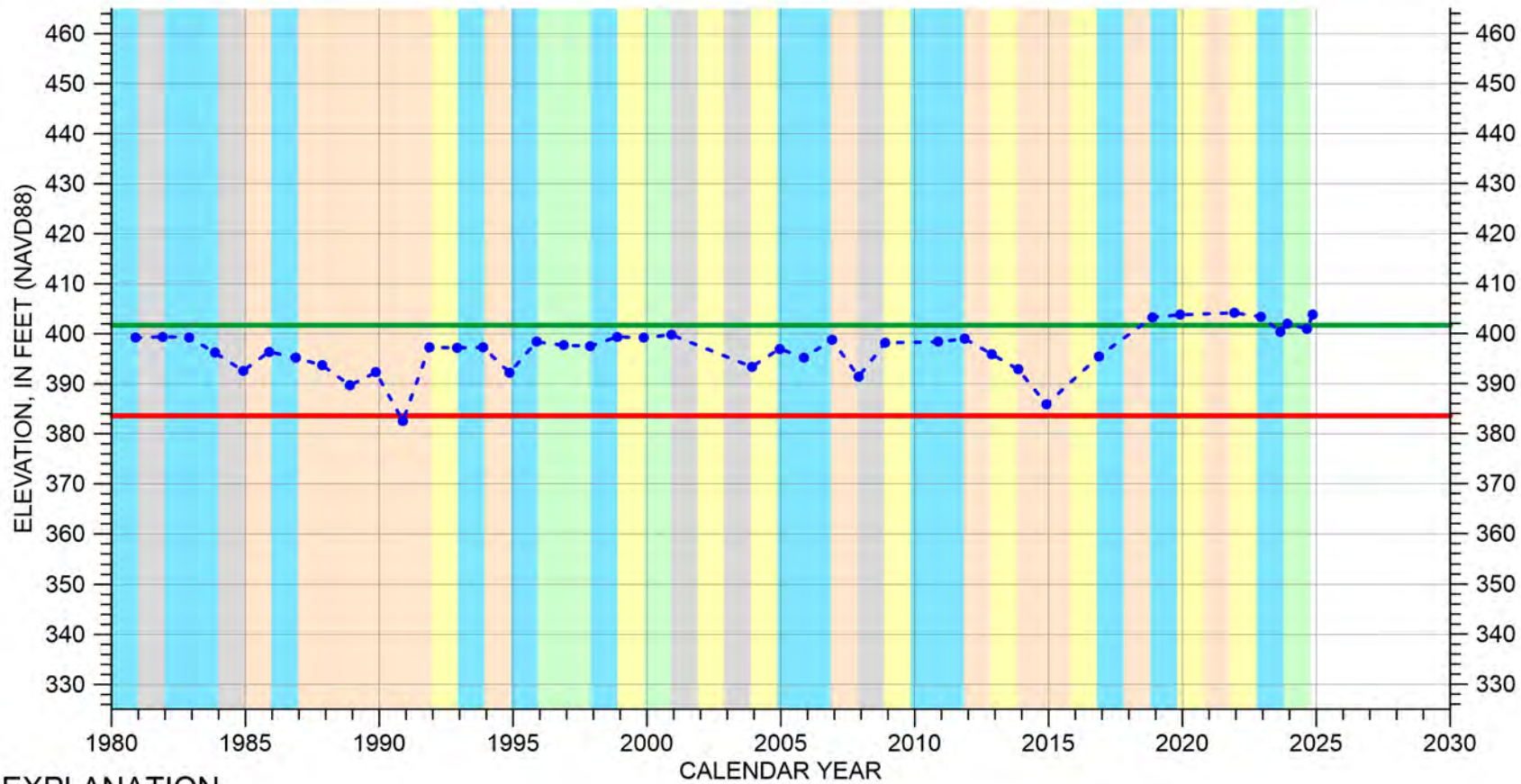


Perforated interval
unknown

Well bottom
elevation unknown

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 22S/10E-09P01

Upper Valley Aquifer Subbasin

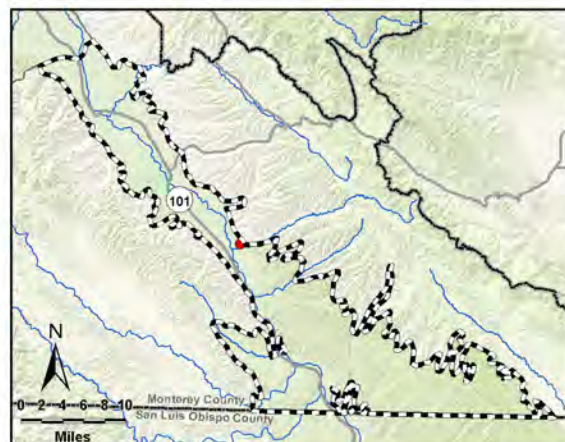


EXPLANATION

- Groundwater Elevation
- Suspect Measurement
- Land Surface (465.4 FT MSL)
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |

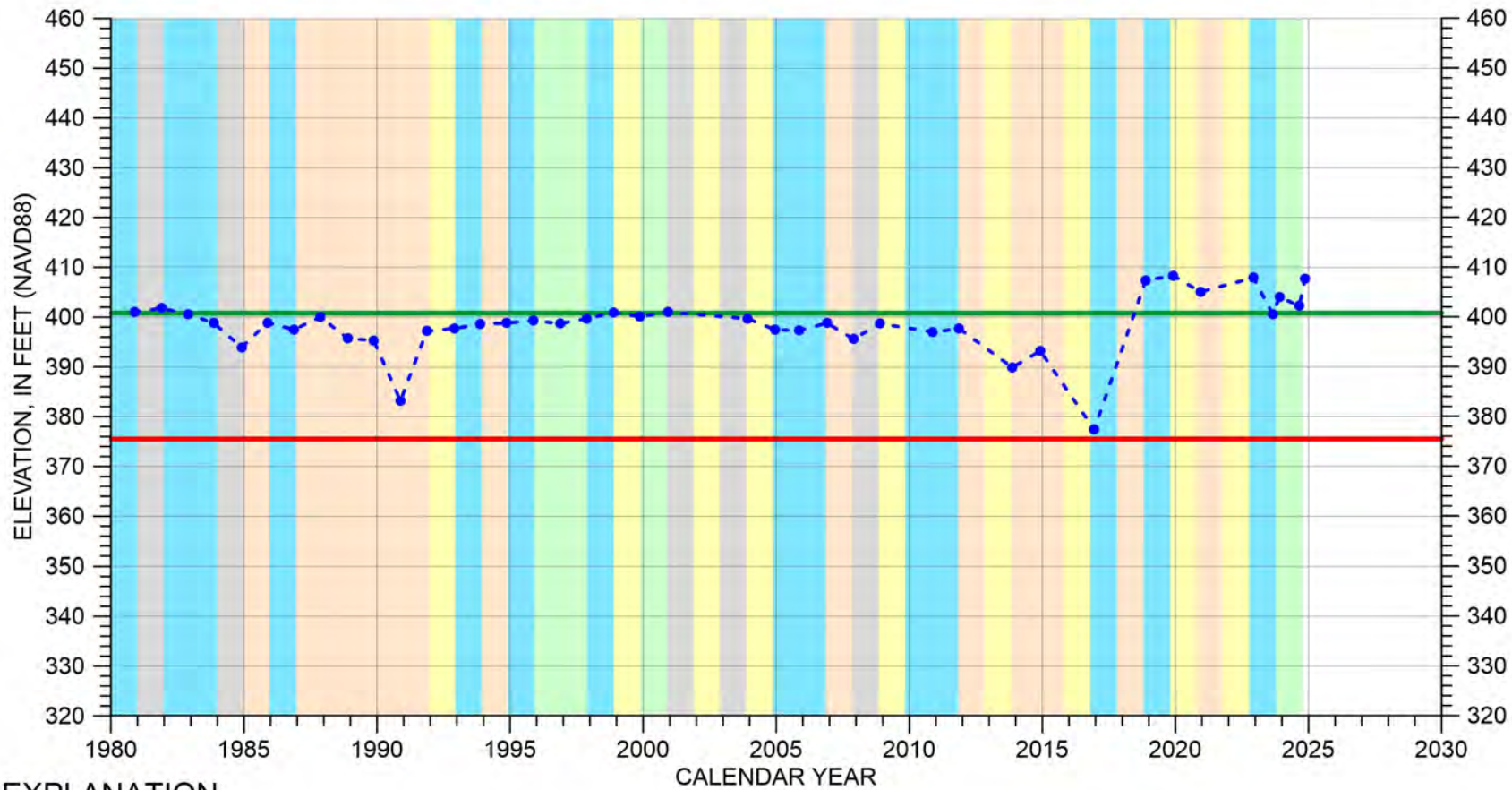


Perforated interval
unknown

Well bottom
elevation unknown

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 22S/10E-16K01

Upper Valley Aquifer Subbasin



EXPLANATION

- - - Groundwater Elevation
- Suspect Measurement
- Land Surface (478.8 FT MSL)
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |

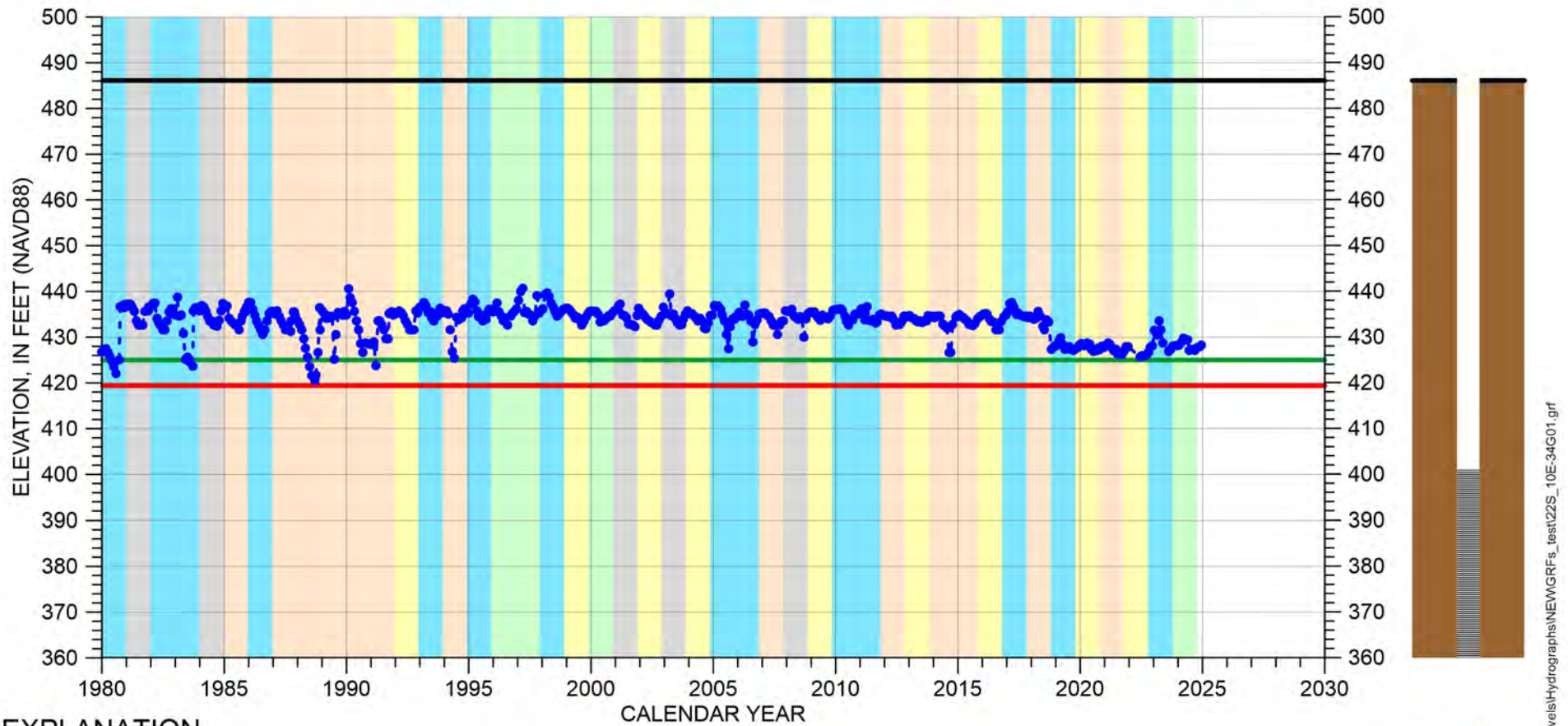


Perforated interval
unknown

Well bottom
elevation unknown

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 22S/10E-34G01

Upper Valley Aquifer Subbasin

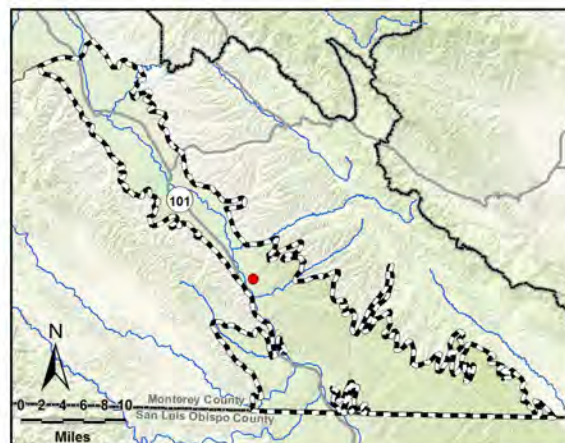


EXPLANATION

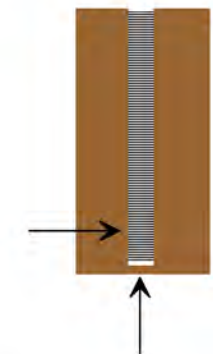
- Groundwater Elevation
- Suspect Measurement
- Land Surface
- Measurable Objective
- Minimum Threshold

WATER YEAR TYPE DESIGNATION

- | | |
|--------------|--------------|
| DRY | WET - NORMAL |
| DRY - NORMAL | WET |
| NORMAL | |



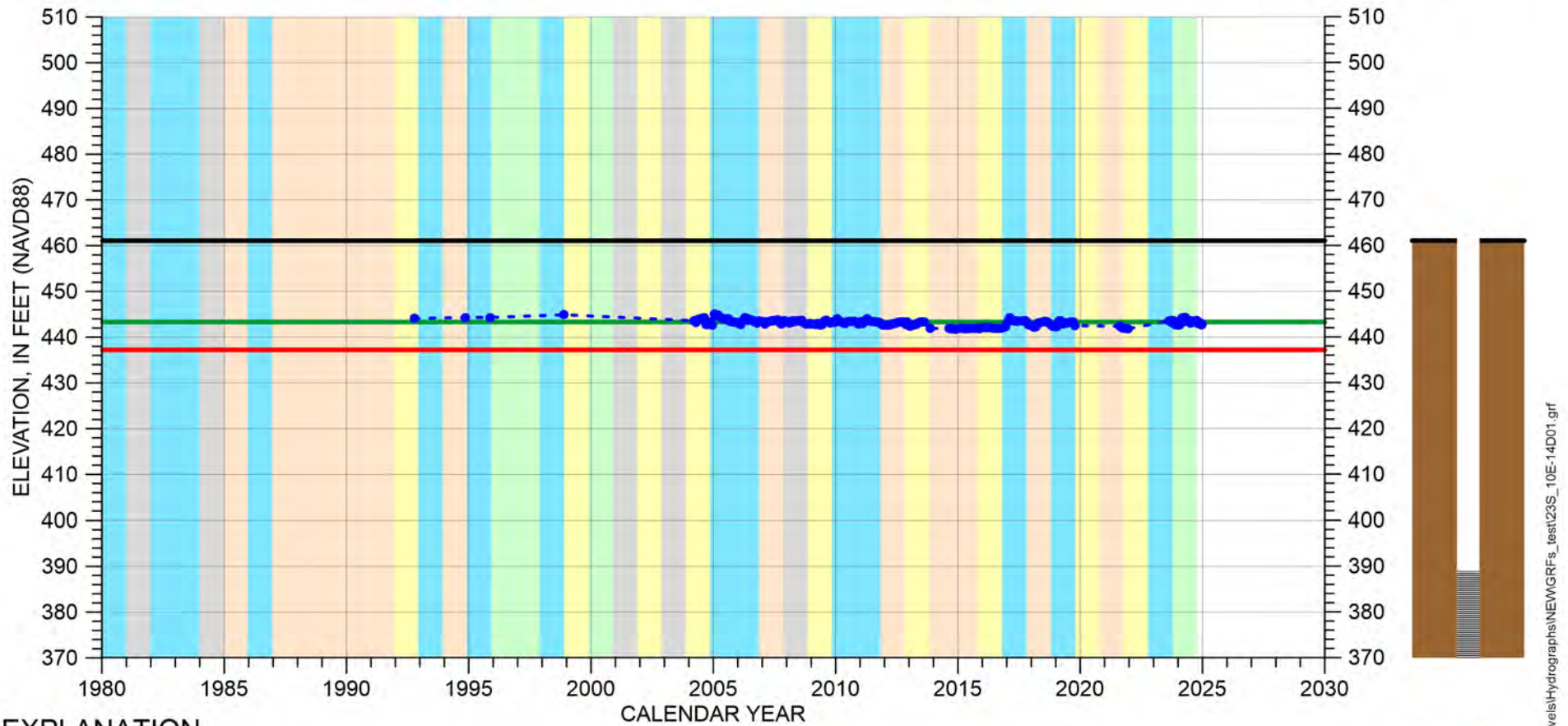
Perforated from
401 to 319 feet msl



Well bottom
304 feet msl

HYDROGRAPH OF MEASURED GROUNDWATER ELEVATION FOR 23S/10E-14D01

Upper Valley Aquifer Subbasin



Appendix C

Groundwater Quality 2024 Annual Report Data

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
AGL020000518-M-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	0.4	MG/L	10		FALSE	FALSE	TRUE	CCRWQCB
AGL020000518-M-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	2763	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000519-J-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	5.9	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020000519-J-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	1145	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020000520-LO-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	39.2	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020000520-LO-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	3774	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000522-PN-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	3937	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000522-PN-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	35.4	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020000601-BLACKJ_DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-06-04 00:00:00	114	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020000601-BLACKJ_DOM	ILRP DOMESTIC	Specific Conductivity	2024-06-04 00:00:00	3783	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000601-SWEETW_DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-24 00:00:00	0.4	MG/L	10		FALSE	FALSE	TRUE	CCRWQCB
AGL020000601-SWEETW_DOM	ILRP DOMESTIC	Specific Conductivity	2024-05-24 00:00:00	3024	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000621-CHERRY DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-24 00:00:00	34.2	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020000621-CHERRY DOM	ILRP DOMESTIC	Specific Conductivity	2024-05-24 00:00:00	3563	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000624-LOMBA_DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-24 00:00:00	98.6	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020000624-LOMBA_DOM	ILRP DOMESTIC	Specific Conductivity	2024-05-24 00:00:00	2655	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020000740-DOM WELL	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-23 00:00:00	0.6	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020000740-DOM WELL	ILRP DOMESTIC	Specific Conductivity	2024-05-23 00:00:00	646	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020001067-CKV DOM	ILRP DOMESTIC	Specific Conductivity	2024-04-16 00:00:00	1005	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020001067-CKV DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-16 00:00:00	1.6	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020001410-H2W3_0386	ILRP DOMESTIC	Specific Conductivity	2024-05-20 00:00:00	1343	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020001410-H2W3_0386	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-20 00:00:00	5	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020002554-BH-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	10.7	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020002554-BH-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	771	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020002562-DP-D2	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	745	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020002562-DP-D2	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	11.9	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020002565-CR-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	821	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020002565-CR-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	14.2	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020002568-LE-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	8.7	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020002568-LE-D	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	652	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020002572-TO-D2	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-13 00:00:00	3.2	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020002572-TO-D2	ILRP DOMESTIC	Specific Conductivity	2024-05-13 00:00:00	3315	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020003371-M-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-09 00:00:00	62.3	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020003371-M-D	ILRP DOMESTIC	Specific Conductivity	2024-05-09 00:00:00	1908	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020003375-H-D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-09 00:00:00	13	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020003375-H-D	ILRP DOMESTIC	Specific Conductivity	2024-05-09 00:00:00	1930	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020003665-WELL 97	ILRP DOMESTIC	Specific Conductivity	2024-04-24 00:00:00	723	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020003665-WELL 97	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-24 00:00:00	5.9	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020003760-DOM WELL	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-02 00:00:00	7	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020003760-DOM WELL	ILRP DOMESTIC	Specific Conductivity	2024-04-02 00:00:00	950	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020003769-DOM WELL	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-02 00:00:00	51	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020003769-DOM WELL	ILRP DOMESTIC	Specific Conductivity	2024-04-02 00:00:00	1914	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020003831-CLAUSEN_D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-17 00:00:00	11.6	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020003831-CLAUSEN_D	ILRP DOMESTIC	Specific Conductivity	2024-05-17 00:00:00	1081	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020003988-DOMESTIC	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-29 00:00:00	27.1	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020003988-DOMESTIC	ILRP DOMESTIC	Specific Conductivity	2024-05-29 00:00:00	1291	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020003990-DOMESTIC	ILRP DOMESTIC	Specific Conductivity	2024-05-29 00:00:00	4261	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020003990-DOMESTIC	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-29 00:00:00	11.2	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020007439-CCGC_0181	ILRP DOMESTIC	Specific Conductivity	2024-04-17 00:00:00	730	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020007439-CCGC_0181	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-17 00:00:00	1.7	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020007443-CCGC_0636	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-17 00:00:00	9.2	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
AGL020007443-CCGC_0636	ILRP DOMESTIC	Specific Conductivity	2024-04-17 00:00:00	946	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020007855-DUPLEX	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-28 00:00:00	2.3	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020007855-DUPLEX	ILRP DOMESTIC	Specific Conductivity	2024-05-28 00:00:00	358	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020007855-GALLAGER	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-28 00:00:00	1.5	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020007855-GALLAGER	ILRP DOMESTIC	Specific Conductivity	2024-05-28 00:00:00	956	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020007855-SHOP	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-28 00:00:00	2.8	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020007855-SHOP	ILRP DOMESTIC	Specific Conductivity	2024-05-28 00:00:00	502	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020011482-CCGC_0391	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-17 00:00:00	28.4	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020011482-CCGC_0391	ILRP DOMESTIC	Specific Conductivity	2024-04-17 00:00:00	2321	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020011483-SAN LUC W3	ILRP DOMESTIC	Specific Conductivity	2024-04-17 00:00:00	1363	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020011483-SAN LUC W3	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-17 00:00:00	0	MG/L	10		FALSE	FALSE	TRUE	CCRWQCB
AGL020011783-WELL DOM	ILRP DOMESTIC	Specific Conductivity	2024-05-15 00:00:00	5137	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020011783-WELL DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-15 00:00:00	110	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020013091-WELL 30	ILRP DOMESTIC	Specific Conductivity	2024-04-25 00:00:00	962	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020013091-WELL 30	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-25 00:00:00	20.6	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020014062-DOMESTIC	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-15 00:00:00	18.7	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020014062-DOMESTIC	ILRP DOMESTIC	Specific Conductivity	2024-04-15 00:00:00	1763	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020015908-DOM WELL	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-23 00:00:00	0.4	MG/L	10		FALSE	FALSE	TRUE	CCRWQCB
AGL020015908-DOM WELL	ILRP DOMESTIC	Specific Conductivity	2024-05-23 00:00:00	557	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020016682-DOMESTIC	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-24 00:00:00	0	MG/L	10		FALSE	FALSE	TRUE	CCRWQCB
AGL020016682-DOMESTIC	ILRP DOMESTIC	Specific Conductivity	2024-04-24 00:00:00	305	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020017563-WELL DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-15 00:00:00	121	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020017563-WELL DOM	ILRP DOMESTIC	Specific Conductivity	2024-05-15 00:00:00	4025	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
AGL020027950-DTRANCH_D	ILRP DOMESTIC	Specific Conductivity	2024-05-17 00:00:00	1228	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020027950-DTRANCH_D	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-17 00:00:00	25.2	MG/L	10		TRUE	FALSE	FALSE	CCRWQCB
AGL020037522-VWR_DOM	ILRP DOMESTIC	Nitrate+Nitrite	2024-05-20 00:00:00	8.4	MG/L	10		FALSE	FALSE	FALSE	CCRWQCB
AGL020037522-VWR_DOM	ILRP DOMESTIC	Specific Conductivity	2024-05-20 00:00:00	803	UMHOS/CM		1600	FALSE	FALSE	FALSE	CCRWQCB
AGL020039378-DOMESTIC	ILRP DOMESTIC	Nitrate+Nitrite	2024-04-26 00:00:00	0	MG/L	10		FALSE	FALSE	TRUE	CCRWQCB
AGL020039378-DOMESTIC	ILRP DOMESTIC	Specific Conductivity	2024-04-26 00:00:00	2520	UMHOS/CM		1600	FALSE	TRUE	FALSE	CCRWQCB
CA2700728_001_001	DDW MUNICIPAL	Nitrate as N	2024-06-20 00:00:00	0.4	MG/L	10		FALSE	FALSE	TRUE	DDW
CA2700728_001_001	DDW MUNICIPAL	Total Dissolved Solids	2024-04-04 00:00:00	270	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2700728_001_001	DDW MUNICIPAL	Chloride	2024-04-04 00:00:00	13	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2700728_002_002	DDW MUNICIPAL	Alachlor	2024-07-22 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	Atrazine	2024-07-22 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	Bentazon	2024-07-22 00:00:00	2	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	Carbofuran	2024-07-22 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	Diquat	2024-07-22 00:00:00	4	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	Nitrate as N	2024-03-22 00:00:00	0.4	MG/L	10		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	Simazine	2024-07-22 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2700728_002_002	DDW MUNICIPAL	2,4-Dichlorophenoxyacetic acid (2,4 D)	2024-07-22 00:00:00	10	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2700964_001_001	DDW MUNICIPAL	Nitrate as N	2024-07-10 00:00:00	5.6	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2700964_001_001	DDW MUNICIPAL	Perchlorate	2024-09-18 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2700984_001_001	DDW MUNICIPAL	Nitrate as N	2024-07-16 00:00:00	2	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2700984_001_001	DDW MUNICIPAL	Nitrite as N	2024-02-13 00:00:00	0.4	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Toluene	2024-02-20 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Cyanide (CN)	2024-07-16 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Ethylbenzene	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-02-20 00:00:00	0.5	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Nitrate as N	2024-02-20 00:00:00	0.2	MG/L	10		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Oxamyl	2024-07-29 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2701171_002_002	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Carbofuran	2024-07-29 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-02-20 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Trichloroethene (TCE)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-02-20 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Uranium	2024-07-16 00:00:00	0.67	pCi/L	20		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Vinyl Chloride	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Xylenes (Total)	2024-02-20 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-02-20 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Styrene	2024-02-20 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-02-20 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Chlorobenzene	2024-02-20 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-02-20 00:00:00	0.0005	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-02-20 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,3-Dichloropropene	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Alachlor	2024-07-16 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Bentazon	2024-07-16 00:00:00	0.8	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Benzene	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_002_002	DDW MUNICIPAL	Carbon tetrachloride	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Styrene	2024-02-20 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Cyanide (CN)	2024-07-16 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Ethylbenzene	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-02-20 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-02-20 00:00:00	0.5	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Nitrate as N	2024-02-20 00:00:00	0.29	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2701171_004_004	DDW MUNICIPAL	Oxamyl	2024-07-29 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Toluene	2024-02-20 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-02-20 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Trichloroethene (TCE)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-02-20 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Uranium	2024-07-16 00:00:00	3	pCi/L	20		FALSE	FALSE	FALSE	DDW
CA2701171_004_004	DDW MUNICIPAL	Xylenes (Total)	2024-02-20 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Chlorobenzene	2024-02-20 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Vinyl Chloride	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Carbon tetrachloride	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Gross Alpha radioactivity	2024-07-16 00:00:00	2.64	pCi/L	15		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-02-20 00:00:00	0.0005	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-02-20 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-02-20 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,3-Dichloropropene	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Alachlor	2024-07-16 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Bentazon	2024-07-16 00:00:00	0.8	UG/L	18		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2701171_004_004	DDW MUNICIPAL	Carbofuran	2024-07-29 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	Benzene	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_004_004	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Trichloroethene (TCE)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-02-20 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Cyanide (CN)	2024-07-16 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Ethylbenzene	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-02-20 00:00:00	0.5	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Nitrate as N	2024-02-20 00:00:00	0.3	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2701171_005_005	DDW MUNICIPAL	Oxamyl	2024-07-29 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Styrene	2024-02-20 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Vinyl Chloride	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-02-20 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-02-20 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Uranium	2024-02-20 00:00:00	3	pCi/L	20		FALSE	FALSE	FALSE	DDW
CA2701171_005_005	DDW MUNICIPAL	Chlorobenzene	2024-02-20 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Xylenes (Total)	2024-02-20 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Toluene	2024-02-20 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Gross Alpha radioactivity	2024-02-20 00:00:00	4.29	pCi/L	15		FALSE	FALSE	FALSE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-02-20 00:00:00	0.0005	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Carbon tetrachloride	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-02-20 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-02-20 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,3-Dichloropropene	2024-02-20 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Alachlor	2024-07-16 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Bentazon	2024-07-16 00:00:00	0.8	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Benzene	2024-02-20 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	Carbofuran	2024-07-29 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2701171_005_005	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-02-20 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701172_003_003	DDW MUNICIPAL	Uranium	2024-07-25 00:00:00	2	pCi/L	20		FALSE	FALSE	FALSE	DDW
CA2701172_003_003	DDW MUNICIPAL	Gross Alpha radioactivity	2024-07-25 00:00:00	4.77	pCi/L	15		FALSE	FALSE	FALSE	DDW
CA2701172_003_003	DDW MUNICIPAL	Nitrate as N	2024-07-25 00:00:00	2.3	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2701187_001_001	DDW MUNICIPAL	Perchlorate	2024-08-26 00:00:00	1	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Thallium	2024-07-16 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Aluminum	2024-07-16 00:00:00	50	UG/L	1000	200	FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Selenium	2024-07-16 00:00:00	2	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Nitrate as N	2024-04-29 00:00:00	2.7	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2701187_001_001	DDW MUNICIPAL	Nickel	2024-07-16 00:00:00	10	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Mercury	2024-07-16 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Chromium	2024-07-16 00:00:00	10	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Cadmium	2024-07-16 00:00:00	1	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Barium	2024-07-16 00:00:00	0.052	MG/L	1		FALSE	FALSE	FALSE	DDW
CA2701187_001_001	DDW MUNICIPAL	Arsenic	2024-07-16 00:00:00	3.2	UG/L	10		FALSE	FALSE	FALSE	DDW
CA2701187_001_001	DDW MUNICIPAL	Antimony	2024-07-16 00:00:00	2	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2701187_001_001	DDW MUNICIPAL	Silver	2024-07-16 00:00:00	10	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2701423_001_001	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-09-18 00:00:00	0.005	UG/L	0.005		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2701423_001_001	DDW MUNICIPAL	Nitrate as N	2024-01-17 00:00:00	1.9	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2701676_006_006	DDW MUNICIPAL	Iron	2024-07-18 00:00:00	316	UG/L		300	FALSE	TRUE	FALSE	DDW
CA2701676_006_006	DDW MUNICIPAL	Uranium	2024-07-18 00:00:00	14.4	pCi/L	20		FALSE	FALSE	FALSE	DDW
CA2701676_006_006	DDW MUNICIPAL	Gross Alpha radioactivity	2024-07-18 00:00:00	17.8	pCi/L	15		TRUE	FALSE	FALSE	DDW
CA2701676_006_006	DDW MUNICIPAL	Manganese	2024-07-18 00:00:00	295	UG/L		50	FALSE	TRUE	FALSE	DDW
CA2701676_006_006	DDW MUNICIPAL	Nitrate as N	2024-09-19 00:00:00	4.2	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2701742_006_006	DDW MUNICIPAL	Manganese	2024-06-13 00:00:00	178	UG/L		50	FALSE	TRUE	FALSE	DDW
CA2701742_006_006	DDW MUNICIPAL	Nitrate as N	2024-06-13 00:00:00	0.2	MG/L	10		FALSE	FALSE	TRUE	DDW
CA2701742_006_006	DDW MUNICIPAL	Zinc	2024-06-13 00:00:00	0.005	MG/L		5	FALSE	FALSE	TRUE	DDW
CA2701742_006_006	DDW MUNICIPAL	Total Dissolved Solids	2024-06-13 00:00:00	847	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2701742_006_006	DDW MUNICIPAL	Sulfate	2024-06-13 00:00:00	257	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2701742_006_006	DDW MUNICIPAL	Specific Conductivity	2024-06-13 00:00:00	1610	UMHOS/CM		1600	FALSE	TRUE	FALSE	DDW
CA2701742_006_006	DDW MUNICIPAL	Iron	2024-06-13 00:00:00	1390	UG/L		300	FALSE	TRUE	FALSE	DDW
CA2701742_006_006	DDW MUNICIPAL	Silver	2024-06-13 00:00:00	10	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2701742_006_006	DDW MUNICIPAL	Foaming Agents (MBAS)	2024-06-13 00:00:00	0.05	MG/L		0.5	FALSE	FALSE	TRUE	DDW
CA2701742_006_006	DDW MUNICIPAL	Copper	2024-06-13 00:00:00	0.005	MG/L		1	FALSE	FALSE	TRUE	DDW
CA2701742_006_006	DDW MUNICIPAL	Chloride	2024-06-13 00:00:00	268	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2702486_001_001	DDW MUNICIPAL	Nitrate as N	2024-01-25 00:00:00	2.3	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2702486_001_001	DDW MUNICIPAL	Nitrite as N	2024-01-25 00:00:00	0.1	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2702539_001_001	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-05-08 00:00:00	0.005	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2702539_001_001	DDW MUNICIPAL	Nitrate as N	2024-08-05 00:00:00	1.5	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2702539_002_002	DDW MUNICIPAL	Thiobencarb	2024-04-08 00:00:00	1	UG/L	70	1	FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Simazine	2024-04-08 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Molinate	2024-04-08 00:00:00	2	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Picloram	2024-04-08 00:00:00	0.001	MG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	2,4-Dichlorophenoxyacetic acid (2,4 D)	2024-04-08 00:00:00	10	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Pentachlorophenol (PCP)	2024-04-08 00:00:00	0.2	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Oxamyl	2024-04-08 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Nitrate as N	2024-04-08 00:00:00	4.6	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2702539_002_002	DDW MUNICIPAL	Dinoseb	2024-04-08 00:00:00	2	UG/L	7		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Dalapon	2024-04-08 00:00:00	10	UG/L	200		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Carbofuran	2024-04-08 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Bentazon	2024-04-08 00:00:00	2	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Alachlor	2024-04-08 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	2,4,5-TP (Silvex)	2024-04-08 00:00:00	1	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Diquat	2024-04-08 00:00:00	4	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2702539_002_002	DDW MUNICIPAL	Atrazine	2024-04-08 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2702802_001_001	DDW MUNICIPAL	Arsenic	2024-08-05 00:00:00	8	UG/L	10		FALSE	FALSE	FALSE	DDW
CA2702802_001_001	DDW MUNICIPAL	Gross Alpha radioactivity	2024-04-29 00:00:00	2.7	pCi/L	15		FALSE	FALSE	FALSE	DDW
CA2702802_001_001	DDW MUNICIPAL	Nitrate as N	2024-08-05 00:00:00	5.8	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2702802_001_001	DDW MUNICIPAL	Nitrite as N	2024-04-29 00:00:00	0.1	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2702802_001_001	DDW MUNICIPAL	Perchlorate	2024-04-29 00:00:00	2.1	UG/L	6		FALSE	FALSE	FALSE	DDW
CA2702802_001_001	DDW MUNICIPAL	Specific Conductivity	2024-04-29 00:00:00	680	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2702802_001_001	DDW MUNICIPAL	Uranium	2024-04-29 00:00:00	2.3	pCi/L	20		FALSE	FALSE	FALSE	DDW
CA2702802_001_001	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-05-08 00:00:00	0.005	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_006_006	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-04-24 00:00:00	0.002	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_006_006	DDW MUNICIPAL	Nitrate as N	2024-02-27 00:00:00	1.6	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Sulfate	2024-09-10 00:00:00	89	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Manganese	2024-09-10 00:00:00	10	UG/L		50	FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Nickel	2024-09-10 00:00:00	10	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Nitrate as N	2024-09-10 00:00:00	4.7	MG/L	10		FALSE	FALSE	FALSE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2710009_007_007	DDW MUNICIPAL	Nitrite as N	2024-09-10 00:00:00	0.05	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Perchlorate	2024-09-10 00:00:00	1	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Selenium	2024-09-10 00:00:00	2.9	UG/L	20		FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Silver	2024-09-10 00:00:00	10	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Specific Conductivity	2024-09-10 00:00:00	570	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Thallium	2024-09-10 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Total Dissolved Solids	2024-09-10 00:00:00	360	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Zinc	2024-09-10 00:00:00	0.05	MG/L		5	FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Iron	2024-09-10 00:00:00	30	UG/L		300	FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Antimony	2024-09-10 00:00:00	2	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Mercury	2024-09-10 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Foaming Agents (MBAS)	2024-09-10 00:00:00	0.11	MG/L		0.5	FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Aluminum	2024-09-10 00:00:00	50	UG/L	1000	200	FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-04-23 00:00:00	0.002	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Arsenic	2024-09-10 00:00:00	2	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Barium	2024-09-10 00:00:00	0.05	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Beryllium	2024-09-10 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Chloride	2024-09-10 00:00:00	19	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710009_007_007	DDW MUNICIPAL	Chromium	2024-09-10 00:00:00	10	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Copper	2024-09-10 00:00:00	0.005	MG/L		1	FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Cyanide (CN)	2024-09-10 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Cadmium	2024-09-10 00:00:00	1	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_007_007	DDW MUNICIPAL	Fluoride	2024-09-10 00:00:00	0.19	MG/L	2		FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Perchlorate	2024-06-11 00:00:00	1	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Nitrite as N	2024-06-11 00:00:00	0.05	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Nitrate as N	2024-06-11 00:00:00	1.2	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Nickel	2024-06-11 00:00:00	10	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Ethylbenzene	2024-07-01 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-07-01 00:00:00	0.5	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Manganese	2024-06-11 00:00:00	10	UG/L		50	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Iron	2024-06-11 00:00:00	30	UG/L		300	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Foaming Agents (MBAS)	2024-06-11 00:00:00	0.05	MG/L		0.5	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Selenium	2024-06-11 00:00:00	2.1	UG/L	20		FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Fluoride	2024-06-11 00:00:00	0.24	MG/L	2		FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Mercury	2024-06-11 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Silver	2024-06-11 00:00:00	10	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Specific Conductivity	2024-06-11 00:00:00	510	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Styrene	2024-07-01 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Zinc	2024-06-11 00:00:00	0.05	MG/L		5	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-07-01 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Total Dissolved Solids	2024-06-11 00:00:00	330	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-07-01 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Trichloroethene (TCE)	2024-07-01 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-07-01 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Vinyl Chloride	2024-07-01 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Xylenes (Total)	2024-07-01 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-07-01 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Sulfate	2024-06-11 00:00:00	79	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Toluene	2024-07-01 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-07-01 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Cyanide (CN)	2024-06-11 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2710009_008_008	DDW MUNICIPAL	Thallium	2024-06-11 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-07-01 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-07-01 00:00:00	0.0005	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-07-01 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-07-01 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-04-23 00:00:00	0.002	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-07-01 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,3-Dichloropropene	2024-07-01 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-07-01 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Cadmium	2024-06-11 00:00:00	1	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-07-01 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Chromium	2024-06-11 00:00:00	10	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Chlorobenzene	2024-07-01 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Chloride	2024-06-11 00:00:00	21	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710009_008_008	DDW MUNICIPAL	Carbon tetrachloride	2024-07-01 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Aluminum	2024-06-11 00:00:00	50	UG/L	1000	200	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Copper	2024-06-11 00:00:00	0.005	MG/L		1	FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Beryllium	2024-06-11 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Benzene	2024-07-01 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Barium	2024-06-11 00:00:00	0.05	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Arsenic	2024-06-11 00:00:00	2	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710009_008_008	DDW MUNICIPAL	Antimony	2024-06-11 00:00:00	2	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710009_012_012	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-04-23 00:00:00	0.002	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_012_012	DDW MUNICIPAL	Nitrate as N	2024-03-12 00:00:00	2.2	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Selenium	2024-02-13 00:00:00	3	UG/L	20		FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Iron	2024-02-13 00:00:00	30	UG/L		300	FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Manganese	2024-02-13 00:00:00	10	UG/L		50	FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Mercury	2024-02-13 00:00:00	0.2	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Nickel	2024-02-13 00:00:00	10	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Nitrate as N	2024-03-12 00:00:00	1.6	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Total Dissolved Solids	2024-02-13 00:00:00	460	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Silver	2024-02-13 00:00:00	10	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Specific Conductivity	2024-02-13 00:00:00	560	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Sulfate	2024-02-13 00:00:00	89	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Thallium	2024-02-13 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Foaming Agents (MBAS)	2024-02-13 00:00:00	0.05	MG/L		0.5	FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Nitrite as N	2024-02-13 00:00:00	0.05	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Barium	2024-02-13 00:00:00	0.05	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Zinc	2024-02-13 00:00:00	0.078	MG/L		5	FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Fluoride	2024-02-13 00:00:00	0.22	MG/L	2		FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	1,2 Dibromoethane (EDB)	2024-01-17 00:00:00	0.02	UG/L	0.05		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-04-24 00:00:00	0.002	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	1,2-Dibromo-3-chloropropane (DBCP)	2024-01-17 00:00:00	0.01	UG/L	0.2		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Aluminum	2024-02-13 00:00:00	50	UG/L	1000	200	FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Arsenic	2024-02-13 00:00:00	2	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Beryllium	2024-02-13 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Cadmium	2024-02-13 00:00:00	1	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Chloride	2024-02-13 00:00:00	22	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710009_014_014	DDW MUNICIPAL	Chromium	2024-02-13 00:00:00	10	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Copper	2024-02-13 00:00:00	0.005	MG/L		1	FALSE	FALSE	TRUE	DDW
CA2710009_014_014	DDW MUNICIPAL	Cyanide (CN)	2024-02-13 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2710009_014_014	DDW MUNICIPAL	Antimony	2024-02-13 00:00:00	2	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710009_015_015	DDW MUNICIPAL	1,2 Dibromoethane (EDB)	2024-01-17 00:00:00	0.02	UG/L	0.05		FALSE	FALSE	TRUE	DDW
CA2710009_015_015	DDW MUNICIPAL	Nitrate as N	2024-03-12 00:00:00	1.4	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710009_015_015	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-04-24 00:00:00	0.002	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710009_015_015	DDW MUNICIPAL	1,2-Dibromo-3-chloropropane (DBCP)	2024-01-17 00:00:00	0.01	UG/L	0.2		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Picloram	2024-07-16 00:00:00	0.001	MG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Pentachlorophenol (PCP)	2024-07-16 00:00:00	0.2	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Oxamyl	2024-07-16 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Nitrite as N	2024-07-16 00:00:00	0.1	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Nitrate as N	2024-07-16 00:00:00	1.6	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Nickel	2024-07-16 00:00:00	5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-07-16 00:00:00	0.5	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-07-16 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Dinoseb	2024-07-16 00:00:00	2	UG/L	7		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Foaming Agents (MBAS)	2024-07-16 00:00:00	0.05	MG/L		0.5	FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Fluoride	2024-07-16 00:00:00	0.2	MG/L	2		FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Ethylbenzene	2024-07-16 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Diquat	2024-07-16 00:00:00	4	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Trichloroethene (TCE)	2024-07-16 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Mercury	2024-07-16 00:00:00	0.3	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Thallium	2024-07-16 00:00:00	0.5	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Iron	2024-07-16 00:00:00	65	UG/L		300	FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Dalapon	2024-07-16 00:00:00	10	UG/L	200		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Zinc	2024-07-16 00:00:00	0.032	MG/L		5	FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Xylenes (Total)	2024-07-16 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Vinyl Chloride	2024-07-16 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-07-16 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Total Dissolved Solids	2024-07-16 00:00:00	350	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Toluene	2024-07-16 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Selenium	2024-07-16 00:00:00	4.1	UG/L	20		FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-07-16 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Sulfate	2024-07-16 00:00:00	97	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Styrene	2024-07-16 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Specific Conductivity	2024-07-16 00:00:00	579	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Simazine	2024-07-16 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Silver	2024-07-16 00:00:00	1.5	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-07-16 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Antimony	2024-07-16 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Aluminum	2024-07-16 00:00:00	15	UG/L	1000	200	FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Alachlor	2024-07-16 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	2,4,5-TP (Silvex)	2024-07-16 00:00:00	1	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-07-16 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,3-Dichloropropene	2024-07-16 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Arsenic	2024-07-16 00:00:00	2.9	UG/L	10		FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-07-16 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-07-16 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-07-16 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-07-16 00:00:00	0.01	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-07-16 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Cyanide (CN)	2024-07-16 00:00:00	4	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-07-16 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2710016_001_001	DDW MUNICIPAL	Copper	2024-07-16 00:00:00	0.02	MG/L		1	FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-07-16 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Chromium	2024-07-16 00:00:00	10	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Chlorobenzene	2024-07-16 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	2,4-Dichlorophenoxyacetic acid (2,4 D)	2024-07-16 00:00:00	10	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Carbon tetrachloride	2024-07-16 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Atrazine	2024-07-16 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Carbofuran	2024-07-16 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Manganese	2024-07-16 00:00:00	15	UG/L		50	FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Bentazon	2024-07-16 00:00:00	2	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Chloride	2024-07-16 00:00:00	23	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Barium	2024-07-16 00:00:00	0.034	MG/L	1		FALSE	FALSE	FALSE	DDW
CA2710016_001_001	DDW MUNICIPAL	Benzene	2024-07-16 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Beryllium	2024-07-16 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710016_001_001	DDW MUNICIPAL	Cadmium	2024-07-16 00:00:00	0.25	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Dinoseb	2024-01-09 00:00:00	2	UG/L	7		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-01-09 00:00:00	0.005	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Picloram	2024-01-09 00:00:00	0.001	MG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Pentachlorophenol (PCP)	2024-01-09 00:00:00	0.2	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Oxamyl	2024-01-09 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Nitrate as N	2024-07-09 00:00:00	2.3	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710016_002_002	DDW MUNICIPAL	Diquat	2024-01-09 00:00:00	4	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Simazine	2024-01-09 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Carbofuran	2024-01-09 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Bentazon	2024-01-09 00:00:00	2	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Atrazine	2024-01-09 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Alachlor	2024-01-09 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	2,4-Dichlorophenoxyacetic acid (2,4 D)	2024-01-09 00:00:00	10	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	2,4,5-TP (Silvex)	2024-01-09 00:00:00	1	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_002_002	DDW MUNICIPAL	Dalapon	2024-01-09 00:00:00	10	UG/L	200		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Oxamyl	2024-01-09 00:00:00	20	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Nitrite as N	2024-01-09 00:00:00	0.1	MG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Nitrate as N	2024-01-09 00:00:00	1.5	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Nickel	2024-01-09 00:00:00	5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Zinc	2024-01-09 00:00:00	0.03	MG/L		5	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Manganese	2024-01-09 00:00:00	15	UG/L		50	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Selenium	2024-01-09 00:00:00	2.3	UG/L	20		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Iron	2024-01-09 00:00:00	30	UG/L		300	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Foaming Agents (MBAS)	2024-01-09 00:00:00	0.05	MG/L		0.5	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Mercury	2024-01-09 00:00:00	0.3	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Pentachlorophenol (PCP)	2024-01-09 00:00:00	0.2	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Bentazon	2024-01-09 00:00:00	2	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Silver	2024-01-09 00:00:00	1.5	UG/L		100	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Simazine	2024-01-09 00:00:00	1	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Specific Conductivity	2024-01-09 00:00:00	498	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Sulfate	2024-01-09 00:00:00	77	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Thallium	2024-01-09 00:00:00	0.5	UG/L	2		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Total Dissolved Solids	2024-01-09 00:00:00	310	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Fluoride	2024-01-09 00:00:00	0.2	MG/L	2		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Picloram	2024-01-09 00:00:00	0.001	MG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Alachlor	2024-01-09 00:00:00	1	UG/L	2		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2710016_003_003	DDW MUNICIPAL	Diquat	2024-01-09 00:00:00	4	UG/L	20		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	1,2,3-Trichloropropane (1,2,3 TCP)	2024-01-09 00:00:00	0.005	UG/L	0.005		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	2,4-Dichlorophenoxyacetic acid (2,4 D)	2024-01-09 00:00:00	10	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Aluminum	2024-01-09 00:00:00	15	UG/L	1000	200	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Antimony	2024-01-09 00:00:00	1	UG/L	6		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Arsenic	2024-01-09 00:00:00	2.4	UG/L	10		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Atrazine	2024-01-09 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Barium	2024-01-09 00:00:00	0.0359	MG/L	1		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Copper	2024-01-09 00:00:00	0.02	MG/L		1	FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Dinoseb	2024-01-09 00:00:00	2	UG/L	7		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	2,4,5-TP (Silvex)	2024-01-09 00:00:00	1	UG/L	50		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Beryllium	2024-01-09 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Cyanide (CN)	2024-01-09 00:00:00	4	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Dalapon	2024-01-09 00:00:00	10	UG/L	200		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Chromium	2024-01-09 00:00:00	1.7	UG/L	50		FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Chloride	2024-01-09 00:00:00	20	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710016_003_003	DDW MUNICIPAL	Carbofuran	2024-01-09 00:00:00	5	UG/L	18		FALSE	FALSE	TRUE	DDW
CA2710016_003_003	DDW MUNICIPAL	Cadmium	2024-01-09 00:00:00	0.25	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Styrene	2024-08-27 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Specific Conductivity	2024-06-26 00:00:00	1210	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710705_003_003	DDW MUNICIPAL	Nitrate as N	2024-07-16 00:00:00	1	MG/L	10		FALSE	FALSE	FALSE	DDW
CA2710705_003_003	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-08-27 00:00:00	3	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Sulfate	2024-06-26 00:00:00	171	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710705_003_003	DDW MUNICIPAL	Iron	2024-06-26 00:00:00	478	UG/L		300	FALSE	TRUE	FALSE	DDW
CA2710705_003_003	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Toluene	2024-08-27 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Total Dissolved Solids	2024-06-26 00:00:00	735	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710705_003_003	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-08-27 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Trichloroethene (TCE)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-08-27 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-08-27 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Xylenes (Total)	2024-08-27 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Cyanide (CN)	2024-07-16 00:00:00	40	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Vinyl Chloride	2024-08-27 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Ethylbenzene	2024-08-27 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Chlorobenzene	2024-08-27 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-08-27 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-08-27 00:00:00	0.01	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-08-27 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-08-27 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Chloride	2024-06-26 00:00:00	111	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Benzene	2024-08-27 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	Carbon tetrachloride	2024-08-27 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,3-Dichloropropene	2024-08-27 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710705_003_003	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Nitrate as N	2024-07-16 00:00:00	0.4	MG/L	10		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	MTBE (Methyl-tert-butyl ether)	2024-08-27 00:00:00	3	UG/L	13	5	FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Dichloromethane (Methylene Chloride)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW

Table C-1. 2024 Annual Report Groundwater Quality

Well Name	Well Category	Chemical Name	Measurement Date	Concentration Value	Unit	MCL	SMCL	MCL exceeded?	SMCL exceeded?	Concentration non-detect?	Data Source
CA2710705_015_015	DDW MUNICIPAL	Iron	2024-06-26 00:00:00	2430	UG/L		300	FALSE	TRUE	FALSE	DDW
CA2710705_015_015	DDW MUNICIPAL	Ethylbenzene	2024-08-27 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Specific Conductivity	2024-06-26 00:00:00	883	UMHOS/CM		1600	FALSE	FALSE	FALSE	DDW
CA2710705_015_015	DDW MUNICIPAL	Xylenes (Total)	2024-08-27 00:00:00	0.5	UG/L	1750		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Styrene	2024-08-27 00:00:00	0.5	UG/L	100		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Sulfate	2024-06-26 00:00:00	114	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710705_015_015	DDW MUNICIPAL	Tetrachloroethene (PCE)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Toluene	2024-08-27 00:00:00	0.5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Total Dissolved Solids	2024-06-26 00:00:00	545	MG/L		1000	FALSE	FALSE	FALSE	DDW
CA2710705_015_015	DDW MUNICIPAL	trans-1,2, Dichloroethylene	2024-08-27 00:00:00	0.5	UG/L	10		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Trichloroethene (TCE)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Vinyl Chloride	2024-08-27 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Cyanide (CN)	2024-07-16 00:00:00	40	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Trichlorofluoromethane (Freon 11)	2024-08-27 00:00:00	5	UG/L	150		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	cis-1,2 Dichloroethylene	2024-08-27 00:00:00	0.5	UG/L	6		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Carbon tetrachloride	2024-08-27 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,1,2,2 Tetrachloroethane (PCA)	2024-08-27 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2024-08-27 00:00:00	0.01	MG/L	1.2		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,1-Dichloroethane (1,1 DCA)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,2 Dichlorobenzene (1,2-DCB)	2024-08-27 00:00:00	0.5	UG/L	600		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Chlorobenzene	2024-08-27 00:00:00	0.5	UG/L	70		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,2 Dichloropropane (1,2 DCP)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	Chloride	2024-06-26 00:00:00	50	MG/L		500	FALSE	FALSE	FALSE	DDW
CA2710705_015_015	DDW MUNICIPAL	Benzene	2024-08-27 00:00:00	0.5	UG/L	1		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,4-Dichlorobenzene (p-DCB)	2024-08-27 00:00:00	0.5	UG/L	5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,3-Dichloropropene	2024-08-27 00:00:00	0.5	UG/L	0.5		FALSE	FALSE	TRUE	DDW
CA2710705_015_015	DDW MUNICIPAL	1,2,4- Trichlorobenzene (1,2,4 TCB)	2024-08-27 00:00:00	0.5	UG/L	4		FALSE	FALSE	TRUE	DDW

