Groundwater Report

Fall 2025

San Joaquin County

Flood Control and Water Conservation District

San Joaquin County

Flood Control and Water Conservation District

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Copies of the 2025 Fall Groundwater Report may be available upon request from:

San Joaquin County Department of Public Works
P.O. Box 1810, Stockton, California 95201

Acknowledgements

This Groundwater Report is a product of the commitment that the San Joaquin County Flood Control and Water Conservation District (District) together with many other interested agencies committed to sustain and enhance the groundwater resources of the Eastern San Joaquin Groundwater Subbasin and the Tracy Groundwater Subbasin. The District extends thanks to:

California Water Service

California Department of Water Resources

City of Lathrop

City of Lodi

City of Manteca

City of Stockton Municipal Utilities Department

City of Tracy

East Bay Municipal Utility District

Morada Area Association

Pacific Gas and Electric Company

San Joaquin County Department of Public Works

State of California, Department of Water Resources Central District

Stockton East Water District

United States Bureau of Reclamation

United States Geological Survey

Local Groundwater Sustainability Agencies

Most of all, we would like to thank all the individual well owners, who give us access to their wells and in some cases, their time.

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1 Introduction

Since the Fall of 1971, the San Joaquin County Flood Control and Water Conservation District (District) has monitored groundwater levels and groundwater quality and has published the data in semi-annual Groundwater Reports. This report utilizes data from federal, state, and local government agencies, as well as non-governmental sources.

This report represents data from the Eastern San Joaquin Groundwater Subbasin (5-022.01, ESJSb) and Tracy Groundwater Subbasin (5-022.15, TSb). The ESJSb includes portions of Calaveras County, Stanislaus County, and San Joaquin County east of the San Joaquin River. The TSb is located primarily in San Joaquin County west of the San Joaquin River and includes a small portion of Alameda County. Both ESJSb and TSb have Groundwater Sustainability Plans (GSP) for the neighboring, but separate subbasins, which are outlined on the map figures within this report and separated by the San Joaquin River, except for the City of Lathrop, which is included as part of the TSb. In addition to the subbasin boundaries, there are individual Groundwater Sustainability Agencies (GSAs) that represent portions of each basin for business or political reasons. Only GSAs in the ESJSb are delineated on the maps in this report, however, TSb has its own GSAs.

Water level data is collected on a semi-annual basis, during the months of March and October, to observe groundwater levels before and after peak groundwater pumping conditions. Over 200 wells, most of which are measured by County staff or their consultant, are included in the Monitoring Network. The exact number of wells varies from year to year, depending on circumstances such as well destructions, new well construction, well accessibility, and well condition. The wells used in this report are reassessed year to year based on quality and comparability of the data and fluctuate occasionally.

1.1 Purpose

The purpose of the semi-annual Groundwater Reports is to provide information on groundwater conditions in San Joaquin County (County) and to publish the results of the groundwater monitoring program which consists of the following:

1. Measure groundwater levels on a County-wide basis.
2. Monitor groundwater quality in GSP representative monitoring wells.

In general, water quality data is more meaningful after peak production which usually occurs during the summer months. Therefore, groundwater quality samples are collected, analyzed, and published for the fall months. The groundwater depth and elevation data are published for both spring and fall.

Saline water intrusion from the west is a natural consequence of the delta potentially affecting the quality of groundwater in the San Joaquin County groundwater subbasins (ESJSb and TSb). Groundwater quality analysis is completed on an annual basis and this year, San Joaquin County

has decided to use the ESJSb GSP representative monitoring wells around the subbasin which are regularly sampled for total dissolved solids, chloride, nitrates, and arsenic.

1.2 Procedure

Water level measurements are performed using either a steel tape or sounder. Data is then immediately recorded in field books and then stored in a database for accessibility and reporting requirements.

Groundwater quality sampling has been conducted historically on an annual basis during the month of October, along with the fall groundwater level measurements.

Water quality data for this report was gathered using representative wells from the ESJSb GSP in October of 2025. These GSP wells have been monitored by DWR and the District for use in long term planning in the subbasin. Historic water quality data for the TSb is not listed in this report and can be found in the TSb GSP reports available online.

2 Rainfall Distribution

The two groundwater basins in the County (ESJSb and TSb) respond in part to changes in annual precipitation. There are three precipitation stations throughout and adjacent to the County which have historically tracked rainfall.

Figure 2-1 shows the locations of the three precipitation stations. The precipitation records from west to east are presented on Figures 2-2 through 2-7 for the entire water year. A Water Year (WY) is the period between October 1st and September 30th. The year in which the period ends denote the water year, e.g., September 30th, 2025, is the end of WY 2025. Based on the above precipitation data, Water Year 2025 is Below Average.

As shown, almost all of the precipitation fell during the winter and spring months. These graphs reflect areas located across the County and one area in neighboring Calaveras County. These stations have been collecting rainfall data since the 1950's. In water year 2025, rainfall was about 50 percent below average in the Tracy region, just below average in Stockton area, and 50 percent of average northeast of the county. Rainfall was below average when measured at Tracy (West) and Camp Pardee (East).

Precipitation Station	Average (in)	WY 2025 (inches)	Note:
Tracy Carbona	10.16	5.59	Below Average
Stockton Airport	13.67	11.21	Below Average
Camp Pardee	21.21	10.98	Below Average

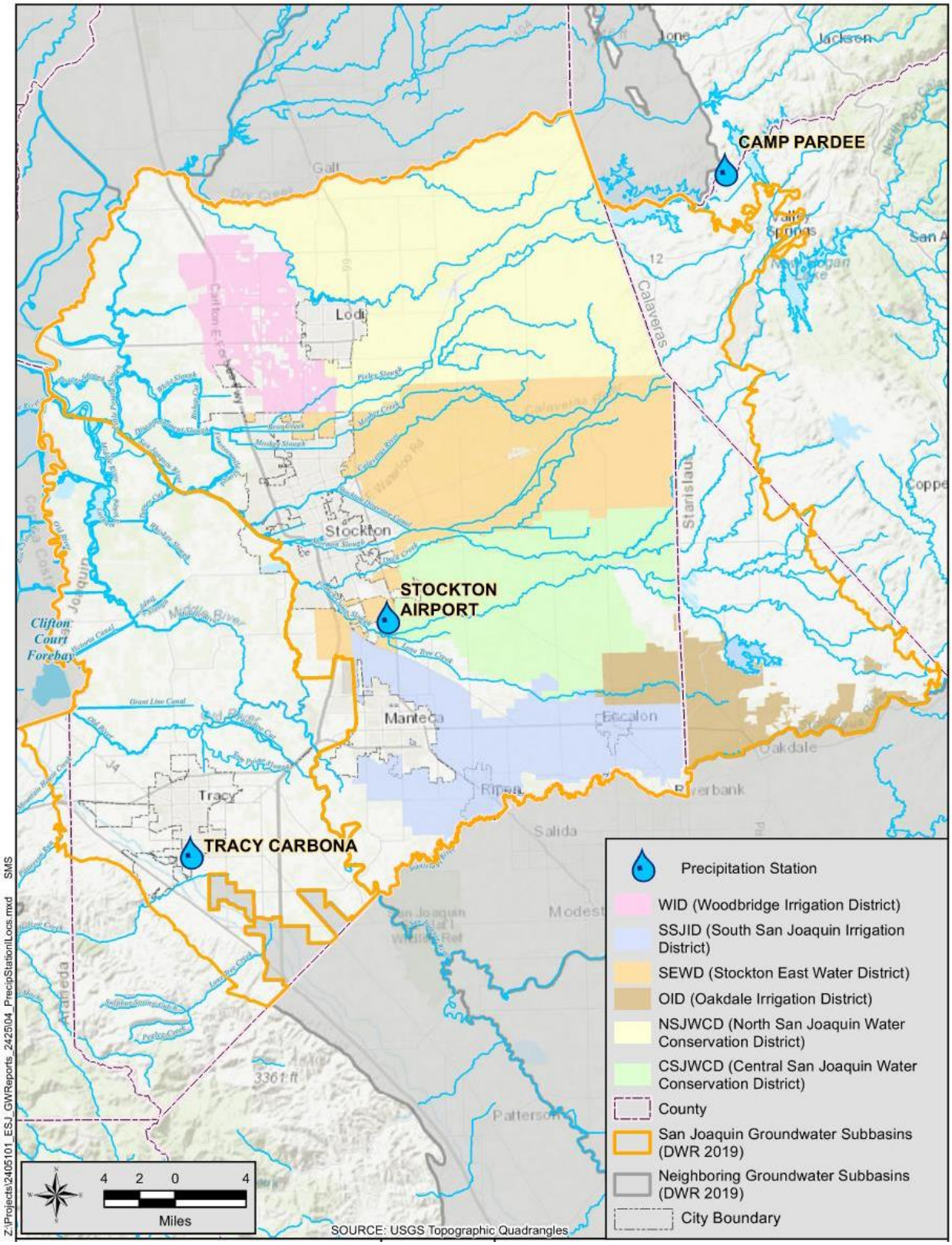

Figure 2-1 Precipitation Station Locations

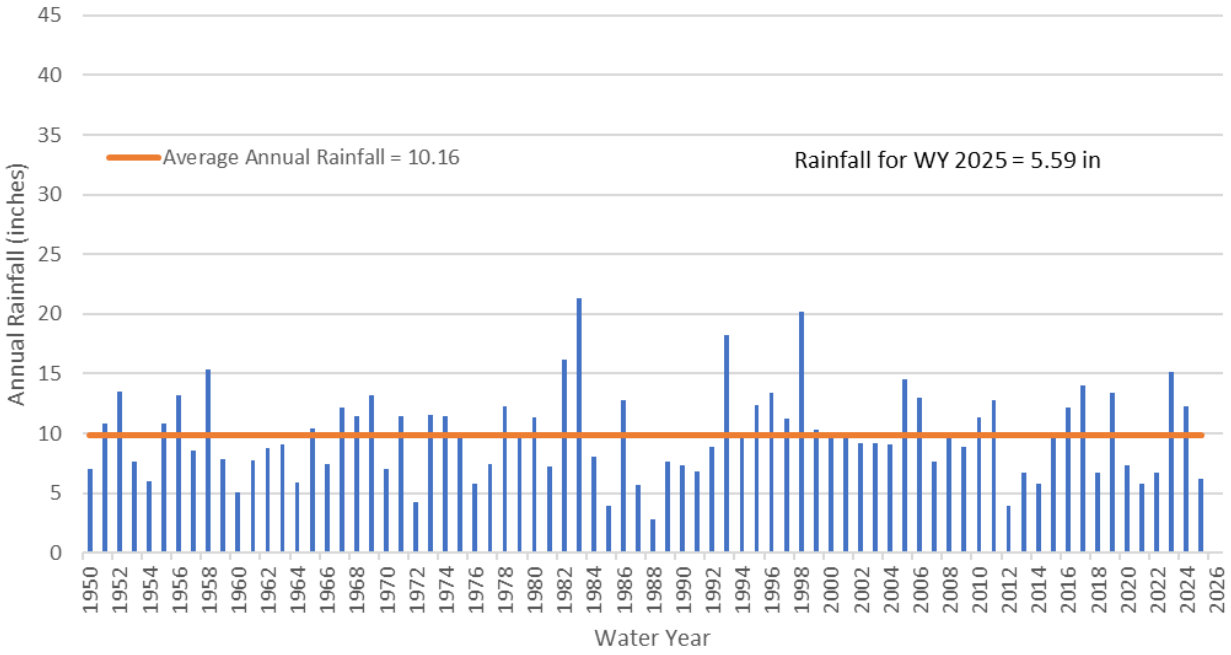

Figure 2-2 Total Annual Rainfall (Tracy Carbona Station)

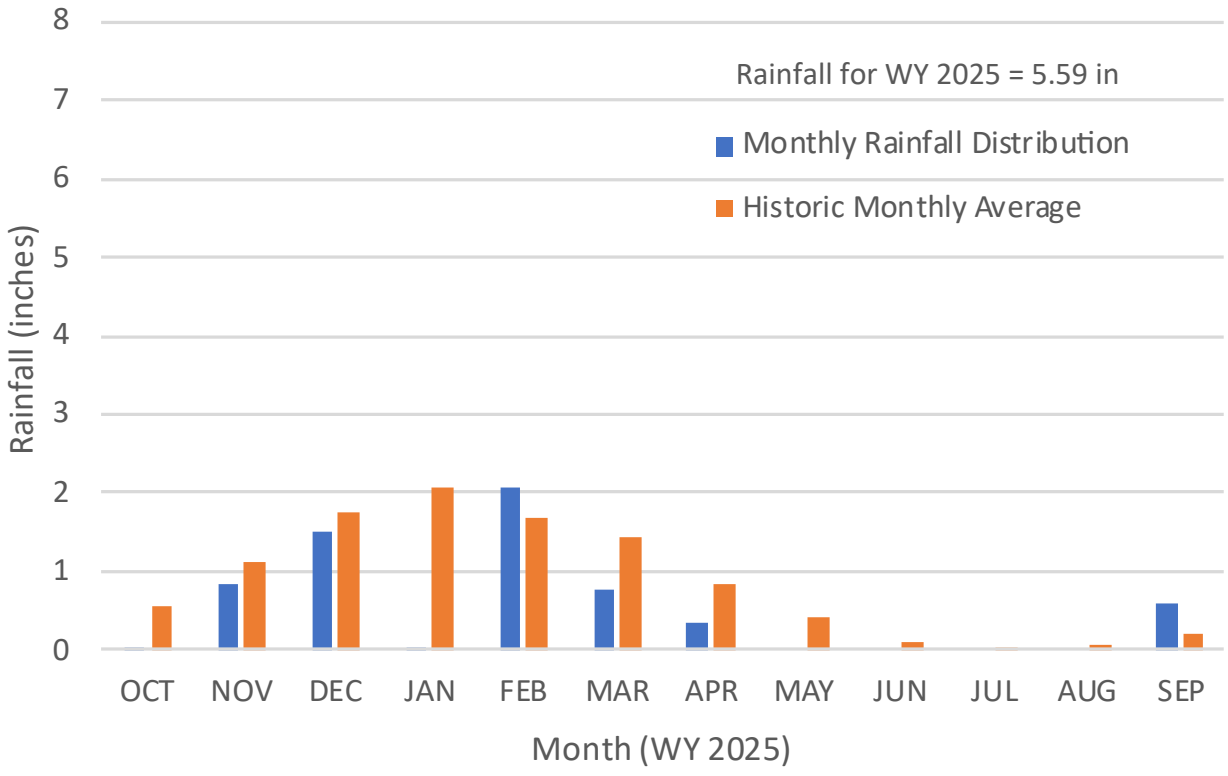

Figure 2-3 Monthly Rainfall Distribution (Tracy Carbona Station)

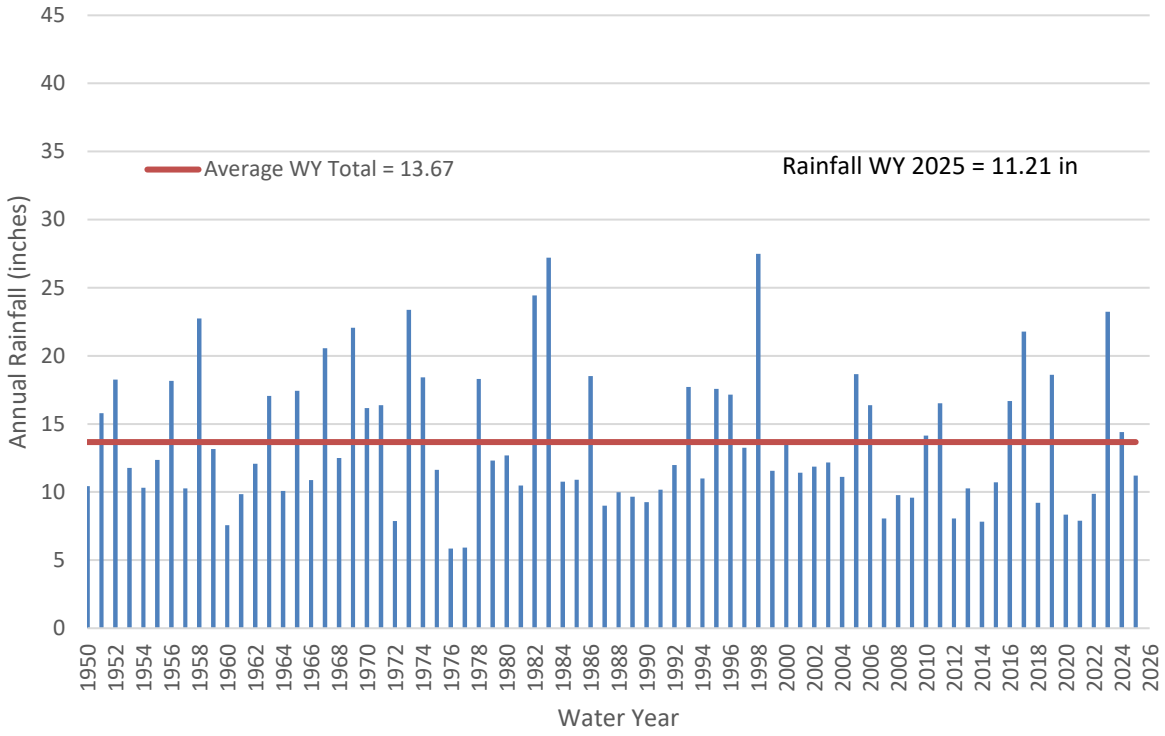

Figure 2-4 Total Annual Rainfall (Stockton Metro AP)

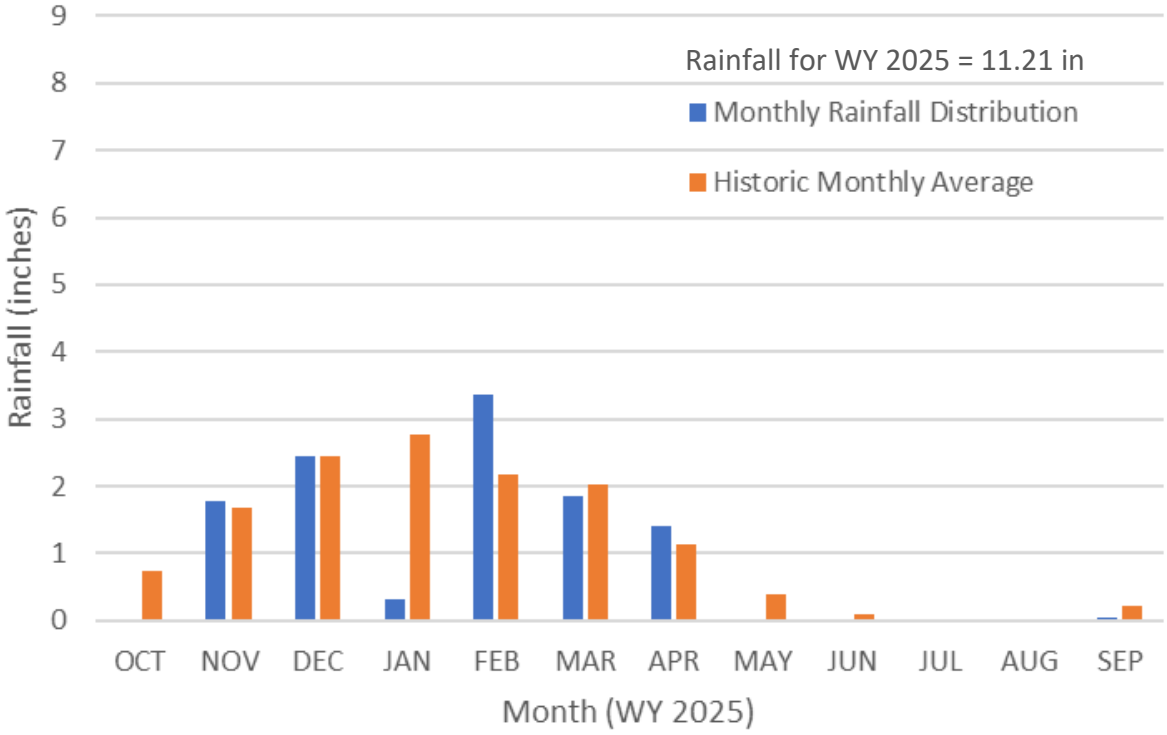

Figure 2-5 Monthly Rainfall Distribution (Stockton Metro AP)

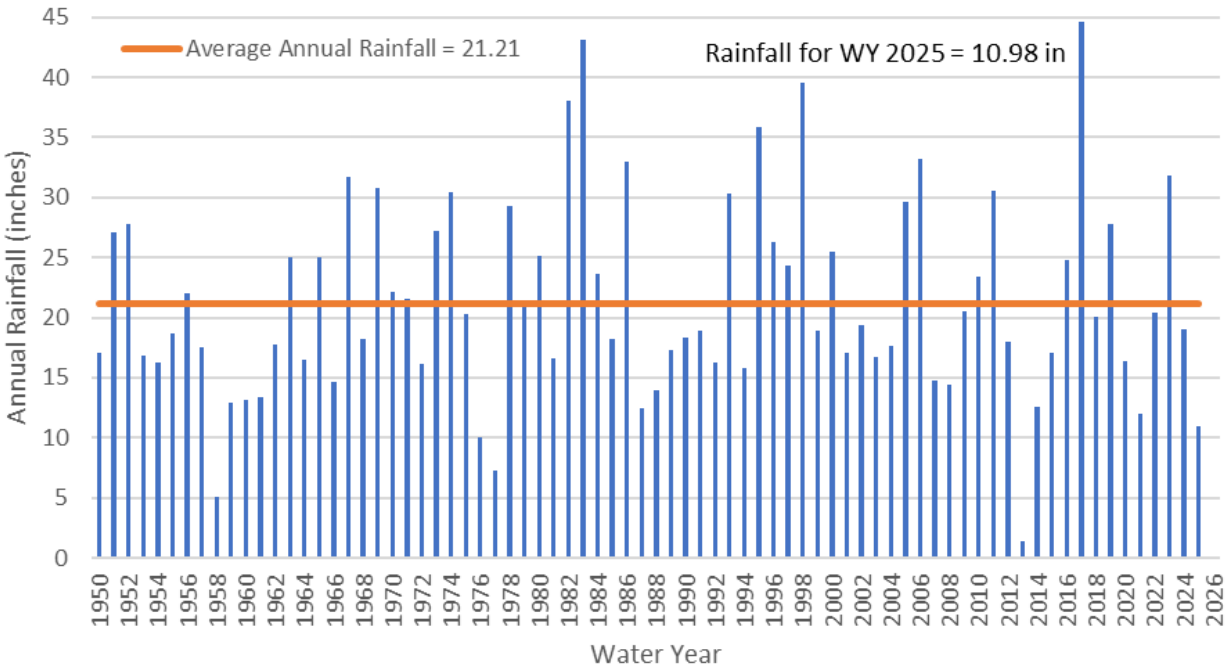

Figure 2-6 Total Annual Rainfall (Camp Pardee Station)

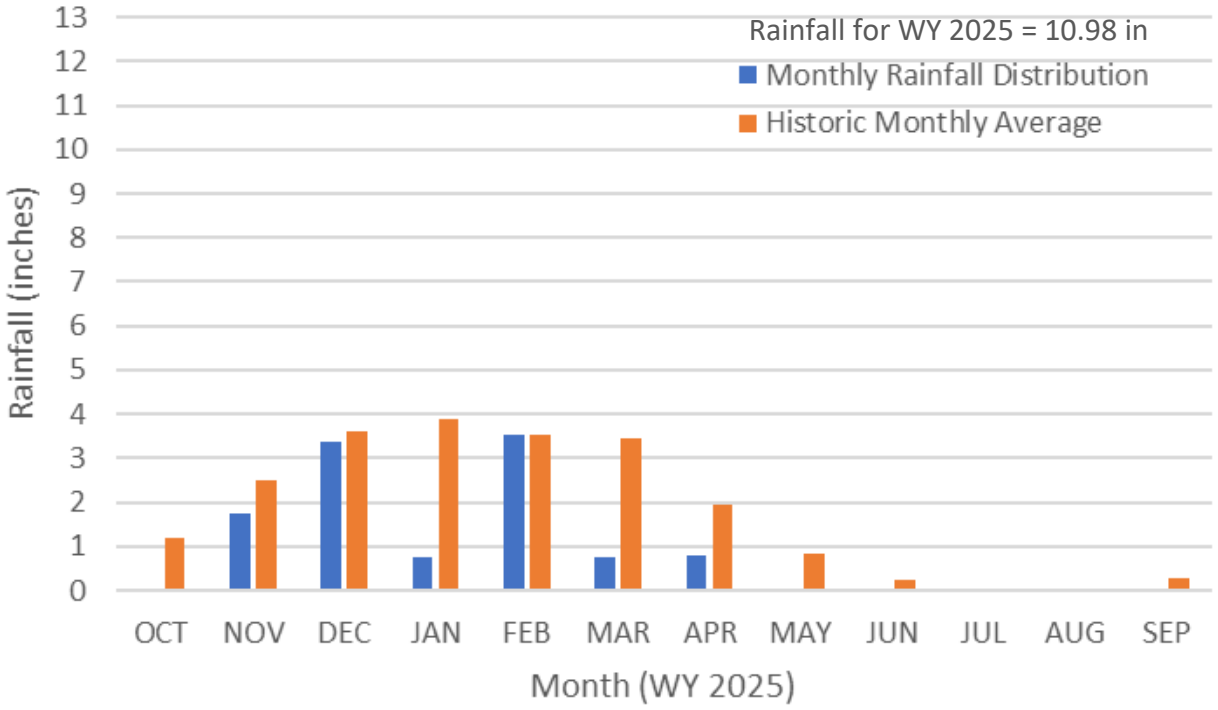

Figure 2-7 Monthly Rainfall Distribution (Camp Pardee Station)

3 Surface Water Levels and Storage

The groundwater levels in the County respond to not only changes in annual precipitation, but also to the amount of surface water in storage and flow in the rivers. Typically, lower amounts of surface water in storage indicate higher amounts of groundwater pumping. Three river gaging stations were selected along the rivers and three reservoir storage stations to represent these conditions.

Figure 3-1 shows the location of these gages and Figures 3-2 through 3-6 provide the recorded reservoir storage and outflows, and river stages for WY 2025. Rain events are shown in the high river flow spikes and reservoir increases, while lower river flow spikes represent the decreases in reservoir levels due to managed outflow.

Tables 3-1 and 3-2 detail the station information for each of the flow gages and reservoir storage totals used to create Figures 3-1 through 3-6.

Figures 3-5 and 3-6 use data from the California Data Exchange Center (CDEC) to supplement data not available through the USGS for San Joaquin River Flow (Vernalis Station) and Mokelumne River (Woodbridge Station). CDEC reports the daily average flow for Vernalis Station, which was averaged by month for comparison to historical data.

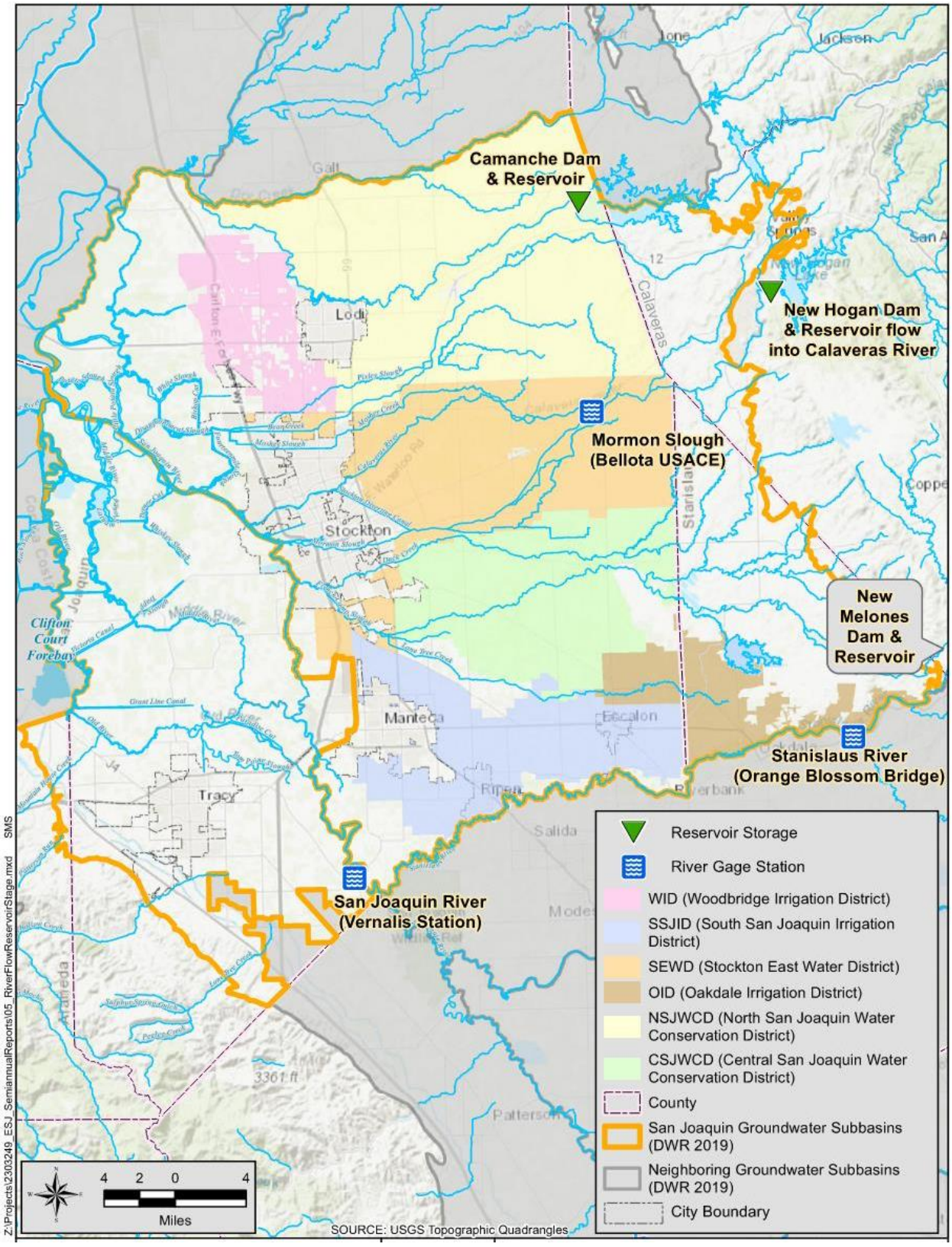

Figure 3-1 Reservoir Storage and River Gage Station Locations

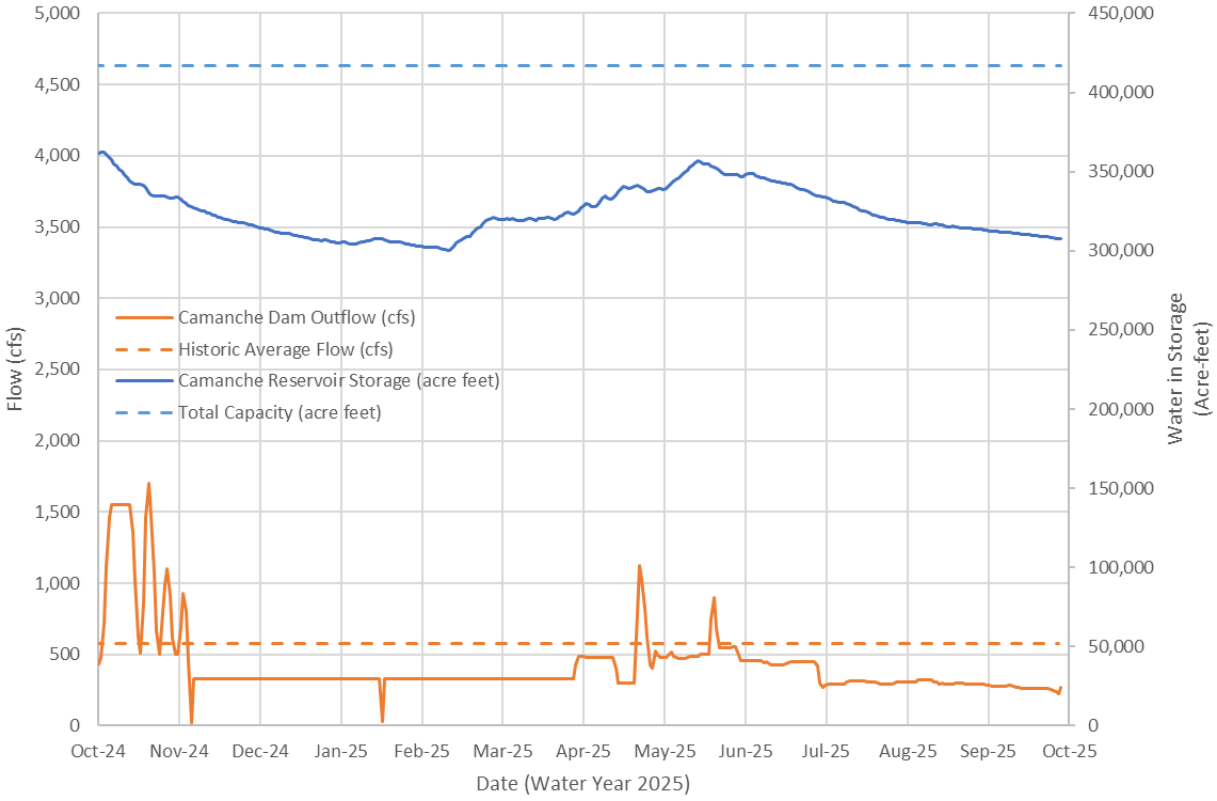

Figure 3-2 Camanche Reservoir

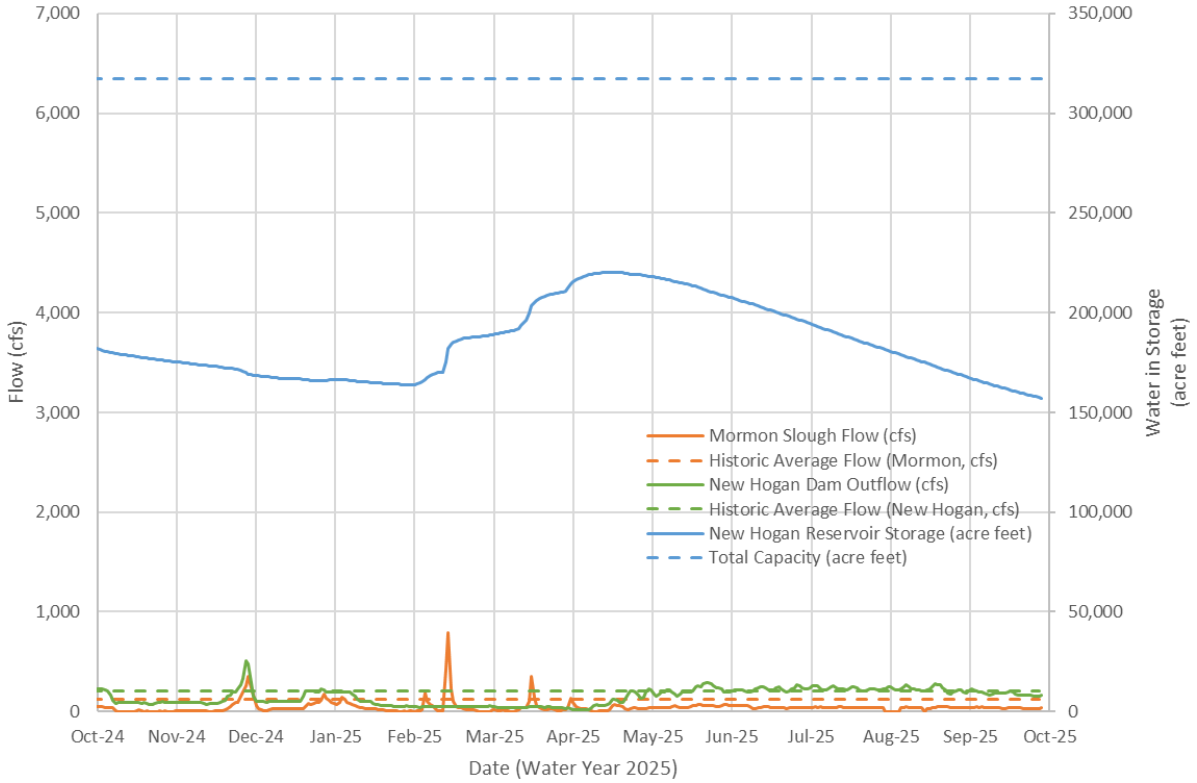

Figure 3-3 New Hogan Reservoir and Calaveras River (Mormon Slough at Bellota)

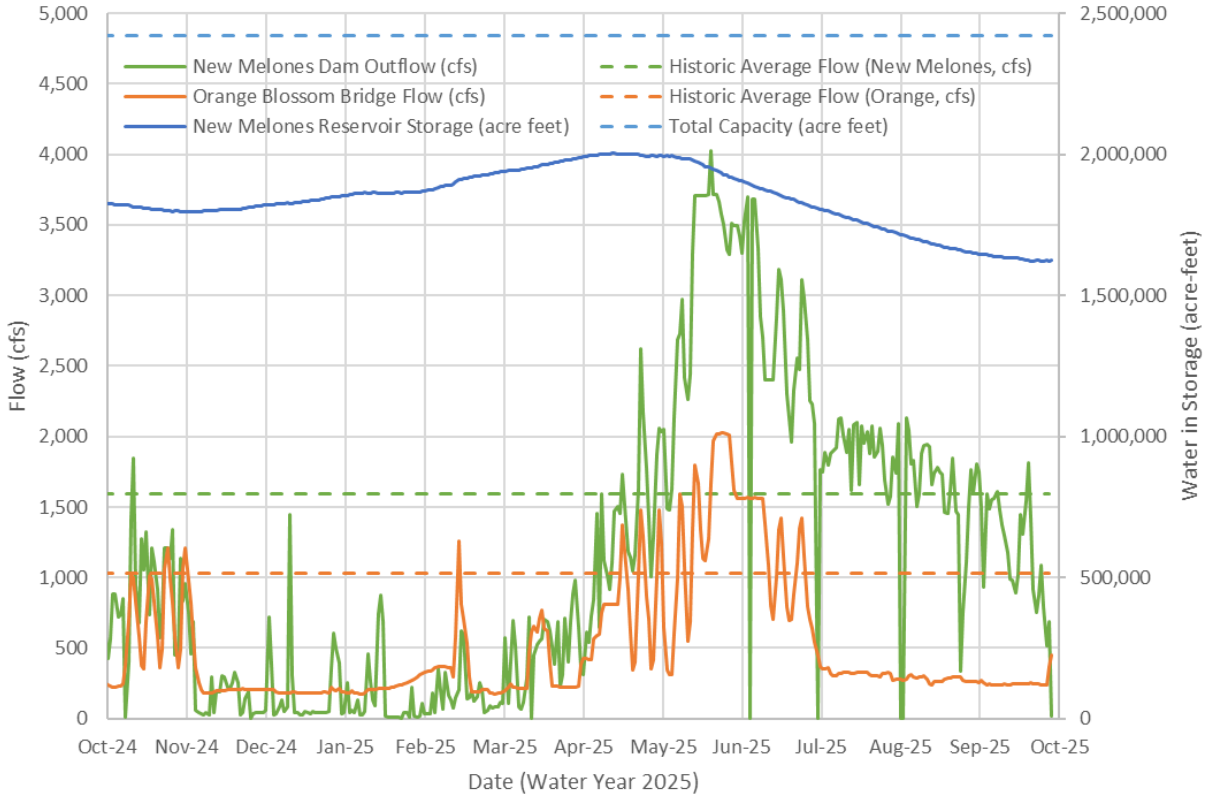

Figure 3-4 New Melones Reservoir and Stanislaus River (Orange Blossom Bridge)

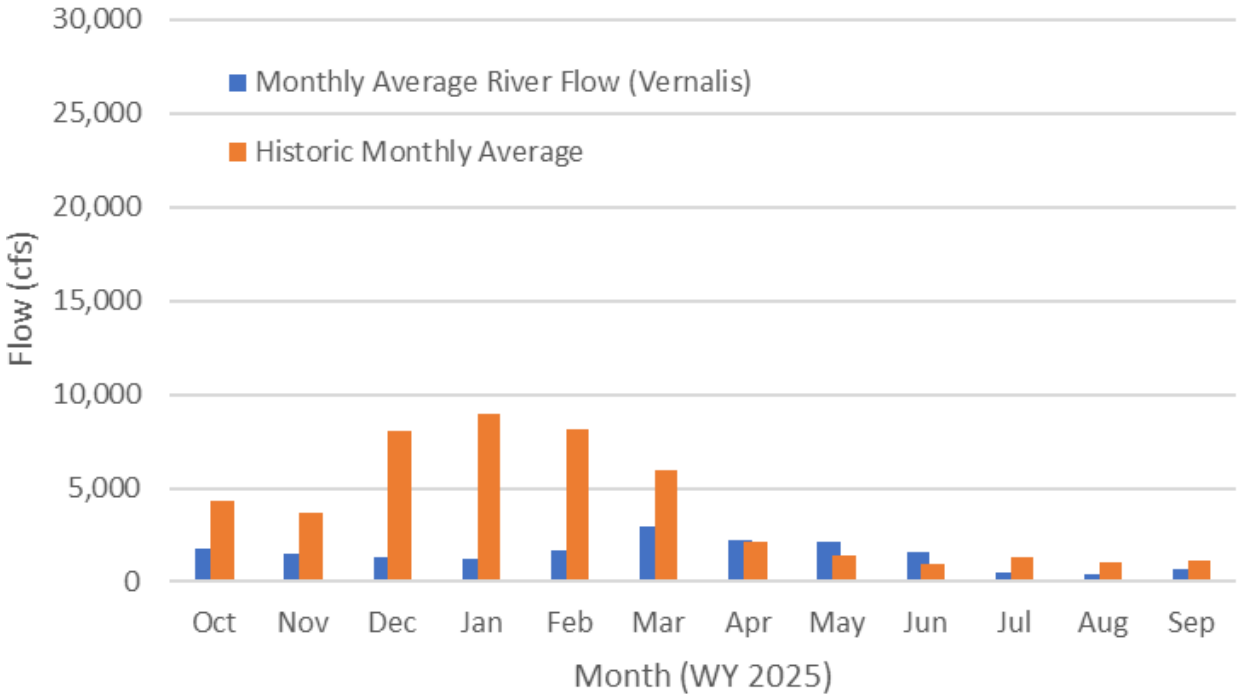

Figure 3-5 San Joaquin River Flow (Vernalis Station) Monthly Average

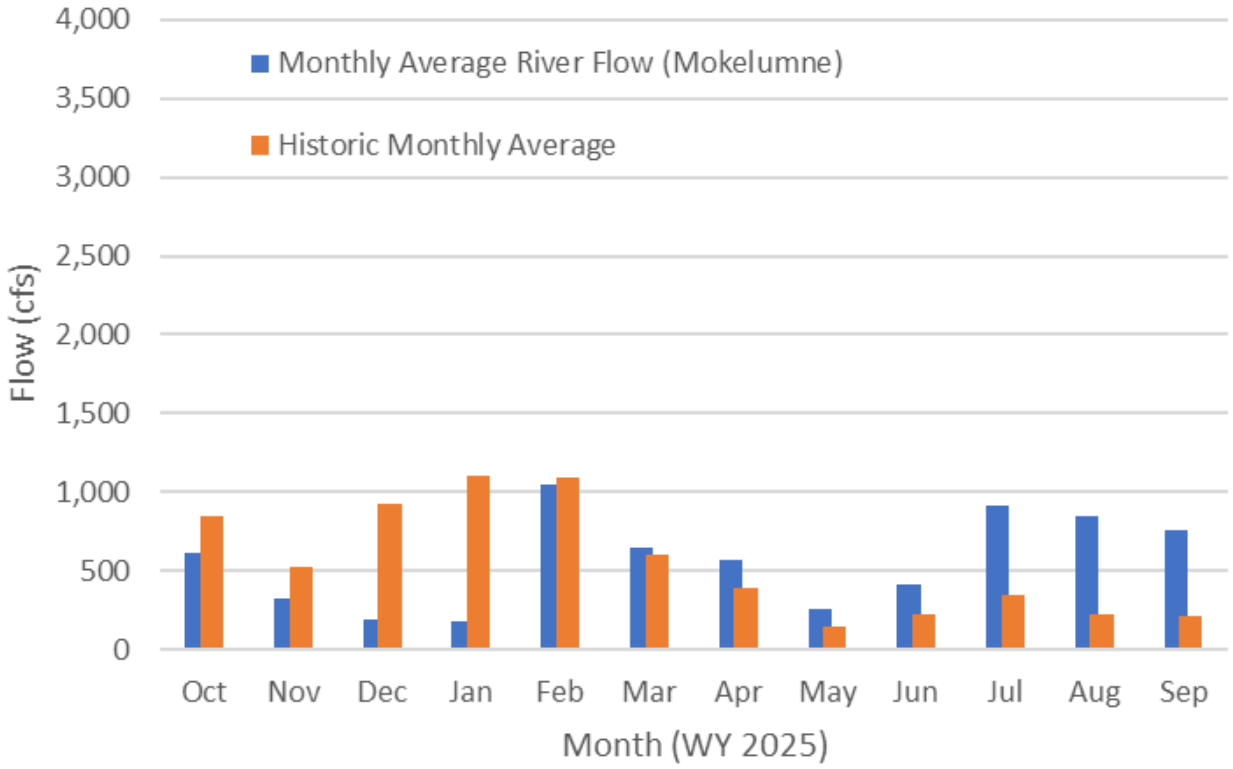

Figure 3-6 Mokelumne River Flow (Woodbridge Station) Monthly Average

Table 3-1 Flow Gages

Station Name	River Basin	Station Code	Station Type	WY 2025, Monthly Average Flow	Unit of Measurement	Historic Average Yearly Total Flow[1]	WY 2025, % of Historic Average
Camanche Reservoir Releases	Mokelumne River	CMN	USACE Outflow, Discharge	427	cubic feet per second	748	57%
Mokelumne River at Woodbridge	Mokelumne River	SMR	USGS River flow, Discharge	564	cubic feet per second	555	102%
New Hogan Dam Releases	Calaveras River	NHG	USACE Outflow, Discharge	148	cubic feet per second	236	63%
Calaveras River Bellota at Mormon Slough	Calaveras River	NHG	USACE River flow, Discharge	44	cubic feet per second	158	28%
New Melones Dam Releases	Stanislaus River	NML	USACE Outflow, Discharge	1152	cubic feet per second	1248	92%
Stanislaus River at Orange Blossom Bridge	Stanislaus River	NML	USACE River flow, Discharge	510	cubic feet per second	684	75%
San Joaquin River near Vernalis	San Joaquin	11303500, VNS	USGS River flow, Discharge	1510	cubic feet per second	3919	39%

Notes:

[1] Historic Yearly Average Flow data for USACE (United States Army Corp of Engineers) gages is not available. Averages shown were calculated by GEI and derived from previous 4 years of data from mean daily flows.

Table 3-2 Reservoir Storage

Station Name	River Basin	Station Code	Station Type	Total Capacity	Unit of Measurement	Total Storage Start of WY 2025	Total Storage End of Spring 2025	Peak Storage WY 2025
Camanche Reservoir	Mokelumne River	CMN	USACE Storage	417 Thousand	Acre-feet	361 Thousand AF 86% Capacity	308 Thousand AF 74% Capacity	362 Thousand AF 87% Capacity
New Hogan Dam & Reservoir	Calaveras River	NHG	USACE Storage	317 Thousand	Acre-feet	182 Thousand AF 57% Capacity	157 Thousand AF 50% Capacity	220 Thousand AF 69% Capacity
New Melones Dam & Reservoir	Stanislaus River	NML	USACE Storage	2.5 Million	Acre-feet	1.82 Million AF 75% Capacity	1.63 Million AF 67% Capacity	2.00 Million AF 83% Capacity

4 Groundwater Elevation Monitoring

Groundwater level data was provided by the County and supplemented with data available through the California Department of Water Resources Statewide Groundwater Elevation Monitoring (CASGEM) program. Groundwater levels were gathered by the County for the ESJSb while portions of the data for the TSb, Calaveras, and Stanislaus County were sourced from the CASGEM or Sustainable Groundwater Management Act, Monitoring Network Module (SGMA Data Viewer, or MNM) website.

4.1 Groundwater Levels in San Joaquin County

Wells included in previous reports that had no available construction details, or discontinued measurements have been removed from Tables 4-1 to 4-9 (located in Appendix A). Wells with comparable data are those wells with groundwater level measurements in both Fall 2024 and Fall 2025. Figure 4-1 shows locations of wells with comparable data and changes in groundwater levels. Localized extreme changes (-20 to -15 and +10 to +15 feet) are present at some wells due to either Fall 2024 or Fall 2025 measurements being affected by pumping and are not necessarily representative of groundwater conditions in the entire subbasin. Overall groundwater levels in most of the subbasin increased or decreased by about 5 feet this water year. Figure 4-2 shows selected key wells with symbols representing increases, decreases, no change, or no data. Representative wells are also shown on Figure 4-1, however are not labeled.

Measurements included in the tables are from two sources; County collected, and DWR CASGEM collected. When data is available from both sources, County collected data is prioritized over CASGEM data for consistency. CASGEM data may not be measured within the same timeframe. If County data is not available or the well could not be monitored, CASGEM data was used. If a well was not measured by the County, it is reported as no measurement (NM). If comparable measurements were not available or other entity, it is reported as "--."

Due to well access issues, several monitoring well sites were not able to be measured in Fall 2025 for a variety of issues, which affects the total amount of comparable wells in the figures generated for this report. Wells with no measurements (NM) for this water year were still kept in the comparison tables due to the measurement history collected previously, and the potential for collecting future measurements.

Most wells in the ESJCo area are not dedicated monitoring wells and groundwater levels measurements may be affected from pumping. Measurements may be affected from irrigation wells where oil from lubrication of the pump has accumulated on the water surface.

Based on professional judgement, groundwater level changes of greater than 20 feet were identified as 'affected by local pumping' and were not included in the evaluation of groundwater level changes or contouring. Wells with greater than 10 feet of groundwater level change may have been affected by pumping but were included in the evaluation and groundwater contouring.

Additional measures are being implemented to better quantify field measurements to reduce uncertainties.

In an effort to provide high quality data, San Joaquin County reviewed the Fall 2025 groundwater level measurements in comparison to Fall 2024 in wells where change was greater than 20 feet and acquired confirmation measurements in December of 2025, after most agricultural pumping has ceased. Table 4-10 is a list of the wells remeasured in December 2025.

The data collected was used to analyze these selected wells to see if the change was accurate and corresponded to water year type, nearby well data, and past measurements within seasonal change in levels. In most of these reacquired measurements, the groundwater levels were within historic range and did not disrupt the contouring of nearby well data.

Fall 2024 data was not held to the same scrutiny as the Fall 2025 data gathered, this has affected comparisons to prior reports.

The information gathered is summarized as follows:

Central San Joaquin Water Conservation District (CSJWCD) – Groundwater levels were measured at fifteen (15) of the monitoring wells in the Fall of 2025, while eighteen (18) wells were unable to have a measurement taken, maintaining the total of thirty-three (33) wells monitored in the district from the previous year. Eleven (11) of the fifteen (15) wells that were successfully measured could be compared to measurements taken in the Fall of 2024 (Table 4-1). One well (01N08E29M002) had an increase in groundwater levels in Fall 2025 of forty-three (43) feet which indicates that groundwater levels in Fall 2024 were influenced by nearby pumping and was not included in the evaluations or contouring. In the Fall, six (6) wells decreased in groundwater levels, while four (4) increased. Average groundwater levels increased by over one (1.1) foot across the district.

North San Joaquin Water Conservation District (NSJWCD) – Thirty (30) wells were monitored in the Fall of 2025, but groundwater levels could not be measured in ten. Eighteen (18) wells have comparable measurements (Table 4-2). In the Fall, eleven (11) wells decreased in groundwater levels, while six (6) increased. Average groundwater levels dropped by about two (2) feet across the district.

Two (2) wells had a difference in groundwater levels greater than ten (10) feet. Wells (03N07E17D004 and 05N07E34G001) had a decrease in groundwater levels in Fall 2025 of twelve and thirteen (-12 and -13.5) feet, respectively, which indicates that groundwater levels in Fall 2025 were potentially influenced by nearby pumping. The data fell within historic range and so was kept in the analyses and used in contouring groundwater levels.

Oakdale Irrigation District (OID) – Two (2) wells were monitored in the Fall of 2025, but one measurement was able to be obtained (Table 4-3). One (1) well was able to be compared and it decreased by four and a half (4.5) feet.

Stockton East Water District (SEWD) – Seventy-three (73) wells were monitored in the Fall of 2025, groundwater levels were measured at fifty-four (54) wells, nineteen (19) wells could not be measured. Forty-four (44) wells have measurements that can be compared to measurements

taken in the Fall of 2024, (Table 4-4). One (1) well showed thirty-five feet of groundwater level rise suggesting the Fall 2024 measurement may have been affected by groundwater pumping and was not included in the evaluation or contouring. Twenty-two (22) wells decreased in groundwater levels; seventeen (17) wells increased. Average groundwater levels remained the same across the district.

Three wells (02N07E03D001, 02N08E09G002 and 03N07E36J001) had a difference in groundwater levels greater than ten (10) feet. Well 02N08E09G002 had an increase of thirty-two (32) feet which indicates the groundwater level in Fall 2024 was influenced by nearby pumping and was not kept in the analyses or used for contouring. The other two wells decreased by thirteen and fourteen (-13.5 and -14) feet respectively, but were kept in analyses and used in contouring.

South San Joaquin Irrigation District (SSJID) – Twenty-four (24) wells were monitored in the Fall of 2025, but groundwater levels were measured at seventeen (17) wells. Seventeen (17) wells have comparable measurements (Table 4-5). Groundwater levels in eleven (11) wells decreased, while four (4) wells increased, and two (2) wells had no change. Average groundwater levels increased by less than one half (0.4) foot across the district.

Two (2) wells had a difference in groundwater levels greater than ten (10) feet. Wells (01S07E25E001 and 02S08E07R001) increased by eighteen and eleven (18.5 and 11) feet which could indicate the groundwater levels may have been influenced by nearby pumping in Fall 2024, but the data was used in analyses and contouring.

Southwest County Area in the Tracy Subbasin – Twenty-four (24) wells were monitored in the Fall of 2025, and all were measured. All twenty-four (24) wells have comparable measurements (Table 4-6). Seventeen (17) wells increased in groundwater levels, and six (6) decreased, while one remained the same. Average groundwater levels increased by about one (1) foot in the TSb. No wells had a change greater than ten (10) feet. Increase in surface water deliveries and a decrease in groundwater pumping caused the increase in groundwater levels, despite the reduced precipitation in 2025.

Woodbridge Irrigation District (WID) – Eighteen (18) total wells were monitored in the Fall of 2025, and measurements were obtained at sixteen (16) wells. Fifteen (15) wells have comparable measurements (Table 4-7). Eight (8) wells decreased in groundwater levels and six (6) wells increased, one (1) well had no change. Average groundwater levels increased by almost three quarters (0.7) foot across the district.

Well (03N06E05N003) had an increase in groundwater levels of fourteen (14) feet which could indicate groundwater levels may have been influenced by nearby pumping in Fall 2024.

Calaveras County – Groundwater measurements have not been uploaded to the CASGEM or MNM websites and therefore were not able to be compared at the time of this report (Table 4-8).

Stanislaus County – Eight (8) total wells were monitored in the Fall of 2025, and measurements were obtained at six (6) wells. Six (6) wells have comparable measurements. Five (5) wells decreased in groundwater levels; one (1) well increased. Average groundwater levels decreased by about one (1) foot across the district (Table 4-9).

Well (01S10E04C001) had an increase of twenty (20.1) feet, suggesting the Fall 2024 measurement may have been affected by nearby pumping and so the data was not included in the evaluation or contouring.

Changes in groundwater levels from Fall 2024 through to Fall 2025 throughout the County are summarized on Figure 4-1.

4.2 Hydrographs

Twenty-six (26) wells were selected to represent groundwater conditions throughout the basin (A through Z). These wells have historical spring and fall groundwater level measurements. The location and long-term trends of these wells are shown on Figure 4-2. Hydrographs of these selected wells are provided on Figures 4-3 through 4-8 to illustrate the changes in groundwater levels with time in areas across the two subbasins. These hydrographs are grouped primarily based on GSA boundaries but include nearby County GSA wells located in close proximity.

Hydrographs for Wells A, D, H, T, V, and Z are provided but monitoring at these wells has been prevented this period due to well access issues. Work is being done to resolve access.

4.3 Groundwater Level Profiles

Groundwater level profiles were developed to illustrate the relationship of where groundwater levels were increasing or decreasing in relationship to Spring 1986, the historic high groundwater levels, and Fall 1992, the historic low groundwater levels. Fall groundwater levels from WY 2024 are also shown for reference to illustrate whether levels are increasing, decreasing, or are stable. Figure 4-9 shows the location of the profiles and Figures 4-10 through 4-12 provide the profiles.

Figure 4-10 follows Highway 99 from the south County limit to the North County limit. Generally, the water levels show mostly lower groundwater levels in Fall 2025 in comparison to Fall 2024. A slight decrease in groundwater levels below the historical subbasin low is observed south of Lousie Avenue. North of Eight Mile Road an increase in groundwater levels is observed, with the greatest increase near the Mokelumne River.

Figure 4-11 trends west to east along Highway 4 and Highway 26. A decrease in groundwater levels below historical lows is observed between Beyer Lane and Escalon-Bellota Road but groundwater levels in this area rose between Fall 2024 and Fall 2025. North and South of the depression remained above the recorded historic high.

Figure 4-12 trends south to north from Highway 99 to Brant Road. Groundwater levels are observed below the historic low across the section. An increase in groundwater levels between Fall 2024 and Fall 2025 is observed between French Camp Road and Kettlemen Lane.

4.4 Groundwater Level Changes

Figure 4-13 shows the contours for depth to groundwater levels from ground surface in Fall 2025. Generally, the depth to groundwater increases further from the rivers and delta to the east, and in the Tracy area to the southwest.

Figure 4-14 shows a groundwater elevation map that was used to develop Figures 4-10 through 4-12. Groundwater elevations decrease from east to west towards the middle of the basin with the deepest point reaching 110 feet below mean sea level. Elevations then rise as they continue west. In the Tracy Subbasin, a depression is observed near the middle of the subbasin in the lower aquifer, below the Corcoran Clay. In the upper aquifer there are no pumping depressions.

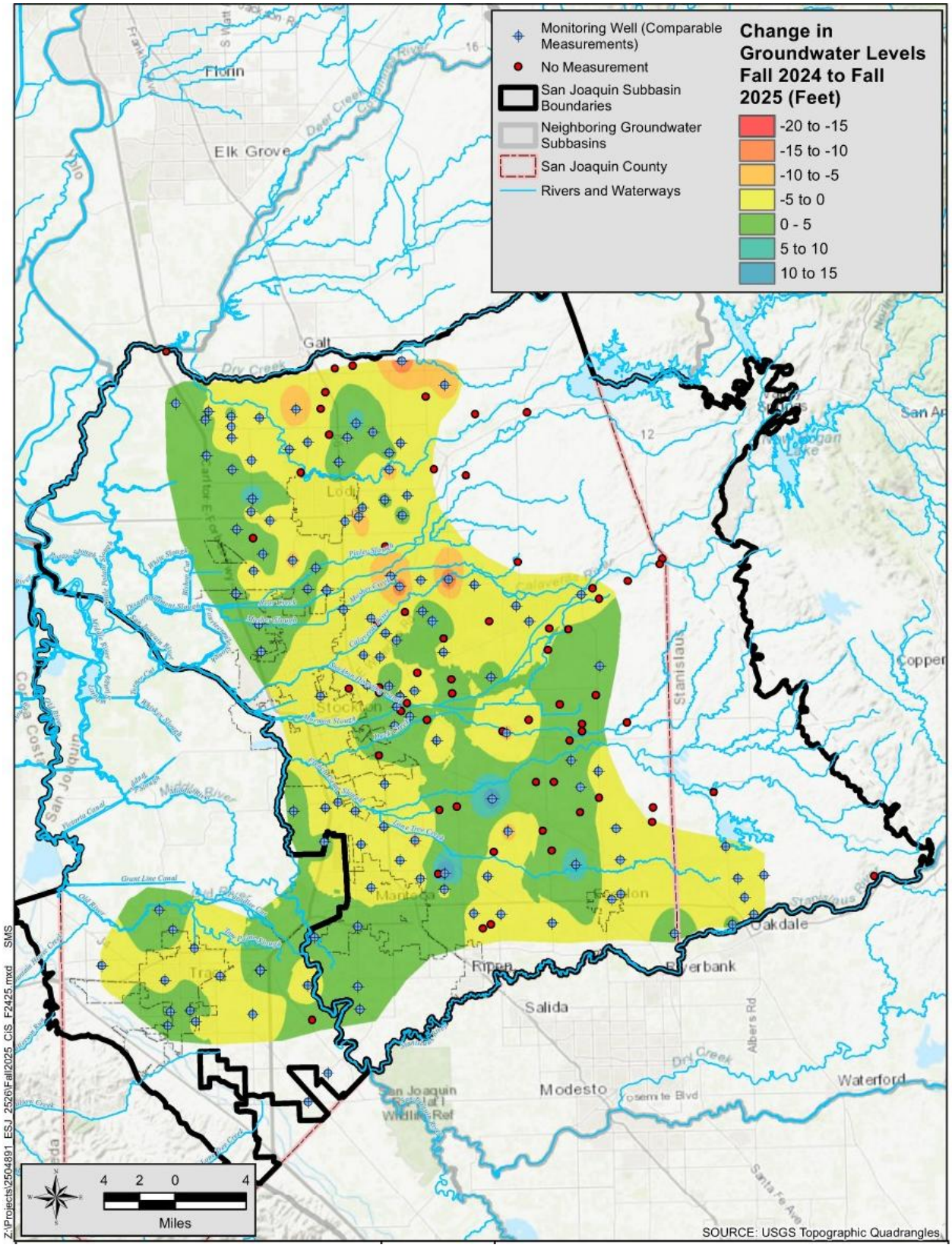

Figure 4-1 Change in Groundwater Elevation – Fall 2024 to Fall 2025

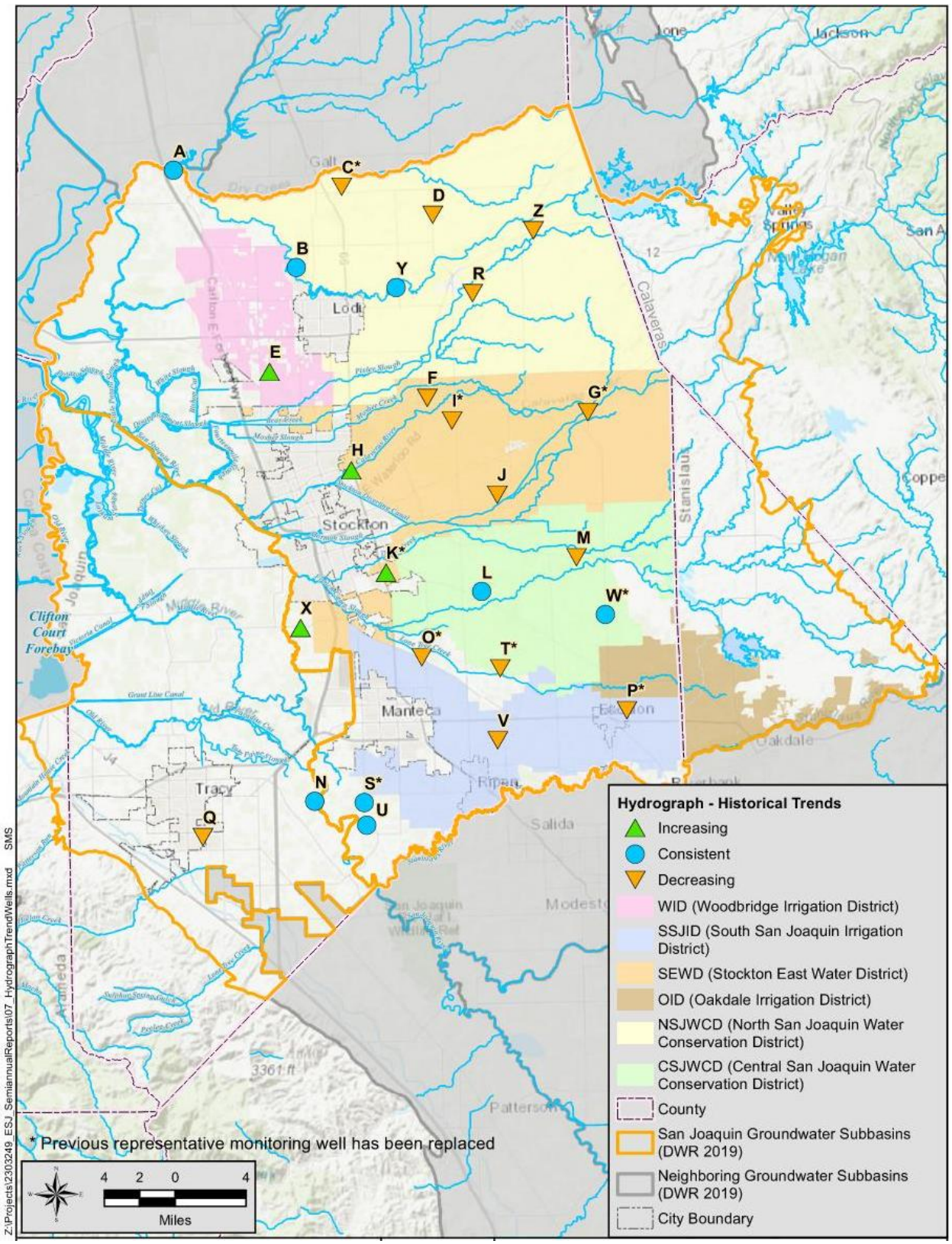

Figure 4-2 Selected Hydrograph Well with Historic Trends

Note: Trends are overall historic data averages, not current WY increases or decreases.

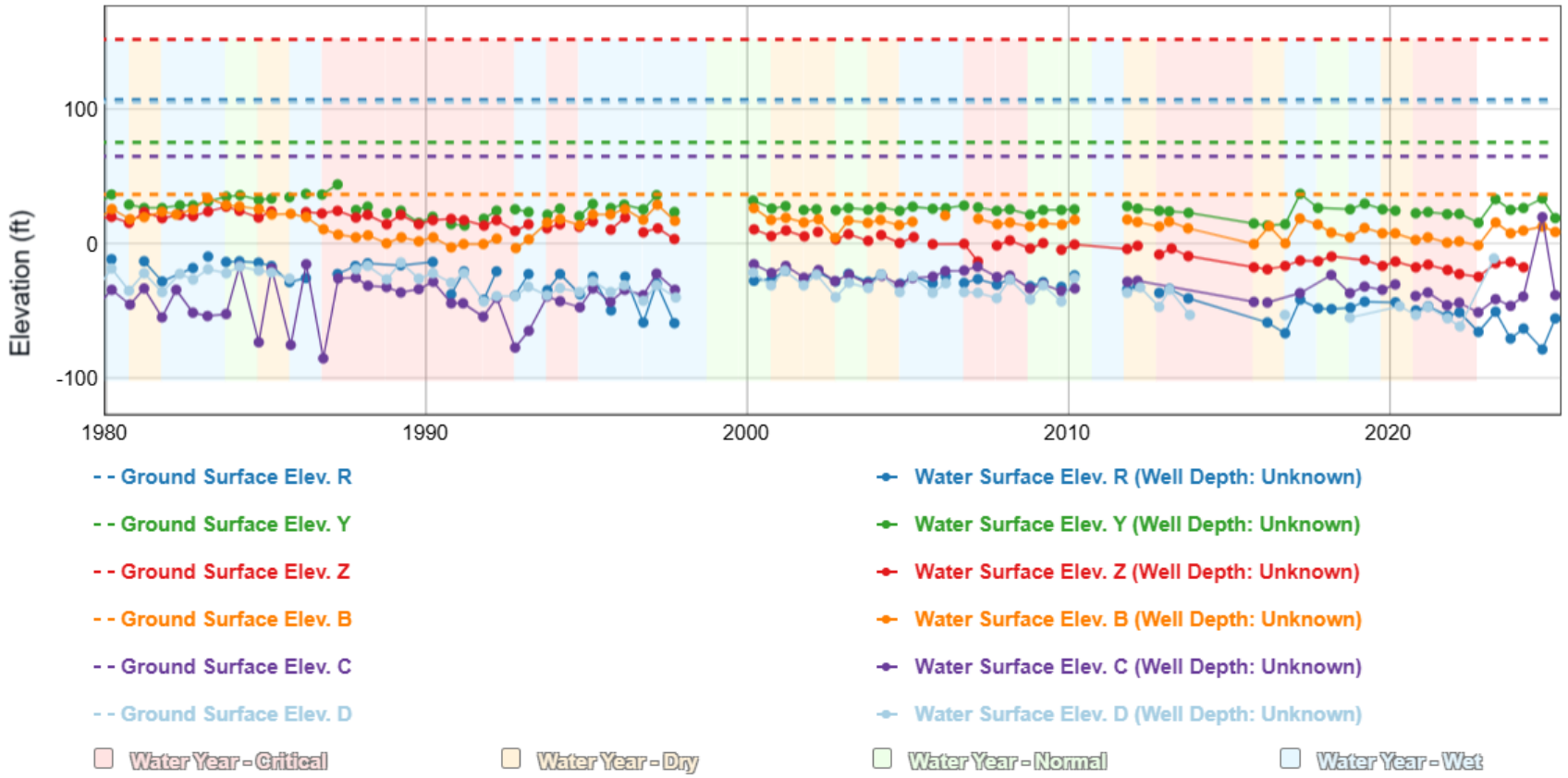

Figure 4-3 NSJWCD Hydrograph Wells B, C, D, R, Y, Z

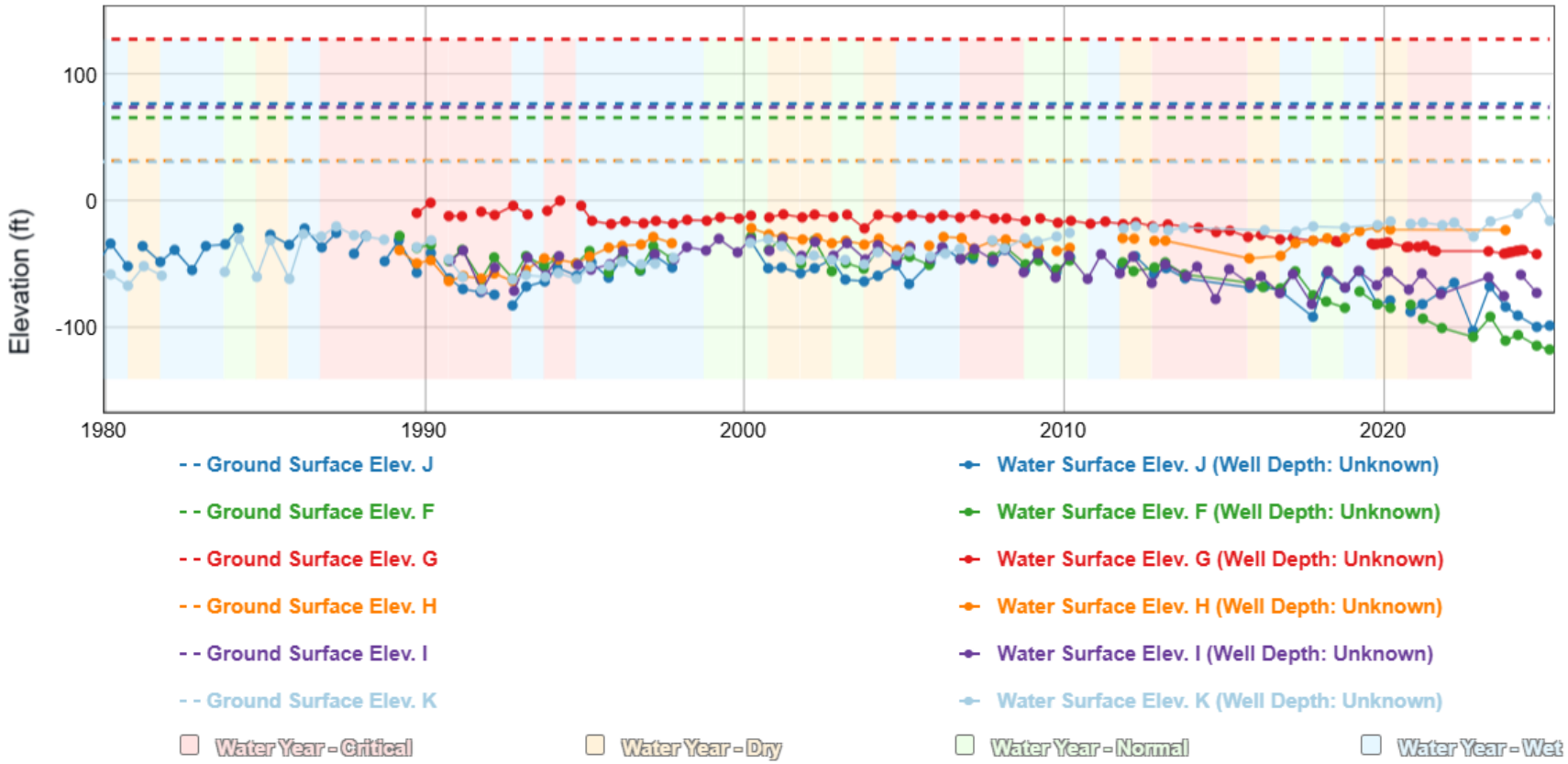

Figure 4-4 SEWD Hydrograph Wells F, G, H, I, J, K

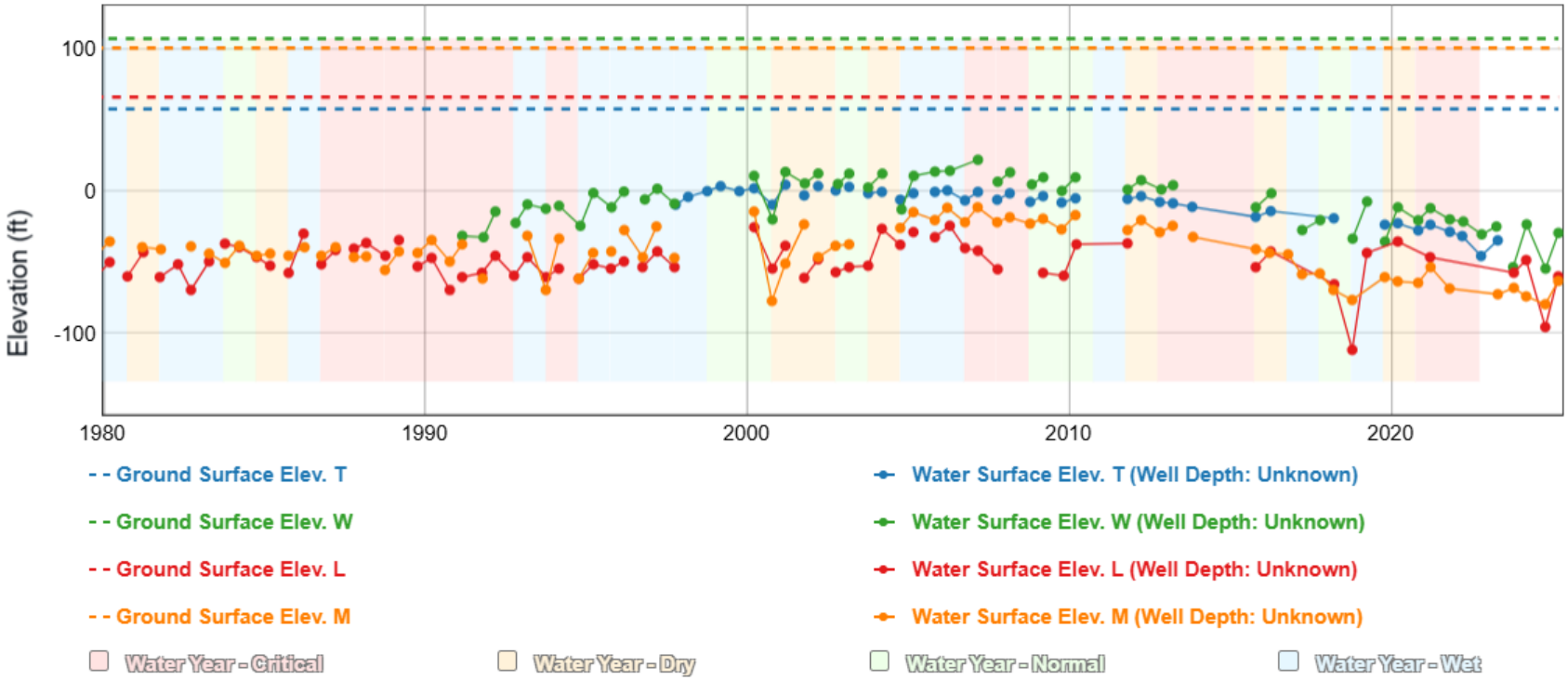

Figure 4-5 CSJWCD Hydrograph Wells L, M, T, W

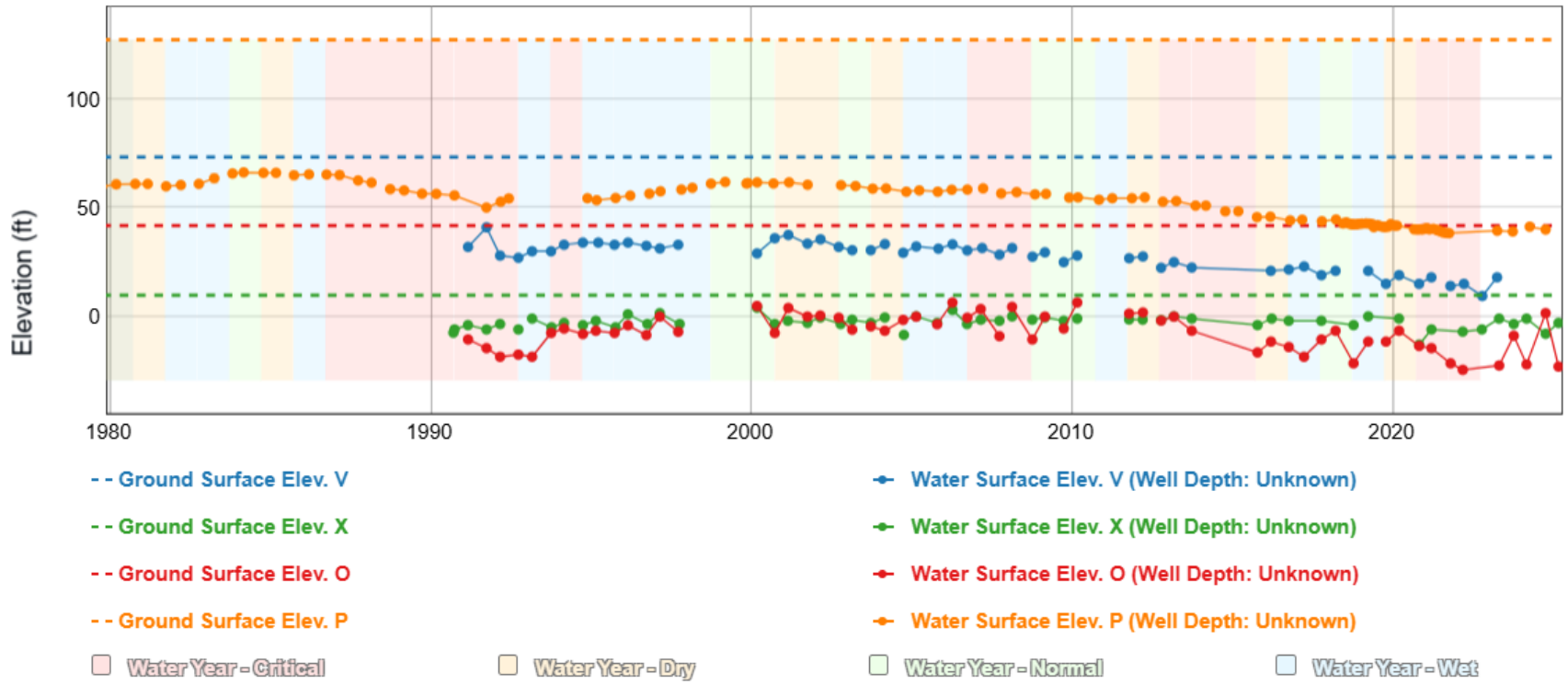

Figure 4-6 SSJID Hydrograph Wells O, P, V, X

Note: Well X is in the San Joaquin County GSA area but was included in the SSJID area due to proximity.

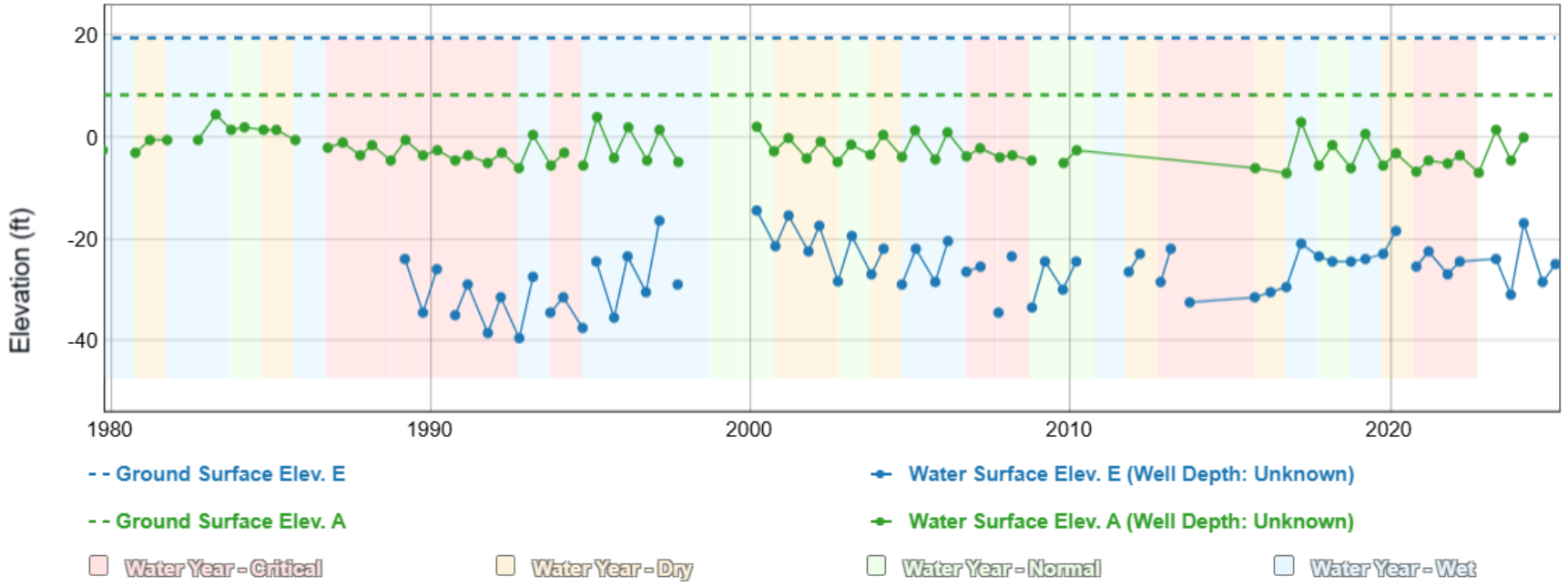

Figure 4-7 WID Area Hydrograph Wells E, A

Note: Well A is in the San Joaquin County GSA area but was included in the WID due to proximity.

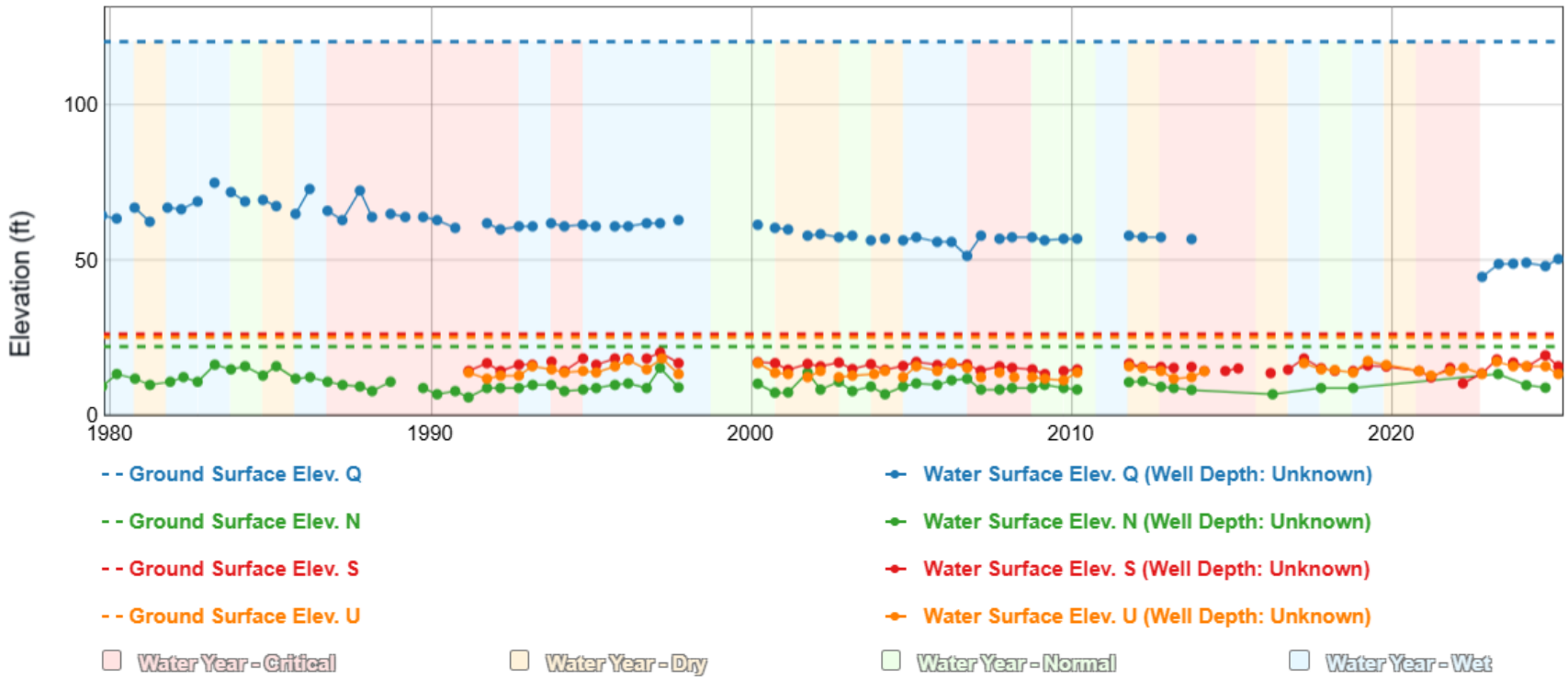

Figure 4-8 Southwest County Hydrograph Wells N, Q, S, U

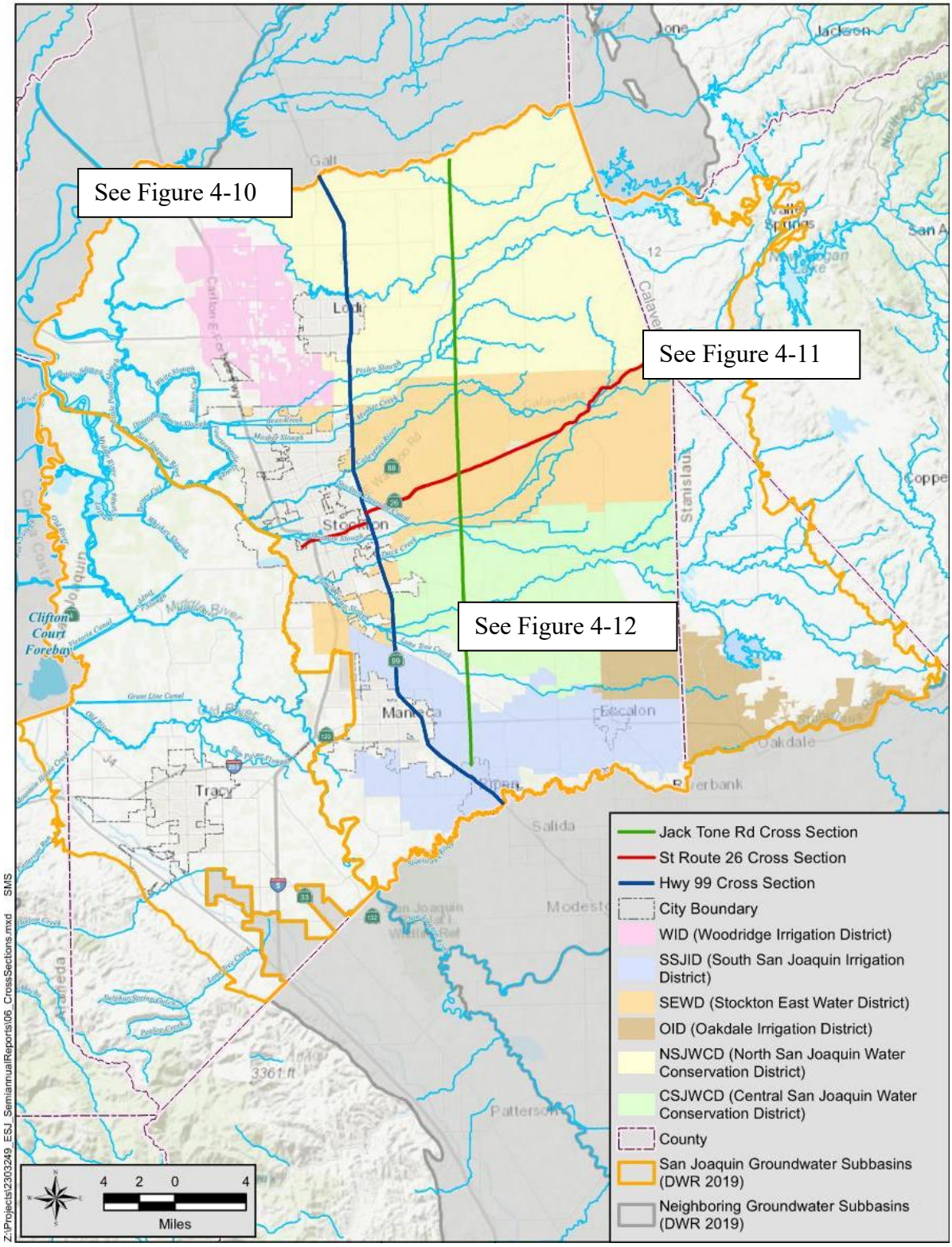

Figure 4-9 Groundwater Surface Cross Sections

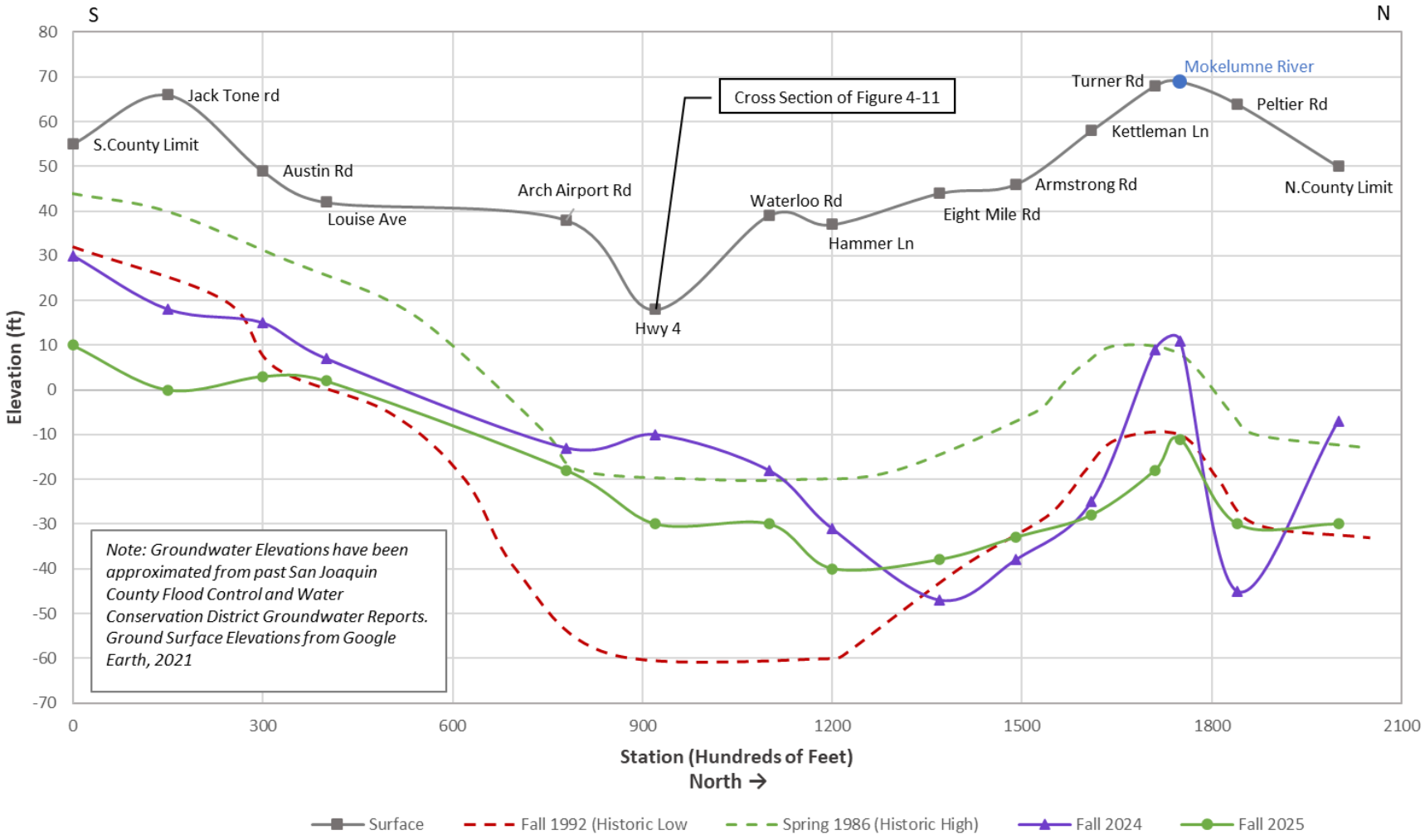

Figure 4-10 Highway 99 Cross Section Fall 2025

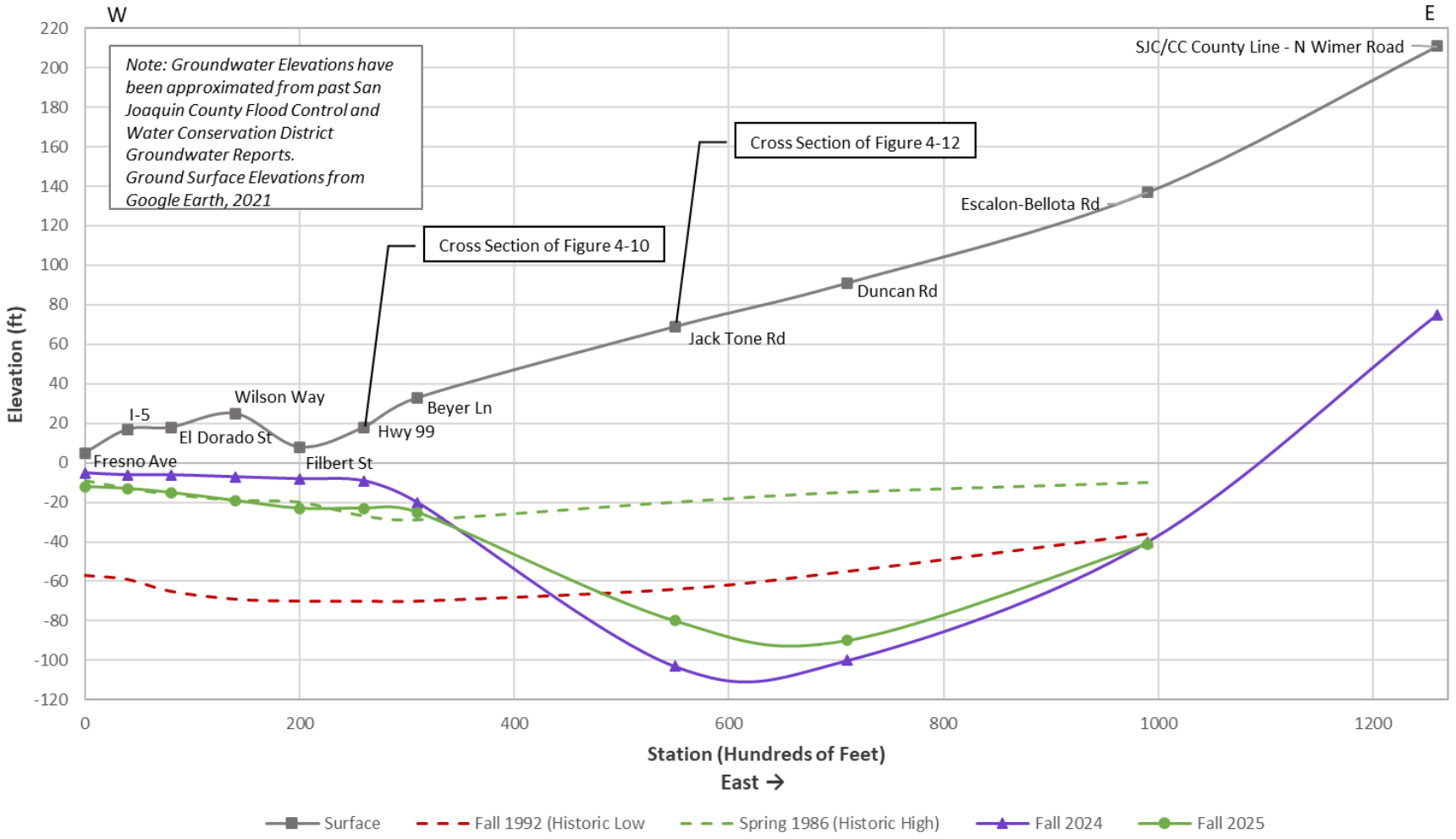

Figure 4-11 Highway 4 & Highway 26 Cross Section Fall 2025

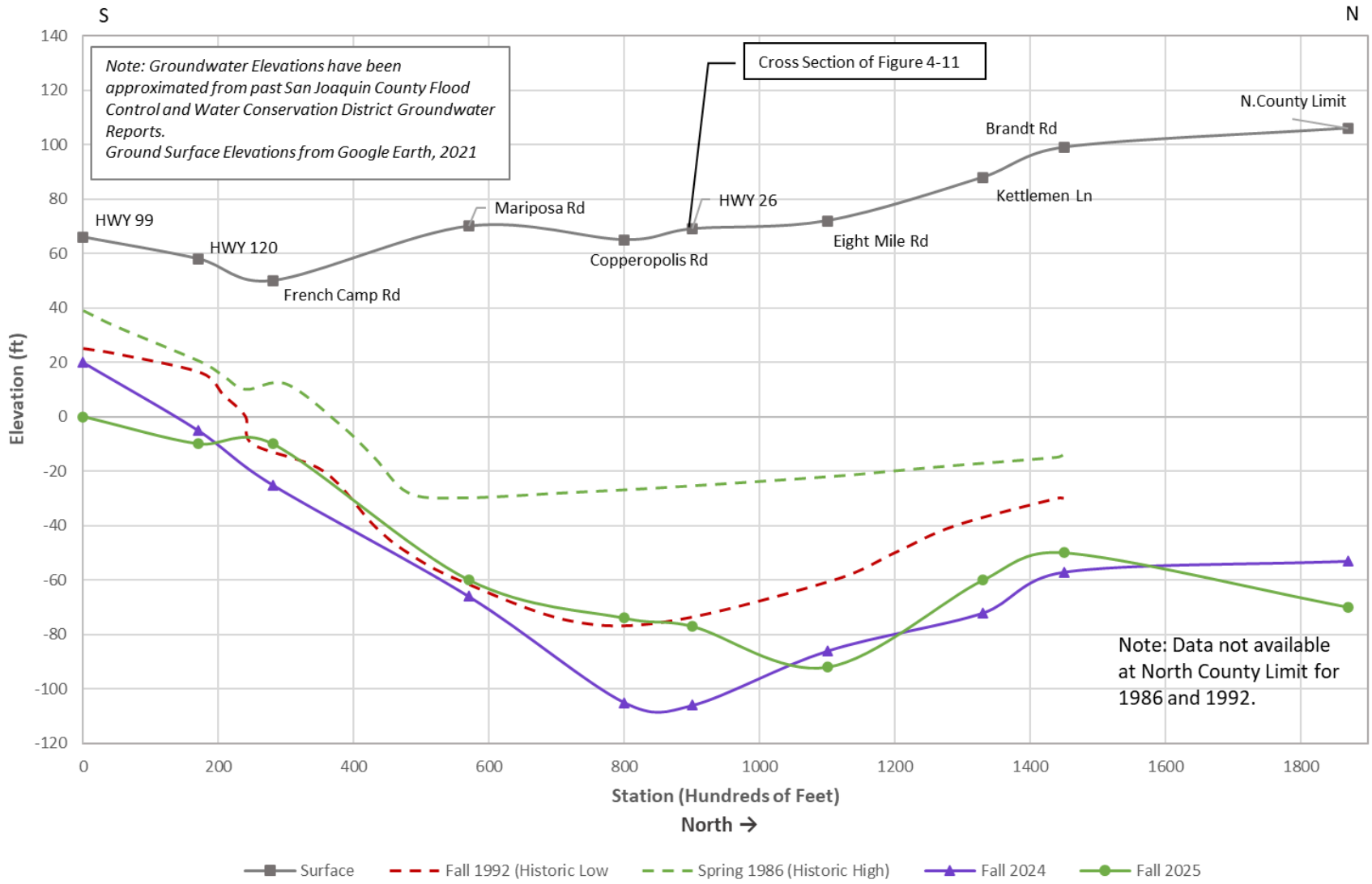

Figure 4-12 Jack Tone Rd Cross Section Fall 2025

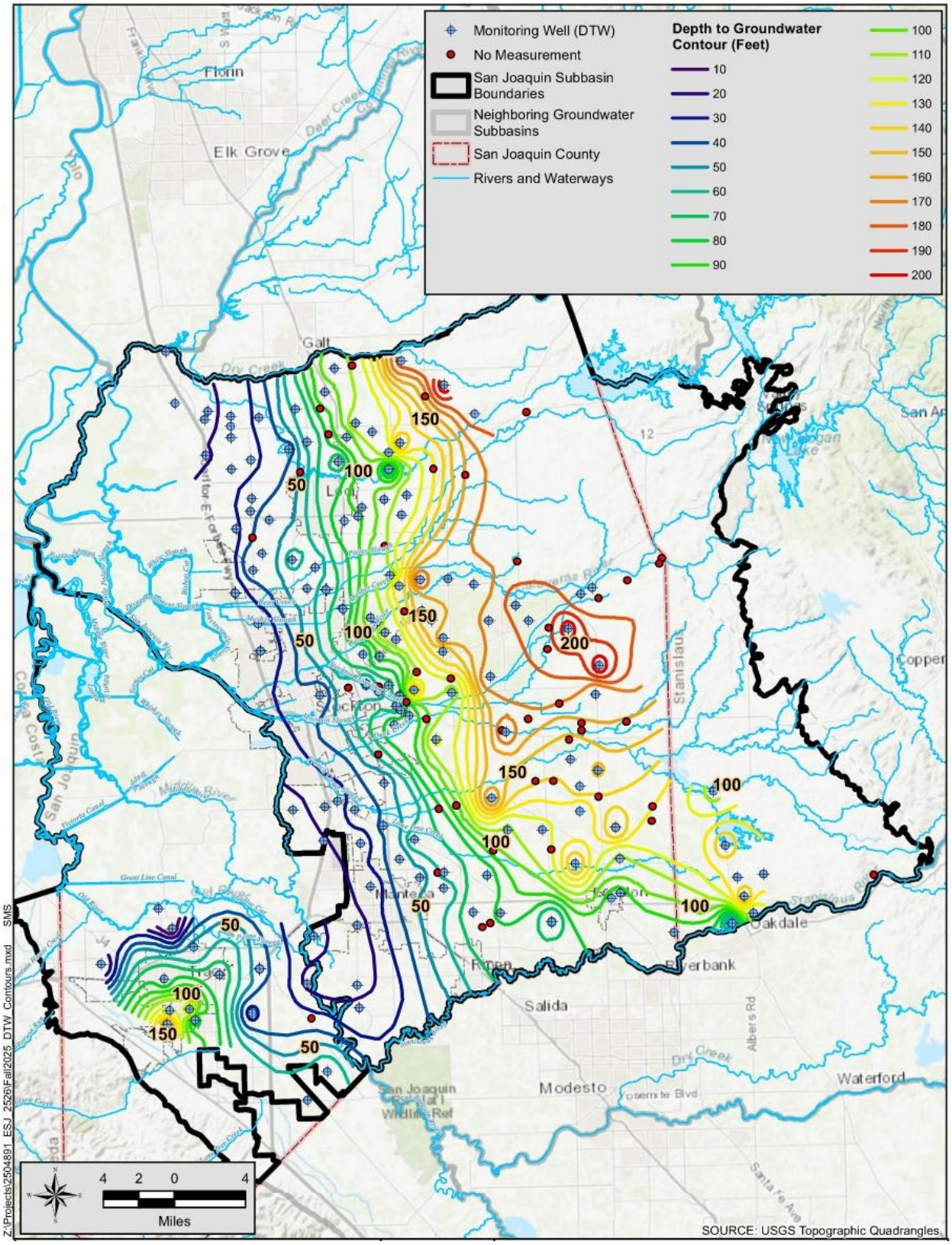

Figure 4-13 Depth to Groundwater – Fall 2025

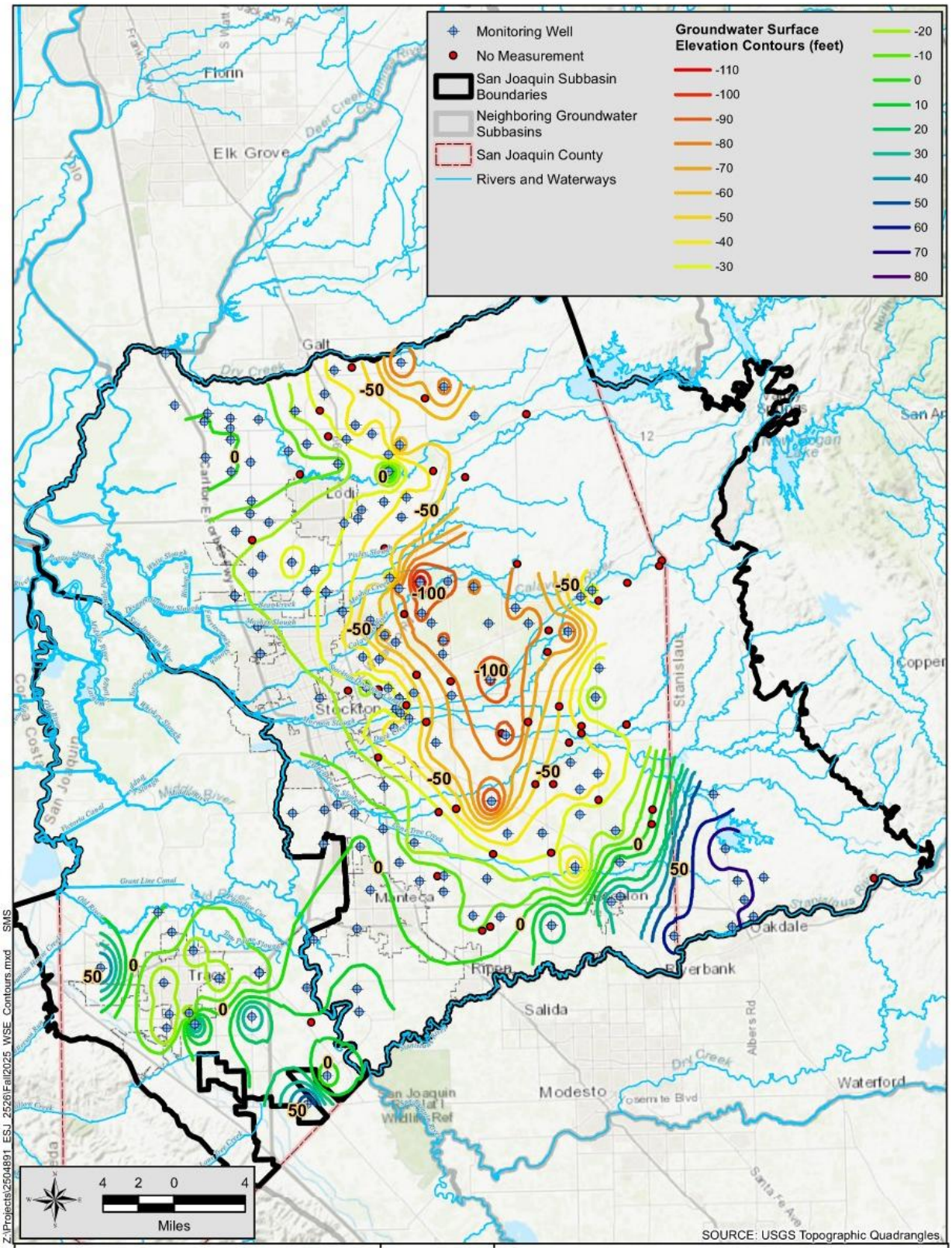

Figure 4-14 Groundwater Surface Elevation – Fall 2025

5 Groundwater Quality Monitoring

The representative monitoring network for groundwater quality was developed for the degraded water quality sustainability indicator as described in the SGMA Groundwater Sustainability Plan for East San Joaquin Subbasin. The water quality monitoring network tests for total dissolved solids (TDS), nitrate, and chloride. (Eastern San Joaquin Groundwater Authority, 2024).

The locations of the 21 well sites are shown on Figure 5-1. The wells are being used in-lieu of wells used in previous reports as those wells could not be reliably measured to the same degree as the GSP water quality wells. Figures have been developed to show the locations and concentration for TDS, nitrate, and chloride across the county in 2025. Historic data for these sites is available in the Eastern San Joaquin Groundwater Authority's groundwater sustainability plan appendices located on their website (Eastern San Joaquin Groundwater Authority GSP Appendicies – Appendix 3-E. [https://www.sjgov.org/docs/default-source/public-works-documents/water-resources/final-esj-revised-gsp-appendices_june2022_clean.pdf?sfvrsn=e48b619_5]).

High TDS concentrations historically have occurred in the western portion of the Subbasin, near the San Joaquin River and urban areas; as such, the majority of monitoring wells are located in the western half of the Eastern San Joaquin Subbasin. Monitoring wells are located both within areas of high TDS concentrations, to observe and monitor TDS trends, and adjacent to high TDS areas, to observe potential TDS movement. Chloride concentrations are also monitored as have been done in previous reports. Nitrate (as nitrogen) is monitored at each of the wells and can provide additional insight into the effects of agricultural effects across the subbasin. Figures 5-2 through 5-4 provide concentrations at these wells.

Fall 2025 measurements show that TDS concentrations were higher along major rivers in the ESJSb as shown in Figure 5-2.

Nitrate ranges from <0.4 to 11.0 mg/L across the subbasin (Figure 5-3). The highest measurements were recorded in the northwest and southern corners of the subbasin.

Chloride ranges from 4.0 to 140 mg/L across the subbasin (Figure 5-4). The highest measurements were recorded in the west and northwest region of the subbasin.

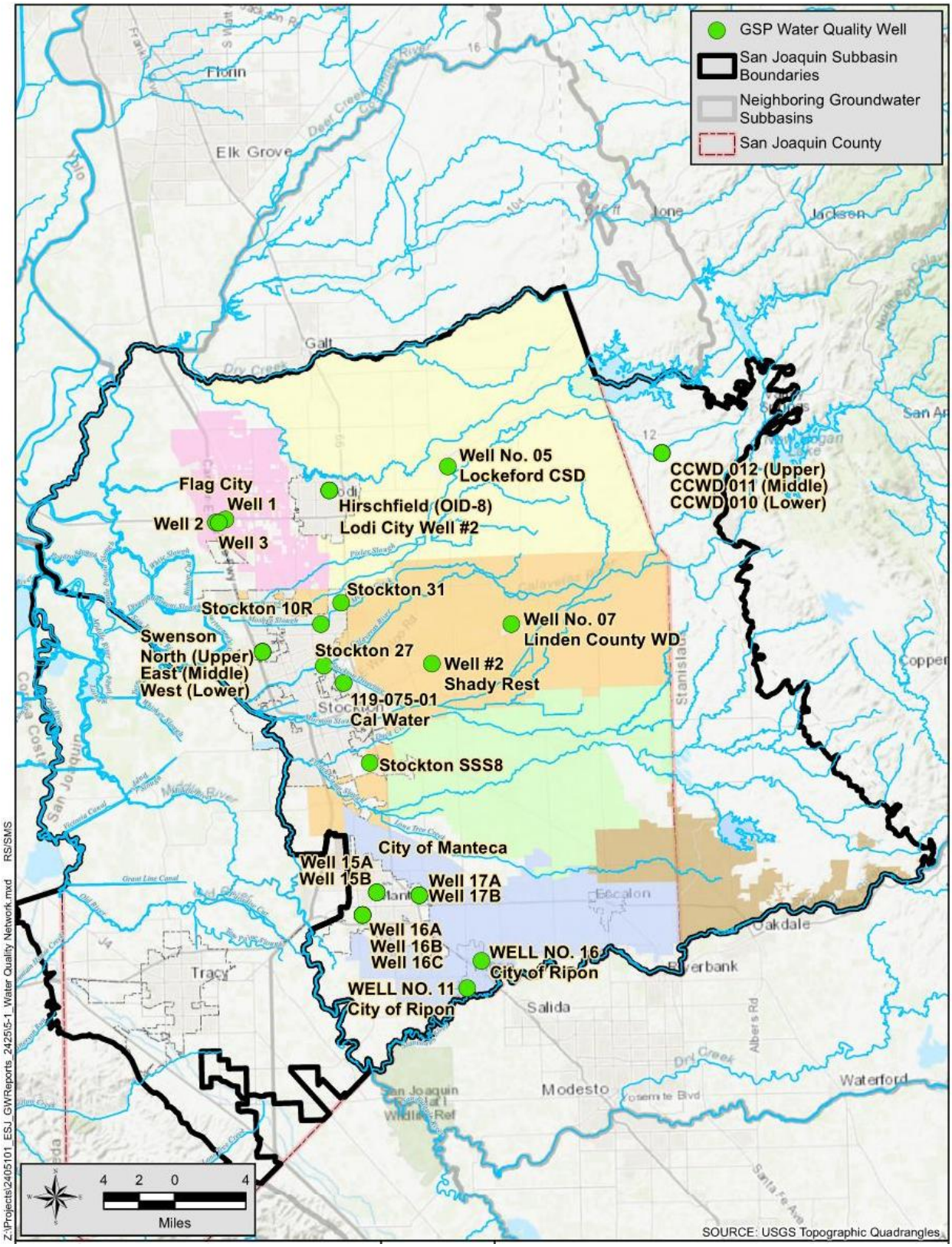

Figure 5-1 Water Quality Monitoring Network Wells

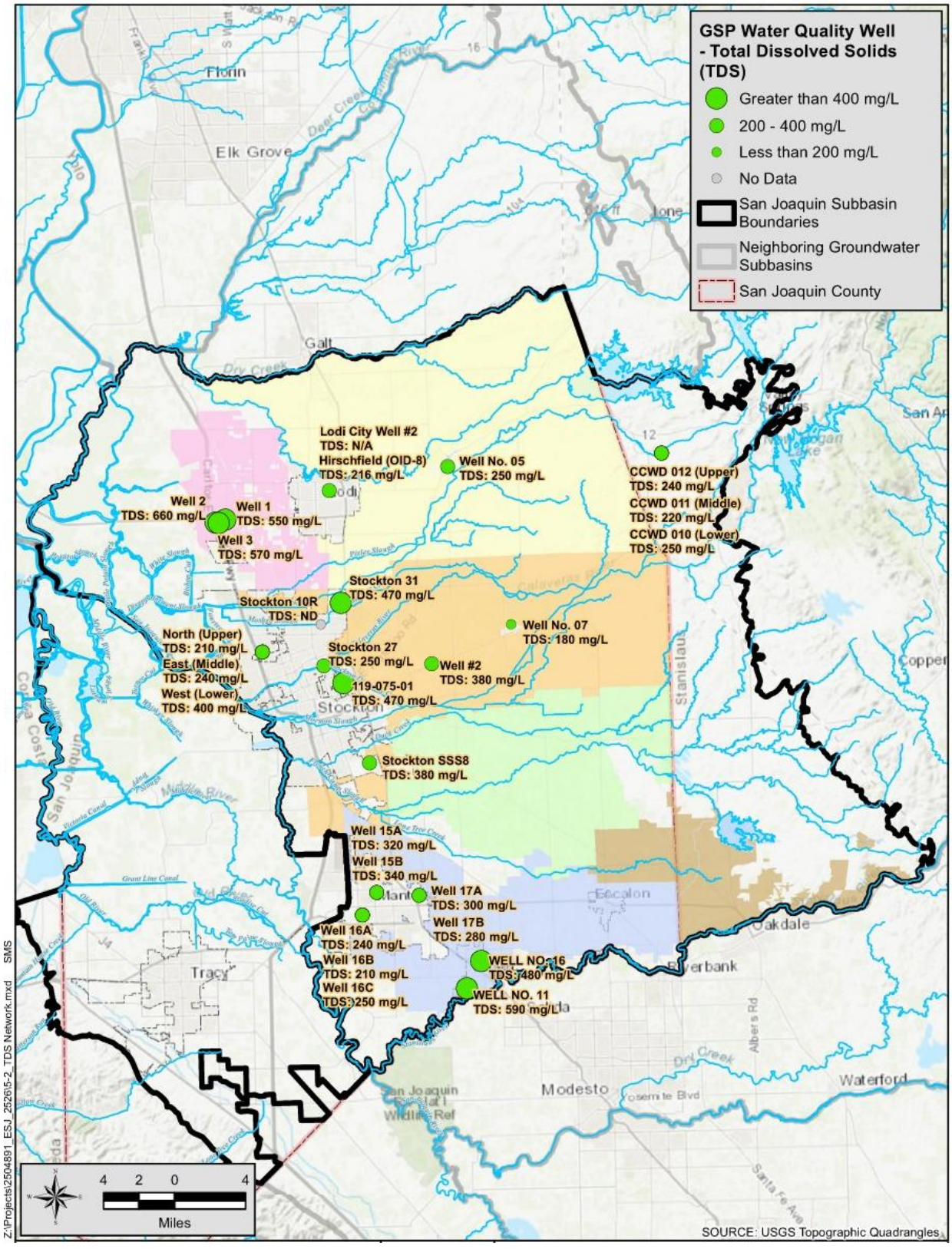

Figure 5-2 Total Dissolved Solids Concentrations Fall 2025

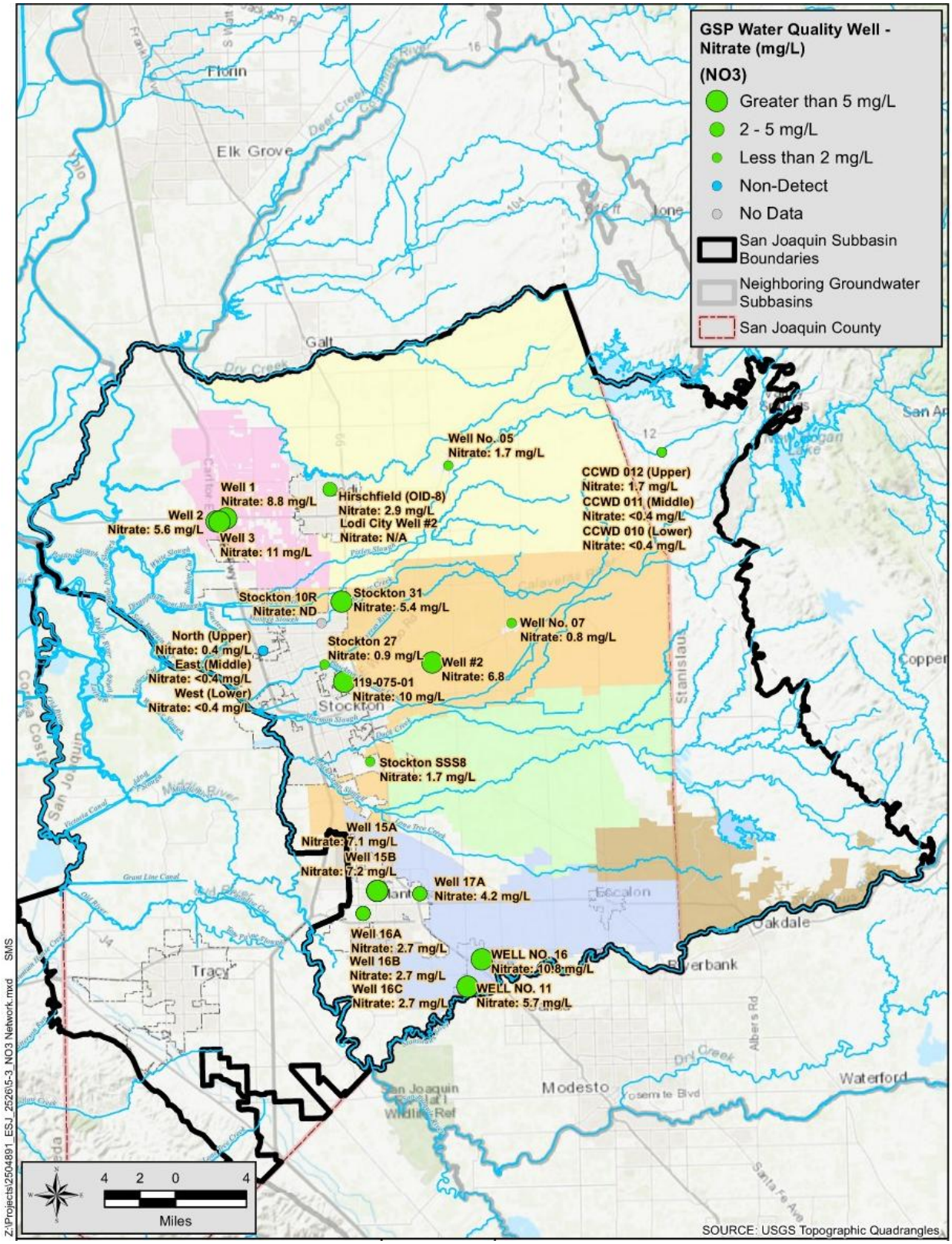

Figure 5-3 Nitrate Concentrations Fall 2025

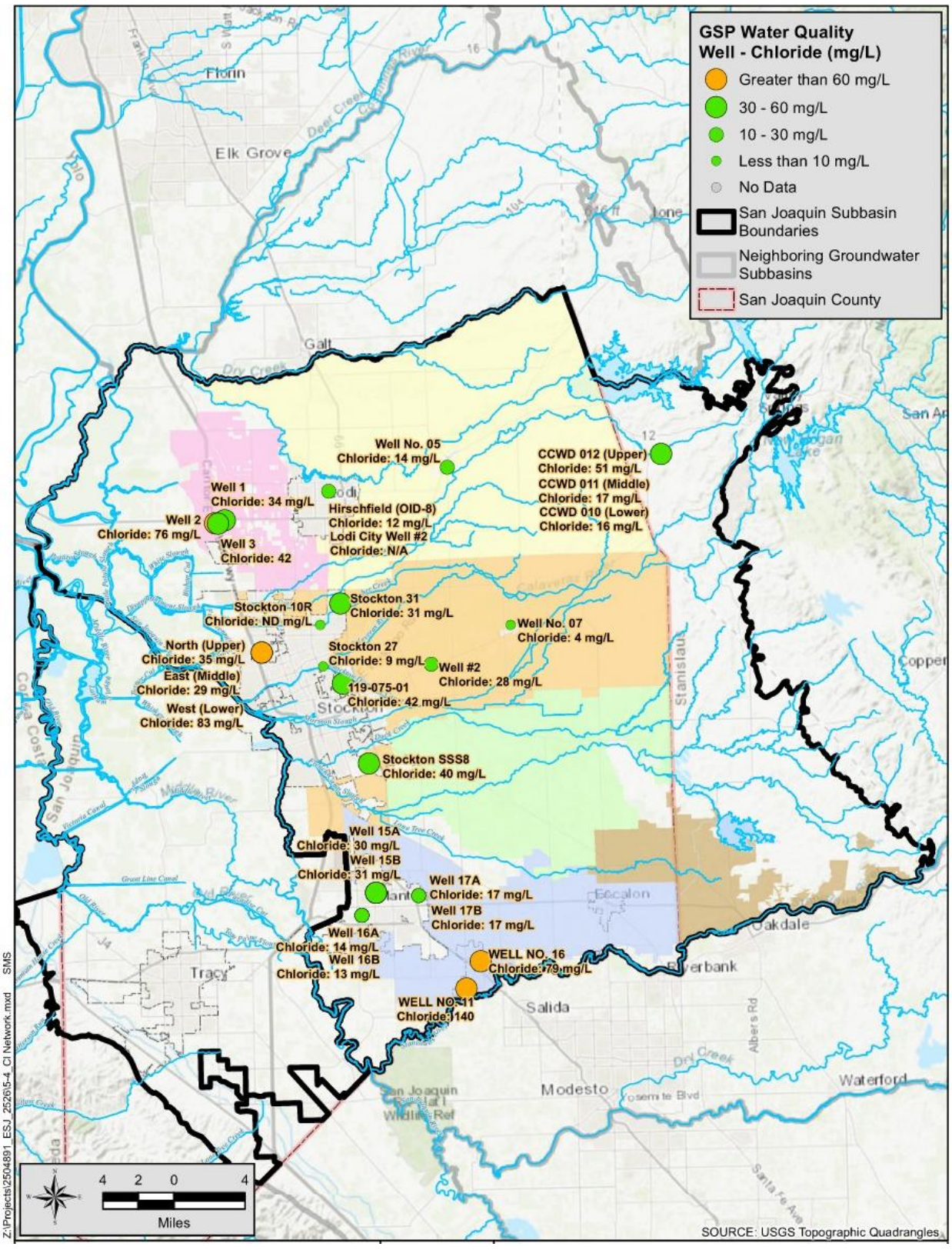

Figure 5-4 Chloride Concentrations Fall 2025

6 Summary

WY 2025 is preliminarily classified as a below average water year based on the San Joaquin River Index. It also received below average precipitation. Combined, surface water storage in Camanche, New Melones and New Hogan reservoirs remained consistent, with higher outflows from New Melones and Comanche reservoirs in the spring and summer months to alleviate the near-full capacity.

Groundwater levels declined in 86 of the 188 wells with comparable measurements between Fall 2024 and Fall 2025, about 46 percent of the wells measured. While 88 of the 188 wells with comparable measurements between Fall 2024 and Fall 2025 increased in groundwater levels, about 47 percent of wells, mostly near rivers and gaining streams.

The pumping depression in the central portion of the County continued to be present and areas of the depression declined by about 5 to 10 feet from Fall 2024 to Fall 2025, however other areas of the depression rose in comparison. The lack of comparable measurements for wells located in and around the depression alters the size and shape of the depression between monitoring periods.

Appendix A – Groundwater Level Data

Table 4-1 Comparison of CSJWCD Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
01N07E11L001	NM	NM	--
01N07E14J002	-69.1	-70.1	-1
01N07E24R001	NM	NM	--
01N07E26H003	NM	NM	--
01N07E32A001	-12.4	-14.3	-1.9
01N08E11L001	-82	NM	--
01N08E13J001	-56	-52.6	3.4
01N08E16G001	-84.7	NM	--
01N08E16H002	-87.5	-93	-5.5
01N08E27R002	NM	NM	--
01N08E29M002	-100	-57	43*
01N08E35F001	-100.4	NM	--
01N08E36F001	NM	NM	--
01N09E13D001	NM	NM	--
01N09E17D001	NM	NM	--
01N09E17M001	-46.6	NM	--
01N09E19C001	-82.5	NM	--
01N09E22G002	NM	NM	--
01N09E29R001	-41.5	-44	-2.5
01N09E30C005	-49.7	-44.7	5
01S07E01J001	NM	-62.1	--
01S08E05A001	-112.4	-98.9	13.5
01S08E05R001	NM	NM	--
01S08E06D001	NM	NM	--
01S08E09Q001	-35.4	-41.9	-6.5
01S08E11F001	NM	NM	--
01S08E14B001	NM	-31.7	--
01S09E05H002	-59	NM	--
01S09E07A001	NM	-21.3	--
01S09E07N001	NM	-21.2	--
01S09E09R001	-22.7	-24.2	-1.5
01S09E19Q002	-57	-48.5	8.5

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
32	10	6	4	0	-6.5 to 13.5	1.1

Note: * comparison of measurements deemed questionable, likely pumping interference during monitoring. Not counted as comparable measurement.

Table 4-2 Comparison of NSJWCD Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
03N07E03R001	-40.3	-42.8	-2.5
03N07E08E002	-33.5	-32	1.5
03N07E09C001	-36.7	-35.4	1.3
03N07E15C004	-49.5	-48	1.5
03N07E17D004	-16.4	-29.9	-13.5
03N07E18D012	-30	-30.2	-0.2
03N07E19J004	-63	-63	0
03N07E23C002	NM	NM	--
03N08E22A001	-76.5	NM	--
04N06E12C004	NM	-40	--
04N06E12N002	-49.3	NM	--
04N06E15B002	-11.2	-20.7	-9.5
04N06E23K00	-11.5	-14	-2.5
04N06E24F001	NM	NM	--
04N06E25R001	-8.5	-6	2.5
04N06E27D002	5.2	0.2	-5
04N07E12E001	NM	NM	--
04N07E17N001	-59.3	-49.8	9.5
04N07E19K001	-29.6	-30.1	-0.5
04N07E20H003	-37.3	-37.6	-0.3
04N07E21F001	NM	NM	--
04N07E27C002	-64.5	-67.5	-3
04N07E28J002	-42.7	-38.7	4
04N07E33H001	24	15	-9
04N07E36L001	-25.5	NM	--
04N08E14K001	NM	NM	--
04N08E17J001	NM	-51.5	--
04N08E21M001	NM	NM	--
04N08E32N001	-78.6	NM	--
05N07E34G001	-78.1	-90.1	-12

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
30	18	11	6	1	-13.5 to 9.5	-2.1

Table 4-3 Comparison of OID Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
01S09E21J002	18	13.5	-4.5
01S09E24R001	NM	NM	--

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
2	1	1	0	0	--	-4.5

Table 4-4 Comparison of SEWD Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
01N06E02C001	-7.0	-11.0	-4
01N06E04J003	NM	-9.43	--
01N06E04J004	NM	-5.27	--
01N06E04J005	NM	-2.71	--
01N06E05M004	NM	NM	--
01N06E36C003	-10.8	-11.3	-0.5
01N06E36C004	-7.3	-7.6	-0.3
01N06E36C005	-4.7	-8.6	-3.9
01N07E01M002	NM	NM	--
01N07E02G001	-54.4	-55.4	-1.0
01N07E04R001	-20	-16	4.0
01N07E09E004	-11	-17.5	-6.5
01N07E09H001	-25.4	-28.1	-2.7
01N07E09Q003	-54	-49	5.0
01N07E10D001	NM	-32	--
01N07E20G001	-13.5	NM	--
01S06E01C002	-5	-5	0.0
01S06E02G002	-3.6	-8.1	-4.5
01S06E10G001	-10.3	-11.8	-1.5
01S07E06M002	-7.5	-9	-1.5
01S07E08J002	-7	-7.5	-0.5
02N06E08N001	-21.6	-21.08	0.5
02N06E08N002	-19.6	-19.02	0.6
02N06E08N003	-16.9	-16.11	0.8
02N06E20E001	-13.7	-6.9	6.8
02N06E24F001	-23	NM	--
02N06E24J002	NM	NM	--
02N07E03D001	-70	-84	-14.0
02N07E08K003	-56.5	-56.2	0.3
02N07E08R002	-55.2	-55.6	-0.4
02N07E11F001	-96	-94	2.0
02N07E11R002	-92	-85	7.0
02N07E16F002	-63.9	-63.44	0.5
02N07E16L001	-70.3	-75.8	-5.5
02N07E20N002	-33.5	-34	-0.5
02N07E21A002	-65.3	-63.81	1.5
02N07E21K002	NM	NM	--

Comparison of SEWD Groundwater Elevations (continued)

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
02N07E21N001	-49.5	-49.5	0.0
02N07E23B001	NM	-73.7	--
02N07E24Q001	-75.3	-75.8	-0.5
02N07E26N001	-136.2	NM	--
02N07E28K002	NM	-61	--
02N07E28N004	NM	NM	--
02N07E28P001	NM	NM	--
02N07E29B001	NM	-42.9	--
02N07E29M002	NM	NM	--
02N07E30H001	NM	NM	--
02N07E31M001	-14.8	NM	--
02N07E32J002	NM	NM	--
02N07E32M002	-11.5	-14.5	-3.0
02N07E32R001	NM	-18.1	--
02N07E33L001	-31	-27.5	3.5
02N07E34R001	-97	-101	-4.0
02N08E03G002	NM	NM	--
02N08E04C001	-79	-70.5	8.5
02N08E05C001	-78	-78.5	-0.5
02N08E08N001	-86.5	NM	--
02N08E09G002	-53	-21	32*
02N08E10H002	-77.1	-77.1	0.0
02N08E14C001	-86	-86	0.0
02N08E16D001	NM	-89.6	--
02N08E18C001	-113.7	-103.2	10.5
02N08E20F001	NM	NM	--
02N08E24J001	--	-72.6	--
02N08E28H002	NM	NM	--
02N08E33E001	-101.6	-101.1	0.5
02N09E05N001	-42.0	-42.9	-0.9
02N09E09D001	NM	NM	--
02N09E28N001	-30.1	-25.6	4.5
03N07E35C002	-73.8	-65.7	8.1
03N07E35L001	-115	-116	-1.0
03N07E36J001	-79.3	-92.8	-13.5
03N09E25R001	72	NM	--

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
73	43	22	17	4	-14 to 10.5	-0.1

Note: * not included in analyses or contouring.

Table 4-5 Comparison of SSJID Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
01S07E14M001	NM	NM	--
01S07E14P003	NM	NM	--
01S07E15F002	-22.1	-28.1	-6
01S07E18L001	4.5	4.0	-0.5
01S07E21G001	4.2	2.5	-1.7
01S07E25E001	-29.5	-11	18.5
01S07E26G001	NM	NM	--
01S07E27K001	-4.5	-6	-1.5
01S07E30R001	7.6	6.9	-0.7
01S07E36D001	5.7	3.6	-2.2
01S08E30C002	-13.5	-21.5	-8
01S09E29M002	NM	NM	--
01S09E33J002	40	39.1	-0.9
01S09E33P001	34	34.0	0
02S07E07D002	5	7	2
02S07E11N002	23.5	NM	--
02S07E19H001	19.5	19.5	0
02S08E04M001	-4.5	-7	-2.5
02S08E06J001	-12	-12.5	-0.5
02S08E07R001	7	18	11
02S08E08A001	NM	NM	--
02S08E08E001	-0.8	NM	--
02S08E12D001	30.3	29.4	-1.0
02S09E12R001	62.8	63.6	0.8

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
24	17	11	4	2	-8 to 18.5	0.4

Table 4-6 Comparison of Southwest County Area in Tracy Subbasin Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
01S05E31R002	0.6	1.6	1.0
02S04E15R001	51.5	50.5	-1.0
02S05E08B001	-1.2	-0.7	0.5
02S06E25J001	15	15	0.0
02S06E31N001	44.5	40	-4.5
03S06E27N001	47.8	55.8	8.0
MW-1A	-19	-18.9	0.1
MW-1B	-27.6	-28.5	-0.9
MW-1C	-31.8	-29.5	2.3
MW-2A	-24.9	-23.3	1.6
MW-2B	-30.5	-28.1	2.3
MW-2C	-31.1	-28.7	2.4
MW-3A	-18.6	-17.3	1.3
MW-3B	-27.8	-27.5	0.3
MW-3C	-29.7	-27.7	2.0
MW-4A	-26.0	-23.8	2.2
MW-4B	-31.4	-28.3	3.1
MW-4C	-31.8	-28.7	3.1
MW-5A	-30.2	-28.3	1.8
MW-5B	-25.6	-28.0	-2.4
MW-5C	-29.3	-27.3	1.9
MW-6A	-23.1	-23.2	-0.1
MW-6B	-24.9	-26.5	-1.6
MW-6C	-28.5	-26.1	2.5

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
24	24	6	17	1	-4.5 to 8	1.1

Note: Monitoring wells MW-1 through MW-6 are measured by City of Tracy. Monitoring wells MW-1 through MW-6 monitor the Lower Aquifer, below the Corcoran Clay confining layer. The Corcoran Clay is only present in the Southwest corner of the ESJCo subbasin and therefor groundwater levels are not directly comparable.

Table 4-7 Comparison of WID Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
03N05E14C001	-5.3	-3.3	2.0
03N06E05N003	-21.5	-7.5	14.0
03N06E07H003	-10	-14	-4.0
03N06E17A004	-17.2	-19.7	-2.5
03N06E18M003	-13.1	-10.1	3.0
03N06E20D002	-16	NM	--
03N06E32R001	-18	-18	0.0
04N05E10K001	-6	-1.7	4.3
04N05E13H001	-5.5	-4.5	1.0
04N05E13R004	-2.5	-5.5	-3.0
04N05E14B002	-1.4	-1.9	-0.5
04N05E24J004	1.9	0.6	-1.3
04N05E36H003	-2.5	0.3	2.8
04N06E17G004	0	-2	-2.0
04N06E29N002	1	-1.5	-2.5
04N06E30E001	4.7	4.2	-0.5
04N06E34J002	NM	NM	--
05N05E28L003	NM	-4.5	--

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
18	15	8	6	1	-4 to 14	0.7

Table 4-8 Comparison of Calaveras County Groundwater Elevations

Local Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
CCWD 001	NM	NM	--
CCWD 002	67.5	NM	--
CCWD 003	NM	NM	--
CCWD 004	NM	NM	--
CCWD 005	NM	NM	--
CCWD 006	NM	NM	--
CCWD 007	NM	NM	--
CCWD 008	72.4	NM	--
CCWD 009	Dry	NM	--
CCWD 010	95.8	NM	--
CCWD 011	88.9	NM	--
CCWD 012	146.5	NM	--
CCWD 014	128.7	NM	--
CCWD 015	NM	NM	--

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
14	0	0	0	0	--	--

Note: *Calaveras County data is sporadically uploaded to DWR databases, some Fall 2024 data was available for this report, but was not available for the Fall 2024 report at its time of publishing. No Fall 2025 data is available.

Table 4-9 Comparison of Stanislaus Groundwater Elevations

State Well ID	Fall 2024 (WSE, ft)	Fall 2025 (WSE, ft)	Change Fall (Feet)
01S10E04C001	32.8	52.9	20.1*
01S10E21A001	83.1	79.3	-3.8
01S10E26J001	75.6	75.3	-0.3
01S10E27Q001	66.4	65.8	-0.6
01S10E34R001	68.3	67.6	-0.7
01S11E25N001	NM	NM	--
02S10E02P001	81.6	80.7	-0.8
02S10E10M002	67.7	67.9	0.3

Number of Wells Fall 2024-2025					Change in Elevation	
Total	Comparable	Decrease WSE	Increase WSE	No Change	Range	Average
8	6	5	1	0	3.8 to 0.3	-1.0

Note: * not included in analyses or contouring.

Table 4-10 Wells Remeasured in December 2025

State Well ID
02N07E34R001
02N08E04C001
02N08E09G002
03N07E15C004
03N07E17D004
03N07E33G002
03N07E36J001
04N07E17N001
01N08E29M002
01N09E05J001
01N09E30C005
01N09E31J001
01S07E25E001
01S08E30C002
02N07E03D001
03N06E05N003
03S05E04H001
05N06E36R001
01S08E05A001

The data collected in December 2025 was used in the previous tables, analyses, and contours.

The data collected from these wells in October 2025 was affected by local groundwater pumping and replaced.