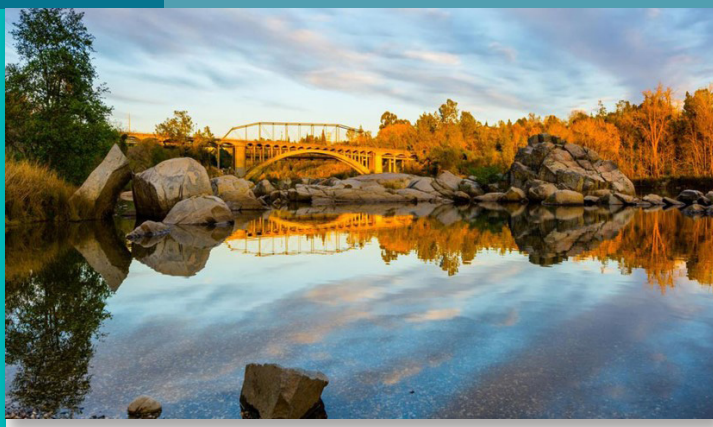


NORTH AMERICAN Subbasin

Groundwater Sustainability Plan

Water Year 2024 Annual Report

March 2025

SGA

SUTTER COUNTY

RECLAMATION DISTRICT NO. 1001

SSWD
South Sutter Water District

WEST PLACER GROUNDWATER SUSTAINABILITY AGENCY

Acknowledgement of State Funding

Funding for this project has been provided in part from The California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 and through an agreement with the State Department of Water Resources.

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

Acronyms

Acronym	Definition
°F	degrees Fahrenheit
AF	acre-feet
Ag	agriculture
a-msl	above mean sea level
APM	assessor's parcel number
ASR	aquifer storage and recovery
CASGEM	California Statewide Groundwater Elevation Monitoring
CDEC	California Data Exchange Center
CII	commercial, industrial, and institutional
CIMIS	California Irrigation Management Information System
CoSANA	Cosumnes, South American, and North American Groundwater Subbasins Integrated Water Resources Model
DWR	California Department of Water Resources
ET	evapotranspiration
EO	Executive Order
eWRIMS	Electronic Water Rights Information Management System
ft	feet
GAMA	Groundwater Ambient Monitoring and Assessment
GDE	groundwater dependent ecosystems
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GW	groundwater
IDC	IWFM Demand Calculator
InSAR	interferometric synthetic-aperture radar
MAF	million acre-feet
MCL	maximum contaminant level
mg/L	milligrams per liter
MO	measurable objective
MOA	Memorandum of Agreement
msl	mean sea level
MT	minimum threshold
N	nitrate
ND	not detected
NOAA	National Oceanic Atmospheric Administration
NASb	North American Subbasin
PMA	project and management action
RD 1001	Reclamation District 1001
RMS	representative monitoring site
RWA	Sacramento Regional Water Authority
SGA	Sacramento Groundwater Authority
SGM	Sustainable Groundwater Management
SGMA	Sustainable Groundwater Management Act
SMCL	secondary maximum contaminant level
State	State of California

Subbasin	North American Subbasin
SSWD	South Sutter Water District
SVSim	Sacramento Valley Simulation Model
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
USGS	United States Geological Survey
WAF	Water Accounting Framework
WCR	well completion report
WPGSA	West Placer Groundwater Sustainability Agency
WP	West Placer
WY	water year

EXECUTIVE SUMMARY

Introduction

This report summarizes Water Year (WY) 2024 (October 1, 2023 – September 30, 2024) conditions and groundwater management activities in the North American Subbasin (NASb or Subbasin) consistent with the requirements of the Sustainable Groundwater Management Act (SGMA).

SGMA is implemented in the NASb based on the adopted and approved Groundwater Sustainability Plan (GSP; NASb, 2021). The NASb Groundwater Sustainability Agencies (GSAs) submitted the adopted GSP to the California Department of Water Resources (DWR) on January 24, 2022. The Department of Water Resources found that the GSP met the requirements of SGMA and provided an approved determination on July 27, 2023. This report represents the fourth Annual Report prepared since GSP adoption.

The Subbasin encompasses an area of approximately 535 square miles in portions of Placer, Sacramento, and Sutter counties. The Subbasin is managed by five GSAs: Reclamation District 1001 (RD 1001), Sacramento Groundwater Authority (SGA), South Sutter Water District (SSWD), Sutter County; and West Placer (WP).

Hydrologic Conditions

Water Year 2024 started off dry, but a very wet February contributed to reaching an average amount of precipitation for the water year. The nearby Sacramento 5 ESE weather station recorded 18.09 inches of precipitation for WY 2024, close to the average of 18.18 inches from 2000 to 2023. Monthly precipitation varied, with a dry start in October and November, higher-than-average precipitation in December, January, and especially February, and typical dry summer months.

The Sierra Nevada snowpack also reflected this normal precipitation, with the Northern Sierra/Trinity and Central Sierra regions reporting snow water contents of 123% and 110% of the April 1st average, respectively. This followed Water Year 2023, which was notably wet and ended a three-year drought.

The Sacramento Valley Water Year Index classified Water Year 2024 as an above-normal year, with unimpaired flow nearly matching the average. The average annual temperature was 1.9°F warmer than the 2000-2023 average, with eleven months warmer than usual.

Water Supply

The primary water sources in the Subbasin is a combination of surface water and groundwater, with some limited use of recycled water. Data on groundwater extractions, groundwater elevations, and surface water deliveries were provided by either local, state, and federal agencies, as well as private entities. The increased use of surface water over groundwater seen in WY 2023 continued in WY 2024 compared to previous dry or critically dry WYs (2020-2022). Overall, surface water use accounted for approximately 57% (320,000 AF) of the total water used in the Subbasin.

Groundwater Levels

Groundwater levels were collected and updated for all 40 representative monitoring sites as defined in the GSP. In general, groundwater levels for both the spring (seasonal high) and fall (seasonal low) levels in 2024

remained stable compared to those observed historically within the Subbasin. Groundwater level data from the representative monitoring sites, including supplemental monitoring sites, was used to create groundwater level contour maps for spring and fall 2024.

Change in Groundwater Storage

The change in groundwater storage in the Subbasin was estimated using the regional groundwater model. The model estimated an increase in storage of 82,500 AF in WY 2024, a continued positive trend from the previous water year.

GSP Implementation

The NASb 2021 GSP was adopted by each GSA and submitted to the DWR in January 2022. The GSAs have had approximately three years to implement the GSP including the projects and management actions (PMAs) in accordance with the schedule identified in the GSP. There has been progress made on PMAs with the status of implementation actions are shown in Appendix B. The NASb GSAs were awarded grant funding on October 2, 2023, from the DWR Sustainable Groundwater Management Grant Program SGMA Implementation – Round 2 (also referred to as DWR SGM Grant Round II) to support GSP implementation activities within the Subbasin.

Sustainability Indicators

A description of the sustainability indicators, their sustainable management criteria, and their status in WY 2024 are summarized in Table ES-1 below. After dry conditions were experienced during WYs 2020, 2021, and 2022 that contributed to groundwater level declines, wet conditions in WY 2023 contributed towards raising groundwater levels and storage in most areas of the Subbasin to near pre-drought (2013-2015) conditions. The Subbasin experienced above normal hydrologic conditions in WY 2024, which showed mostly stable groundwater conditions compared to WY 2023. The GSAs have observed minimum threshold exceedances for the chronic lowering of groundwater, land subsidence, and depletions of interconnected surface water sustainability indicators at representative monitoring sites (RMSs). However, the minimum threshold exceedances do not indicate the occurrence of undesirable results as defined in the NASb GSP. The GSAs are currently evaluating these limited number of exceedances and have continued GSP implementation actions to ensure the Subbasin achieves its sustainability goal by 2042.

Table ES-1: Summary and Status of Sustainable Management Criteria

Sustainability Indicator	Minimum Threshold	Interim Milestones	Measurable Objective	Undesirable Result Definition	Fall 2024 Status
Groundwater Levels	Average fall 2014 & 2015 groundwater levels incorporated with change in groundwater levels projected over 50-year period.	Projected in 5-year intervals to meet Measurable Objectives by 2042.	Average spring groundwater level from 2010 through 2019.	20% (8 out of 40 wells) or more of all RMSs have MT exceedances for two consecutive fall measurements.	4 out of 40 wells (10%) exceeded their minimum thresholds for two consecutive years. Thus, an undesirable result did not occur.
Groundwater Storage	Groundwater levels are used as a proxy for this sustainability indicator. Sustainable Management Criteria and conditions are identical to those of groundwater levels.				
Seawater Intrusion	This sustainability indicator is not applicable in the Subbasin.				
Water Quality	Secondary Maximum Contaminant Level (SMCL) for **TDS**: 500 mg/L Primary Maximum Contaminant Level (MCL) for **Nitrate (as N)**: 10 mg/L	Identical to Measurable Objectives	<u>Public Water Supply Wells</u> **TDS:** 300 mg/L **Nitrate**: 3 mg/L <u>Shallow Aquifer Wells</u> 10% greater than recently observed TDS & Nitrate concentrations in each RMS.	<u>Public Water Supply Wells</u> **TDS:** Basin-wide average >400 mg/L in all public water supply wells *Or* **Nitrate**: Basin-wide average >8 mg/L in all public water supply wells. <u>Shallow Aquifer Wells</u> TDS & Nitrate MCLs are exceeded in 25% RMS.	The average public water supply well concentration for TDS and Nitrate were below concentrations defined for undesirable results. Shallow aquifer sites were all below minimum thresholds.
Land Subsidence	Groundwater levels are used as a proxy for this sustainability indicator, equating 1 foot of groundwater level decline to 0.01 feet of subsidence.			The rate of subsidence exceeds 0.5 feet over a 5-year period over an area covering approximately 5 or more square miles.	2 out of 40 wells (5%) exceeded their minimum threshold. Thus, there was not an undesirable result.
Depletions of Interconnected Surface Waters	Groundwater levels are used as a proxy, using a subset of the groundwater level representative monitoring network. Sustainable Management Criteria are identical to those established for groundwater levels.			20% (5 out of 24 wells) or more of the interconnected surface water RMSs have MT exceedances for two consecutive fall measurements.	2 out of 24 wells (8%) exceeded their minimum threshold. Thus, there was not an undesirable result.

1. INTRODUCTION

1.1 Purpose

This report summarizes Water Year (WY) 2024 (October 1, 2023 – September 30, 2024) groundwater conditions and groundwater management in the North American Subbasin (NASb or Subbasin) consistent with the requirements of the Sustainable Groundwater Management Act (SGMA). The report complies with the requirements for annual reports contained in the California Water Code (§10728) and further defined in the California Code of Regulation, Title 23, §356.2. This report represents the fourth Annual Report prepared since GSP adoption.

1.2 North American Subbasin Groundwater Sustainability Plan

SGMA is implemented in the NASb based on the adopted and approved Groundwater Sustainability Plan (GSP; NASb, 2021). The NASb Groundwater Sustainability Agencies (GSAs) submitted the adopted GSP to the California Department of Water Resources (DWR) on January 24, 2022. The Department of Water Resources found that the NASb 2021 GSP met the requirements of SGMA and the GSP regulations and provided an approved determination on July 27, 2023, with six recommended corrective actions which are anticipated to be addressed in the future submission of an amended GSP and Periodic Evaluation. The NASb GSAs are in process of developing the 2027 Periodic Evaluation.

1.3 North American Subbasin

The NASb is identified by DWR in Bulletin 118, *California's Groundwater*, as Subbasin No. 5-021.64 (DWR, 2003). The Subbasin is part of the greater Sacramento Valley Groundwater Basin. The location of the Subbasin and surrounding subbasins are shown in Figure 1-1. The Subbasin encompasses an area of approximately 342,516 acres (535 square miles) in Sacramento, Placer, and Sutter counties. The Subbasin is generally bounded on the north by the Bear River, on the south by the American River, to the west by the Feather and Sacramento Rivers, and on the east by the Sierra Nevada foothills (Figure 1-1).

1.4 North American Subbasin GSAs

The Subbasin is managed by five GSAs that cover the entire Subbasin (Figure 1-1):

- Reclamation District 1001 (RD 1001)
- Sacramento Groundwater Authority (SGA)
- South Sutter Water District (SSWD)
- Sutter County
- West Placer (WP)

1.5 Organization of this Report

This annual report is organized in a manner that generally follows the structure of the SGMA regulations both to assist in the review of the document and to support consistency between subbasins. The WY 2024 Annual Report is divided into the following sections:

- **Section 1. Introduction:** a brief background of the Subbasin GSAs and a location map.
- **Section 2. Hydrologic Conditions:** a summary of WY 2024 precipitation, runoff, and temperature.
- **Section 3. Water Supply:** a summary of the sources and uses of supply/delivery.
- **Section 4. Groundwater Levels:** a summary of groundwater levels at individual monitoring wells in response to hydrologic supply and demand conditions, including contour maps of annual highs and lows.
- **Section 5. Change in Groundwater Storage:** a description of the methodologies and presentation of changes in groundwater storage.
- **Section 6. GSP Implementation:** a summary of progress toward implementing management activities and projects and management actions since adoption of the GSP.
- **Section 7. Sustainability Indicators:** a summary of the status of adopted sustainability indicators for the Subbasin.
- **Section 8. References**

FIGURE 1-1: NORTH AMERICAN SUBBASIN AND GROUNDWATER SUSTAINABILITY AGENCIES

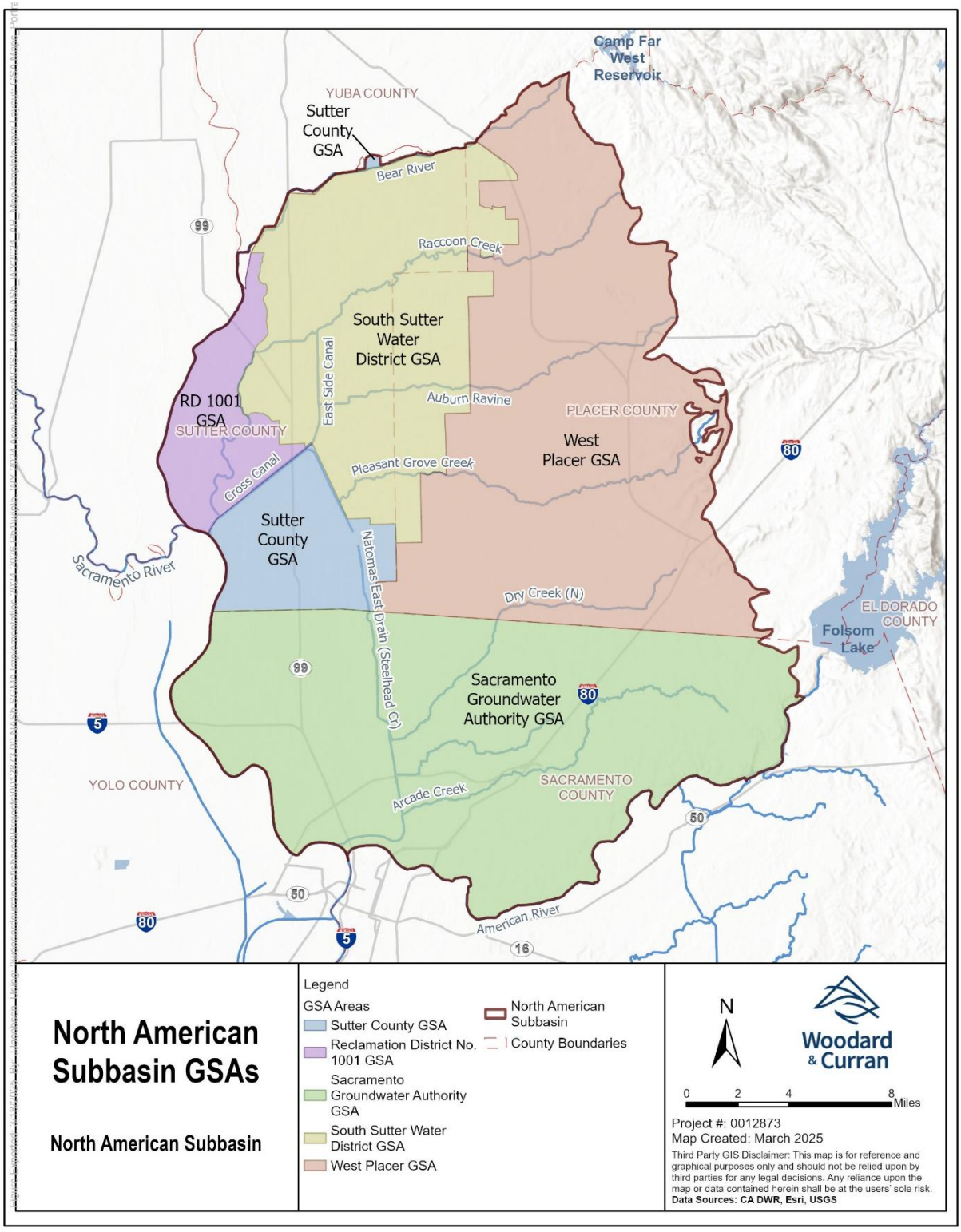


TABLE 1-1: ANNUAL REPORT ELEMENT GUIDE

California Code of Regulations - GSP Regulation Sections	Annual Report Element	Report sections that address requirements for Annual Report elements.
§ 354.40. Reporting Monitoring Data to the Department	Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.	Section 4; Appendix A
§ 356.2. Annual Reports	Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:	
§ 356.2(a)	General information, including an executive summary and a location map depicting the basin covered by the report.	Executive Summary; Section 1
§ 356.2(b)	A detailed description and graphical representation of the following conditions of the basin managed in the Plan:	
§ 356.2(b)(1)	Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:	
§ 356.2(b)(1)(A)	Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.	Section 4.1
§ 356.2(b)(1)(B)	Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.	Section 4.2; Appendix A
§ 356.2(b)(2)	Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.	Section 3.1.2
§ 356.2(b)(3)	Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.	Section 3.1.1

California Code of Regulations - GSP Regulation Sections	Annual Report Element	Report sections that address requirements for Annual Report elements.
§ 356.2(b)(4)	Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.	Section 3.2
§ 356.2(b)(5)	Change in groundwater in storage shall include the following:	
§ 356.2(b)(5)(A)	Change in groundwater in storage maps for each principal aquifer in the basin.	Section 5
§ 356.2(b)(5)(B)	A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.	Section 5
§ 356.2(c)	A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.	Section 6; Section 7; Appendix B

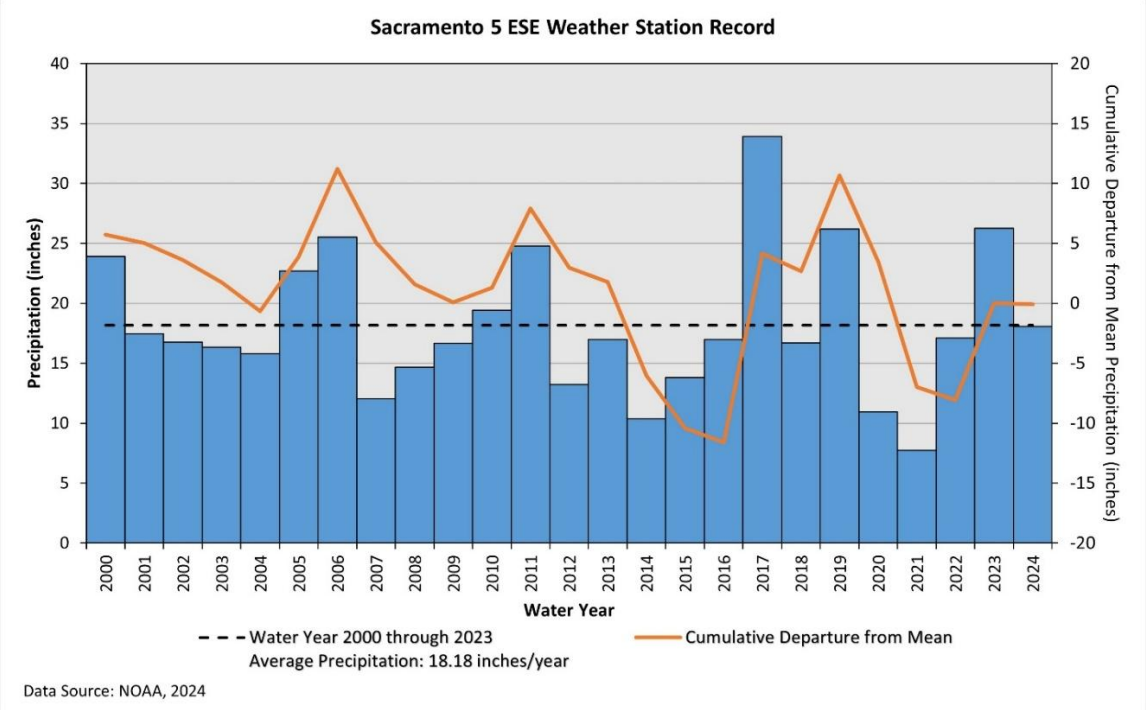
2. HYDROLOGIC CONDITIONS

2.1 Precipitation

Water Year 2024 began drier than usual, but a very wet February brought total precipitation up to approximately 100% of the average for the Subbasin and maintained this level through the end of the year. This normal precipitation was also reflected in the Sierra Nevada snowpack, with the Northern Sierra/Trinity and Central Sierra regions reporting maximum snow water contents of 123% and 110% of the April 1st average, respectively (DWR, 2024c). This rather hydrologically average year followed Water Year 2023, a notably wet year with multiple atmospheric rivers that resulted in 144% of average precipitation and one of the largest snowpacks on record, ending three years of persistent drought.

The Sacramento 5 ESE weather station, with historical data dating back to the 1880s, has one of the longest records in the vicinity of the Subbasin. Although the station is located immediately south of the American River and slightly outside of the Subbasin boundary, it is still considered representative due to its close geographic proximity. During Water Year 2024, the annual precipitation at the Sacramento 5 ESE station was 18.09 inches, closely matching the average 18.18 inches observed between WYs 2000 and 2023[1] (Figure 2-1). It is worth noting that this station's data differs from the CoSANA model's precipitation, which averaged 18.78 inches across the NASb for WY 2024. The differences arise from the methods used: the Sacramento 5 ESE station captures localized precipitation data, while the CoSANA model uses PRISM climate data over a broader area, leading to slight variations in reported precipitation.

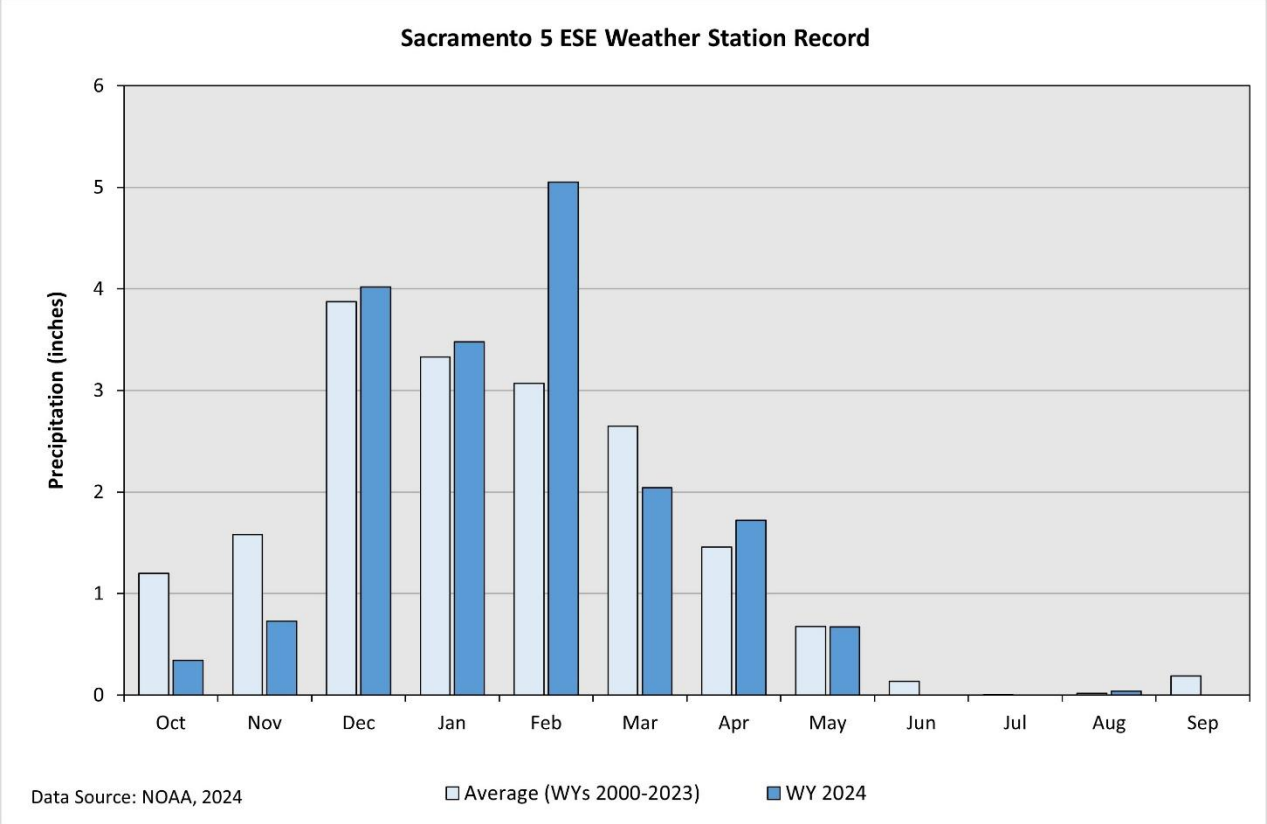
FIGURE 2-1: PRECIPITATION RECORD, WATER YEARS 2000-2024



[1] WY 2000 through 2023 was used for comparison as it is considered more representative of current and potential future conditions with climate change than the available longer period of record.

Figure 2-2 below shows the monthly precipitation observed in Water Year 2024, compared to the average monthly precipitation from WYs 2000 through 2023. Overall, WY 2024 had a drier start, with October and November reporting much lower precipitation than the average. During the winter months, December and January had slightly higher precipitation than the average, while February saw a substantial increase, with 5.05 inches compared to the average 3.07 inches. Spring was relatively normal, with March below average and April and May near or slightly above average. The summer months were very dry, with negligible precipitation, as is typical for the region.

FIGURE 2-2: MONTHLY PRECIPITATION, WATER YEAR 2024 COMPARED TO HISTORICAL AVERAGES



2.2 Runoff

In addition to local precipitation, rivers and streams enter the North American Subbasin, providing water supply and interacting with the groundwater system, among other benefits. One measure of the relative volume of surface runoff into rivers and streams in the Sacramento Valley region is the Sacramento Valley Water Year Index, calculated annually by DWR. The index classifies water years into five categories based on unimpaired runoff[1]: wet, above normal, below normal, dry, and critical. Water Year 2024 has preliminary

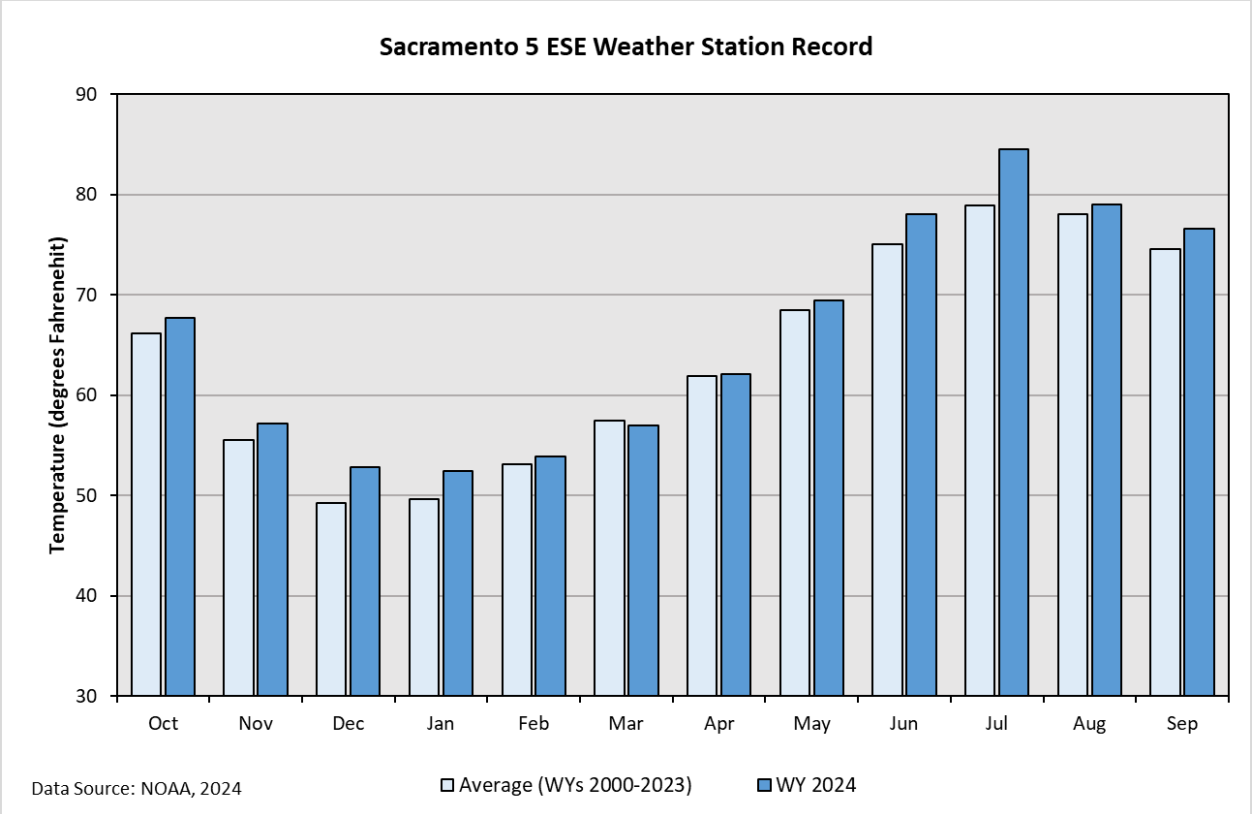
[1] Unimpaired runoff is based on the Sacramento River Runoff, the sum of unimpaired flow at Sacramento River above Bend Bridge, Feather River at Oroville (aka inflow to Lake Oroville), Yuba River near Smartville, and the American River below Folsom Lake.

been classified as an above normal year type, with an index of 8.45[1], based on the May 1st 50% exceedance forecast (DWR, 2025). In WY 2024, unimpaired flow totaled 17.57 million acre-feet (MAF), which is nearly 100% of the average runoff of 17.7 MAF, recorded from WYs 1991 through 2020. This was preceded by WY 2023, which was classified as a wet year, with an index of 9.33 and unimpaired flows totaling 24.11 MAF (DWR, 2024a).

2.3 Temperature

The average annual temperature at the Sacramento 5 ESE station in WY 2024 was 1.9 degrees Fahrenheit (°F) warmer than the 2000 through 2023 average (65.9 compared to 64.1°F, respectively). Eleven of the twelve months in WY 2024 were warmer than average temperatures for the same months from 2000 through 2023, as shown in Figure 2-3.

FIGURE 2-3: MONTHLY AVERAGE TEMPERATURE, WATER YEAR 2024 COMPARED TO HISTORICAL AVERAGES



[1] Sacramento Valley Water Year Type Index is based on flow in million acre-feet: Wet = equal to or greater than 9.2; Above Normal = greater than 7.8 and less than 9.2; Below Normal = greater than 6.5 and less than or equal to 7.8; Dry = greater than 5.4 and less than or equal to 6.5; Critical = equal to or less than 5.4.

3. WATER SUPPLY

3.1 Water Supply by Source

Water supply data sources for WY 2024 and associated accuracy of measurements are listed in Table 3-1. The primary water supply sources within the Subbasin for WY 2024 were surface water and groundwater. Metered or directly reported data, such groundwater extractions, and surface water deliveries, were supplied by local, state, and federal agencies as well as private entities. Data used in the Consumnes South American North American (CoSANA) model to estimate agricultural groundwater use included climate, stream flow, and land use, which were provided by local, state and federal entities. The accuracy of data is dependent on the reported method of data collection or estimation. For instance, directly measured data from flowmeters has a high level accuracy. Additionally, data generated from the CoSANA model has a moderate level of accuracy as it is estimated but estimated using a robust groundwater model based on extensive datasets and refined through calibration. The specific agencies and entities that provided data are discussed in their applicable sections below.

TABLE 3-1: DATA SOURCES AND ACCURACY

Data Requirements	Data Source	Accuracy
Climate (Precipitation and Evapotranspiration)	CIMIS, PRISM	Moderate
Stream Flows	USGS, CDEC	High
Surface Water Deliveries	Direct Reporting, eWRIMS	High
Groundwater Levels	DWR, SGA, WPGSA member agencies, Aerojet, McClellan	High
Land Use	DWR, Sacramento County Survey	High
Groundwater Pumping (Municipal)	Metered	High
Groundwater Pumping (Agricultural)	Estimated using CoSANA Model	Moderate

3.1.1 Surface Water Supply

Table 3-2 summarizes surface water use by sector during WY 2024. Surface water use measurements were recorded monthly and provided by the following water purveyors:

- Camp Far West Irrigation District
- Carmichael Water District
- City of Sacramento
- City of Roseville
- Natomas Central Mutual Water Company
- Nevada Irrigation District
- Placer County Water Agency
- Pleasant Grove-Verona Mutual Water Company

- San Juan Water District
- South Sutter Water District

Certain water purveyors listed above also received water from the Central Valley Project and these supplies are combined and reported by the local agency. Directly measured data are expected to have a high level of accuracy. Smaller riparian diversions for private use and tailwater reuse of surface water were estimated by the CoSANA model and have a moderate level of accuracy. In WYs 2020, 2022, and 2023, the City of Roseville used their Aquifer Storage and Recovery (ASR) wells to directly recharge surface water in the Subbasin, providing 2,900 AF across those water years. During WY 2024, the City of Roseville did not perform any recharge activities.

TABLE 3-2: SURFACE WATER USE BY SECTOR

Sector	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	Method
Municipal & Industrial	115,600	112,100	108,300	123,700	133,000	Metered
Agricultural	197,700	130,300	179,200	200,100	187,400	Metered
Managed Wetlands	0	0	0	0	0	-
Managed Recharged	900	0	200	1,800	0	Metered
Native Vegetation	0	0	0	0	0	-
Recycled Water	0	6,600	2,700	6,000	6,100	Metered
Total	**314,200**	**249,000**	**290,400**	**331,600**	**322,900**	

***Note**: Volumes are reported in acre-feet (AF).*

3.1.1.1 Water Accounting Framework

Several agencies in the Subbasin have access to both surface water and groundwater and are able to practice conjunctive use programs to adapt to changing hydrologic conditions and to manage groundwater in a sustainable and responsible manner. In 2010, the SGA developed a Water Accounting Framework (WAF) to promote conjunctive use operations in the central SGA area. The framework provides groundwater extraction targets and tracks surface water that is used to reduce groundwater demand. The WAF recognizes and accounts for surface water use that has occurred in-lieu of groundwater pumping (e.g., conjunctive use) within the central SGA area. Using the WAF methodology, since conjunctive use activities started in the SGA area (predating 2010), approximately 400,000-acre feet of water has been banked through urban in-lieu recharge to date. The SGA staff provides conjunctive use banking estimates yearly during the April SGA Board of Directors meetings. Currently modeling analysis is being conducted to evaluate how much of this banked water remains in the basin after considering potential losses such as subsurface outflow and accretions to streams as well as groundwater that is necessary for sustainability under SGMA.

3.1.2 Groundwater Supply

During WY 2024, the use of groundwater in the Subbasin continued to decline compared to previous water years. The decline in use is partially attributed to the recent increases in surface water use and also the decline in total water use by various sectors. Groundwater extractions for WYs 2020-2024 by water use sector and method of measurement are shown in Table 3-3. Metered groundwater extraction data was reported by multiple entities throughout the Subbasin:

- Carmichael Water District
- Citrus Heights Water District
- City of Lincoln
- City of Roseville
- City of Sacramento
- Fair Oaks Water District
- Natomas Central Mutual Water Company
- Orange Vale Water Company
- Pleasant Grove-Verona Mutual Water Company
- Rio Linda / Elverta Community Water District
- Placer County Water Agency
- Sacramento Suburban Water District
- Sacramento International Airport

Groundwater extractions for agricultural water use and private wells without flow meters were estimated by the CoSANA model based on land use, precipitation, evapotranspiration, irrigation practices data, and reporting of surface water deliveries. Details about the CoSANA model processes can be found in Appendix P of the GSP. Directly measured data are expected to have a high level of accuracy. Estimated groundwater extraction data is expected to have a moderate level of accuracy. A map illustrating the general location and volume of groundwater extractions reported by the GSAs and estimated by the CoSANA model for WY 2024 can be found in Figure 3-1.

TABLE 3-3: GROUNDWATER USE BY SECTOR

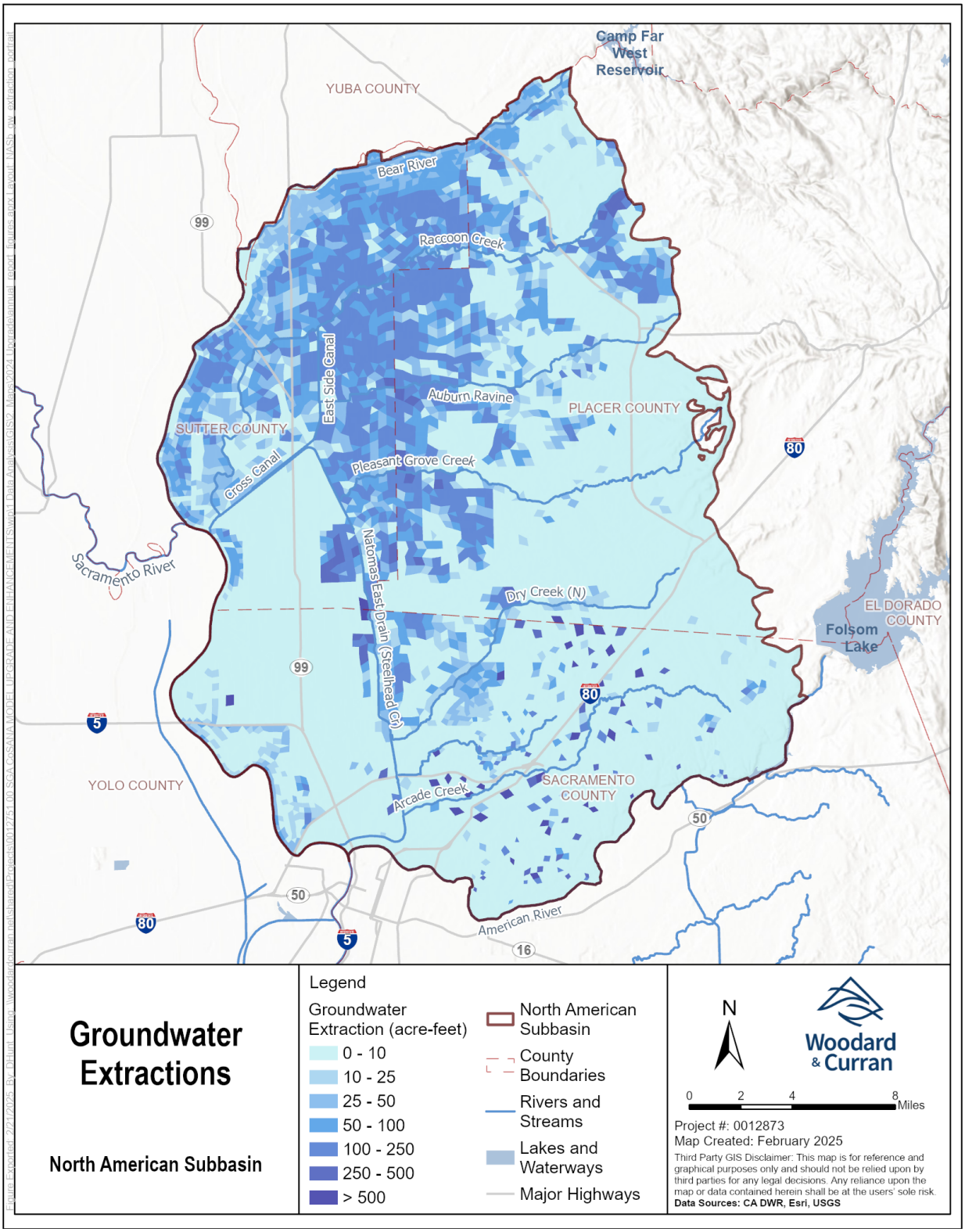
Sector	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	Methods
Municipal & Industrial	82,600	87,900	89,400	60,200	46,900	Metered
Agricultural	263,700	290,800	207,700	181,100	190,200	Metered and CoSANA
Managed Wetlands	0	0	0	0	0	-
Managed Recharged	0	0	0	0	0	-
Native Vegetation	0	0	0	0	0	-
Total	**350,600**	**385,800**	**304,400**	**244,800**	**240,200**	

***Note**: Volumes are reported in acre-feet (AF).*

3.1.3 Remedial Groundwater Extractions

Remediation activities that included groundwater extraction were metered and reported for the former McClellan Air Force Base and a subset of Aerojet sites within the Subbasin. Remediation extractions amounted to 3,100 acre-feet during WY 2024.

FIGURE 3-1: LOCATION AND VOLUMES OF GROUNDWATER EXTRACTIONS, WATER YEAR 2024



3.2 Total Water Use

Total water use, by sector, is summarized in Table 3-4 along with the method of measurement. Table 3-5 summarizes total water use by source for WY 2024. Overall, total water use decreased across all sectors during WY 2024 compared to previous water years. WY 2023, a historically wet water year, provided a surplus in usable surface water for conjunctive use and in-lieu recharge. The impacts of hydrologic conditions in WY 2023 are still observed in WY 2024 as the primary source of water has continued to be surface water since the shift from groundwater following drought conditions in WYs 2020, 2021, and 2022.

In addition to groundwater and surface water use, recycled water has provided water to municipal and agricultural sectors. The City of Lincoln and the City of Roseville own and operate wastewater treatment facilities and report metered recycled water. A portion of the water is used in urban areas (e.g., green belts and golf courses) with some usage for agriculture. Recycled water reported in WY 2024 was approximately 6,100 AF, a slight increase from the previous two water years.

TABLE 3-4: TOTAL WATER USE BY SECTOR

Sector	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	Method
Municipal & Industrial	198,200	200,000	197,700	183,900	179,900	Metered
Agricultural	461,400	421,100	386,900	381,200	377,600	Metered and CoSANA
Managed Wetlands	0	0	0	0	0	-
Managed Recharged	900	0	200	1,800	0	Metered
Native Vegetation	0	0	0	0	0	-
Recycled Water	0	6,600	2,700	6,000	6,100	Metered
Remediation	4,300	7,100	7,300	3,500	3,100	Metered
Total	**664,800**	**634,800**	**594,800**	**576,400**	**566,700**	

***Note**: Volumes are reported in acre-feet (AF).*

TABLE 3-5: TOTAL WATER USE BY SOURCE

Sector	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	Methods
Groundwater	346,300	378,700	297,100	241,300	237,100	Metered and CoSANA
Surface Water	314,200	242,400	287,700	325,600	320,400	Metered
Recycled Water	0	6,600	2,700	6,000	6,100	Metered
Remediation	4,300	7,100	7,300	3,500	3,100	Metered
Total	**664,800**	**634,800**	**594,800**	**576,400**	**566,700**	

***Note**: Volumes are reported in acre-feet (AF).*

4. GROUNDWATER LEVELS

Groundwater level monitoring data is discussed in this section using groundwater level contour maps and hydrographs to depict changes in groundwater levels during WY 2024.

Groundwater level data for the Subbasin were primarily obtained from the GSAs and DWR. Additionally, reports submitted by various agencies with groundwater monitoring programs overseen by the Regional Water Quality Control Board were also used. All groundwater level measurements reported during WY 2024 were uploaded to the SGMA portal and updated in the NASb Data Management System.

4.1 Groundwater Conditions

During WY 2024, groundwater elevation contours were prepared for the principal aquifer to illustrate groundwater conditions in the Subbasin during the annual high (spring) and low (fall). Groundwater levels were monitored from 69 wells throughout the Subbasin, including all 40 representative monitoring sites. Additionally, data from the South American (3 wells) and Yuba Subbasins (3 wells) were incorporated to better align groundwater contours with adjacent basins. Despite occurring one month past the end of WY 2024, the annual low groundwater contours incorporate October 2024 measurements to reflect conditions resulting from pumping that occurred during WY 2024 and to report on the most recent available fall data.

The spring and fall groundwater elevation contour maps and the locations of monitoring wells providing data are depicted in Figure 4-1 and Figure 4-2, respectively. Additionally, Figure 4-3 presents the total change in groundwater elevation between fall 2023 and fall 2024.

In the spring, groundwater elevations ranged from a high of 211 ft a-msl[1] in the eastern portion of the Subbasin, to a low of -38 ft a-msl in Sacramento County near the former McClellan Air Force Base. Groundwater level measurements during the fall tend to be lower than the spring and are attributed to greater groundwater pumping during summer months and lower recharge. Groundwater flow directions are oriented toward the slight pumping depression at the center of the Subbasin that has been present historically.

[1] All elevations are reported in feet above mean sea level (ft msl), datum NAVD88.

FIGURE 4-1: GROUNDWATER ELEVATIONS, SPRING 2024

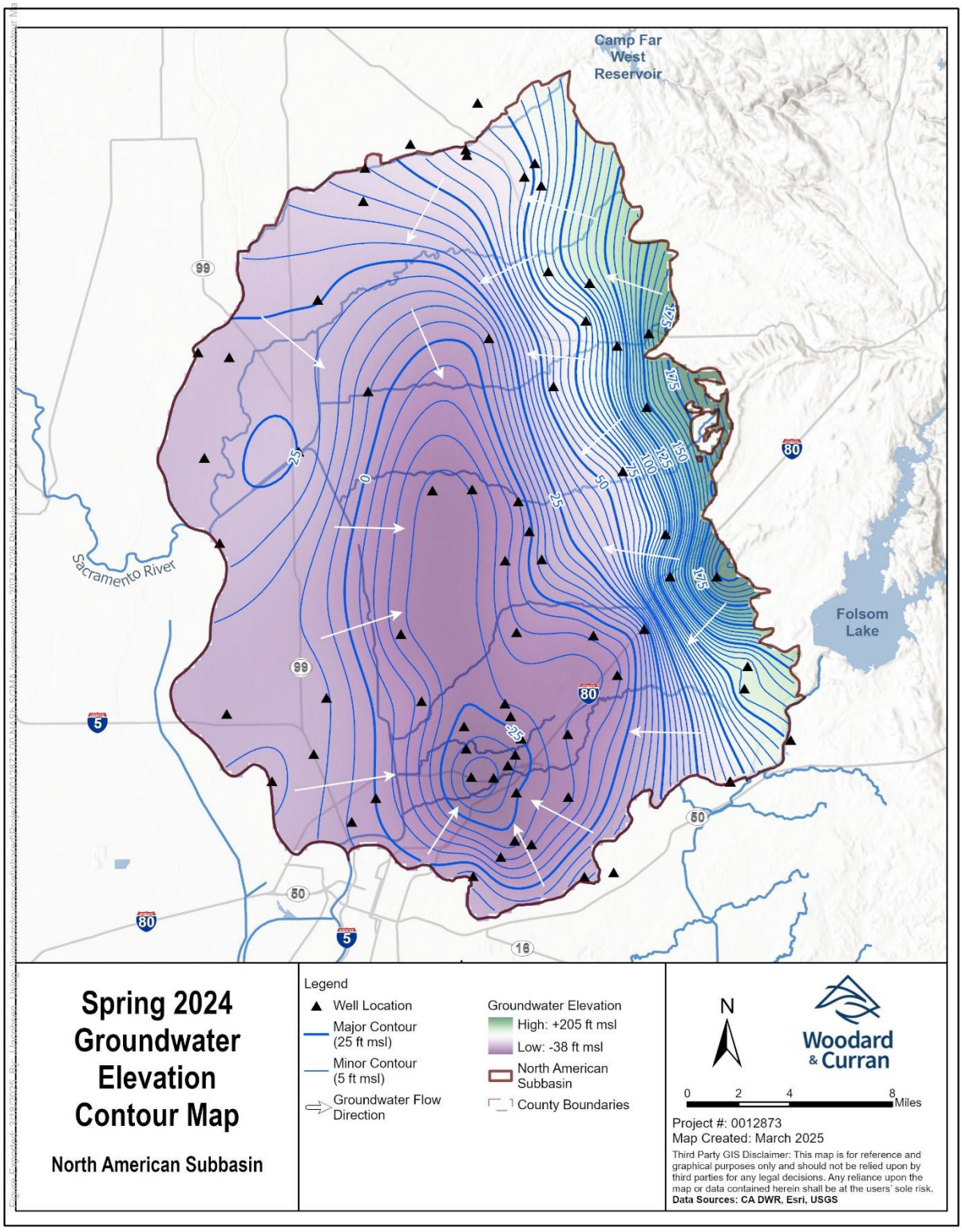


FIGURE 4-2: GROUNDWATER ELEVATIONS, FALL 2024

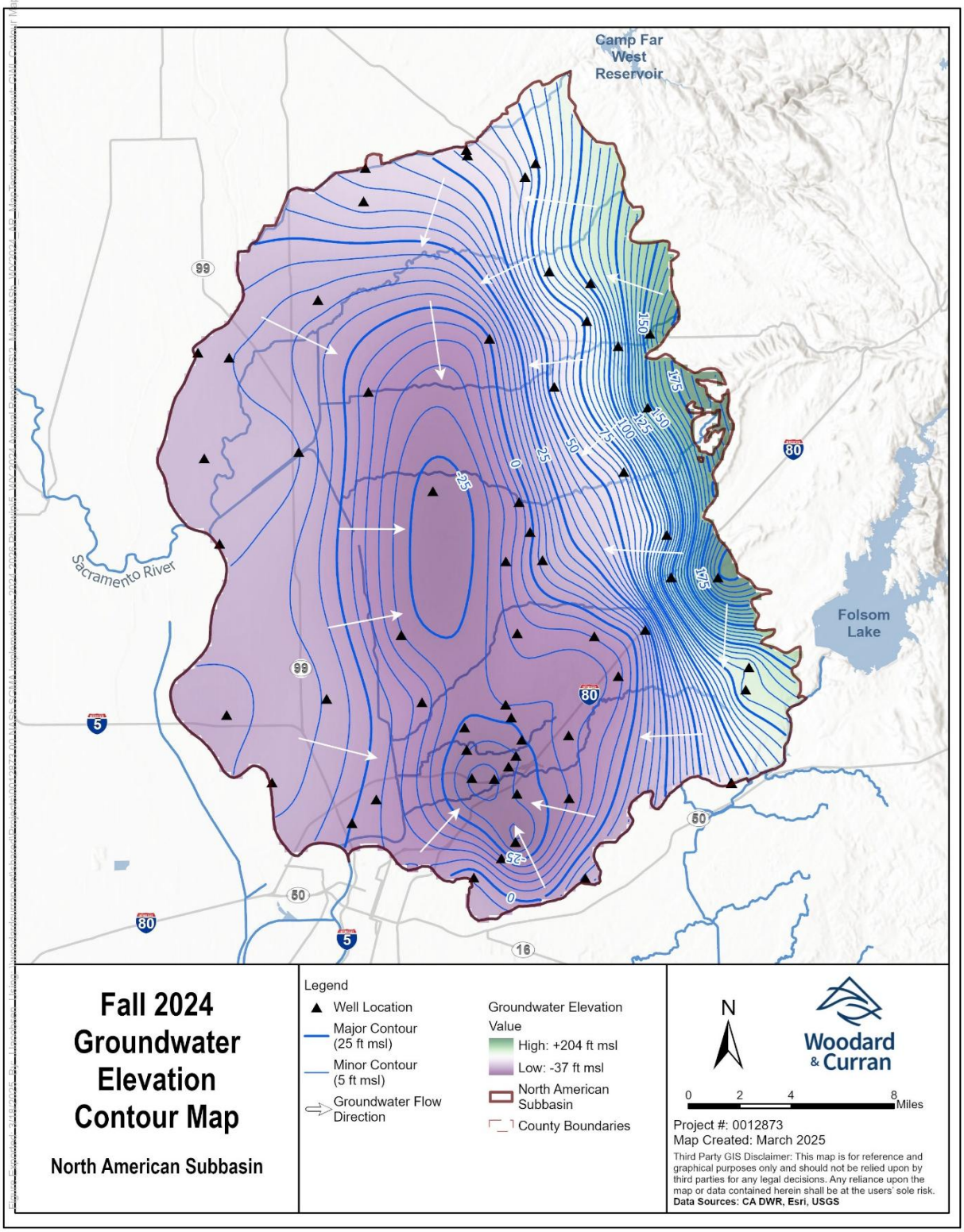
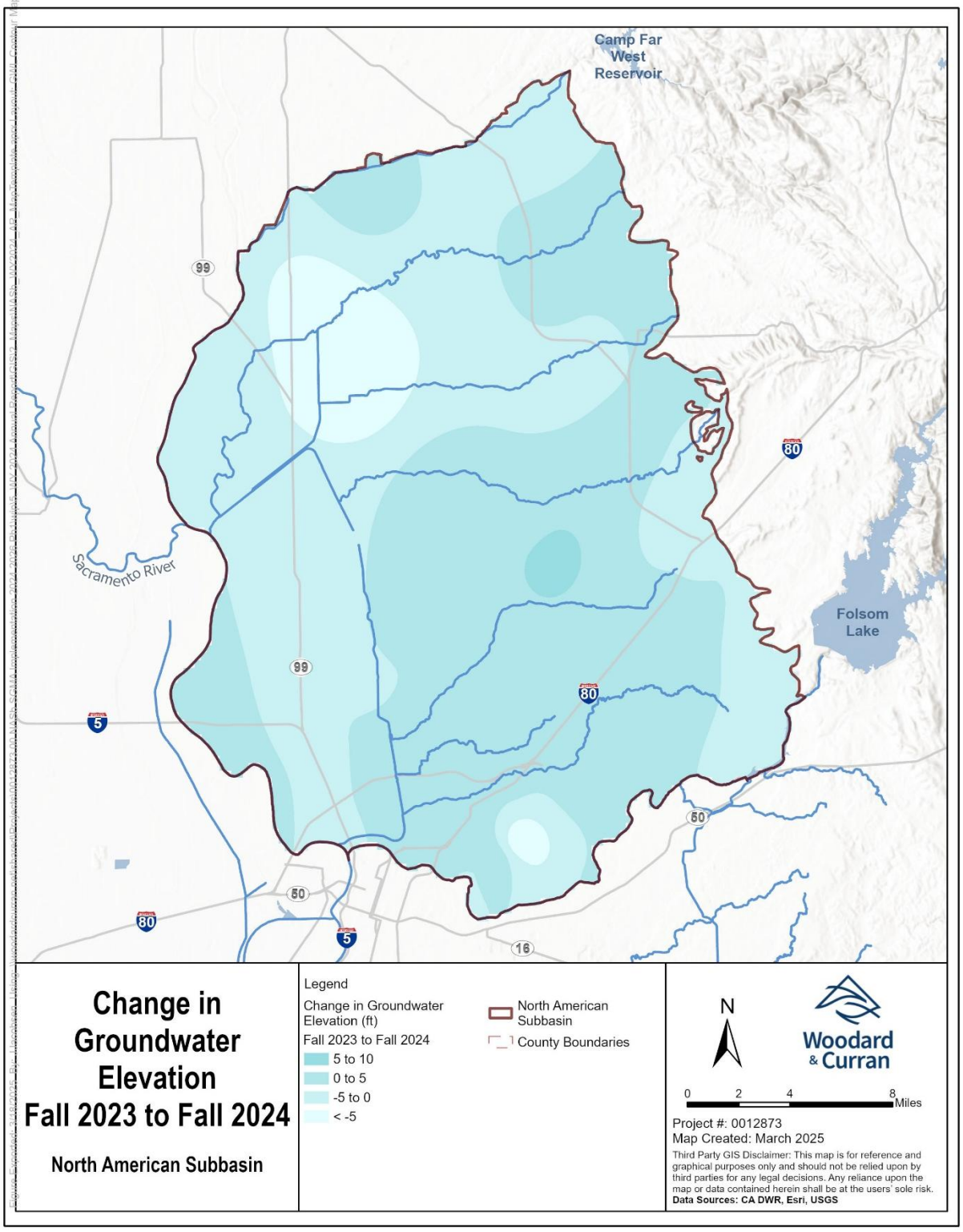


FIGURE 4-3: CHANGE IN GROUNDWATER ELEVATION, FALL 2023 TO FALL 2024



4.2 Hydrographs

Fluctuations in groundwater elevations occur annually throughout the Subbasin. Seasonal trends are typically defined by slightly higher spring groundwater elevations compared with fall levels.

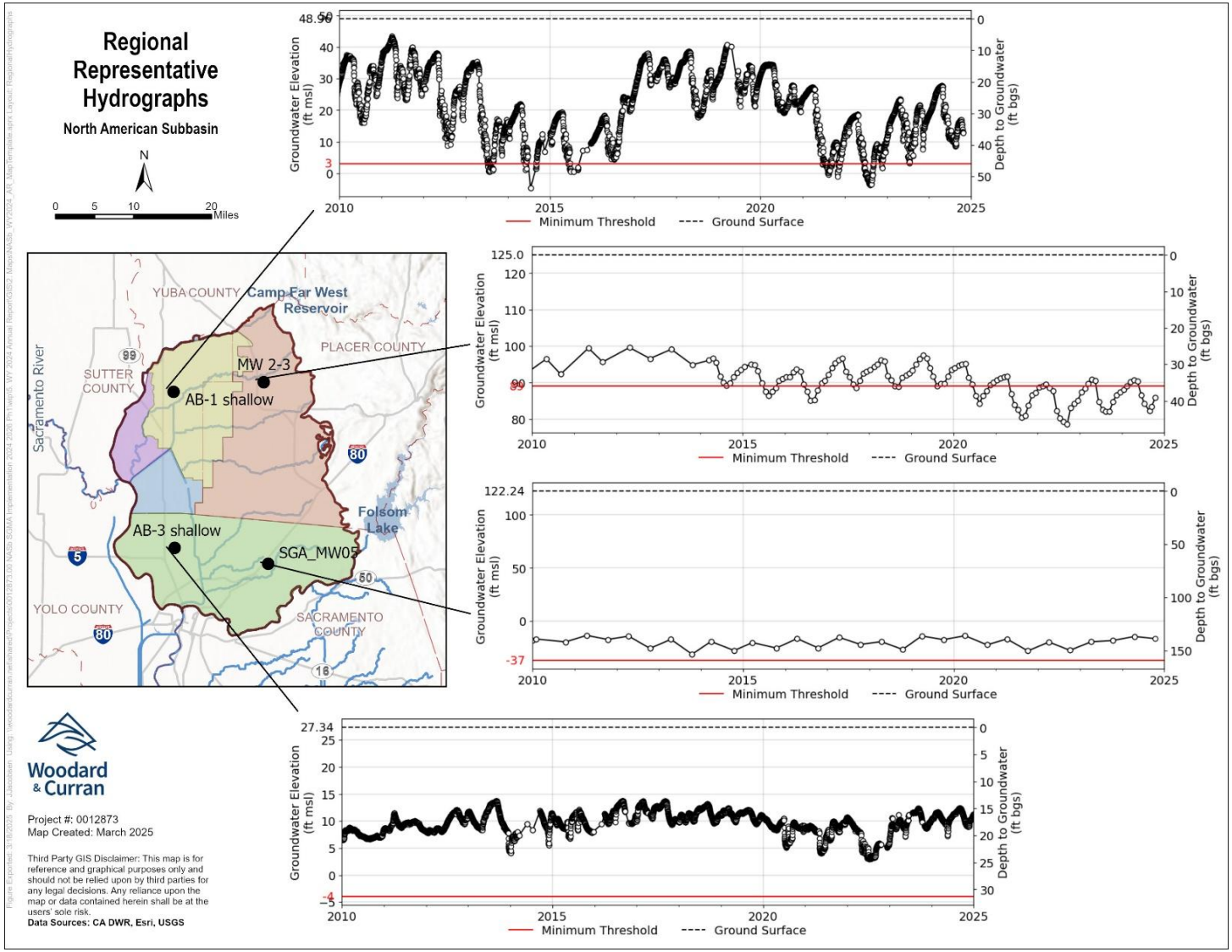
Hydrographs for all 40 GSP representative monitoring site wells and their established minimum thresholds, measurable objectives, and interim milestones are shown in Appendix A and include groundwater levels through the fall of 2024.

Figure 4-4 provides a representation of changes in groundwater levels during WY 2024 at representative monitoring site wells throughout the Subbasin. Cumulatively, the hydrographs depict a downward trend in groundwater levels during the period of drought from 2020 through early 2023. This trend changed as groundwater levels stabilized and began to increase as a result of substantial precipitation events during the winter and spring of WY 2023.

Fall 2024 groundwater elevations were similar to those in fall 2019, prior to the drought and the last hydrologic wet water year. Groundwater elevations in a small subset of wells did not fully recover from the recharge (e.g., precipitation, stream recharge) the Subbasin received during WYs 2023 and 2024. The majority of groundwater elevations from wells in the Subbasin remained above their respective minimum thresholds in the fall of 2024. Groundwater elevations with respective to their sustainable management criteria are discussed further in Section 7.1.

As documented in the GSP, the GSAs collect additional data when a minimum threshold is exceeded to support any investigation of potential causes and effects of that exceedance. Specifically, during late calendar year 2022, the GSAs collected groundwater elevation data from select representative monitoring sites where minimum threshold exceedances were observed in WYs 2021 and 2022. Because these minimum threshold occurrences occurred during critically dry years, the GSAs planned to collect data for an additional year to see if groundwater levels rose above the minimum thresholds. During WY 2023, groundwater elevations increased across the Subbasin compared to WY 2022 as a result of historic precipitation events and recharge. However, minimum thresholds were exceeded in four monitoring sites similar to the previous water years. Groundwater levels declined slightly in WY 2024 compared to WY 2023 and five representative monitoring sites exceeded their minimum thresholds. The GSAs are investigating potential causes for these exceedances and declining groundwater elevations. The GSAs have taken this proactive approach to further understand groundwater elevation trends in these wells and prevent unreasonable groundwater conditions within the Subbasin.

FIGURE 4-4: REGIONAL REPRESENTATIVE HYDROGRAPHS



5. CHANGE IN GROUNDWATER STORAGE

Change in groundwater storage in the Subbasin is estimated through the CoSANA model for both the GSP and annual reports. The CoSANA model estimated change in groundwater storage in the GSP from WYs 2009-2018 and extended the estimation to WY 2024 using the latest groundwater extraction, evapotranspiration, precipitation, and surface water delivery data. Table 5-1 shows the estimated change in storage compared to groundwater extractions and the Subbasin's sustainable yield.

TABLE 5-1: MODELED ANNUAL CHANGE IN GROUNDWATER STORAGE, WATER YEARS 2020-2024

	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	Method
Water Year Classification	**Dry**	**Critically Dry**	**Critically Dry**	**Wet**	**Above Normal**	
Groundwater Extractions	350,600	382,200	300,400	244,800	240,200	Metered and CoSANA
Difference to Sustainable Yield[1]	-14,600	-46,200	35,600	91,200	95,800	
Estimated Change in Storage	**-90,000**	**-134,800**	**2,800**	**161,100**	**82,500**	CoSANA

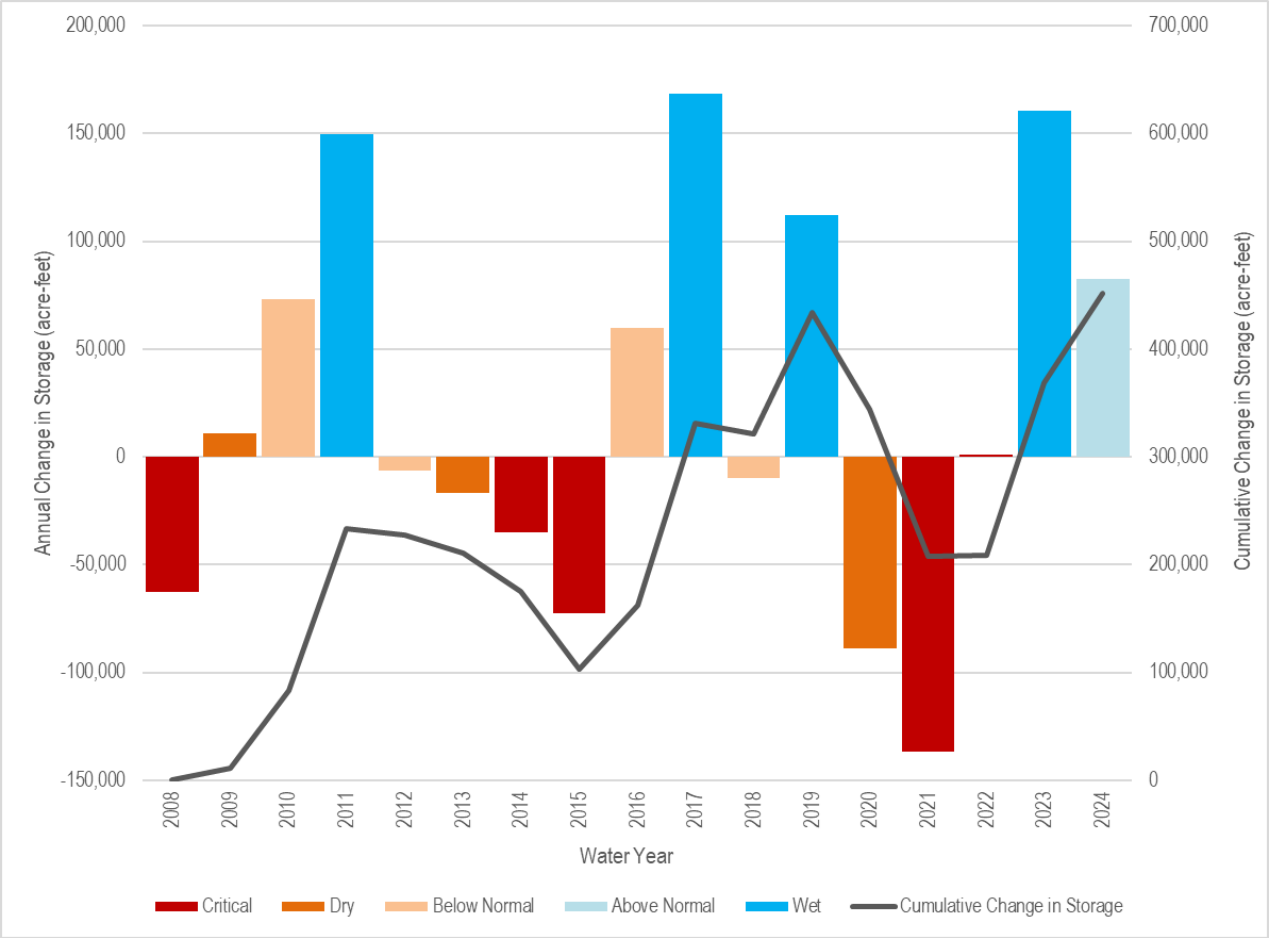
***Notes**: Volumes are reported in acre-feet (AF)*

(1) Sustainable yield is 336,000 AF.

During WY 2024, the change in storage was estimated as an increase of 82,500 AF. Over the reported period (WYs 2008–2024), the Subbasin maintains a positive cumulative change in groundwater storage of approximately 450,000 AF. Change in storage is a function of hydrologic year type and groundwater extraction rates. The years with declining change in storage coincide with dry and critically dry years, when less rainfall percolation and higher groundwater extractions occur to meet agricultural and municipal/industrial demands.

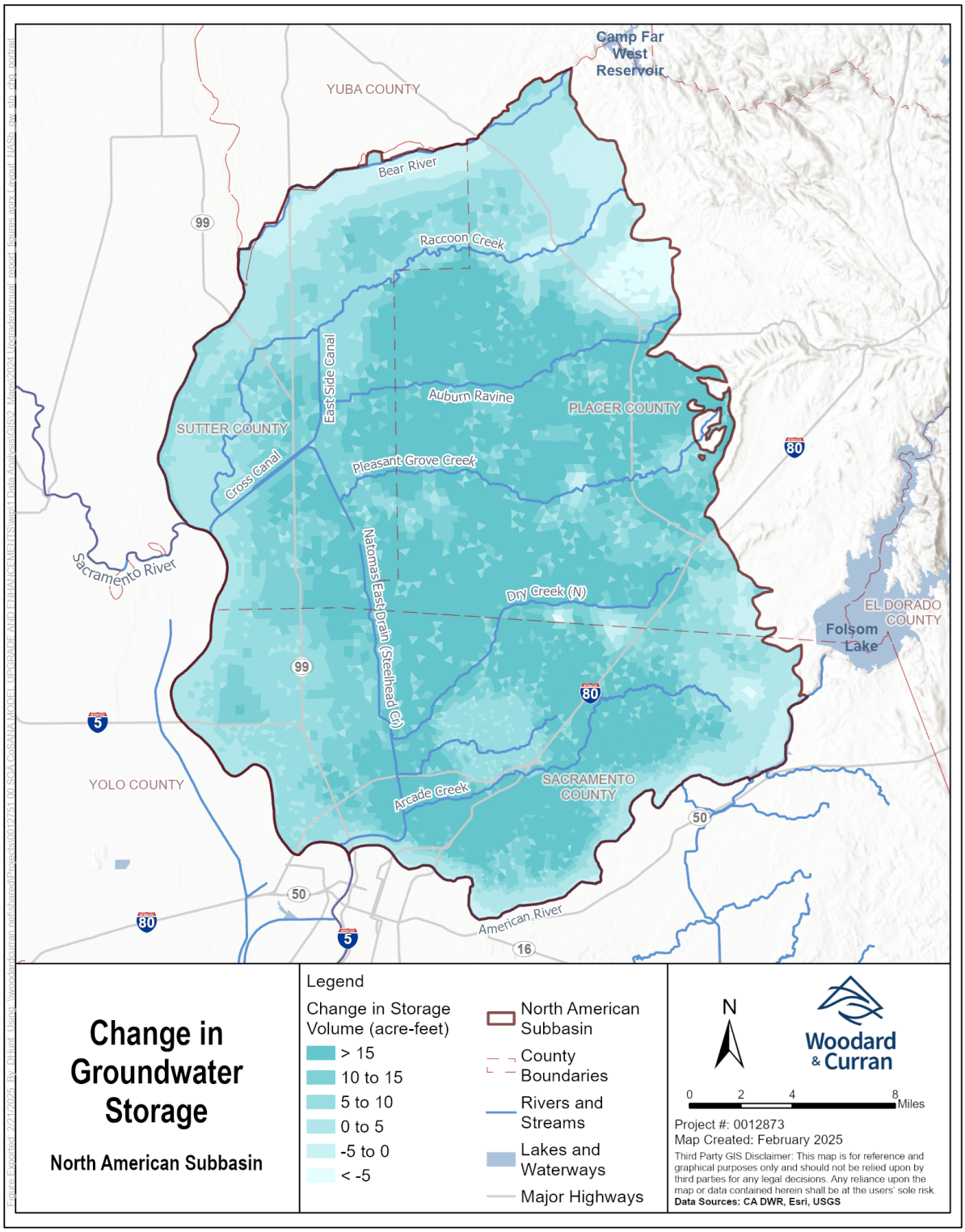
Figure 5-1 shows the annual and cumulative change in storage for WYs 2008-2024 and hydrologic water year type. Groundwater in storage increased from WYs 2008-2019 by approximately 430,000 AF. Drought conditions observed during WYs 2020, 2021, and 2022 resulted in higher reliance on groundwater and reduced recharge, resulting in a reduction of groundwater in storage by about 224,000 AF. However, in WY 2023 the changes in groundwater storage were increased by about 161,000 AF due to a reduction in groundwater pumping and recharge that occurred during hydrologically wet conditions. WY 2024 was designated an above normal water year type, with somewhat reduced pumping and somewhat increased recharge resulting in an increase in groundwater in storage of approximately 82,500 AF.

FIGURE 5-1: CUMULATIVE CHANGE IN GROUNDWATER STORAGE, WY 2008 TO WY 2024



Changes in groundwater storage are influenced by variations in groundwater levels and the physical characteristics of the aquifer. Typically, areas with increased groundwater storage also show increased groundwater levels, as shown in Figures Figure 4-1 through Figure 4-3, and areas with decreased storage typically show decreased levels. There are inherent uncertainties in use of the CoSANA model to estimate changes in groundwater storage, including the groundwater extraction, hydrologic conditions, land use and cropping patterns, representation of lithologic and geologic conditions, physical characteristic of wells and perforation intervals, especially with respect to the agricultural and rural residential wells. Analyzing these figures and data together helps the GSAs better understand the relationship between changes in groundwater levels and storage. Figure 5-2 shows corresponding areas of changes in storage. Several areas within the Subbasin, such as Placer County, the eastern areas of Sutter County, and northern area of Sacramento County, showed a moderate increase in storage with the remaining areas showing little change. Moderate declines were observed in the north-central portion of Sacramento County and along the northern, eastern, and southern boundaries of the Subbasin, primarily along the American River and Bear River.

FIGURE 5-2: CHANGE IN GROUNDWATER STORAGE, WATER YEAR 2024



6. GSP IMPLEMENTATION

The GSAs have operated together under a Memorandum of Agreement (MOA) signed in 2022 to protect the groundwater resources of the Subbasin by meeting the defined sustainability goal and avoiding undesirable results. Projects and Management Actions (PMAs) defined in the GSP (Chapter 9, Projects and Management Actions [NASb, 2021]) were designed to assist the Subbasin in meeting its 20-year sustainability goal. Water Year 2024 is the fourth year GSP implementation activities have occurred in the Subbasin since adoption of the GSP and significant progress has continued to be made in many areas. Implementation activities of PMAs in accordance with the schedule presented in the GSP and the status of each PMA is provided in Table 6-1 below.

The GSAs held coordination meetings in November, March, and June of the Water Year 2024 to assist with implementation of the GSP. Additionally, following the submittal of the Water Year 2023 Annual Report, the GSAs held a virtual public meeting on June 26, 2024, during which the Subbasin conditions and upcoming implementation activities were presented to the public. The intention of this meeting is to engage the public and interested parties, most of whom are beneficial users of groundwater within the Subbasin, along with providing an overview of the Subbasin's current conditions. As part of continued coordination and outreach efforts, the GSAs plan to hold at least one public meeting each year following the completion of the annual report. Other public meetings that occurred in the Subbasin are provided in Table 6-2 below.

Additional GSP implementation actions performed within the Subbasin, along with their status, are shown in Appendix B.

TABLE 6-1: PROJECT AND MANAGEMENT ACTIONS

Project and Management Actions	Status
Project #1: Regional Conjunctive Use Expansion – Phase 1	Continuation of implementing conjunctive use in accordance with the Water Accounting System (WAS). Additional conjunctive use expansion will occur when Sacramento Regional Water Bank becomes operational. Management Action #1 includes the status of planning activities related to Project 1 implementation.
Project #2: Natomas Cross Canal Stability Berm and Channel Habitat Enhancements Project	The Project is being coordinated through CVFPB encroachment permit and USACE Section 408. Design and environmental review are complete, and all other necessary permits have been issued. We hope to have CVFPB permit and USACE Letter of Permission in late 2024 or spring 2025. Construction is planned for late 2025 or 2026. Design and Environmental Review started in late spring of 2020."
Management Action #1: Complete Planning for Sacramento Regional Water Bank	Participating local public agencies continue to make progress developing the Sacramento Regional Water Bank (Water Bank). Specifically last year agencies completed the Water Bank governance document, advanced modeling improvements, started CEQA documentation, and started the water accounting system. Next water year it is anticipated that participating agencies will advance CEQA documentation, advance groundwater and surface water modeling, complete a monitoring plan, and finalize the water accounting system. The Sacramento Regional Water Bank project is anticipated to be completed during the 2026 water year. The current target for completion of the environmental documents necessary for federal acknowledgement of the Water Bank is late 2025.
Management Action #2: Explore Improvements with NASb Well Permitting Programs	Well standards updates were on hold during the Executive Order (EO N-7-22). However, part of the EO included a requirement for GSAs to make written findings that the construction of a new well in a medium- or high-priority subbasins would not be inconsistent with the applicable GSP and decrease the likelihood of achieving the subbasins sustainability goal. Additionally, DWR is in process of updating Bulletin 74: California Well Standards, which is anticipated to be published by spring 2026. Each GSA developed a well standards process to adapt to EO N-7-22 and implemented their process during WY 2024. SGA received no well applications for WY 2024. SGA also met with local agencies to discuss potential new standards during WY 2024. WPGSA and Placer County Environmental Health maintain an approach for well permitting pursuant to the EO N-7-22. Revisions to Placer County well standards are still under discussion between both entities. One well permit application was submitted to WPGSA in Water Year 2024. WPGSA provided recommendations to the applicant on well siting and potential limits on pumping during certain periods of the calendar year.
Management Action #3: Proactive Coordination with Land Use Agencies	The GSAs regularly coordinate with land use planning agencies, so they are aware of activities related to GSP implementation through stakeholder communications, public meetings, intrabasin GSA meetings, and other forms of outreach. The GSAs are evaluating active land use plans and will continue to evaluate future updates to these plans and their impacts to managing groundwater within their jurisdiction. The WPGSA, in coordination with the Placer County Planning Services

Project and Management Actions	Status
	Department, prepared the *SGMA Guidance Document for Analysis of Groundwater Impacts for Development Requiring CEQA Analysis* within Placer County. The document was shared with the other GSAs. WPGSA has continued annual meetings with Placer County Planning Services and invited members of the department to the GSA's monthly meetings. WPGSA is also engaged with Planning Services on updates to the County's General Plan on aspects related to groundwater conditions and use.
Management Action #4: Domestic/Shallow Well – Data Collection and Communication Program	The GSAs are currently using DWR's Online System of Well Completion Reports (OSWCR) and assessor parcel number (APNs) data to identify potential domestic well owners within the Subbasin. This information would be used to develop a mailing list that would be sent to high concentration areas of domestic and other shallow wells to assist with the following actions: confirm the presence of a well; establish a voluntary group of domestic well owners interested in local groundwater conditions; and, provide regular information to interested domestic well owners and Subbasin well permitting agencies. SGA completed the desktop analysis of the entire Subbasin in October 2024 and is preparing a summary report and coordinating outreach methods. WPGSA is in the process of updating an outreach mailing list to domestic well owners, which is comprised of Well Completion Report data provided by OSWCR. In Water Year 2024, WPGSA used the existing mailing list to communicate current groundwater conditions as well as local projects & management actions. The WPGSA intends to initiate a more in-depth approach to identity parcels not served by public water systems not identified in the DWR database; we are planning to begin this work in spring/summer of 2025. Once additional parcels have been identified, WPGSA will expand its outreach to include these beneficial users.
Management Action #5: Groundwater Dependent Ecosystem (GDE) Assessment Program	The GSAs are researching options for assessing GDEs health despite no records of unreasonable impacts to GDEs within the Subbasin. Additionally, SGA was awarded funding through the DWRs SGM Grant Round II, and the GSAs plan to construct four new monitoring wells within areas identified in Section 7.4.6 Data Gaps of the GSP that would help enhance the GSAs understanding of groundwater levels near priority GDE areas. After GDE data gaps are addressed, the GSAs plan to assess and evaluate additional activities needed to sustain GDEs.

TABLE 6-2: PUBLIC OUTREACH AND ENGAGEMENT ACTIVITIES

Agency	Date	Communication Tactics / Tools	Key Messages
RWA	10/10/2023	Scoping & Public Meeting	Hosted an in person public meeting consistent with CEQA requirements taking questions and providing information related to the development of the Project Description for the Sacramento Regional Water Bank (Management Action #1).
RWA	10/11/2023	Scoping & Public Meeting	Hosted an in person public meeting consistent with CEQA requirements taking questions and providing information related to the development of the Project Description for the Sacramento Regional Water Bank (Management Action #1).
SGA	10/12/2023	Board Meeting	Presented on SGA's engagement in the Sacramento Regional Water Bank and provided an update on SGMA GSP Implementation and DWR SGM Round 2 Grant Award.
RWA	12/12/2023	Public Meeting	Conducted a large hybrid public meeting to obtain feedback and provide an update on the development of the Sacramento Regional Water Bank (Management Action #1).
SGA	12/14/2023	Board Meeting	Presented on SGA's WAF.
NCMWC / Sutter GSA	2/13/2024	Annual Meeting	Discussion on SGMA and the GSP.
WPGSA / SSWD	4/9/2024	Ag. Tailgate Meeting & Presentation	Overview of WY 2023 Annual Report, current conditions, GSP implementation activities
SGA	4/11/2024	Board Meeting	Presented on GSP Implementation, DWR SGM Grant Round 2 Award, and development of the WY 2023 Annual Report.
NASb GSAs	5/29/2024	Public Meeting	Presented on several of the seven proposed components, or projects, of the DWR SGM Grant Round II Awarded to the NASb to provide project information and obtain feedback.
NASb GSAs	6/26/2024	Public Meeting	WY 2023 Annual Report, current conditions, ongoing GSP implementation activities.
SSWD GSA	6/27/2024	Meeting and presentation	Updates on SGMA funding for the Subbasin.
RD 1001 GSA	Monthly	Board Meeting	Subbasin groundwater conditions update.

6.1 GSP Corrective Actions

Six recommended corrective actions were provided by DWR in the determination letter dated July 27, 2023. The recommended actions included defining the bottom of the Subbasin; reevaluating sustainable management criteria for inelastic land subsidence, degraded water quality, and depletions of interconnected surface water; reconciling inconsistencies within representative monitoring networks; and addressing data gaps. The GSAs are preparing a Periodic Evaluation and Amended GSP for the Subbasin which will address the recommended corrective actions. The Periodic Evaluation and Amended GSP will be submitted to DWR by January 31, 2027.

6.2 Monitoring Network Changes

No changes were made to the Subbasin's representative monitoring network during WY 2024.

6.3 Progress Toward Filling Data Gaps

The GSAs received funding from the DWR SGM Grant Round II for the construction of eight new monitoring wells that would assist with filling potential data gaps identified in the GSP. Installation activities are expected to begin in June 2025 and end by October 2025.

6.4 Intrabasin Communication

In WY 2024, the GSAs met with the South American Subbasin GSAs on November 6, 2023, and May 22, 2024. These meetings included coordination and discussion related to updated basin conditions and efforts to upgrade the CoSANA model.

Additional GSP implementation actions are shown in Appendix B.

7. SUSTAINABILITY INDICATORS

The GSAs are committed to implementing a GSP that achieves the sustainability goal for the Subbasin and avoids undesirable results. This section includes a detailed description of groundwater conditions for each applicable GSP sustainability indicator, displayed in Table 7-1.

TABLE 7-1: SUSTAINABILITY INDICATORS AND UNDESIRABLE RESULT DEFINITIONS

Sustainability Indicator	Undesirable Result Definition	Occurrence of Undesirable Result
Groundwater Levels	20% (8 out of 40 wells) or more of all representative monitoring sites have minimum threshold exceedances for two consecutive fall measurements.	**No**
Groundwater Storage		**No**
Water Quality	***Public Water Supply Wells*** The Subbasin-wide average TDS concentrations of all public water system wells exceeds 400 mg/L. or The Subbasin-wide average nitrate (as N) concentration of all public water system wells exceeds 8 mg/L. ***Shallow Aquifer Wells (i.e., domestic and self-supplied)*** TDS and nitrate (as N) concentrations exceed minimum thresholds in 25% of the representative monitoring sites.	**No**
Land Subsidence	The rate of inelastic subsidence exceeds 0.5 feet over a 5-year period over an area covering approximately 5 or more square miles.	**No**
Depletions of Interconnected Surface Water	20% (5 out of 24 wells) or more of the interconnected surface water representative monitoring sites have minimum threshold exceedances for two consecutive fall measurements.	**No**

***Notes**: mg/L = milligrams per liter; TDS = total dissolved solids*
Source: NASb, 2021

7.1 Chronic Lowering of Groundwater Levels

In fall 2024[1], five representative monitoring sites exceeded their minimum threshold, all located in northern part of the Placer County portion of the Subbasin, as shown in Table 7-2 and Figure 7-1. Of these wells, consecutive fall minimum threshold exceedances were observed in MW 2-3, RDMW-104, Old Well #2, and WPMW-11A.The consecutive minimum threshold exceedances accounted for 10% of the representative monitoring sites, below the undesirable result definition of 20%. As a result, undesirable results did not occur for the chronic lowering of groundwater levels sustainability indicator, as defined in Table 7-1. A minimum threshold exceedance was observed at RDMW-103; however, the threshold was not exceeded in

[1] Fall 2024 measurements were sampled in October 2024, categorially Water Year 2025. Previous Annual Reports for the Subbasin have reported groundwater levels from October of the calendar, as a result the GSAs have reported fall 2024 data to remain consistent with previous Annual Reports.

Fall 2023, thus the monitoring site did not have consecutive exceedances. In WY 2024, 65% of representative monitoring sites met measurable objectives.

The GSAs are continuing efforts to determine the causes and potential impacts of these exceedances. No dry wells were reported to the DWR in WY 2024. In response to these consecutive exceedances, the GSAs are continuing the following activities:

- Increased frequency of monitoring at wells that have had two or more consecutive minimum threshold exceedances to assess if lowering groundwater levels are due to local or regional pumping.
- Continued assessment of potential groundwater recharge options near wells with minimum threshold exceedances.
- Continued evaluation of potential causes of minimum threshold exceedances and whether these exceedances are resulting in negative effects to beneficial users.
- Evaluating whether minimum thresholds set for representative monitoring sites identified in the GSP are appropriate for evaluating Subbasin conditions.

Evaluation of the appropriateness of the minimum thresholds is particularly important as two of the five representative monitoring sites with minimum threshold exceedances in fall 2024 had less than two years of monitoring data prior to the development of the GSP. The GSAs are evaluating whether the minimum thresholds set for these sites are effective for identifying undesirable results within the Subbasin. During the development of the Periodic Evaluation, the GSAs will continue assessing new and existing data as they evaluate sustainable management criteria for groundwater levels.

Figure 7-1 shows the locations of the groundwater level representative monitoring site wells and their fall 2024 groundwater elevations in relation to their minimum thresholds. Additionally, Table 7-2 presents spring and fall groundwater levels from representative monitoring sites from WYs 2020-2024, as well as their minimum thresholds and measurable objectives. As discussed in the WY 2023 Annual Report, monitoring site WPMW-2A was destroyed in WY 2023, a result of new road construction, and will no longer be included as a representative monitoring site for groundwater levels.

TABLE 7-2: GROUNDWATER ELEVATIONS AT GROUNDWATER LEVELS REPRESENTATITVE MONITORING SITES, WATER YEARS 2020-2024

GSP RMS Number	Local Well Name	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	MT	MO
2	SGA_MW06	12.59	9.24	9.69	7.79	9.44	7.78	13.09	11.97	13.93	12.29	1	5
3	SGA_MW04	2.59	0.19	0.89	-1.36	0.34	-0.42	7.58	3.39	6.69	3.20	-5	-1
11	Bannon Creek Park	1.66	-1.09	-0.40	-1.54	0.26	-1.74	4.65	0.16	4.26	-0.09	-5	-2
13	Chuckwagon Park	-7.19	-8.94	-8.69	-10.49	-9.39	-11.34	-4.54	-3.79	0.36	-3.09	-15	-13
14	13N04E23A002M	45.28	40.98	39.88	28.88	32.18	27.88	36.64	34.72	38.28	37.13	26	45
17	AB-2 Shallow	19.80	10.01	11.61	-8.41	3.07	-7.69	7.24	0.91	7.96	-7.62	-17	13
20	SGA_MW05	-13.68	-22.28	-16.78	-27.98	-19.63	-27.43	-19.44	-18.26	-14.38	-16.45	-37	-25
22	AB-4 Shallow	8.59	4.98	6.26	4.93	9.03	3.46	11.45	7.53	12.48	8.17	-1	4
24	SGA_MW02	-13.36	-15.11	-14.96	-16.86	-15.46	-16.91	-14.21	-13.91	-12.31	-12.50	-27	-23
27	AB-3 Shallow	8.52	8.91	7.95	8.06	8.75	5.70	9.53	9.81	10.97	9.46	-4	-1
28	Twin Creeks Park	-6.40	-12.75	-9.20	-16.10	-12.30	-16.00	-13.45	-12.85	-10.30	-10.90	-28	-19
37	SUT-P1	19.23	18.71	16.50	18.65	16.51	12.21	24.81	19.50	25.85	15.21	10	20
38	Lone Oak Park	-10.53	-15.03	-12.88	-17.68	-15.23	-16.91	-15.18	-14.43	-11.00	-13.26	-27	-21
39	AB-1 Shallow	34.16	27.46	27.08	9.70	17.66	5.39	22.92	21.38	26.48	12.78	3	31
44	WPMW-10A	137.21	135.21	136.11	134.01	135.51	134.37	139.56	134.81	138.38	135.05	133	140
45	WPMW-9A	140.66	137.86	139.26	136.76	138.53	137.46	142.08	136.86	141.26	136.96	135	143
46	SVMW West - 1A	-12.35	-17.45	-13.81	-20.70	-16.55	-21.25	-16.48	-16.27	-12.43	-14.00	-32	-22
48	WPMW-4A	78.47	79.07	79.47	79.07	79.19	79.07	79.37	81.68	79.95	79.99	75	78
61	Sutter County MW-5A	17.15	16.80	14.34	10.88	14.95	14.40	20.70	18.40	22.02	17.21	10	18
63	WPMW-3A	147.57	147.43	147.29	146.60	147.51	146.90	148.60	148.00	149.33	148.38	145	147
65	MW 1-3	58.37	56.47	57.88	55.23	57.03	54.74	58.31	56.86	59.31	55.87	49	55
66	MW 5-2	110.51	108.65	109.31	108.05	110.96	108.93	112.59	110.05	111.33	109.83	108	112
71	WCMSS	-15.26	-28.76	-20.26	-27.76	-22.41	-29.31	-22.76	-21.26	-16.04	-19.26	-40	-32
75	MW 2-3	95.19	87.79	91.72	83.83	88.58	83.04	90.95	84.72	90.81	85.86	89	94

GSP RMS Number	Local Well Name	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	MT	MO
77	SREL-1-27-F1	14.06	11.55	13.84	11.57	11.84	10.38	22.22	16.26	22.44	16.06	9	16
89	Roseview Park - 315	-4.86	-9.41	-6.61	-11.91	-9.46	-11.76	-10.46	-10.06	-7.66	-8.76	-22	-13
90	WPMW-12A	-13.98	-27.28	-18.93	-34.54	-23.08	-35.53	-24.63	-30.95	-21.58	-27.50	-45	-30
91	WPMW-11A	22.47	13.43	19.55	6.04	12.58	0.52	11.48	0.72	8.07	-0.73	3	13
92	RDMW-101	19.69	17.92	17.65	16.73	19.49	16.46	26.35	19.71	24.58	19.15	15	18
93	RDMW-102	19.26	13.86	15.48	10.40	15.33	11.03	20.85	16.28	22.13	15.53	12	16
94	RDMW-103	68.09	61.09	62.99	54.13	59.71	50.68	65.76	58.38	64.73	57.48	58	65
95	RDMW-104	67.20	59.91	61.80	52.01	58.52	51.08	64.58	56.68	62.98	55.85	57	65
96	Aerojet - 1516	70.87	70.20	69.89	69.43	69.76	69.72	73.89	---	72.01	70.13	67	70
97	Aerojet - 1518	62.50	61.46	60.56	59.87	60.42	60.48	65.56	62.97	63.06	61.76	57	59
98	URS71000-700+00C	11.80	9.85	9.04	7.74	10.38	7.60	16.03	11.84	16.15	10.17	7	10
103	BR-1B	46.81	43.95	40.46	36.28	40.99	36.97	43.86	41.17	46.06	42.17	36	45
104	SGA_MW08	107.21	106.71	106.76	106.31	106.21	105.76	105.76	105.46	105.03	104.63	97	99
109	SGA_MW01	-15.66	-18.61	-16.51	-20.41	-18.26	-20.61	-18.71	-21.08	-17.86	-19.52	-33	-30
116	Old Well #2	78.90	72.93	72.98	67.22	69.10	65.30	69.05	66.05	69.00	65.50	68	76
126	DeWit	---	---	4.95	-2.30	5.30	-3.80	6.85	5.30	8.10	3.26	-25	-13

***Notes**:*

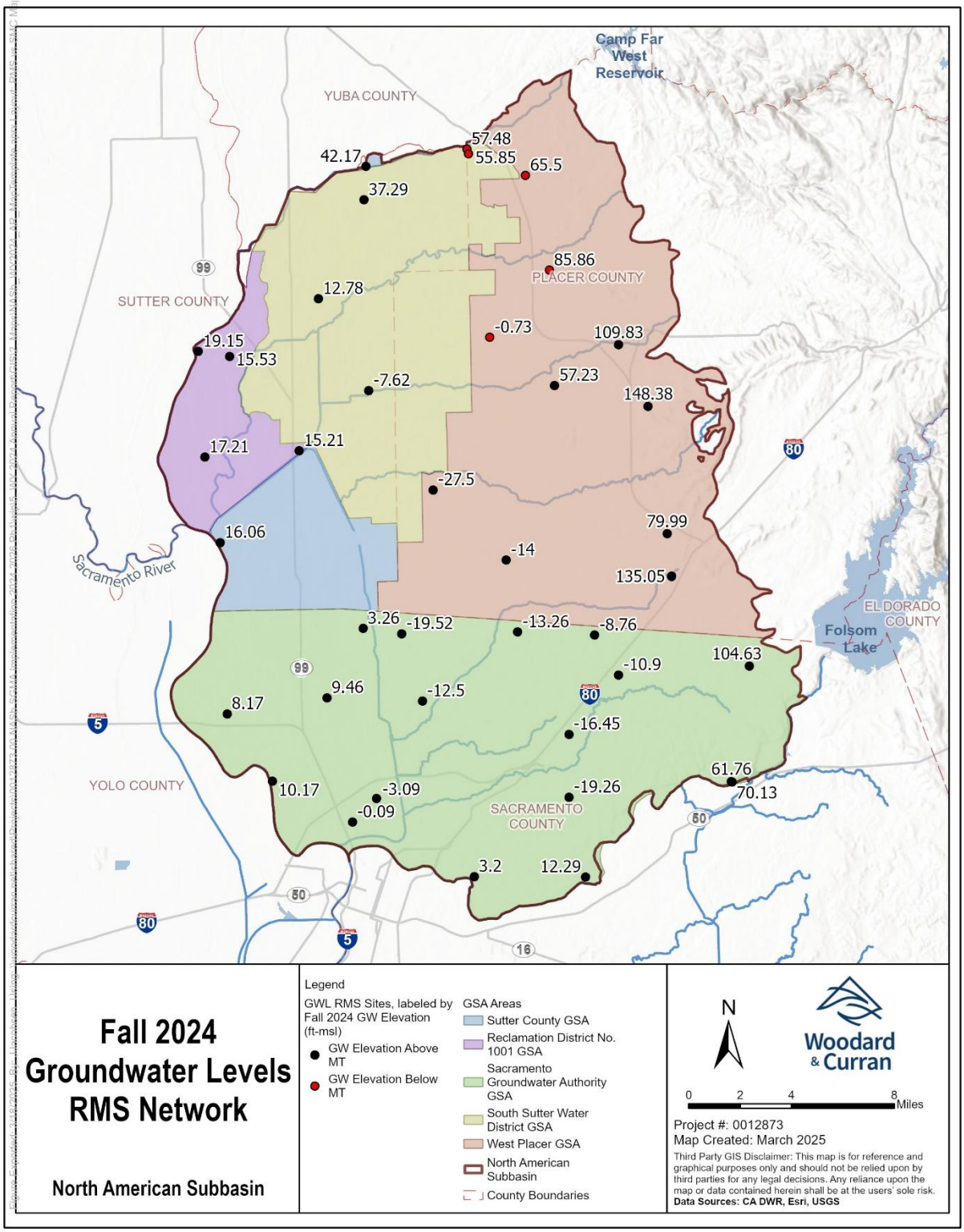
Groundwater elevations are reported in feet above mean sea level (ft. a-msl), datum NAVD88.

Shaded value indicates a measurement exceeds the minimum threshold.

"---" represents no measurement available.

Fall 2024 data was collected in October 2024 (Water Year 2025), data is provided in this Annual Report to remain consistent with approaches in previous Annual Reports.

FIGURE 7-1: GROUNDWATER LEVELS REPRESENTATIVE MONITORING, FALL 2024



7.2 Reduction of Groundwater in Storage

Groundwater levels are used as a proxy for defining the quantitative thresholds for reduction in groundwater storage, as supported in the GSP regulations. As described in Section 7.1, the Subbasin is not currently experiencing an undesirable result with respect to groundwater levels, and through the use of proxy is thus not currently experiencing an undesirable result with respect to reduction of groundwater in storage.

7.3 Degraded Water Quality

The GSP outlines the procedure to determine whether degraded water quality is occurring in the Subbasin. This methodology analyzes water quality data recorded from both public water supply wells and shallow monitoring wells. The California State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) requires all active public supply wells to be sampled and analyzed periodically to ensure compliance with California Water Code Title 22 constituent standards. Data is subsequently recorded and is publicly available via SWRCB's Groundwater Ambient Monitoring and Assessment (GAMA) Program. During WY 2024, data for Total Dissolved Solids (TDS) and Nitrate (N as Nitrate) was sourced from GAMA and compared to their respective sustainable management criteria based on well category (DWR, 2025c).

7.3.1 Public Water Supply Wells

For public water system wells, the GSP states that degraded water quality for public supply wells exceeds the threshold of "significant and unreasonable" if either of the following outcomes occur:

- The basin wide average TDS concentrations for all public water system wells exceeds 400 mg/L.
- The basin wide average nitrate (as N) concentration for all public water system wells exceeds 8 mg/L.

Minimum thresholds for both constituents were established to be consistent with state and federal drinking water standards. As established in the GSP, minimum threshold exceedances occur when:

- TDS concentrations exceed the state SMCL of 500 mg/L (SWRCB, 2018).
- Nitrate (as N) concentrations exceed the state MCL of 10 mg/L (SWRCB, 2024a).

Measurable objectives for degraded water quality were established at concentrations slightly higher than annual averages observed in public supply wells. As a result, the measurable objective for TDS is 300 mg/L and 3 mg/L for Nitrate (as N).

The average concentration of TDS and Nitrate (as N) in public water supply wells during Water Year 2024 were 277 and 1.6 mg/L, respectively. As a result, the observed conditions do not indicate the occurrence of an undesirable result. Additionally, measurable objectives were achieved for both constituents during the water year. Table 7-3 and Table 7-4 summarize public water supply data for TDS and Nitrate, respectively.

TABLE 7-3: SUMMARY OF TDS IN PUBLIC WATER SUPPLY WELLS, WATER YEARS 2020-2024

	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024
Number of Wells with Analytical Results	75	70	46	69	62
Date Range of Samples	10/10/2019 - 9/3/2020	11/19/2020 - 8/25/2021	12/7/2021 - 8/30/2022	10/6/2022 - 9/19/2023	10/4/2023 - 8/7/2024
Minimum Concentration	38	48	10	47	76
Maximum Concentration	500	650	471	510	560
Average Concentration	247	270	256	250	277
Minimum Threshold[2]	500	500	500	500	500
Measurable Objective	300	300	300	300	300
Number of Wells Exceeding Minimum Threshold	1	2	0	2	3

Notes: *Total dissolved solids (TDS) concentrations are reported in milligrams per liter (mg/L).*

(1) The minimum threshold for TDS, as established in the GSP, is the secondary drinking water standard, which has a recommended SMCL of 500 mg/L. An undesirable result for public water supply wells would occur if the average concentration of TDS exceeds 400 mg/L.

Sources*: NASb 2021; SWRCB, 2018.*

FIGURE 7-2: AVERAGE TDS CONCENTRATIONS, WATER YEARS 2020-2024

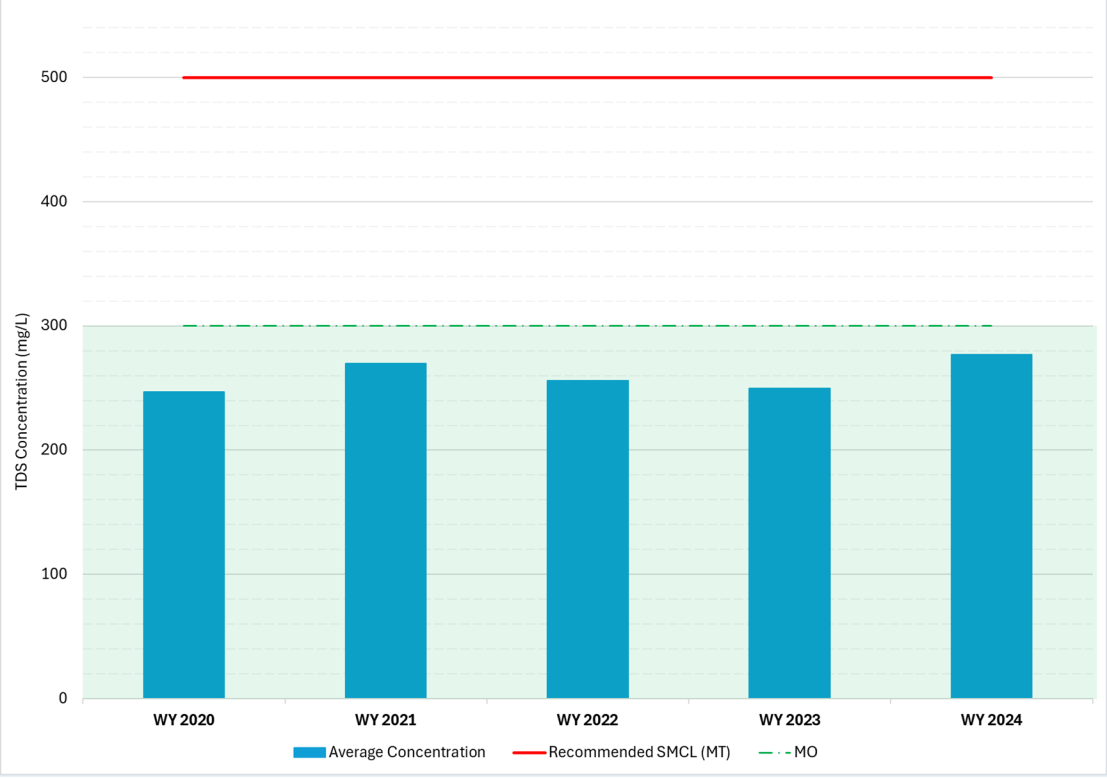


TABLE 7-4: SUMMARY OF NITRATE (AS N) IN PUBLIC WATER SUPPLY WELLS, WATER YEARS 2020-2024

	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024
Number of Wells with Analytical Results	217	211	208	206	200
Date Range of Samples	10/10/2019 - 9/23/2020	10/9/2020 - 9/27/2021	11/17/2021 - 9/27/2022	10/13/2022 - 9/25/2023	10/16/2023 - 9/10/2024
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Concentration	9.60	9.80	9.40	9.10	9.40
Average Concentration[1]	1.75	1.72	1.65	1.58	1.66
Minimum Threshold[2]	10	10	10	10	10
Measurable Objective	8	8	8	8	8
Number of Wells Exceeding Minimum Threshold	0	0	0	0	0

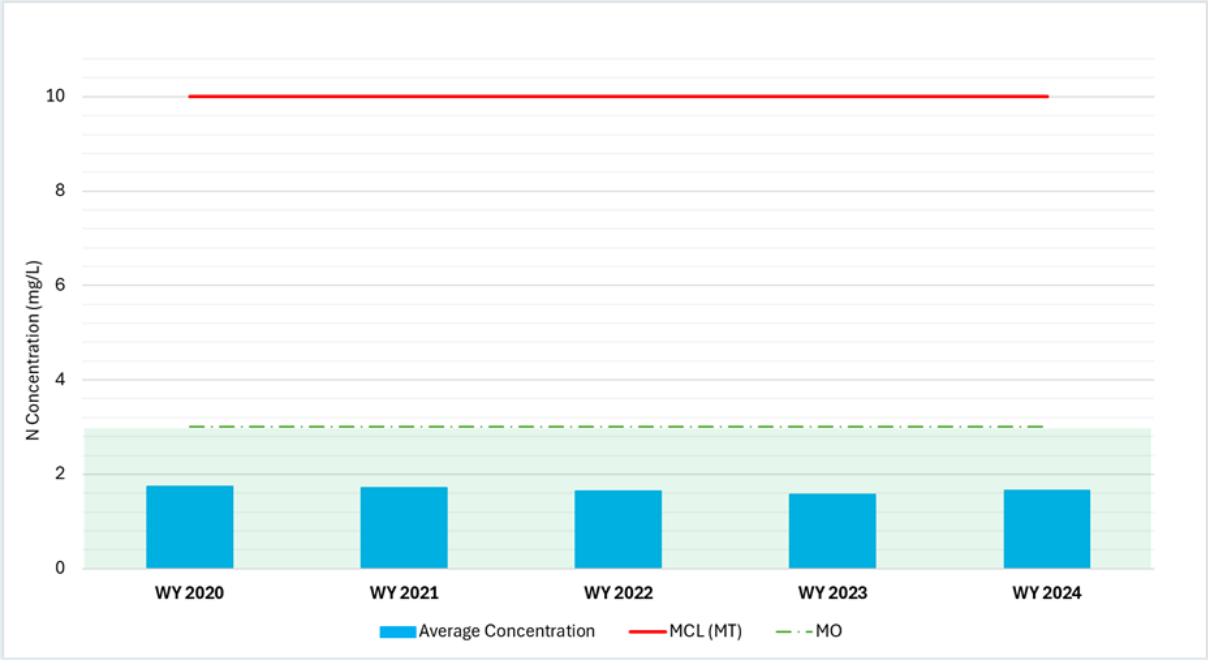
Notes: *Nitrate (as N) concentrations are reported in milligrams per liter (mg/L).*

(1) For average concentrations, values below laboratory detection levels were calculated as half the reporting limit.

(2) The minimum threshold for nitrate (as N), as established in the GSP, is the state drinking water standard, which has a primary MCL of 10 mg/L. An undesirable result for public water supply wells would occur if the average concentration of nitrate exceeds 8 mg/L.

Sources*: NASb, 2021; SWRCB, 2024.*

FIGURE 7-3: AVERAGE NITRATE (AS N) CONCENTRATIONS, WATER YEARS 2020-2024



7.3.2 Shallow Aquifer Wells

Water quality sampling of the shallow aquifer representative monitoring sites occurred between October 16, 2023, and October 30, 2023. While technically in WY 2024, these results were reported in the NASb WY 2023 Annual Report, including a technical memorandum that evaluated the distribution of TDS, nitrate, arsenic, boron, hexavalent chromium, iron, and manganese. Sampling of the shallow aquifer monitoring sites is scheduled to occur biennially and will be conducted in October 2025. Analytical results from the shallow aquifer monitoring sites are included in Table 7-5 and Table 7-6 for TDS and nitrate, respectively. The locations of the shallow aquifer sites and public water supply wells used to evaluate water quality and the distribution of TDS and nitrate in the Subbasin are illustrated in Figure 7-4 and Figure 7-5, respectively. Concentrations of TDS in the shallow aquifer ranged from 97 to 320 mg/L, below the minimum threshold of 500 mg/L. Additionally, measurable objectives for TDS were achieved in eight of the sixteen monitoring sites sampled. Nitrate concentrations ranged from below reporting limits (<0.40 mg/L) to 4.0 mg/L. All monitoring sites remained below minimum thresholds and measurable objectives were achieved in four wells. As a result, water quality conditions observed during WY 2024 do not indicate the occurrence of an undesirable result for the Subbasin.

TABLE 7-5: SHALLOW AQUIFER TDS CONCENTRATIONS, WATER YEARS 2020-2024

RMS Number	Local Well Name	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	MT	MO
Shallow Aquifer Monitoring Sites								
39	AB-1 shallow	---	---	---	---	170	500	150
17	AB-2 shallow	---	---	---	---	250	500	220
27	AB-3 shallow	---	---	---	---	170	500	170
80	Cemetery (IRLP)	---	---	240	---	260	500	290
133	LW-1	240	200	220	240	260	500	220
99	Main Well	---	---	---	---	---	500	TBD
89	Roseview Park - 315	---	---	---	---	240	500	210
109	SGA_MW01	---	---	---	---	320	500	360
24	SGA_MW02	---	---	---	---	250	500	300
20	SGA_MW05	---	---	---	---	98	500	300
37	SUT-P1	---	---	---	---	97	500	120
46	SVMW West - 1A	---	---	180	---	200	500	TBD
91	WPMW-11A	---	---	210	---	220	500	240
90	WPMW-12A	---	200	210	---	220	500	230
Shallow Public Water Supply Wells								
177	Well 22 – Northop	110	---	---	94	---	500	120
298	Tinker Road Well	220	280	200	241	240	500	240
299	Well 03	---	---	260	---	---	500	290

Notes:
Total dissolved solids (TDS) concentrations are reported in milligrams per liter (mg/L).
"---" represents no measurement available.
Measurable Objectives under development for Shallow Aquifers sites are marked "TBD"
Sources: *SWRCB, 2025c*

TABLE 7-6: SHALLOW AQUIFER NITRATE (AS N) CONCENTRATIONS, WATER YEARS 2020-2024

RMS Number	Local Well Name	WY 2020	WY 2021	WY 2022	WY 2023	WY 2024	MT	MO
Shallow Aquifer Monitoring Sites								
39	AB-1 shallow	---	---	---	---	<0.23	10	TBD
17	AB-2 shallow	---	---	---	---	<0.23	10	TBD
27	AB-3 shallow	---	---	---	---	<0.23	10	TBD
80	Cemetery (IRLP)	---	---	---	1.50	1.40	10	TBD
133	LW-1	3.20	3.60	3.00	3.90	4.00	10	4.00
99	Main Well	<0.40	<0.40	<0.40	<0.40	<0.40	10	TBD
89	Roseview Park - 315	---	---	---	---	1.10	10	TBD
109	SGA_MW01	---	---	---	---	6.00	10	1.00
24	SGA_MW02	---	---	---	---	6.20	10	4.50
20	SGA_MW05	---	---	---	---	0.63	10	1.70
37	SUT-P1	---	---	---	---	<0.23	10	TBD
46	SVMW West - 1A	---	---	---	1.60	1.80	10	TBD
91	WPMW-11A	---	1.00	---	1.20	1.30	10	1.10
90	WPMW-12A	---	0.58	0.33	0.73	0.72	10	0.64
Shallow Public Water Supply Wells								
177	Well 22 – Northop	<0.40	<0.40	<0.40	<0.23	0.18	10	TBD
298	Tinker Road Well	3.87	3.83	3.75	3.72	4.00	10	4.26
299	Well 03	1.61	---	1.82	---	2.10	10	1.42

Notes:
Nitrate (as N) concentrations are reported in milligrams per liter (mg/L).
"---" represents no measurement available.
Measurable Objectives under development for Shallow Aquifer sites are marked "TBD"
Sources: *SWRCB, 2025c; SWRCB, 2024b*

FIGURE 7-4: TDS CONCENTRATIONS AT REPRESENTATIVE MONITORING SITES, WATER YEAR 2024

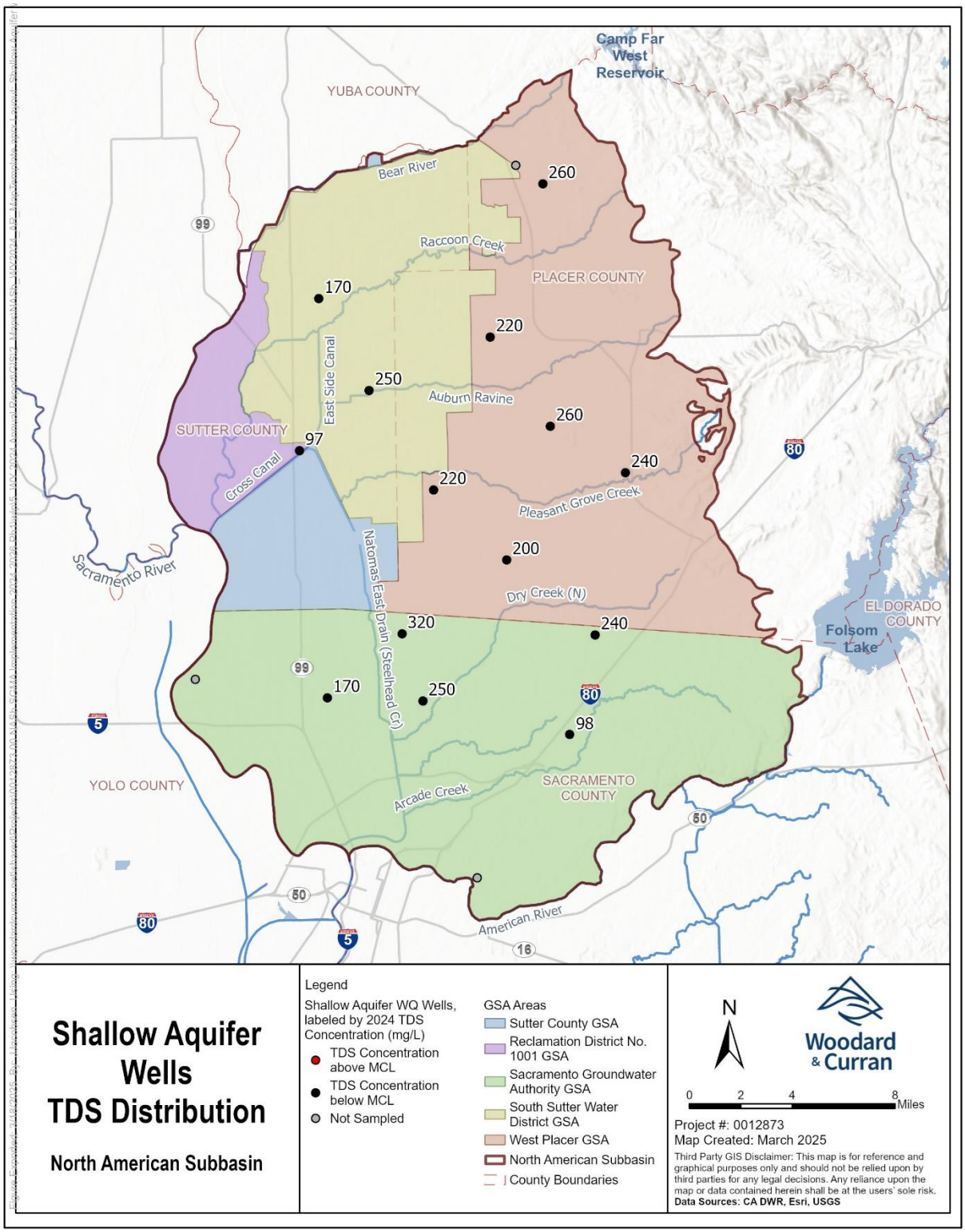
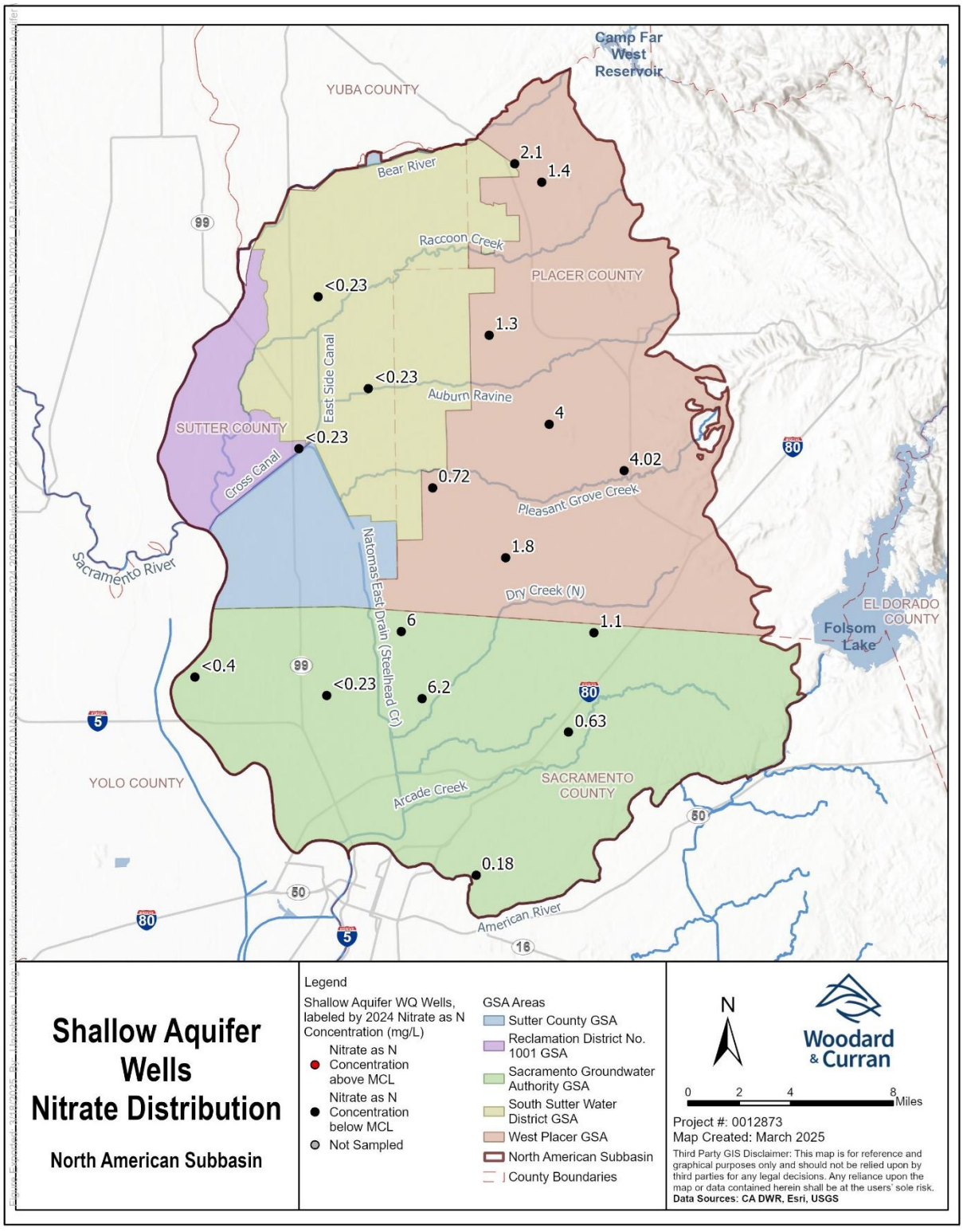


FIGURE 7-5: NITRATE (AS N) CONCENTRATIONS AT REPRESENTATIVE MONITORING SITES, WATER YEAR 2024



7.4 Inelastic Land Subsidence

Sustainable management criteria for inelastic land subsidence were defined using groundwater levels as a proxy to evaluate land surface elevation changes as a result of GSA activities. Water levels measured in fall 2024 showed minimum thresholds exceedances at two representative monitoring sites. However, groundwater levels observed since adoption of the GSP do not constitute an undesirable result, as defined in Table 7-1. Table 7-7 provides spring and fall groundwater level measurements from representative monitoring sites from WY 2020-2024. Additionally, Figure 7-6 includes the locations of representative monitoring sites and data collected in fall 2024.

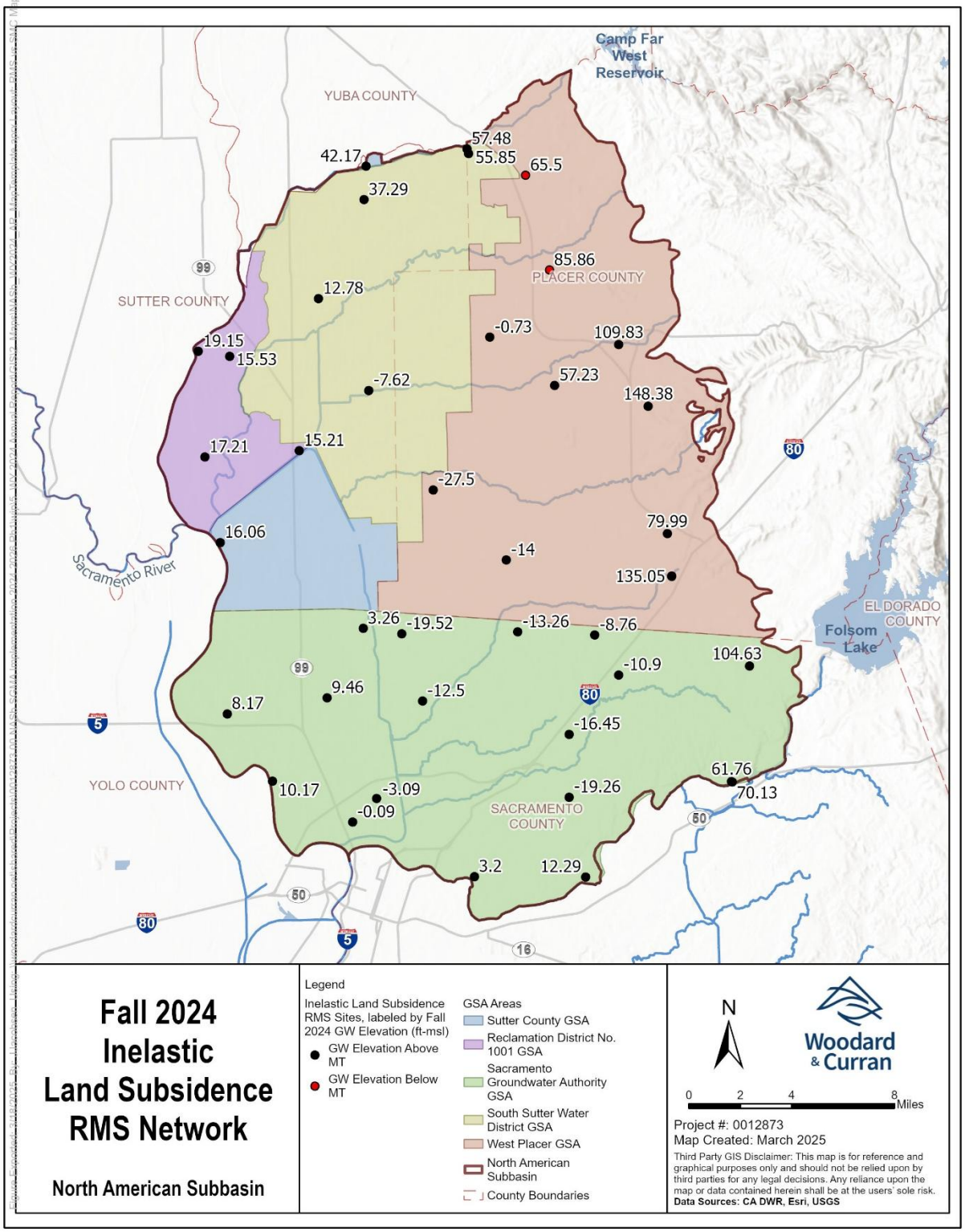
TABLE 7-7: INELASTIC LAND SUBSIDENCE REPRESENTATIVE MONITORING, WATER YEARS 2020-2024

GSP RMS Number	Local Well Name	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	MT	MO
2	SGA_MW06	12.59	9.24	9.69	7.79	9.44	7.78	13.09	11.97	13.93	12.29	1	5
3	SGA_MW04	2.59	0.19	0.89	-1.36	0.34	-0.42	7.58	3.39	6.69	3.20	-5	-1
11	Bannon Creek Park	1.66	-1.09	-0.40	-1.54	0.26	-1.74	4.65	0.16	4.26	-0.09	-5	-2
13	Chuckwagon Park	-7.19	-8.94	-8.69	-10.49	-9.39	-11.34	-4.54	-3.79	0.36	-3.09	-15	-13
14	13N04E23A002M	45.28	40.98	39.88	28.88	32.18	27.88	36.64	34.72	38.28	37.13	15	45
17	AB-2 Shallow	19.80	10.01	11.61	-8.41	3.07	-7.69	7.24	0.91	7.96	-7.62	-21	13
20	SGA_MW05	-13.68	-22.28	-16.78	-27.98	-19.63	-27.43	-19.44	-18.26	-14.38	-16.45	-37	-25
22	AB-4 Shallow	8.59	4.98	6.26	4.93	9.03	3.46	11.45	7.53	12.48	8.17	-1	4
24	SGA_MW02	-13.36	-15.11	-14.96	-16.86	-15.46	-16.91	-14.21	-13.91	-12.31	-12.50	-27	-23
27	AB-3 Shallow	8.52	8.91	7.95	8.06	8.75	5.70	9.53	9.81	10.97	9.46	-4	-1
28	Twin Creeks Park	-6.40	-12.75	-9.20	-16.10	-12.30	-16.00	-13.45	-12.85	-10.30	-10.90	-28	-19
37	SUT-P1	19.23	18.71	16.50	18.65	16.51	12.21	24.81	19.50	24.81	15.21	8	20
38	Lone Oak Park	-10.53	-15.03	-12.88	-17.68	-15.23	-16.91	-15.18	-14.43	-11.00	-13.26	-27	-21
39	AB-1 Shallow	34.16	27.46	27.08	9.70	17.66	5.39	22.92	21.38	26.48	12.78	-5	31
44	WPMW-10A	137.21	135.21	136.11	134.01	135.51	134.37	139.56	134.81	138.38	135.05	133	140
45	WPMW-9A	140.66	137.86	139.26	136.76	138.53	137.46	142.08	136.86	141.26	136.96	131	143
46	SVMW West - 1A	-12.35	-17.45	-13.81	-20.70	-16.55	-21.25	-16.48	-16.27	-12.43	-14.00	-32	-22
48	WPMW-4A	78.47	79.07	79.47	79.07	79.19	79.07	79.37	81.68	79.95	79.99	72	78
61	Sutter County MW-5A	17.15	16.80	14.34	10.88	14.95	14.40	20.70	18.40	22.02	17.21	-1	18
63	WPMW-3A	147.57	147.43	147.29	146.60	147.51	146.90	148.60	148.00	149.33	148.38	145	147
65	MW 1-3	58.37	56.47	57.88	55.23	57.03	54.74	58.31	56.86	59.31	55.84	38	55
66	MW 5-2	110.51	108.65	109.31	108.05	110.96	108.93	112.59	110.05	111.33	109.83	104	112
71	WCMSS	-15.26	-28.76	-20.26	-27.76	-22.41	-29.31	-22.76	-21.26	-16.04	-19.26	-40	-32
75	MW 2-3	95.19	87.79	91.72	83.83	88.58	83.04	90.95	84.72	90.81	85.86	86	94

GSP RMS Number	Local Well Name	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	MT	MO
77	SREL-1-27-F1	14.06	11.55	13.84	11.57	11.84	10.38	22.22	16.26	22.44	16.06	9	16
89	Roseview Park - 315	-4.86	-9.41	-6.61	-11.91	-9.46	-11.76	-10.46	-10.06	-7.66	-8.76	-22	-13
90	WPMW-12A	-13.98	-27.28	-18.93	-34.54	-23.08	-35.53	-24.63	-30.95	-21.58	-27.50	-65	-30
91	WPMW-11A	22.47	13.43	19.55	6.04	12.58	0.52	11.48	0.72	8.07	-0.73	-18	13
92	RDMW-101	19.69	17.92	17.65	16.73	19.49	16.46	26.35	19.71	24.58	19.15	14	18
93	RDMW-102	19.26	13.86	15.48	10.40	15.33	11.03	20.85	16.28	22.13	15.53	8	16
94	RDMW-103	68.09	61.09	62.99	54.13	59.71	50.68	65.76	58.38	64.73	57.48	36	65
95	RDMW-104	67.20	59.91	61.80	52.01	58.52	51.08	64.58	56.68	62.98	55.85	36	65
96	Aerojet - 1516	70.87	70.20	69.89	69.43	69.76	69.72	73.89	---	72.01	70.13	67	70
97	Aerojet - 1518	62.50	61.46	60.56	59.87	60.42	60.48	65.56	62.97	63.06	61.76	57	59
98	URS71000-700+00C	11.80	9.85	9.04	7.74	10.38	7.60	16.03	11.84	16.15	10.17	6	10
103	BR-1B	46.81	43.95	40.46	36.28	40.99	36.97	43.86	41.17	46.06	42.17	36	45
104	SGA_MW08	107.21	106.71	106.76	106.31	106.21	105.76	105.76	105.46	105.03	104.63	97	99
109	SGA_MW01	-15.66	-18.61	-16.51	-20.41	-18.26	-20.61	-18.71	-21.08	-17.86	-19.52	-33	-30
116	Old Well #2	78.90	72.93	72.98	67.22	69.10	65.30	69.05	66.05	69.00	65.50	68	76
126	DeWit	---	---	4.95	-2.30	5.30	-3.80	6.85	5.30	8.10	3.26	-25	-13

***Notes**:*
Groundwater elevations are reported in feet above mean sea level (ft. a-msl), datum NADV88.
Shaded value indicates a measurement exceeds the minimum threshold.
"---" represents no measurement available.

FIGURE 7-6: INELASTIC LAND SUBSIDENCE REPRESENTATIVE MONITORING, FALL 2024



7.5 Depletions of Interconnected Surface Water

In the GSP, sustainable management criteria for depletions of interconnected surface waters were established using groundwater levels as a proxy. Twenty-four representative monitoring sites were selected for monitoring depletions of interconnected surface water, presented in Figure 7-7. Table 7-8 presents groundwater levels within the interconnected surface water representative monitoring network from WYs 2020-2024 as well as their minimum thresholds and measurable objectives. Groundwater levels recorded in the fall showed minimum thresholds exceedances in three representative monitoring sites. Exceedances were at the same monitoring sites as in the groundwater levels and inelastic subsidence networks.

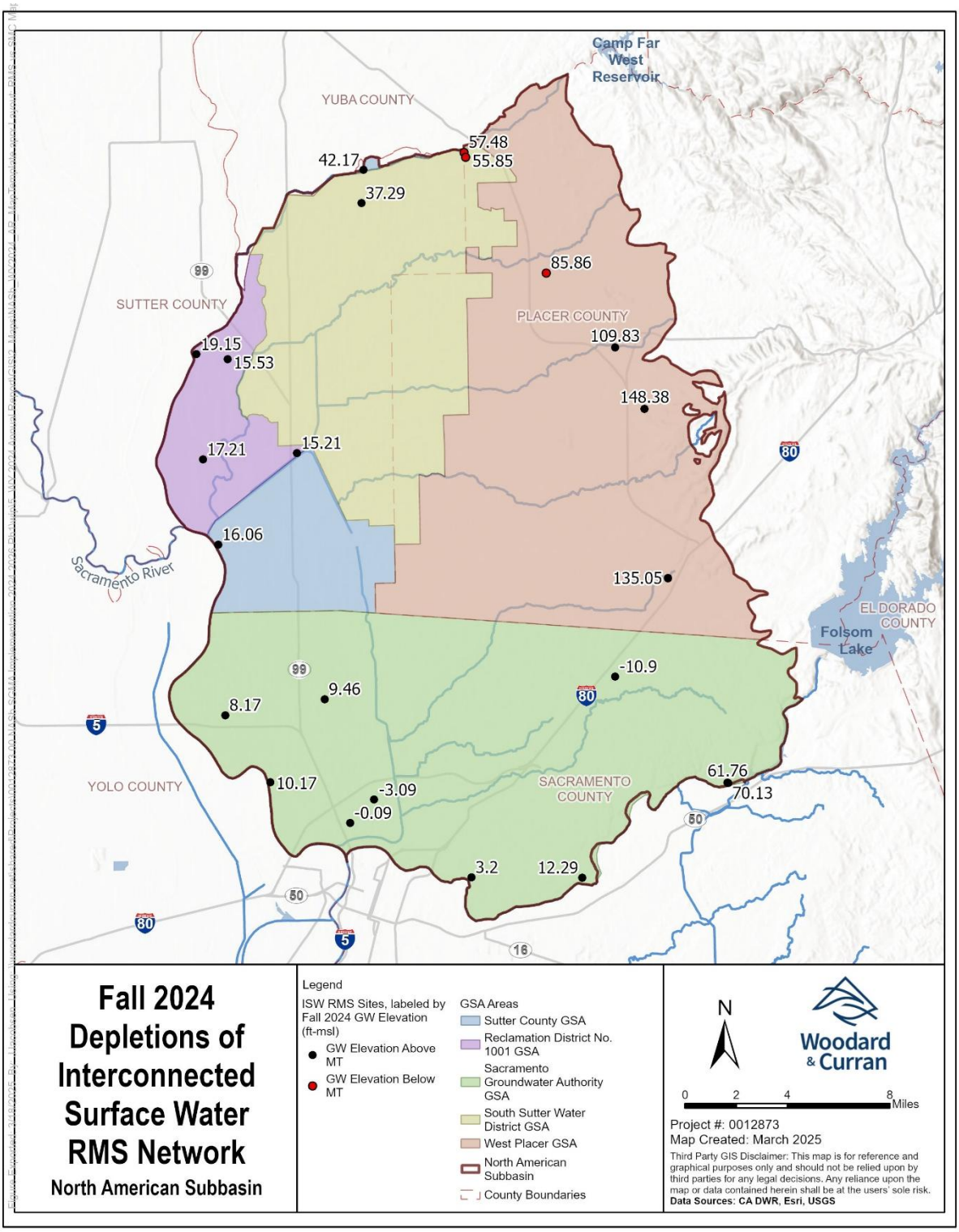
As discussed in Section 7.1, recent groundwater conditions in the Subbasin do not indicate an undesirable result. During the development of the Periodic Evaluation, the GSAs plan to reevaluate sustainable management criteria for depletions of interconnected surface water, the justification for using groundwater levels as a proxy, and the potential impacts of the minimum threshold exceedances on beneficial uses and users.

TABLE 7-8: GROUNDWATER ELEVATIONS AT DEPLETIONS OF INTERCONNECTED SURFACE WATER REPRESENTATIVE MONITORING SITES, WATER YEARS 2020-2024

GSP RMS Number	Local Well Name	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	MT	MO
2	SGA_MW06	12.59	9.24	9.69	7.79	9.44	7.78	13.09	11.97	13.93	12.29	1	5
3	SGA_MW04	2.59	0.19	0.89	-1.36	0.34	-0.42	7.58	3.39	6.69	3.20	-5	-1
11	Bannon Creek Park	1.66	-1.09	-0.40	-1.54	0.26	-1.74	4.65	0.16	4.26	-0.09	-5	-2
13	Chuckwagon Park	-7.19	-8.94	-8.69	-10.49	-9.39	-11.34	-4.54	-3.79	0.36	-3.09	-15	-13
14	13N04E23A002M	45.28	40.98	39.88	28.88	32.18	27.88	36.64	34.72	38.44	37.29	26	45
22	AB-4 shallow	8.59	4.98	6.26	4.93	9.03	3.46	11.45	7.53	12.48	8.17	-1	4
27	AB-3 shallow	8.52	8.91	7.95	8.06	8.75	5.70	9.53	9.81	10.97	9.46	-4	-1
28	Twin Creeks Park	-6.40	-12.75	-9.20	-16.10	-12.30	-16.00	-13.45	-12.85	-10.30	-10.90	-28	-8
37	SUT-P1	19.23	18.71	16.50	18.65	16.51	12.21	24.81	19.50	24.81	15.21	10	20
44	WPMW-10A	137.21	135.21	136.11	134.01	135.51	134.37	139.56	134.81	138.38	135.05	133	140
45	WPMW-9A	140.66	137.86	139.26	136.76	138.53	137.46	142.08	136.86	141.26	136.96	135	143
61	Sutter County MW-5A	17.15	16.80	14.34	10.88	14.95	14.40	20.70	18.40	22.02	17.21	10	18
63	WPMW-3A	147.57	147.43	147.29	146.60	147.51	146.90	148.60	148.00	149.33	148.38	145	147
66	MW 5-2	110.51	108.65	109.31	108.05	110.96	108.93	112.59	110.05	111.33	109.83	108	112
75	MW 2-3	95.19	87.79	91.72	83.83	88.58	83.04	90.95	84.72	90.81	85.86	89	94
77	SREL-1-27-F1	14.06	11.55	13.84	11.57	11.84	10.38	22.22	16.26	22.44	16.06	9	16
92	RDMW-101	19.69	17.92	17.65	16.73	19.49	16.46	26.35	19.71	24.58	19.15	15	18
93	RDMW-102	19.26	13.86	15.48	10.40	15.33	11.03	20.85	16.28	22.13	15.53	12	16
94	RDMW-103	68.09	61.09	62.99	54.13	59.71	50.68	65.76	58.38	64.73	57.48	58	65
95	RDMW-104	67.20	59.91	61.80	52.01	58.52	51.08	64.58	56.68	62.98	55.85	57	65
96	Aerojet - 1516	70.87	70.20	69.89	69.43	69.76	69.72	73.89	---	72.01	70.13	67	70
97	Aerojet - 1518	62.50	61.46	60.56	59.87	60.42	60.48	65.56	62.97	63.06	61.76	57	59
98	URS71000-700+00C	11.80	9.85	9.04	7.74	10.38	7.60	16.03	11.84	16.15	10.17	7	10
103	BR-1B	46.81	43.95	40.46	36.28	40.99	36.97	43.86	41.17	46.06	42.17	36	45

***Notes**:*
Groundwater elevations are reported in feet above mean sea level (ft. a-msl), datum NADV88.
Shaded value indicates a measurement exceeds the minimum threshold.
"---" represents no measurement available.

FIGURE 7-7: GROUNDWATER ELEVATIONS AT DEPLETIONS OF INTERCONNECTED SURFACE WATER REPRESENTATIVE MONITORING, FALL 2024



8. REFERENCES

DWR. (2003). *California's Groundwater (Bulletin 118)*.

DWR. (2022). *SGM Grant Program's SGMA Implementation - Round 2 Award List*.

DWR. (2024a). *Chronological Reconstructed Sacramento and San Joaquin Valley Water Year Hydrologic Classifications Indices*. Retrieved February 2023, from http://cdec.water.ca.gov/reportapp/javareports?name=WSIHIST

DWR. (2024b). *Water Supply Index (WSI) Forecasts: 2024 Water Year Hydrologic Classification Indicies*. Retrieved February 2023, from http://cdec.water.ca.gov/reportapp/javareports?name=WSI

DWR. (2024c). *Daily Regional Snow Water Content Data*. Retrieved January 2024

Esri. (2025, February). "World Hillshade" [basemap]. Retrieved from https://services.arcgisonline.com/arcgis/rest/services/Elevation/World_Hillshade/MapServer

NASb. (2021). *North American Subbasin Groundwater Sustainability Plan*. Retrieved from https://nasbgroundwater.org/gsp/

SWRCB. (2018). *Secondary Drinking Water Standards*. Retrieved from https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/ddw_secondary_standards.pdf

SWRCB. (2024a). *MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants*. Retrieved from https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/mclreview/mcls_dlrs_phgs.pdf

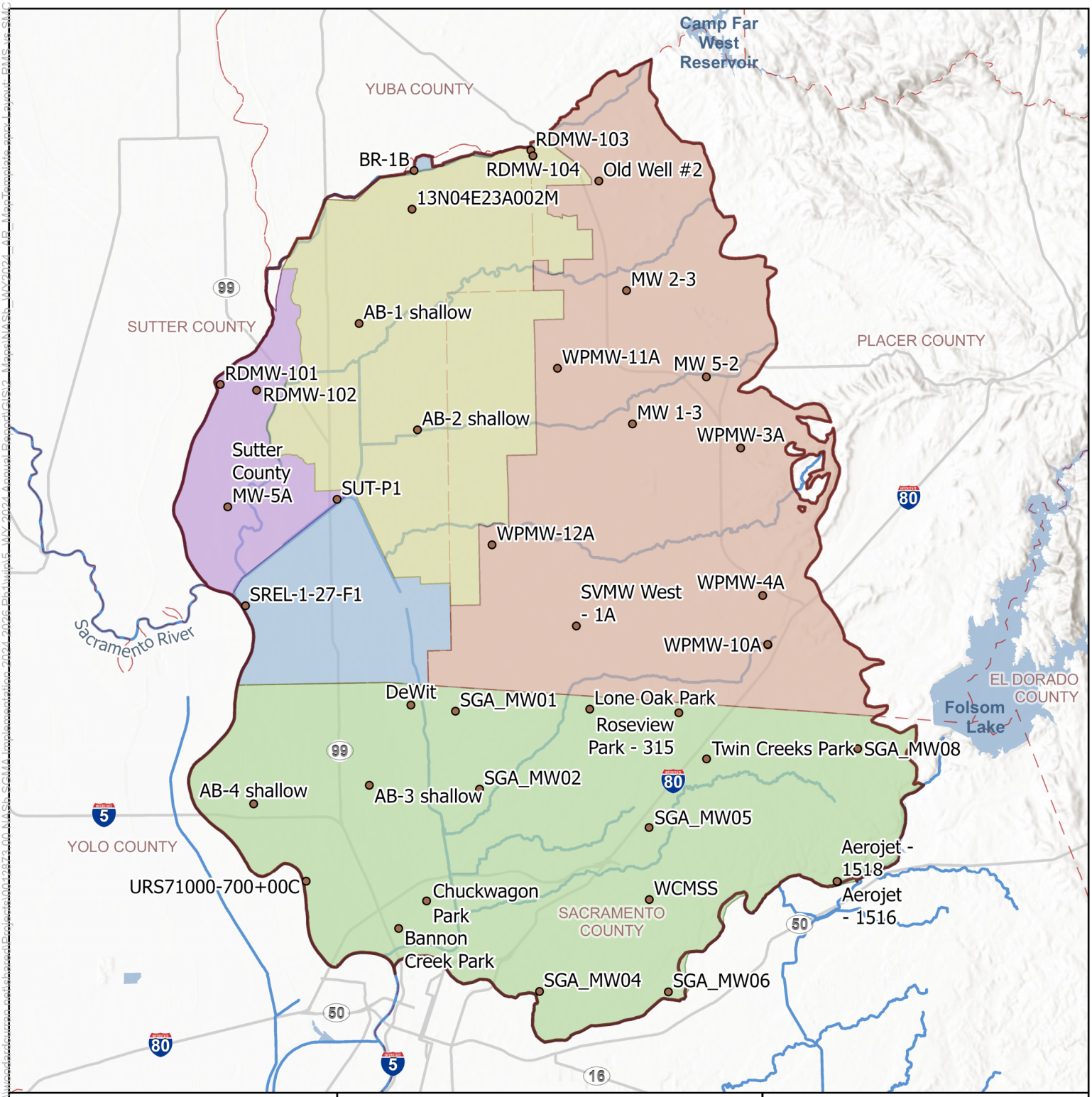
SWRCB. (2024b). *Fourth Quarter 2023 Water Quality Monitoring Report*. State Water Resources Control Board GeoTracker. Retrieved from https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/4209580659/L10007939295.PDF

SWRCB. (2025c). Groundwater Ambient Monitoring and Assessment Program Data for TDS and Nitrate. Retrieved January 2025, from https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/

USGS. (2019). National Hydrography Dataset. Retrieved from https://apps.nationalmap.gov/downloader/#/

Woodard & Curran. (2025). North American Subbasin Water Year 2024 CoSANA Groundwater Model Results.

APPENDIX A: REPRESENTATIVE MONITORING SITES & HYDROGRAPHS



Fall 2024 Groundwater Levels RMS Network

North American Subbasin

Legend

GSA Areas
- Sutter County GSA
- Reclamation District No. 1001 GSA
- Sacramento Groundwater Authority GSA
- South Sutter Water District GSA
- West Placer GSA

- North American Subbasin
- County Boundaries
- Representative Monitoring Site

N

Woodard & Curran

0 2 4 8 Miles

Project #: 0012873
Map Created: March 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk.
Data Sources: CA DWR, Esri, USGS

Representative Monitoring Site Information

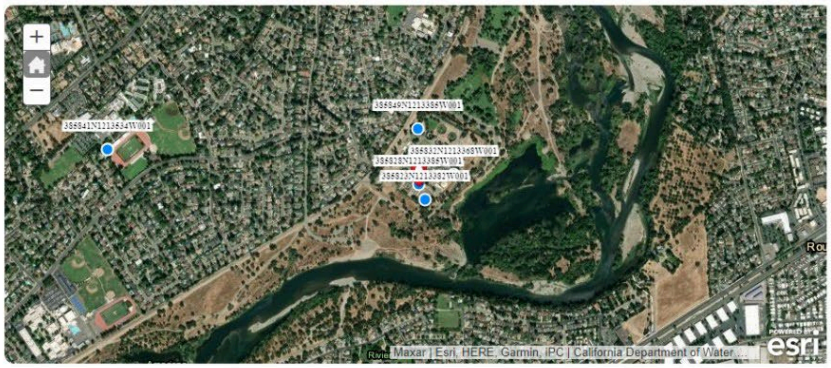
State Well ID	Local Well Name	Latitude	Longitude	Top of Screen (ft. bgs)	Bottom of Screen (ft. bgs)	Bottom of Well (ft. bgs)	Measurement Frequency
385828N1213385W001	SGA_MW06	38.58281	-121.33846	62	72	72	Monthly
385841N1214185W001	SGA_MW04	38.58414	-121.41852	55	65	65	Daily
386160N1215054W001	Bannon Creek Park	38.61603	-121.5054	33	48	48	Monthly
386292N1214877W001	Chuckwagon Park	38.62921	-121.4877	27	37	52	Monthly
389669N1214897W001	13N04E23A002M	38.9669	-121.4897	56	83	83	Semi-Annual
388593N1214885W003	AB-2 Shallow	38.8593	-121.4885	135	145	155	Daily
386635N1213486W001	SGA_MW05	38.66347	-121.34859	205	215	215	Semi-Annual
386782N1215943W004	AB-4 Shallow	38.6782	-121.5943	170	190	200	Daily
386836N1214536W001	SGA_MW02	38.68362	-121.45363	100	110	110	Monthly
386864N1215222W003	AB-3 Shallow	38.6864	-121.5222	190	210	220	Daily
386964N1213120W001	Twin Creeks Park	38.6964	-121.31203	183	193	193	Monthly
388260N1215394W004	SUT-P1	38.826	-121.5394	110	120	120	Daily
387216N1213842W001	Lone Oak Park	38.72163	-121.38417	151	161	166	Monthly
389116N1215238W003	AB-1 Shallow	38.9116	-121.5238	170	180	190	Daily
387515N1212725W001	WPMW-10A	38.75149	-121.27251	26	36	36	Daily
387517N1212727W001	WPMW-9A	38.75167	-121.27266	26	36	36	Daily
387623N1213915W001	SVMW West - 1A	38.76232	-121.39153	120	140	145	Monthly
387755N1212753W001	WPMW-4A	38.77554	-121.27525	120	140	145	Monthly
388235N1216079W001	Sutter County MW-5A	38.82324	-121.60763	130	160	170	Daily
388476N1212872W001	WPMW-3A	38.84761	-121.28719	48	53	53	Monthly
388604N1213544W003	MW 1-3	38.86038	-121.35438	184	204	204	Monthly
388826N1213078W002	MW 5-2	38.88258	-121.30775	52	62	62	Monthly
386280N1213493W001	WCMSS	38.62799	-121.34925	130	150	170	Monthly

State Well ID	Local Well Name	Latitude	Longitude	Top of Screen (ft. bgs)	Bottom of Screen (ft. bgs)	Bottom of Well (ft. bgs)	Measurement Frequency
389255N1213566W003	MW 2-3	38.92547	-121.35663	75	85	85	Monthly
387749N1215975W001	SREL-1-27-F1	38.77491	-121.59754	Unknown	Unknown	46	Daily
387191N1213287W001	Roseview Park - 315	38.71912	-121.32879	295	305	315	Monthly
388026N1214432W002	WPMW-12A	38.80264	-121.44322	260	280	300	Daily
389919N1214141W002	WPMW-11A	38.88816	-121.40046	132	152	162	Daily
388829N1216110W001	RDMW-101	38.88294	-121.61105	28	43	48	Daily
388798N1215885W001	RDMW-102	38.87987	-121.58853	28	43	48	Daily
389950N1214148W002	RDMW-103	38.99461	-121.41479	28	43	48	Daily
389919N1214141W002	RDMW-104	38.99195	-121.4135	28	43	48	Daily
386348N1212319W001	Aerojet - 1516	38.63487	-121.23192	13	33	40	Daily
386351N1212323W001	Aerojet - 1518	38.63513	-121.23231	55	75	80	Daily
386397N1215624W001	URS71000-700+00C	38.6397	-121.56244	Unknown	Unknown	45	Daily
389857N1214880W001	BR-1B	38.9857	-121.488	78	98	98	Daily
387000N1212180W001	SGA_MW08	38.69998	-121.21795	130	140	140	Semi-Annual
387218N1214677W001	SGA_MW01	38.72178	-121.46771	100	110	110	Semi-Annual
389791N1213727W001	Old Well #2	38.97913	-121.37269	144	209	209	Semi-Annual

Figure A-1. SGA_MW06

Site Code: 385828N1213385W001 **State Well Number:** **Local Well Name:** SGA_MW06

Site Code: 385828N1213385W001
Local Well Name: SGA_MW06
State Well Number:
Station ID: 48014
WCR Number:
Latitude: 38.58281
Longitude: -121.33846
Station Organization ID:
Station Organization Name:
Well Location Description: 100 River Walk Way in Sheriff training facility
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 72
Top Perforation (feet bgs): 62
Bottom Perforation (feet bgs): 72
Ground Surface Elevation: 49.68
Reference Point Elevation: 49.49
Reference Point Description: top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

Date: (hover to see values)

Ground Surface:
Groundwater Elevation:
Depth to Groundwater:

Current Ground Surface Elevation: 49.68

Sustainable Management Criteria
(Elevation, feet)

Minimum Threshold: 1
Measurable Objective: 5
Interim Milestone
5-Year : 9.2
10-Year : 7.4
15-Year : 5.6

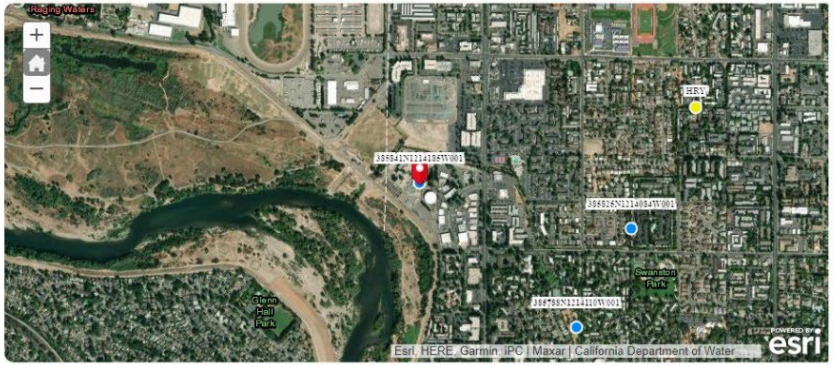
Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

Minimum Threshold bgs: 48.68
Measurable Objective bgs: 44.68
Interim Milestone
5-Year bgs : 40.48
10-Year bgs : 42.28
15-Year bgs : 44.08

Figure A-2. SGA_MW04

Site Code: 385841N1214185W001 **State Well Number:** **Local Well Name:** SGA_MW04

Site Code: 385841N1214185W001
Local Well Name: SGA_MW04
State Well Number:
Station ID: 48012
WCR Number:
Latitude: 38.58414
Longitude: -121.41852
Station Organization ID:
Station Organization Name:
Well Location Description: Enterprise water storage tank at Enterprise Dr near Howe Ave
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 65
Top Perforation (feet bgs): 55
Bottom Perforation (feet bgs): 65
Ground Surface Elevation: 36.85
Reference Point Elevation: 38.69
Reference Point Description: top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

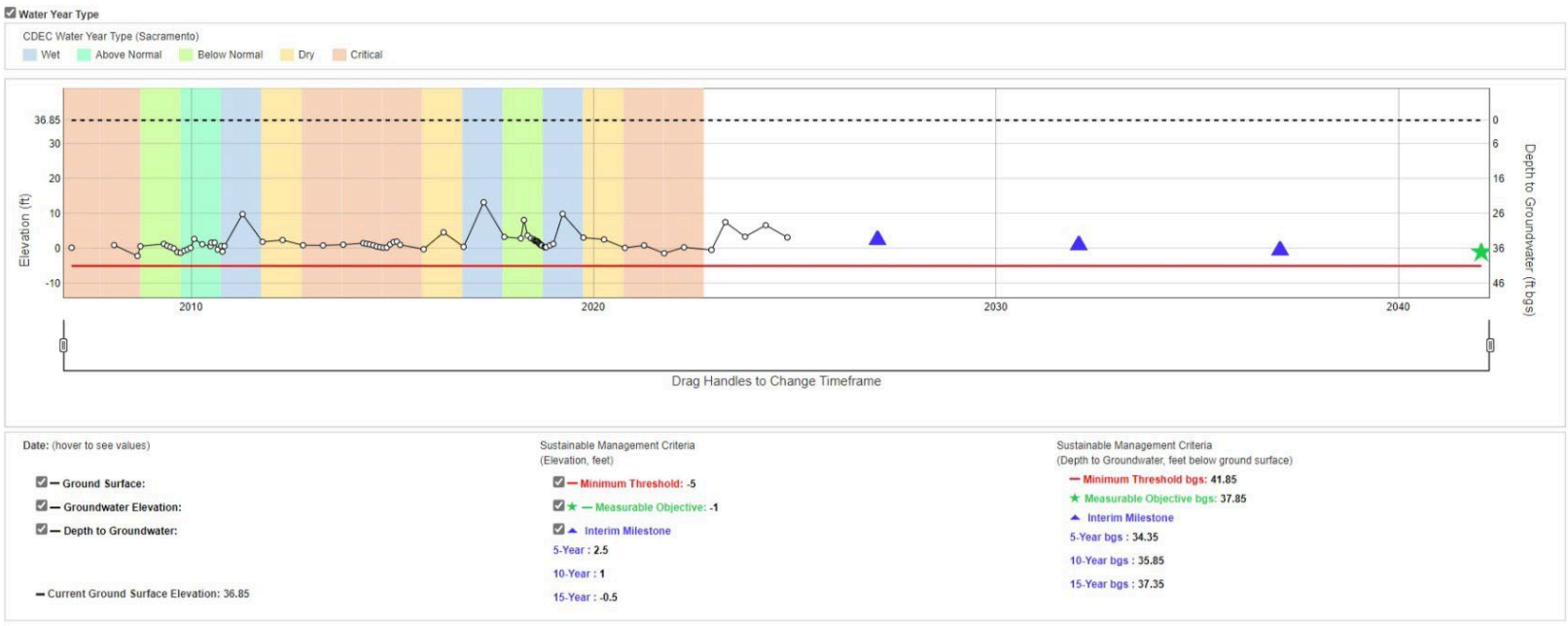
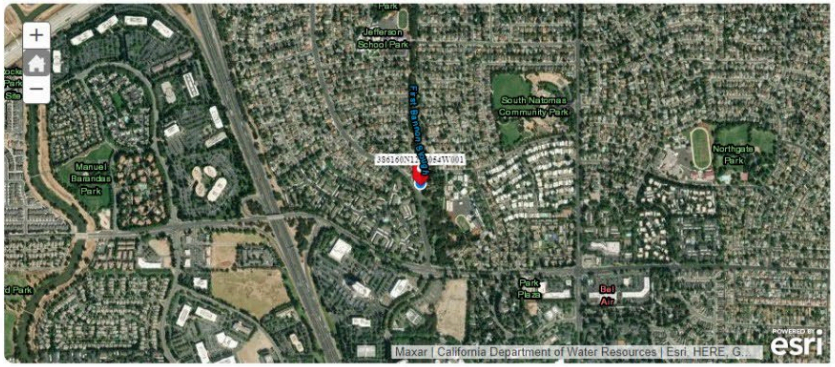


Figure A-3. Bannon Creek Park

Site Code: 386160N1215054W001 **State Well Number:** 09N04E23R002M **Local Well Name:** Bannon Creek Park

Site Code: 386160N1215054W001
Local Well Name: Bannon Creek Park
State Well Number: 09N04E23R002M
Station ID: 48041
WCR Number:
Latitude: 38.61603
Longitude: -121.50540
Station Organization ID:
Station Organization Name:
Well Location Description: .20 mi north of West El Camino Dr and Azevedo Dr, 14 feet east of sidewalk.
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 48
Top Perforation (feet bgs): 33
Bottom Perforation (feet bgs): 43
Ground Surface Elevation: 14
Reference Point Elevation: 13.76
Reference Point Description: top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

Date: (hover to see values)

- **Ground Surface:**
- **Groundwater Elevation:**
- **Depth to Groundwater:**

Current Ground Surface Elevation: 14

Sustainable Management Criteria
(Elevation, feet)

- **Minimum Threshold:** -5
- **Measurable Objective:** -2
- Interim Milestone

5-Year : 0.8
10-Year : -0.4
15-Year : -1.6

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

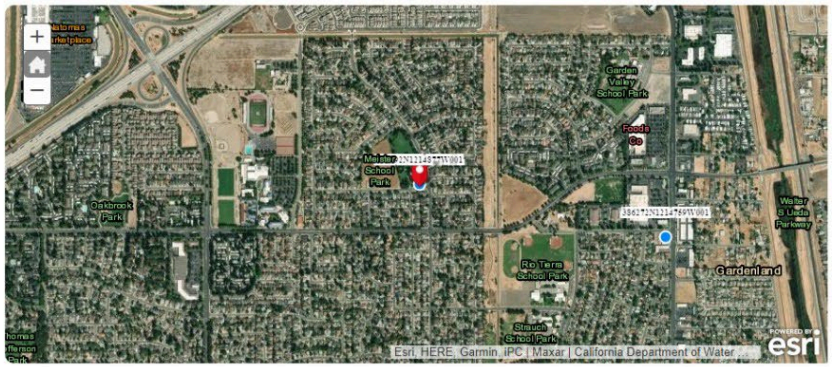
- **Minimum Threshold bgs:** 19.00
- **Measurable Objective bgs:** 16.00
- Interim Milestone

5-Year bgs : 13.20
10-Year bgs : 14.40
15-Year bgs : 15.60

Figure A-4. Chuckwagon Park

Site Code: 386292N1214877W001 **State Well Number:** 09N04E13R001M **Local Well Name:** Chuckwagon Park

Site Code: 386292N1214877W001
Local Well Name: Chuckwagon Park
State Well Number: 09N04E13R001M
Station ID: 48040
WCR Number:
Latitude: 38.62921
Longitude: -121.48770
Station Organization ID:
Station Organization Name:
Well Location Description: .02 mi west of Chuckwagon Dr and Bridgeford Dr, 15 feet north of sidewalk.
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 52
Top Perforation (feet bgs): 27
Bottom Perforation (feet bgs): 37
Ground Surface Elevation: 12
Reference Point Elevation: 11.71
Reference Point Description: top of casing
Station Comments:



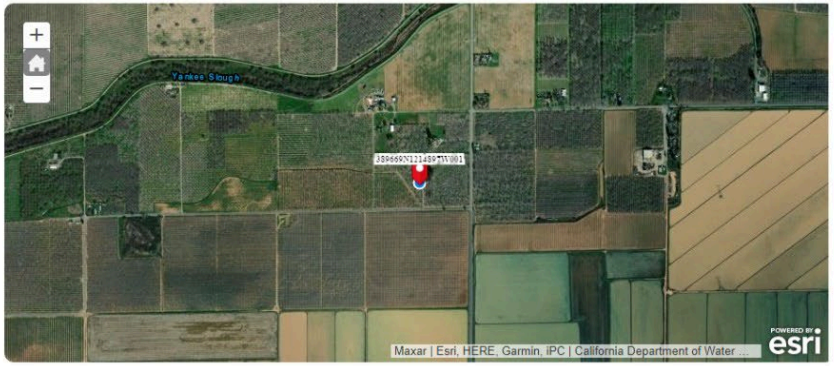
Well Completion Report

Groundwater Elevation

Figure A-5. 13N04E23A002M

Site Code: 389669N1214897W001 **State Well Number:** 13N04E23A002M **Local Well Name:** 13N04E23A002M

Site Code: 389669N1214897W001
Local Well Name: 13N04E23A002M
State Well Number: 13N04E23A002M
Station ID: 17193
WCR Number: WCR1954-000963
Latitude: 38.96650
Longitude: -121.49008
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Residential
Well Completion Type: Single Well
Well Depth (feet bgs): 83
Top Perforation (feet bgs):
Bottom Perforation (feet bgs):
Ground Surface Elevation: 59.28
Reference Point Elevation: 59.28
Reference Point Description: None Provided
Station Comments: DWR Surveyed well in 2022.



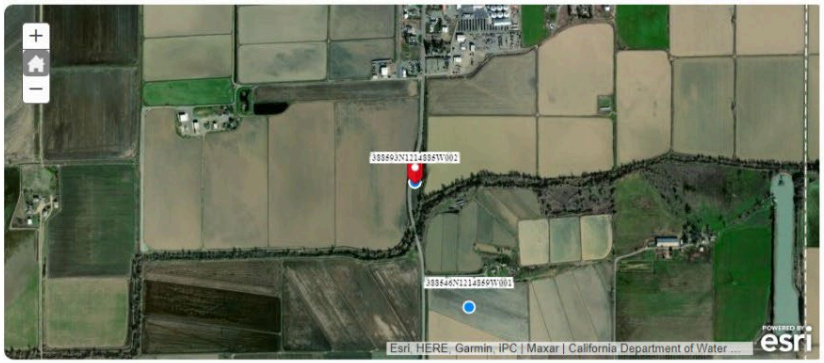
Well Completion Report (WCR1954-000963)

Groundwater Elevation

Figure A-6. AB-2 Shallow

Site Code: 388593N1214885W003 **State Well Number:** 12N04E26J004M **Local Well Name:** AB-2 shallow

Site Code: 388593N1214885W003
Local Well Name: AB-2 shallow
State Well Number: 12N04E26J004M
Station ID: 39691
WCR Number:
Latitude: 38.85930
Longitude: -121.48850
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 155
Top Perforation (feet bgs): 135
Bottom Perforation (feet bgs): 145
Ground Surface Elevation: 51.62
Reference Point Elevation: 52.76
Reference Point Description: TOC
Station Comments: This site was surveyed by DWR in late 2014. The new RP and GS elevations reflect the elevations reported in the SR-14-20 - Sacramento Valley NCRO Well Site Survey Report dated 1/14/2015.



Well Completion Report

Groundwater Elevation

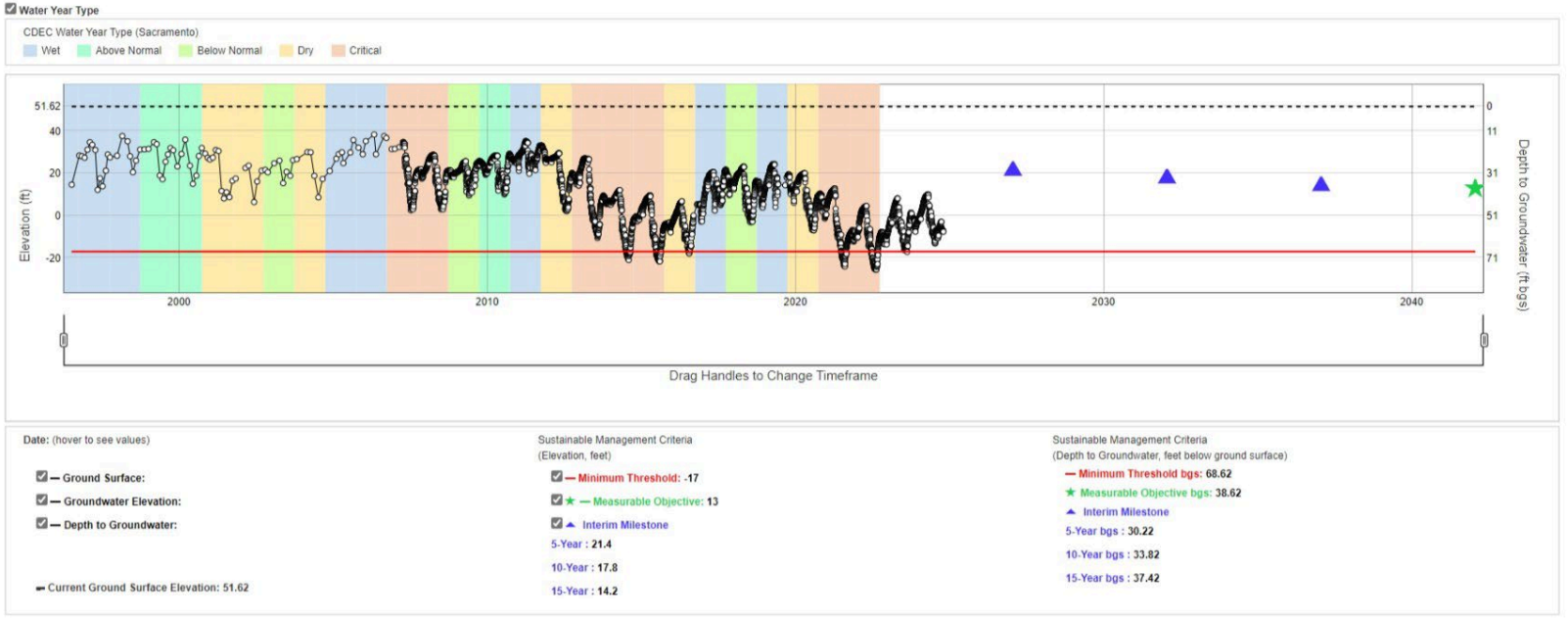
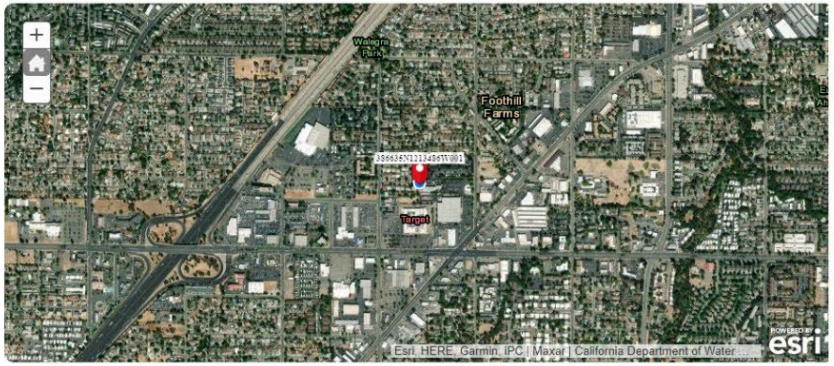


Figure A-7. SGA_MW05

Site Code: 386635N1213486W001 **State Well Number:** **Local Well Name:** SGA_MW05

Site Code: 386635N1213486W001
Local Well Name: SGA_MW05
State Well Number:
Station ID: 48013
WCR Number:
Latitude: 38.66347
Longitude: -121.34859
Station Organization ID:
Station Organization Name:
Well Location Description: SSWD Corp Yard 5331 Walnut Ave
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 220
Top Perforation (feet bgs): 205
Bottom Perforation (feet bgs): 215
Ground Surface Elevation: 122.24
Reference Point Elevation: 121.87
Reference Point Description: top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

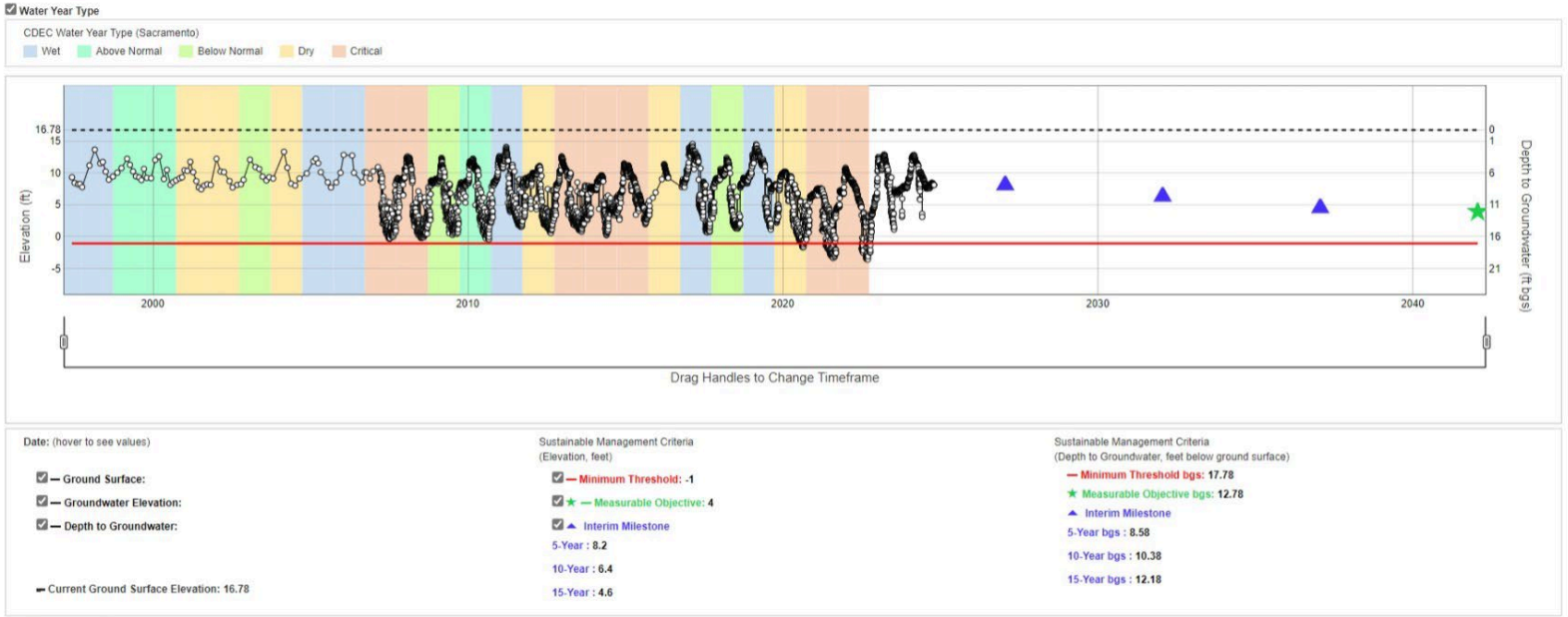
Figure A-8. AB-4 Shallow

Site Code: 386782N1215943W004 **State Well Number:** 10N04E31M004M **Local Well Name:** AB-4 shallow

Site Code: 386782N1215943W004
Local Well Name: AB-4 shallow
State Well Number: 10N04E31M004M
Station ID: 24318
WCR Number:
Latitude: 38.67820
Longitude: -121.59430
Station Organization ID:
Station Organization Name:
Well Location Description: This site was surveyed by DWR in late 2014. The new RP and GS elevations reflect the elevations reported in the SR-14-20 - Sacramento Valley NCRO Well Site Survey Report dated 1/14/2015.
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 200
Top Perforation (feet bgs): 170
Bottom Perforation (feet bgs): 190
Ground Surface Elevation: 16.78
Reference Point Elevation: 18.53
Reference Point Description: TOC
Station Comments: THIS WELL WAS PREVIOUSLY IDENTIFIED BY SWN: 10N03E31M004M. SWN WAS CHANGED TO 10N04E31M004M ON 06-04-2007 (TO CORRECTLY REFLECT WELLS TRS). DWR DATABASES WERE UPDATED WITH CORRECT SWN ON THIS DATE.

Well Completion Report

Groundwater Elevation



Date: (hover to see values)
- Ground Surface:
- Groundwater Elevation:
- Depth to Groundwater:

Current Ground Surface Elevation: 16.78

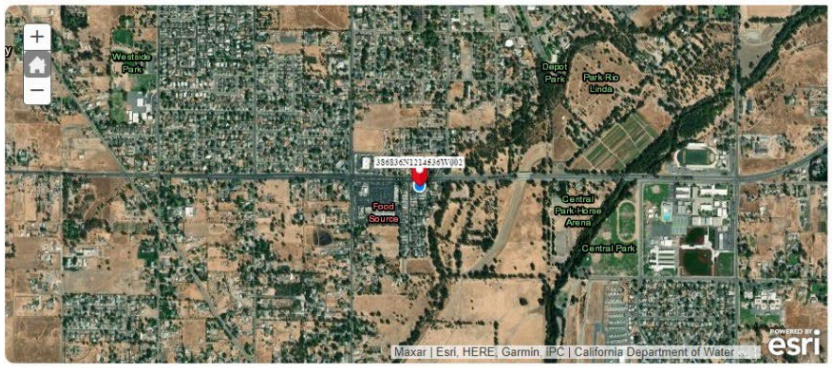
Sustainable Management Criteria
(Elevation, feet)
- Minimum Threshold: -1
- Measurable Objective: 4
- Interim Milestone
  - 5-Year : 8.2
  - 10-Year : 6.4
  - 15-Year : 4.6

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)
- Minimum Threshold bgs: 17.78
- Measurable Objective bgs: 12.78
- Interim Milestone
  - 5-Year bgs : 8.58
  - 10-Year bgs : 10.38
  - 15-Year bgs : 12.18

Figure A-9. SGA_MW02

Site Code: 386836N1214536W001 **State Well Number:** **Local Well Name:** SGA_MW02

Site Code: 386836N1214536W001
Local Well Name: SGA_MW02
State Well Number:
Station ID: 48010
WCR Number:
Latitude: 38.68362
Longitude: -121.45363
Station Organization ID:
Station Organization Name:
Well Location Description: south side of Elkhorn Blvd, 100 feet west of Elkhorn Manor Dr
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 110
Top Perforation (feet bgs): 100
Bottom Perforation (feet bgs): 110
Ground Surface Elevation: 49.11
Reference Point Elevation: 52.39
Reference Point Description: top of casing
Station Comments: northern of the two wells on lot



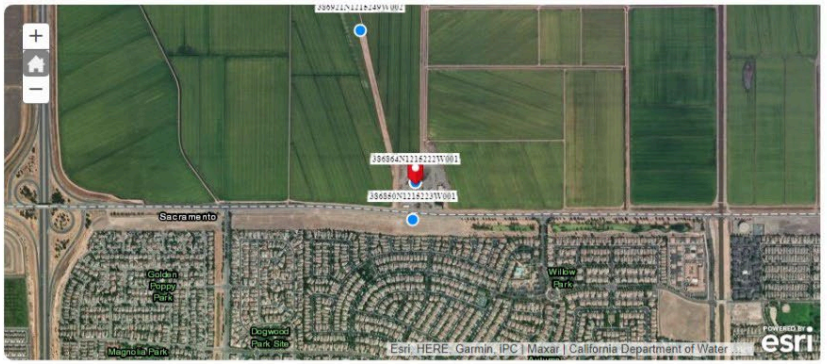
Well Completion Report

Groundwater Elevation

Figure A-10. AB-3 Shallow

Site Code: 386864N1215222W003 **State Well Number:** 10N04E27R004M **Local Well Name:** AB-3 shallow

Site Code: 386864N1215222W003
Local Well Name: AB-3 shallow
State Well Number: 10N04E27R004M
Station ID: 15690
WCR Number:
Latitude: 38.68640
Longitude: -121.52220
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 220
Top Perforation (feet bgs): 190
Bottom Perforation (feet bgs): 210
Ground Surface Elevation: 27.34
Reference Point Elevation: 28.31
Reference Point Description: TOC
Station Comments: This site was surveyed by DWR in late 2014. The new RP and GS elevations reflect the elevations reported in the SR-14-20 - Sacramento Valley NCRO Well Site Survey Report dated 1/14/2015.



Well Completion Report

Groundwater Elevation

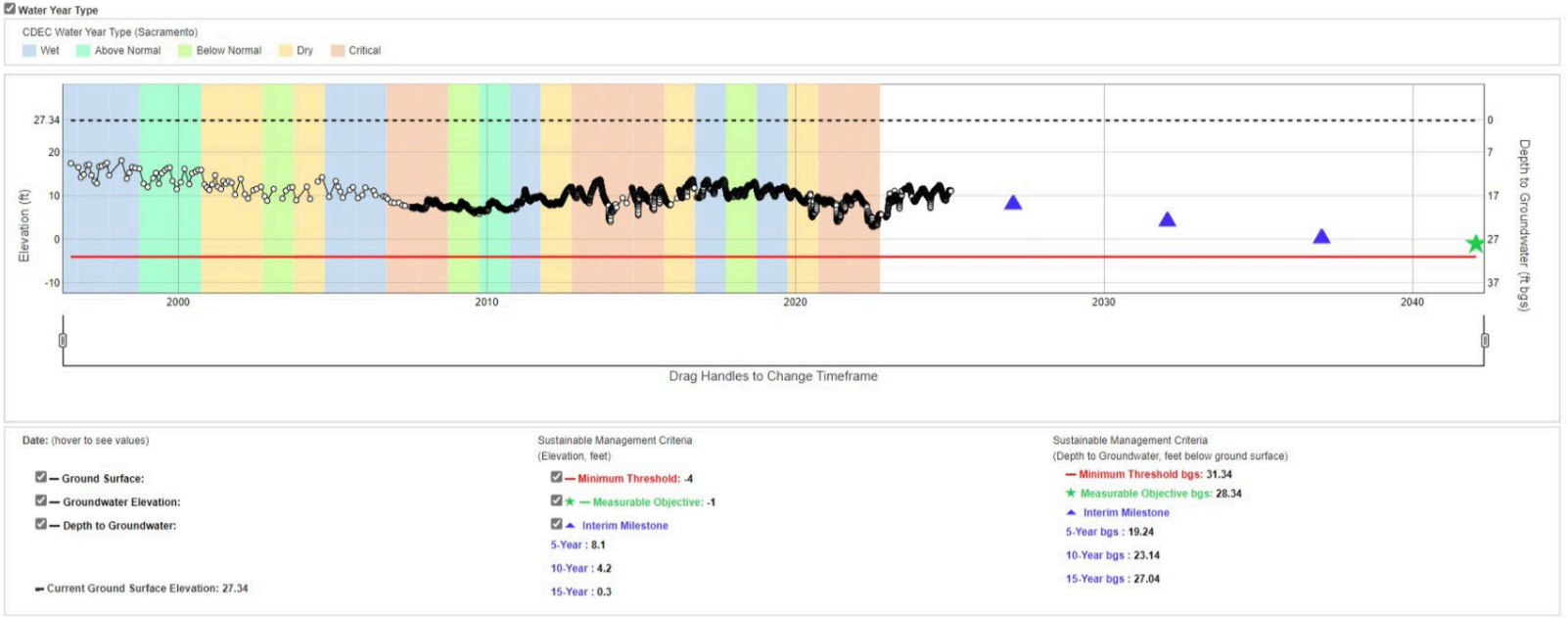
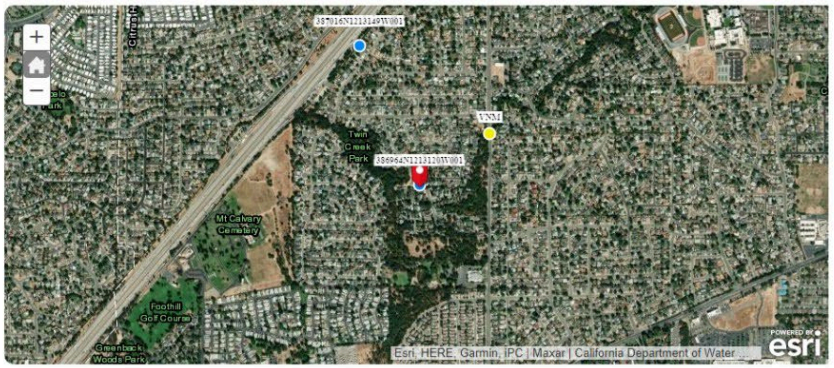


Figure A-11. Twin Creeks Park

Site Code: 386964N1213120W001 **State Well Number:** 10N06E27F001M **Local Well Name:** Twin Creeks Park

Site Code: 386964N1213120W001
Local Well Name: Twin Creeks Park
State Well Number: 10N06E27F001M
Station ID: 48042
WCR Number:
Latitude: 38.69640
Longitude: -121.31203
Station Organization ID:
Station Organization Name:
Well Location Description: Intersection of Starflower Dr and Creekmont Way 30' south of sidewalk.
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 198
Top Perforation (feet bgs): 183
Bottom Perforation (feet bgs): 193
Ground Surface Elevation: 122
Reference Point Elevation: 121.8
Reference Point Description: top of casing
Station Comments:



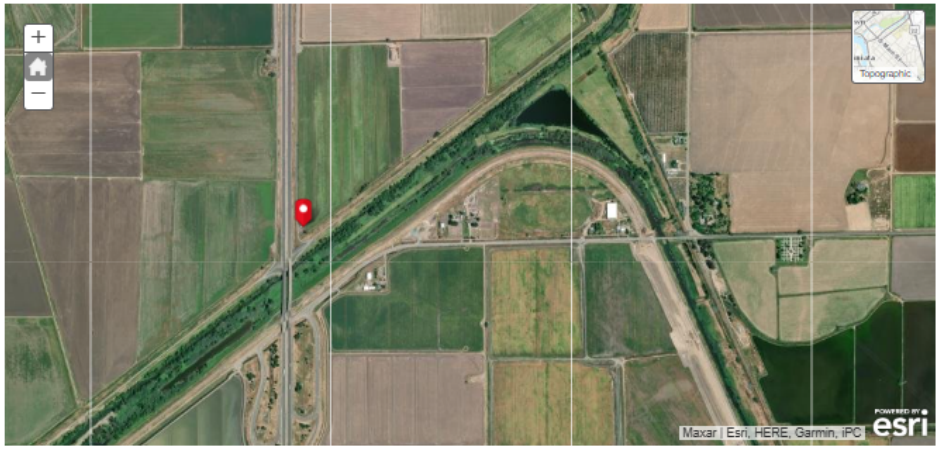
Well Completion Report

Groundwater Elevation

Figure A-12. SUT-P1

Site Code: 388260N1215394W004 **State Well Number:** 11N04E04N004M **Local Well Name:** SUT-P1

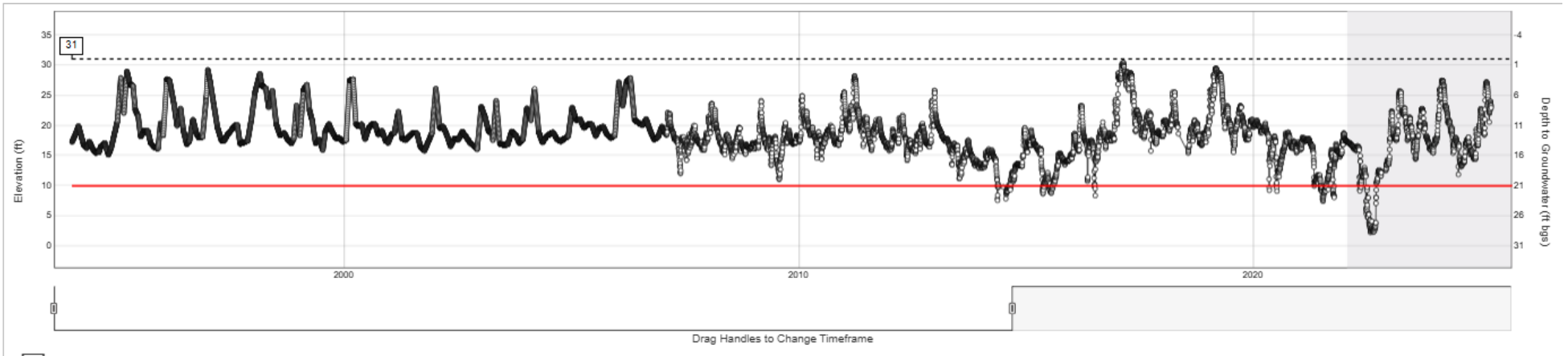
Site Code:	388260N1215394W004
Local Well Name:	SUT-P1
Monitoring Network Type:	SGMA Representative
Station ID:	25773
Latitude:	38.8239
Longitude:	-121.543
Well Depth (feet bgs):	120.0
Top Perforation (feet bgs):	110.0
Bottom Perforation (feet bgs):	120.0
Ground Surface Elevation:	31.0
Reference Point Elevation:	32.31
Sustainability Indicators:	Groundwater Levels,Groundwater Storage,Interconnected Surface Waters,Land Subsidence,Water Quality



Download Well Data

Well Completion Report (WCR1993-003719)

Groundwater Elevations



Date: (hover to see values)

- Ground Surface:
- Groundwater Elevation:

Sustainable Management Criteria
(Elevation, feet)

- Minimum Threshold: 10
- Measurable Objective: 20

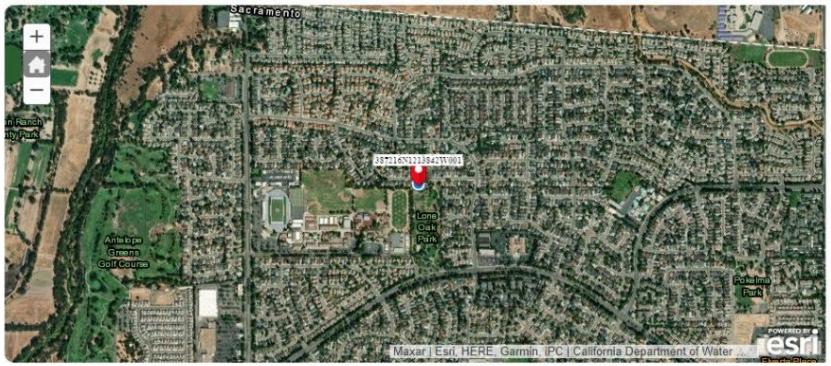
Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- Minimum Threshold bgs: 21.00
- Measurable Objective bgs: 11.00

Figure A-13. Lone Oak Park

Site Code: 387216N1213842W001 **State Well Number:** 10N05E13F001M **Local Well Name:** Lone Oak Park

Site Code: 387216N1213842W001
Local Well Name: Lone Oak Park
State Well Number: 10N05E13F001M
Station ID: 48043
WCR Number:
Latitude: 38.72163
Longitude: -121.38417
Station Organization ID:
Station Organization Name:
Well Location Description: .15 mi W of intersection of Esterbrook Way and Black Eagle Drive, 60' S of sidewalk
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 166
Top Perforation (feet bgs): 151
Bottom Perforation (feet bgs): 161
Ground Surface Elevation: 106
Reference Point Elevation: 105.77
Reference Point Description: top of casing
Station Comments:



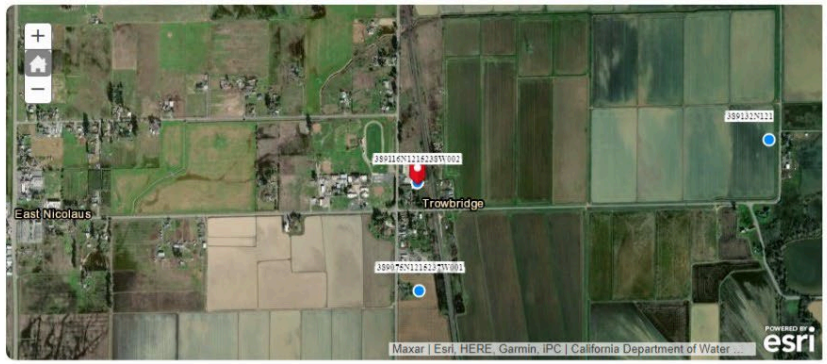
Well Completion Report

Groundwater Elevation

Figure A-14. AB-1 Shallow

Site Code: 389116N1215238W003 **State Well Number:** 12N04E03N004M **Local Well Name:** AB-1 shallow

Site Code: 389116N1215238W003
Local Well Name: AB-1 shallow
State Well Number: 12N04E03N004M
Station ID: 17023
WCR Number:
Latitude: 38.91160
Longitude: -121.52380
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 190
Top Perforation (feet bgs): 170
Bottom Perforation (feet bgs): 180
Ground Surface Elevation: 48.96
Reference Point Elevation: 50.58
Reference Point Description: TOC
Station Comments: This site was surveyed by DWR in late 2014. The new RP and GS elevations reflect the elevations reported in the SR-14-20 - Sacramento Valley NCRO Well Site Survey Report dated 1/14/2015.



Well Completion Report

Groundwater Elevation

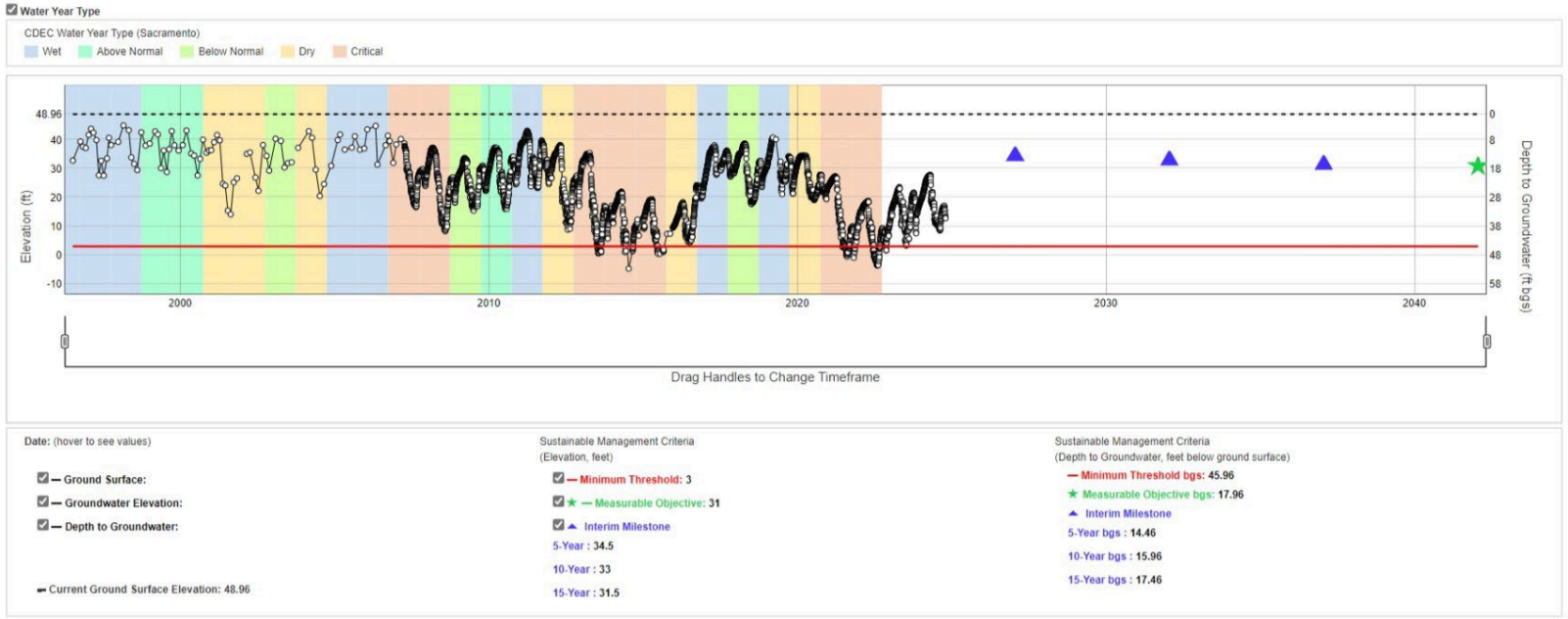
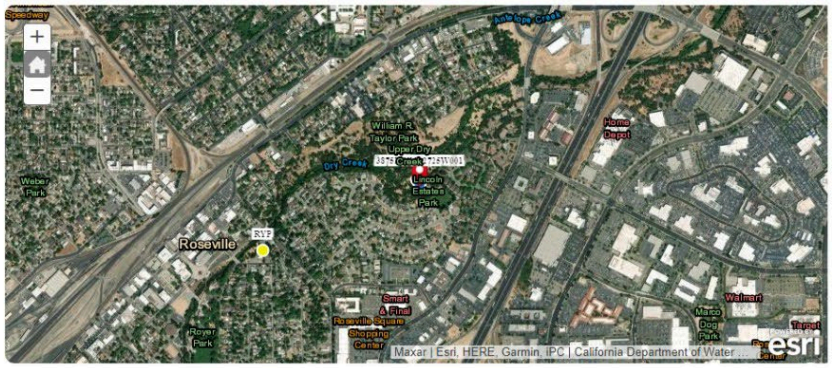


Figure A-15. WPMW-10A

Site Code: 387515N1212725W001 **State Well Number:** **Local Well Name:** WPMW-10A

Site Code: 387515N1212725W001
Local Well Name: WPMW-10A
State Well Number:
Station ID: 51287
WCR Number:
Latitude: 38.75149
Longitude: -121.27251
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 36
Top Perforation (feet bgs): 26
Bottom Perforation (feet bgs): 36
Ground Surface Elevation: 150.98
Reference Point Elevation: 153.21
Reference Point Description: Notch on PVC Casing
Station Comments: City of Roseville Well



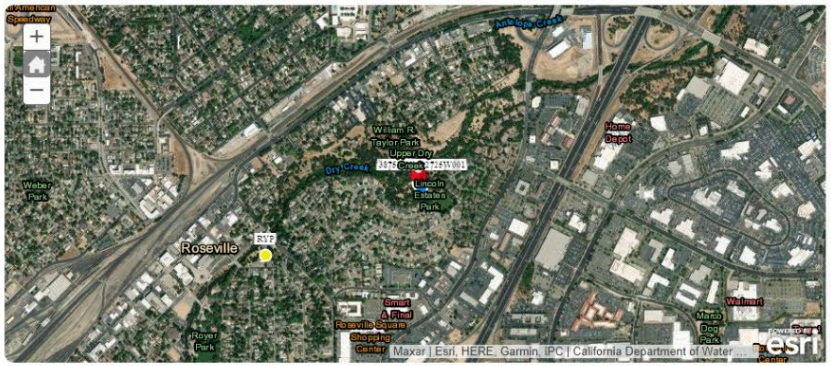
Well Completion Report

Groundwater Elevation

Figure A-16. WPMW-9A

Site Code: 387517N1212727W001 **State Well Number:** **Local Well Name:** WPMW-9A

Site Code: 387517N1212727W001
Local Well Name: WPMW-9A
State Well Number:
Station ID: 51286
WCR Number:
Latitude: 38.75167
Longitude: -121.27266
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 36
Top Perforation (feet bgs): 26
Bottom Perforation (feet bgs): 36
Ground Surface Elevation: 152.4
Reference Point Elevation: 154.66
Reference Point Description: Notch on PVC Casing
Station Comments: City of Roseville Well



Well Completion Report

Groundwater Elevation

Figure A-17. SVMA West- 1A

Site Code: 387623N1213915W001 **State Well Number:** **Local Well Name:** SVMW West - 1A

Site Code: 387623N1213915W001
Local Well Name: SVMW West - 1A
State Well Number:
Station ID: 48573
WCR Number:
Latitude: 38.76232
Longitude: -121.39153
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 145
Top Perforation (feet bgs): 120
Bottom Perforation (feet bgs): 140
Ground Surface Elevation: 91.56
Reference Point Elevation: 94.25
Reference Point Description: notch on casing
Station Comments:

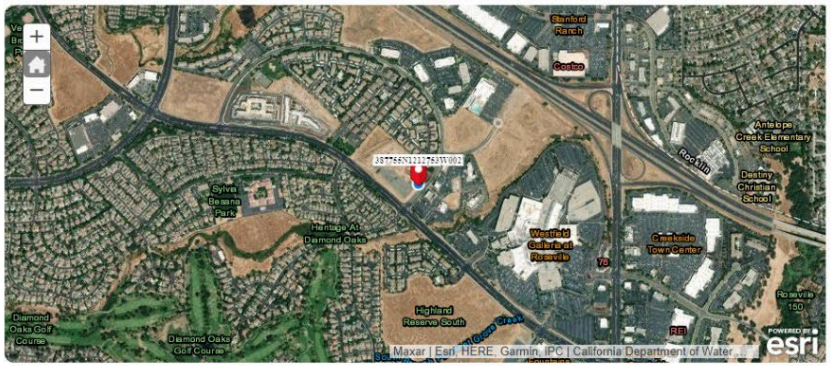
Well Completion Report

Groundwater Elevation

Figure A-18. WPMW – 4A

Site Code: 387755N1212753W001 **State Well Number:** **Local Well Name:** WPMW-4A

Site Code: 387755N1212753W001
Local Well Name: WPMW-4A
State Well Number:
Station ID: 48567
WCR Number:
Latitude: 38.77554
Longitude: -121.27525
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 145
Top Perforation (feet bgs): 120
Bottom Perforation (feet bgs): 140
Ground Surface Elevation: 180.02
Reference Point Elevation: 181.67
Reference Point Description: notch on casing
Station Comments:



Well Completion Report

Groundwater Elevation

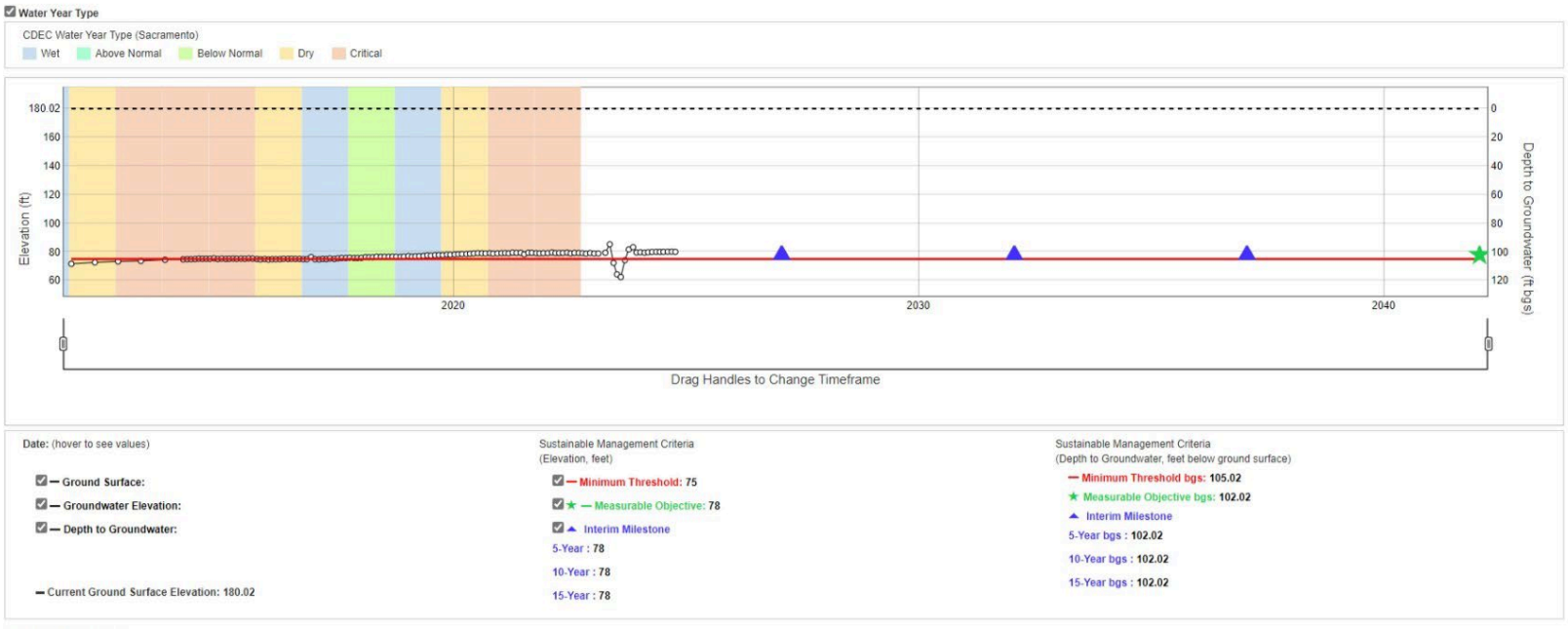


Figure A-19. Sutter County MW-5A

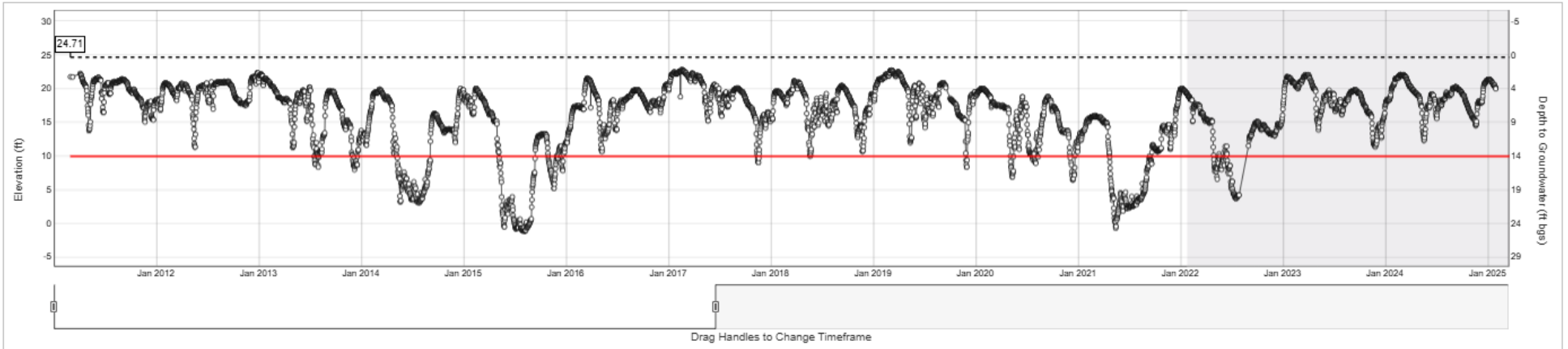
Site Code: 388235N1216079W001 **State Well Number:** 11N03E02Q002M **Local Well Name:** Sutter County MW-5A

Site Code:	388235N1216079W001
Local Well Name:	Sutter County MW-5A
Monitoring Network Type:	SGMA Representative
Station ID:	47776
Latitude:	38.8232
Longitude:	-121.608
Well Depth (feet bgs):	170.0
Top Perforation (feet bgs):	130.0
Bottom Perforation (feet bgs):	160.0
Ground Surface Elevation:	24.71
Reference Point Elevation:	26.45
Sustainability Indicators:	Groundwater Levels,Groundwater Storage,Interconnected Surface Waters,Land Subsidence

Download Well Data

Well Completion Report (WCR0016059)

Groundwater Elevations



Date: (hover to see values)

- Ground Surface:
- Groundwater Elevation:

Sustainable Management Criteria
(Elevation, feet)

- Minimum Threshold: 10
- Measurable Objective: 18

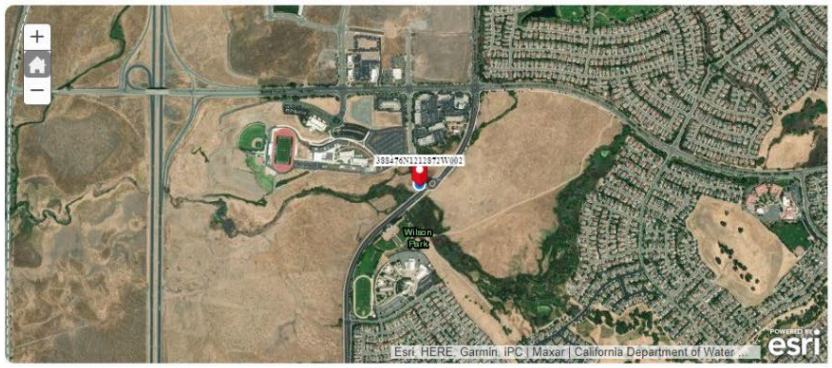
Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- Minimum Threshold bgs: 14.71
- Measurable Objective bgs: 6.71

Figure A-20. WPMA-3A

Site Code: 388476N1212872W001 **State Well Number:** **Local Well Name:** WPMW-3A

Site Code: 388476N1212872W001
Local Well Name: WPMW-3A
State Well Number:
Station ID: 48565
WCR Number:
Latitude: 38.84761
Longitude: -121.28719
Station Organization ID:
Station Organization Name:
Well Location Description: At Lincoln lift station, intersection of E. Joiner Pkwy & Fieldstone Dr
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 53
Top Perforation (feet bgs): 48
Bottom Perforation (feet bgs): 53
Ground Surface Elevation: 148.45
Reference Point Elevation: 150.95
Reference Point Description: notch on casing
Station Comments: Lincoln well



Well Completion Report

Groundwater Elevation

Figure A-21. MW 1-3

Site Code: 388604N1213544W003 **State Well Number:** **Local Well Name:** MW 1-3

Site Code: 388604N1213544W003
Local Well Name: MW 1-3
State Well Number:
Station ID: 49929
WCR Number:
Latitude: 38.86038
Longitude: -121.35438
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 204
Top Perforation (feet bgs): 184
Bottom Perforation (feet bgs): 204
Ground Surface Elevation: 111
Reference Point Elevation: 113.81
Reference Point Description: Top of SW casing
Station Comments: Lincoln well

Well Completion Report

Groundwater Elevation

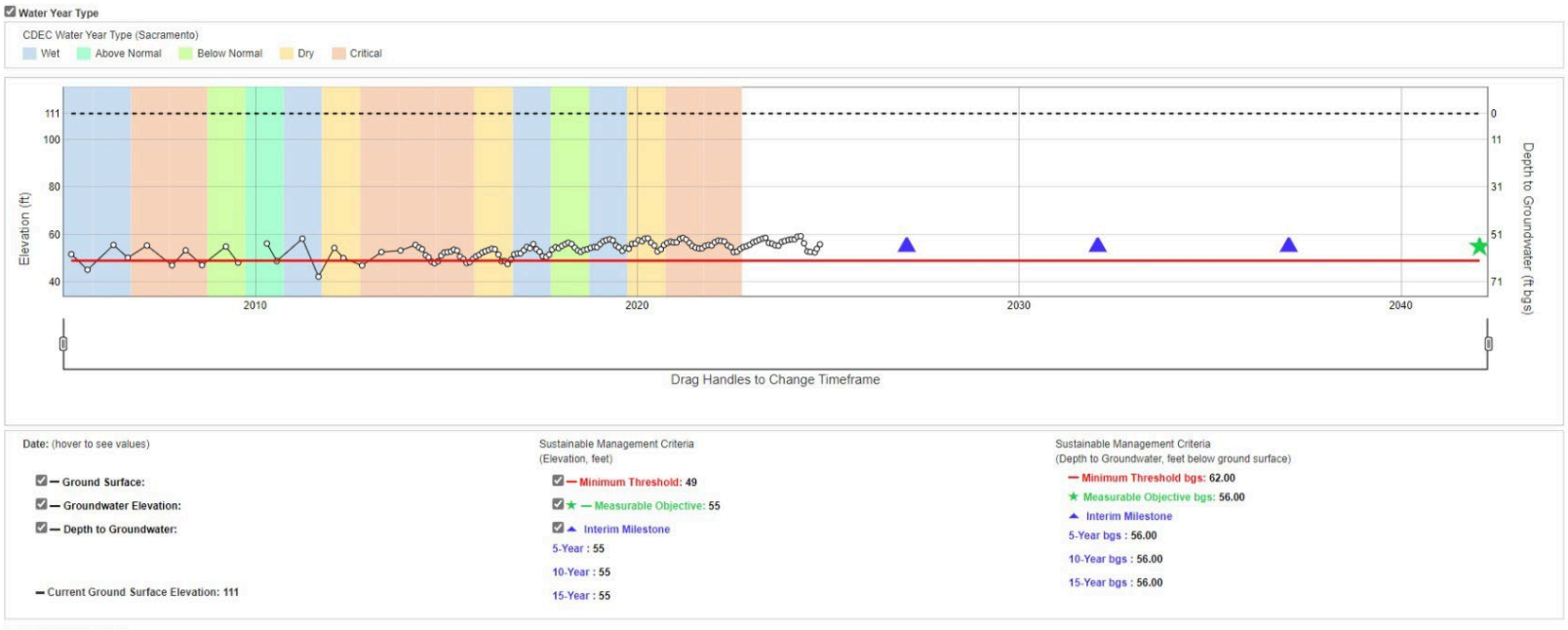
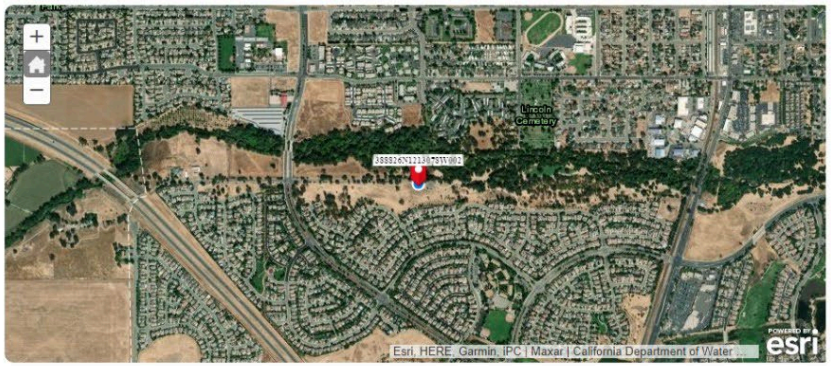


Figure A-22. MW 5-2

Site Code: 388826N1213078W002 **State Well Number:** **Local Well Name:** MW 5-2

Site Code: 388826N1213078W002
Local Well Name: MW 5-2
State Well Number:
Station ID: 49938
WCR Number:
Latitude: 38.88258
Longitude: -121.30775
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 62
Top Perforation (feet bgs): 52
Bottom Perforation (feet bgs): 62
Ground Surface Elevation: 146
Reference Point Elevation: 148.65
Reference Point Description: Top of S casing
Station Comments: Lincoln well



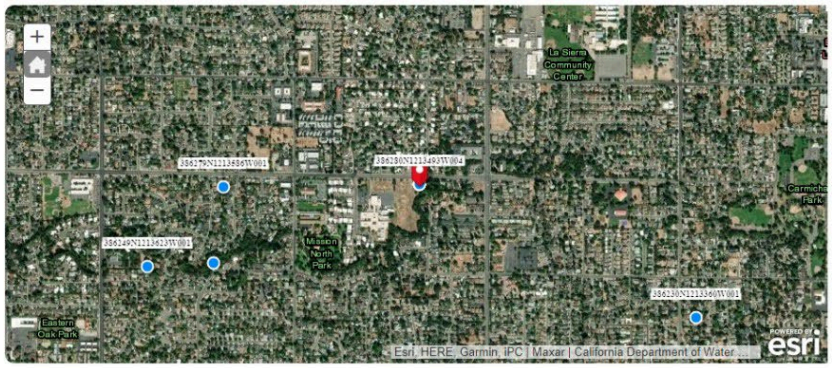
Well Completion Report

Groundwater Elevation

Figure A-23. WCMSS

Site Code: 386280N1213493W001 **State Well Number:** **Local Well Name:** WCMSS

Site Code: 386280N1213493W001
Local Well Name: WCMSS
State Well Number:
Station ID: 52461
WCR Number:
Latitude: 38.62799
Longitude: -121.34925
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 170
Top Perforation (feet bgs): 130
Bottom Perforation (feet bgs): 150
Ground Surface Elevation: 91
Reference Point Elevation: 90.74
Reference Point Description: Pipe Sleeve
Station Comments:



Well Completion Report

Groundwater Elevation

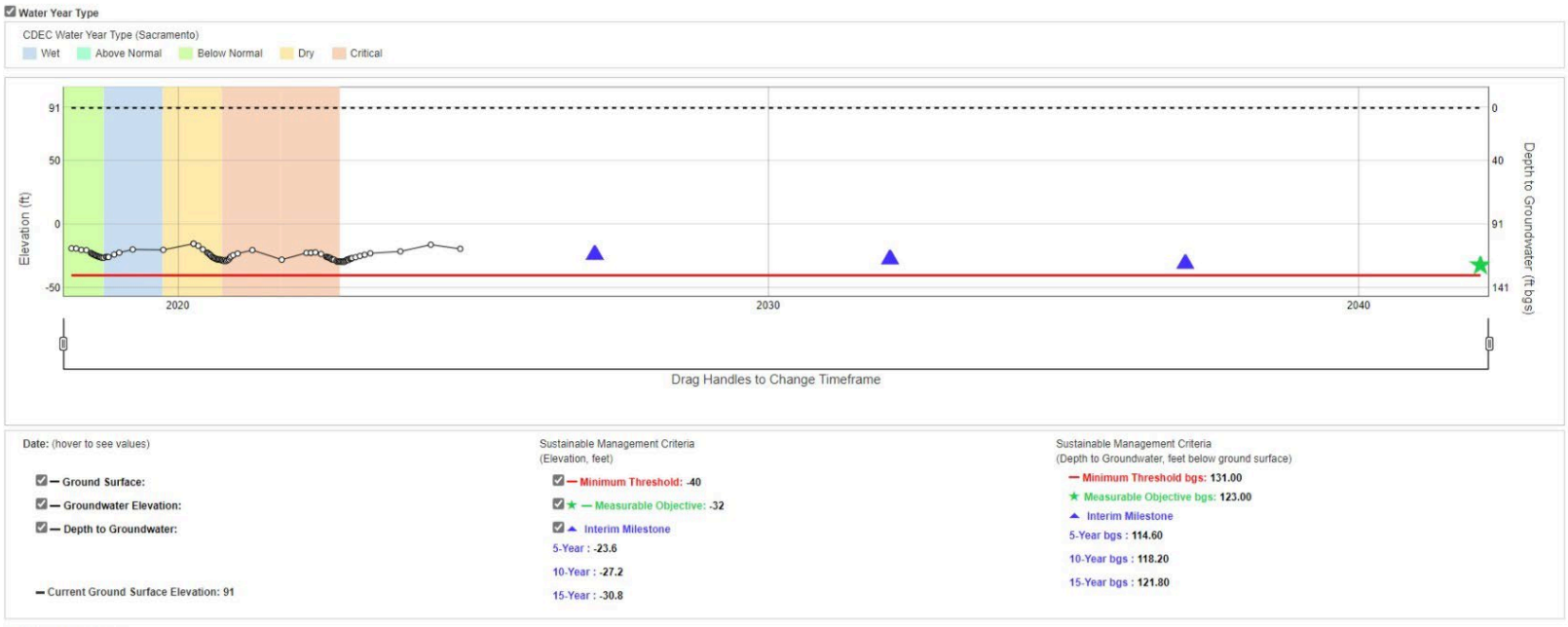
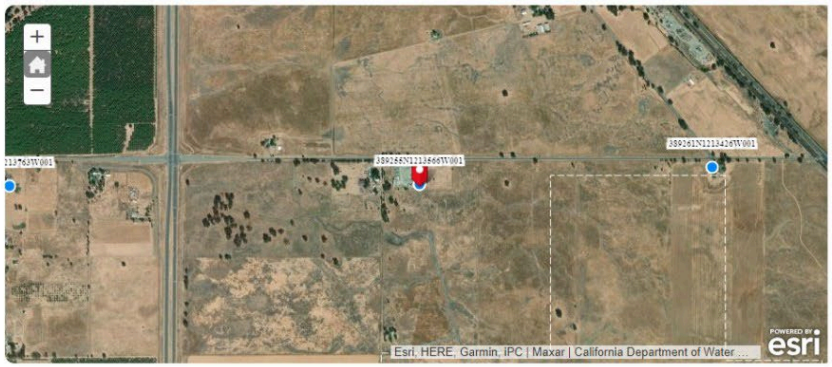


Figure A-24. MW 2-3

Site Code: 389255N1213566W003 **State Well Number:** **Local Well Name:** MW 2-3

Site Code: 389255N1213566W003
Local Well Name: MW 2-3
State Well Number:
Station ID: 49933
WCR Number:
Latitude: 38.92547
Longitude: -121.35663
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 85
Top Perforation (feet bgs): 75
Bottom Perforation (feet bgs): 85
Ground Surface Elevation: 125
Reference Point Elevation: 127.67
Reference Point Description: Top of S casing
Station Comments: Lincoln well



Well Completion Report

Groundwater Elevation

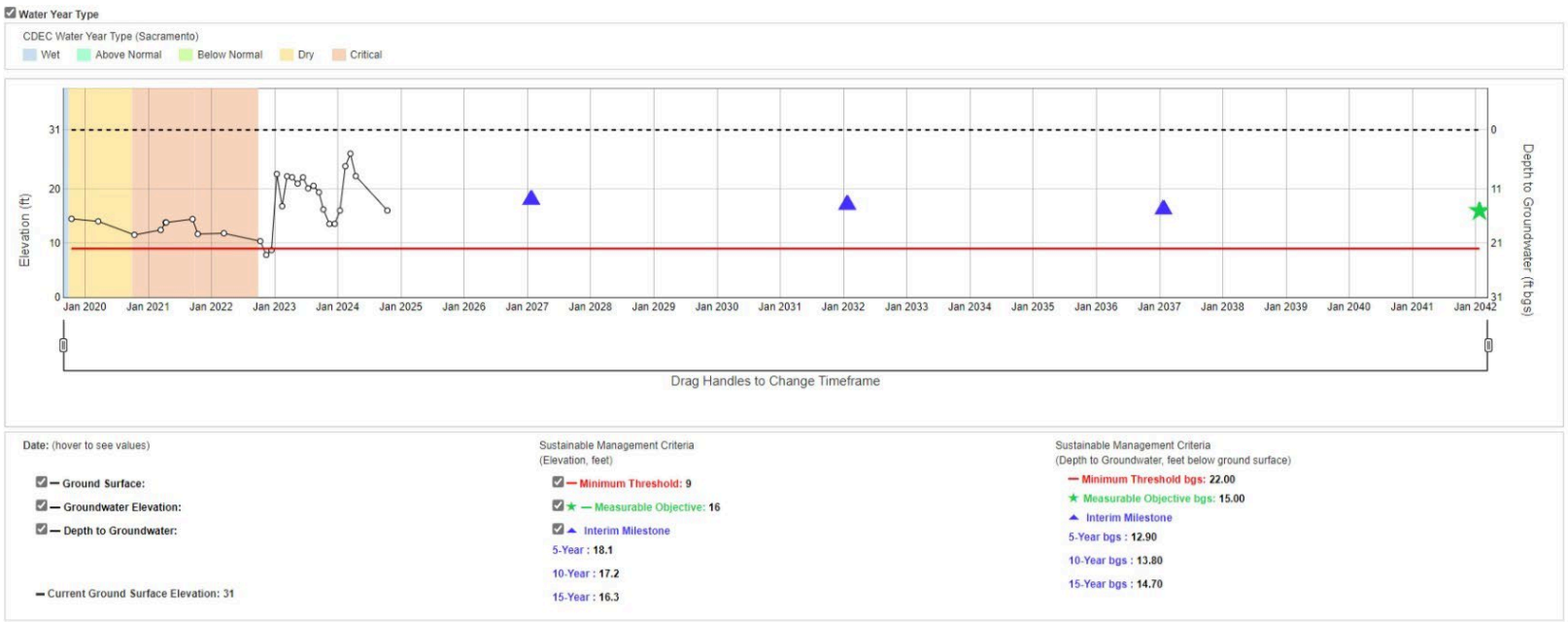
Figure A-25. SREL-1-27-F1

Site Code: 387749N1215975W001 **State Well Number:** **Local Well Name:** SREL-1-27-F1

Site Code: 387749N1215975W001
Local Well Name: SREL-1-27-F1
State Well Number:
Station ID: 57541
WCR Number:
Latitude: 38.77491
Longitude: -121.59753
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 49
Top Perforation (feet bgs):
Bottom Perforation (feet bgs):
Ground Surface Elevation: 31
Reference Point Elevation: 30.76
Reference Point Description: Top of casing
Station Comments:

Well Completion Report

Groundwater Elevation



Date: (hover to see values)

- **Ground Surface:**
- **Groundwater Elevation:**
- **Depth to Groundwater:**

Current Ground Surface Elevation: 31

Sustainable Management Criteria
(Elevation, feet)

- **Minimum Threshold: 9**
- **Measurable Objective: 16**
- **Interim Milestone**
  - 5-Year : 18.1
  - 10-Year : 17.2
  - 15-Year : 16.3

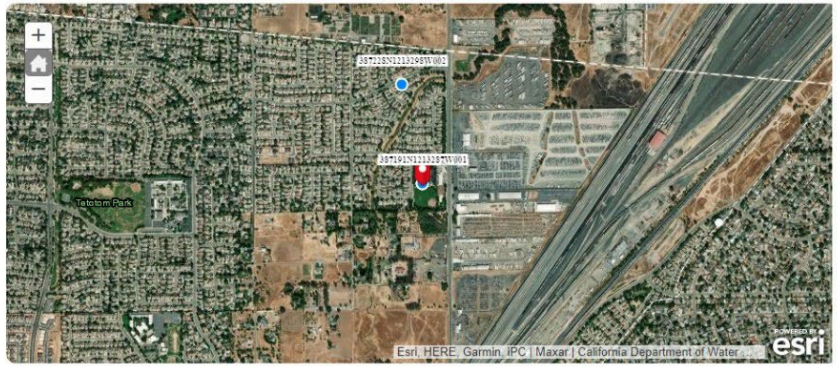
Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- **Minimum Threshold bgs: 22.00**
- **Measurable Objective bgs: 15.00**
- **Interim Milestone**
  - 5-Year bgs : 12.90
  - 10-Year bgs : 13.80
  - 15-Year bgs : 14.70

Figure A-26. Roseview Park - 315

Site Code: 387191N1213287W001 **State Well Number:** **Local Well Name:** Roseview Park - 315

Site Code: 387191N1213287W001
Local Well Name: Roseview Park - 315
State Well Number:
Station ID: 57530
WCR Number:
Latitude: 38.71912
Longitude: -121.32879
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 315
Top Perforation (feet bgs): 295
Bottom Perforation (feet bgs): 305
Ground Surface Elevation: 157
Reference Point Elevation: 156.84
Reference Point Description: Top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

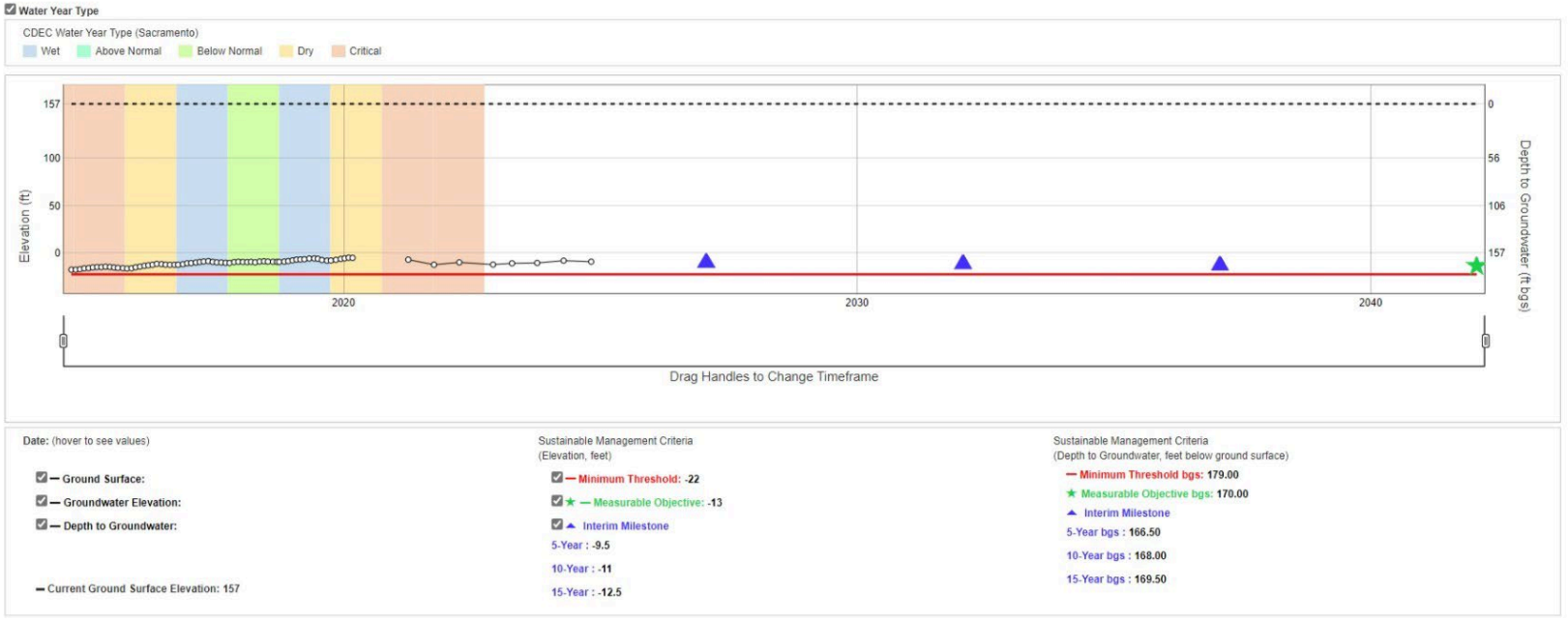


Figure A-27. WPMW – 12A

Site Code: 388026N1214432W002 **State Well Number:** **Local Well Name:** WPMW-12A

Site Code: 388026N1214432W002
Local Well Name: WPMW-12A
State Well Number:
Station ID: 54777
WCR Number:
Latitude: 38.80264
Longitude: -121.44322
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 300
Top Perforation (feet bgs): 260
Bottom Perforation (feet bgs): 280
Ground Surface Elevation: 67.64
Reference Point Elevation: 69.62
Reference Point Description: Top of PVC Casing
Station Comments:

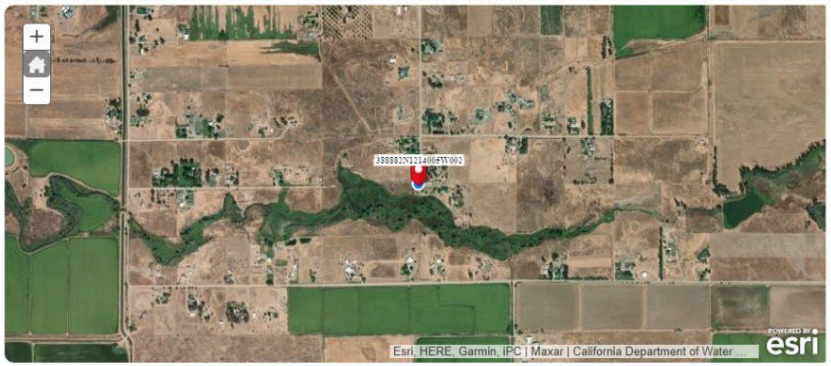
Well Completion Report

Groundwater Elevation

Figure A-28. WPMW-11A

Site Code: 388882N1214005W002 **State Well Number:** **Local Well Name:** WPMW-11A

Site Code: 388882N1214005W002
Local Well Name: WPMW-11A
State Well Number:
Station ID: 54779
WCR Number:
Latitude: 38.88816
Longitude: -121.40046
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Part of a nested/multi-completion well
Well Depth (feet bgs): 162
Top Perforation (feet bgs): 132
Bottom Perforation (feet bgs): 152
Ground Surface Elevation: 89.35
Reference Point Elevation: 92.07
Reference Point Description: Top of PVC casing
Station Comments:



Well Completion Report

Groundwater Elevation

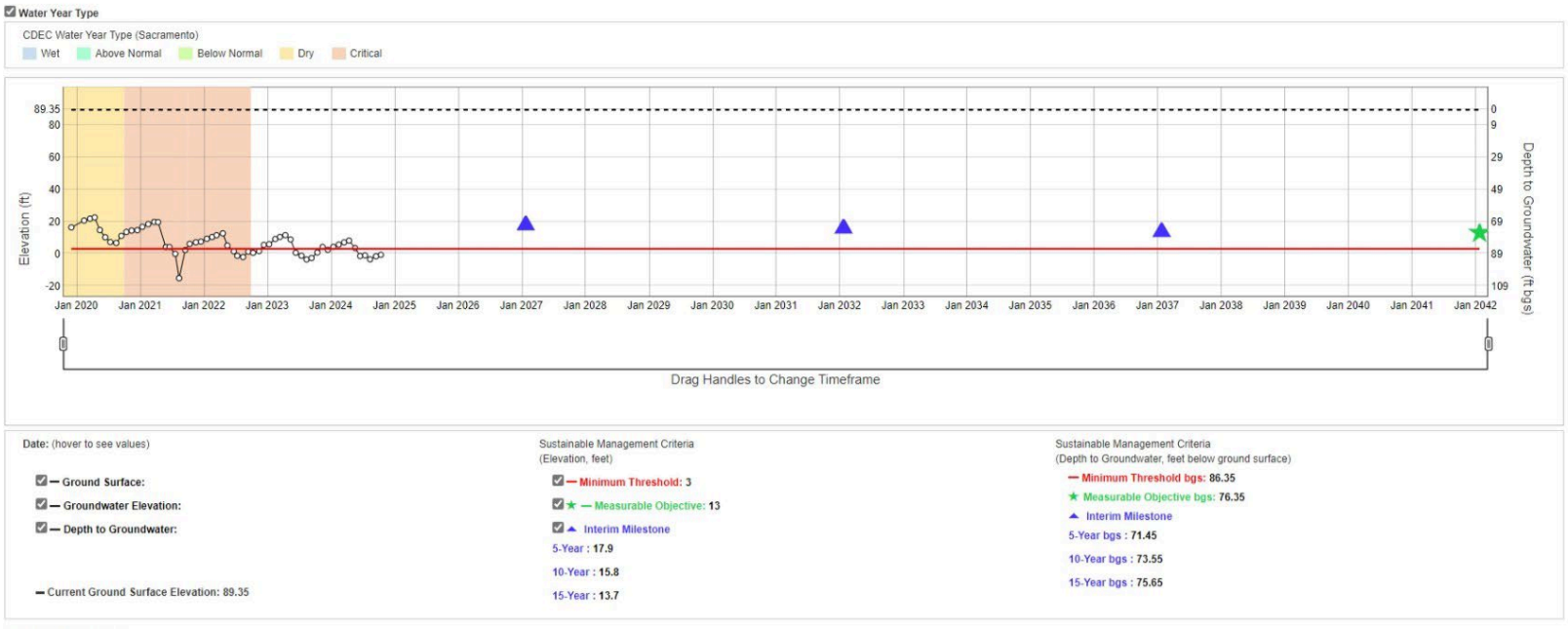


Figure A-29. RDMW-101

Site Code: 388829N1216110W001 **State Well Number:** **Local Well Name:** RDMW-101

Site Code: 388829N1216110W001
Local Well Name: RDMW-101
State Well Number:
Station ID: 57539
WCR Number:
Latitude: 38.88294
Longitude: -121.61105
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 48
Top Perforation (feet bgs): 28
Bottom Perforation (feet bgs): 43
Ground Surface Elevation: 30.17
Reference Point Elevation: 30.18
Reference Point Description: Top of casing
Station Comments:

Well Completion Report

Groundwater Elevation

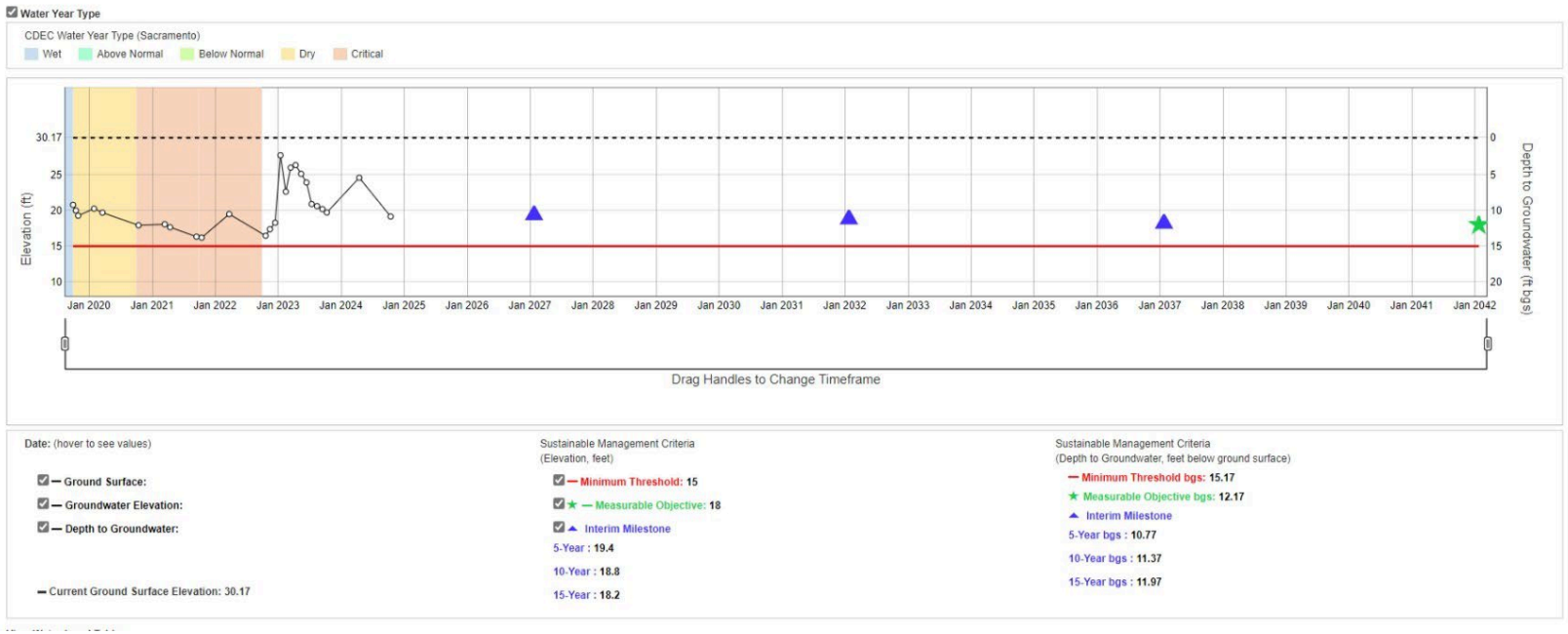
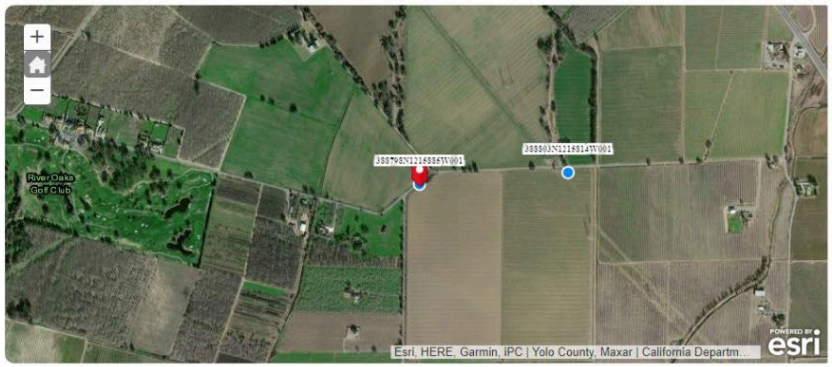


Figure A-30. RDMW-102

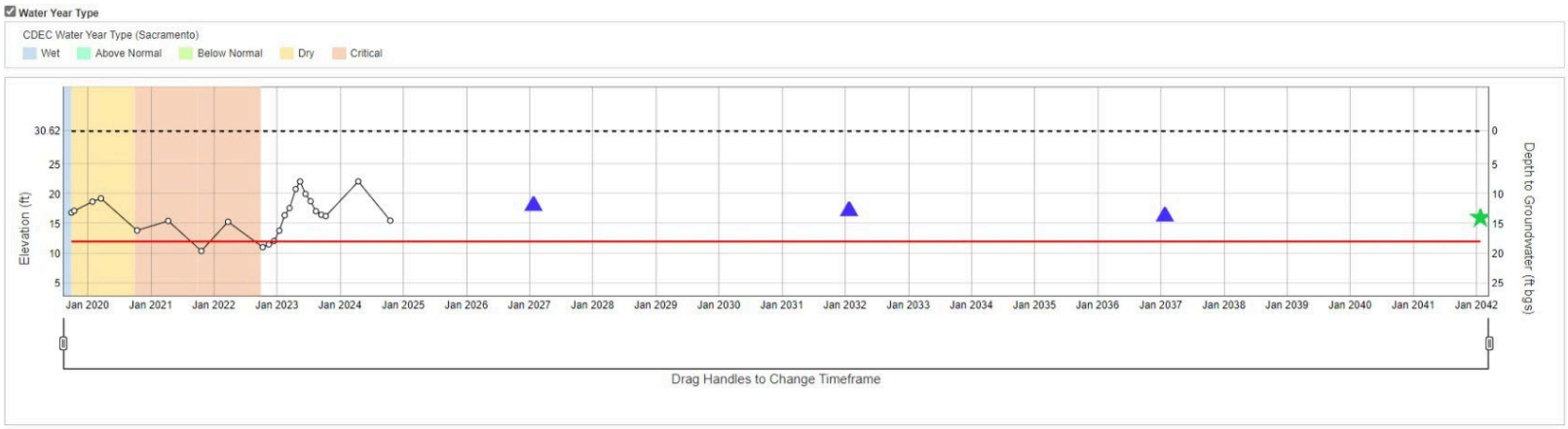
Site Code: 388798N1215885W001 **State Well Number:** **Local Well Name:** RDMW-102

Site Code: 388798N1215885W001
Local Well Name: RDMW-102
State Well Number:
Station ID: 57540
WCR Number:
Latitude: 38.87987
Longitude: -121.58853
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 48
Top Perforation (feet bgs): 28
Bottom Perforation (feet bgs): 43
Ground Surface Elevation: 30.62
Reference Point Elevation: 30.47
Reference Point Description: Top of casing
Station Comments:



Well Completion Report

Groundwater Elevation



Date: (hover to see values)

- **Ground Surface:**
- **Groundwater Elevation:**
- **Depth to Groundwater:**

Current Ground Surface Elevation: 30.62

Sustainable Management Criteria
(Elevation, feet)

- **Minimum Threshold:** 12
- **Measurable Objective:** 16
- Interim Milestone
  - 5-Year : 18.1
  - 10-Year : 17.2
  - 15-Year : 16.3

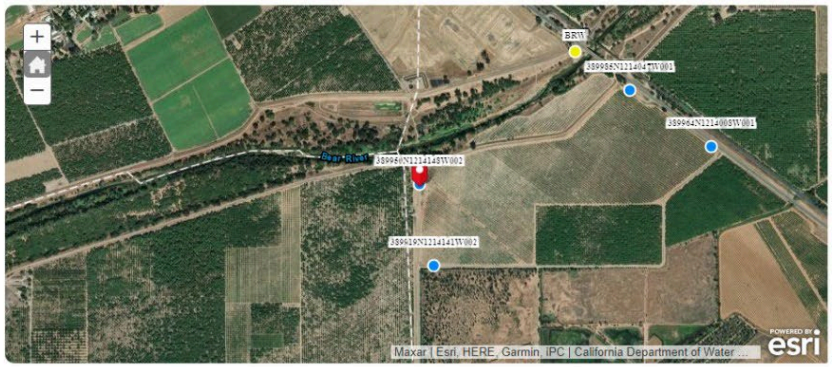
Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- **Minimum Threshold bgs:** 18.62
- **Measurable Objective bgs:** 14.62
- Interim Milestone
  - 5-Year bgs : 12.52
  - 10-Year bgs : 13.42
  - 15-Year bgs : 14.32

Figure A-31. RDMW-103

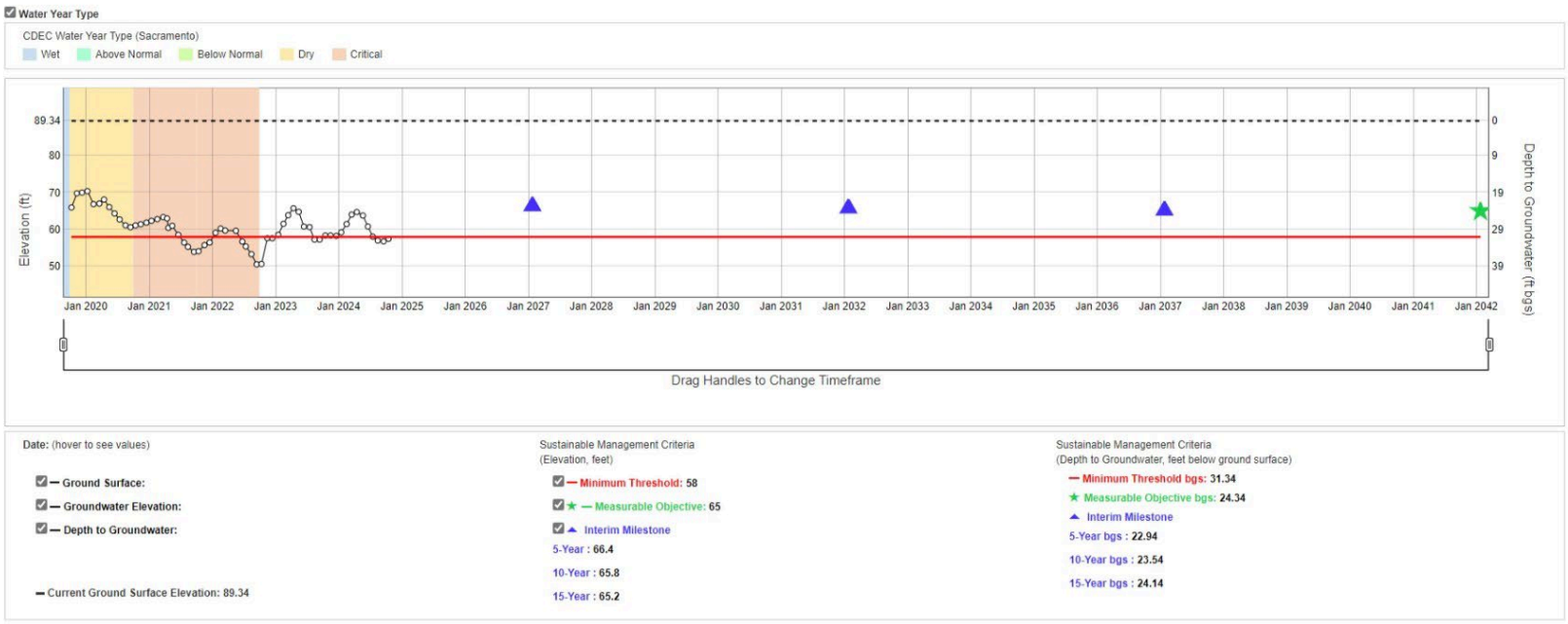
Site Code: 389950N1214148W002 **State Well Number:** **Local Well Name:** RDMW-103

Site Code: 389950N1214148W002
Local Well Name: RDMW-103
State Well Number:
Station ID: 54781
WCR Number:
Latitude: 38.99499
Longitude: -121.41479
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 52
Top Perforation (feet bgs): 28
Bottom Perforation (feet bgs): 43
Ground Surface Elevation: 89.34
Reference Point Elevation: 89.38
Reference Point Description: Top of PVC Casing
Station Comments:



Well Completion Report

Groundwater Elevation



Date: (hover to see values)

- **Ground Surface:**
- **Groundwater Elevation:**
- **Depth to Groundwater:**

Current Ground Surface Elevation: 89.34

Sustainable Management Criteria
(Elevation, feet)

- **Minimum Threshold:** 58
- **Measurable Objective:** 65
- **Interim Milestone**
  - 5-Year : 66.4
  - 10-Year : 65.8
  - 15-Year : 65.2

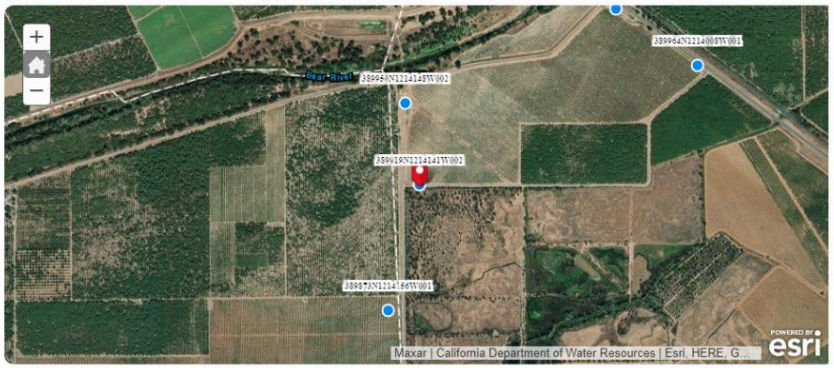
Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

- **Minimum Threshold bgs:** 31.34
- **Measurable Objective bgs:** 24.34
- **Interim Milestone**
  - 5-Year bgs : 22.94
  - 10-Year bgs : 23.54
  - 15-Year bgs : 24.14

Figure A-32. RDMW-104

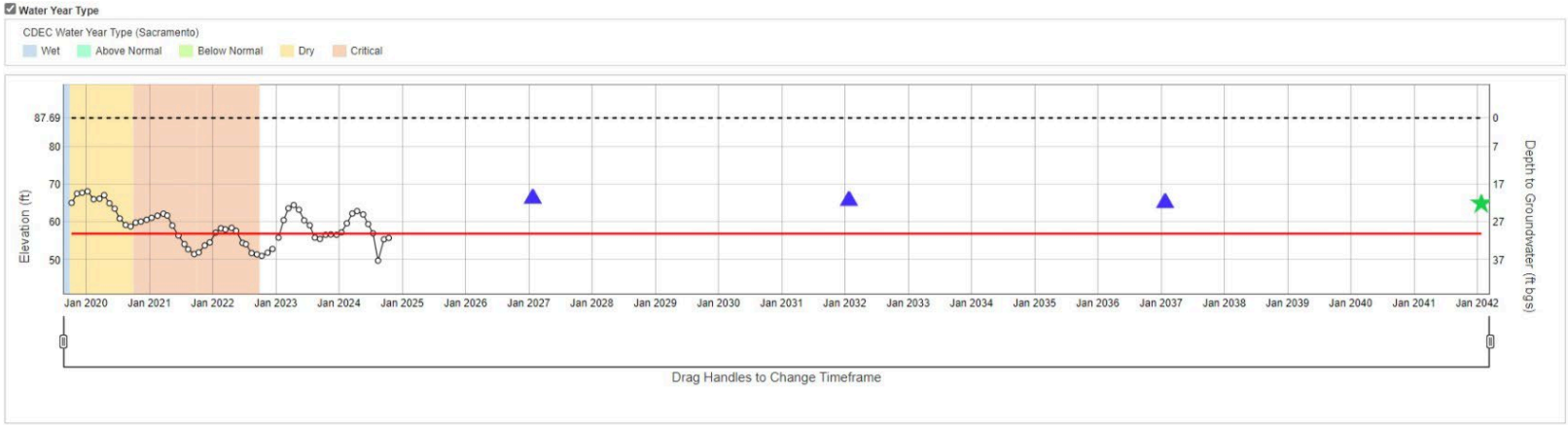
Site Code: 389919N1214141W002 **State Well Number:** **Local Well Name:** RDMW-104

Site Code: 389919N1214141W002
Local Well Name: RDMW-104
State Well Number:
Station ID: 54782
WCR Number:
Latitude: 38.99194
Longitude: -121.41407
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 50
Top Perforation (feet bgs): 28
Bottom Perforation (feet bgs): 43
Ground Surface Elevation: 87.69
Reference Point Elevation: 87.68
Reference Point Description: Top of PVC casing
Station Comments:



Well Completion Report

Groundwater Elevation



Date: (hover to see values)

- **Ground Surface:**
- **Groundwater Elevation:**
- **Depth to Groundwater:**

Current Ground Surface Elevation: 87.69

Sustainable Management Criteria
(Elevation, feet)

- **Minimum Threshold:** 57
- **Measurable Objective:** 65
- Interim Milestone

5-Year : 66.4
10-Year : 65.8
15-Year : 65.2

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

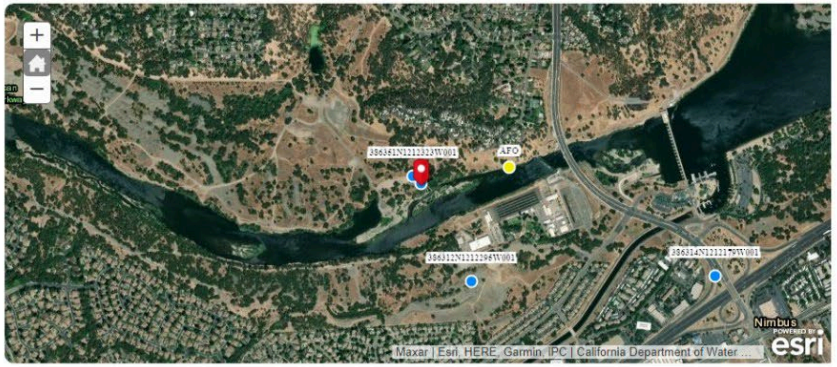
- **Minimum Threshold bgs:** 30.69
- **Measurable Objective bgs:** 22.69
- Interim Milestone

5-Year bgs : 21.29
10-Year bgs : 21.89
15-Year bgs : 22.49

Figure A-33. Aerojet- 1516

Site Code: 386348N1212319W001 **State Well Number:** **Local Well Name:** Aerojet-1516

Site Code: 386348N1212319W001
Local Well Name: Aerojet-1516
State Well Number:
Station ID: 57533
WCR Number:
Latitude: 38.63487
Longitude: -121.23192
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 40
Top Perforation (feet bgs): 13
Bottom Perforation (feet bgs): 33
Ground Surface Elevation: 89
Reference Point Elevation: 88.38
Reference Point Description: Top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

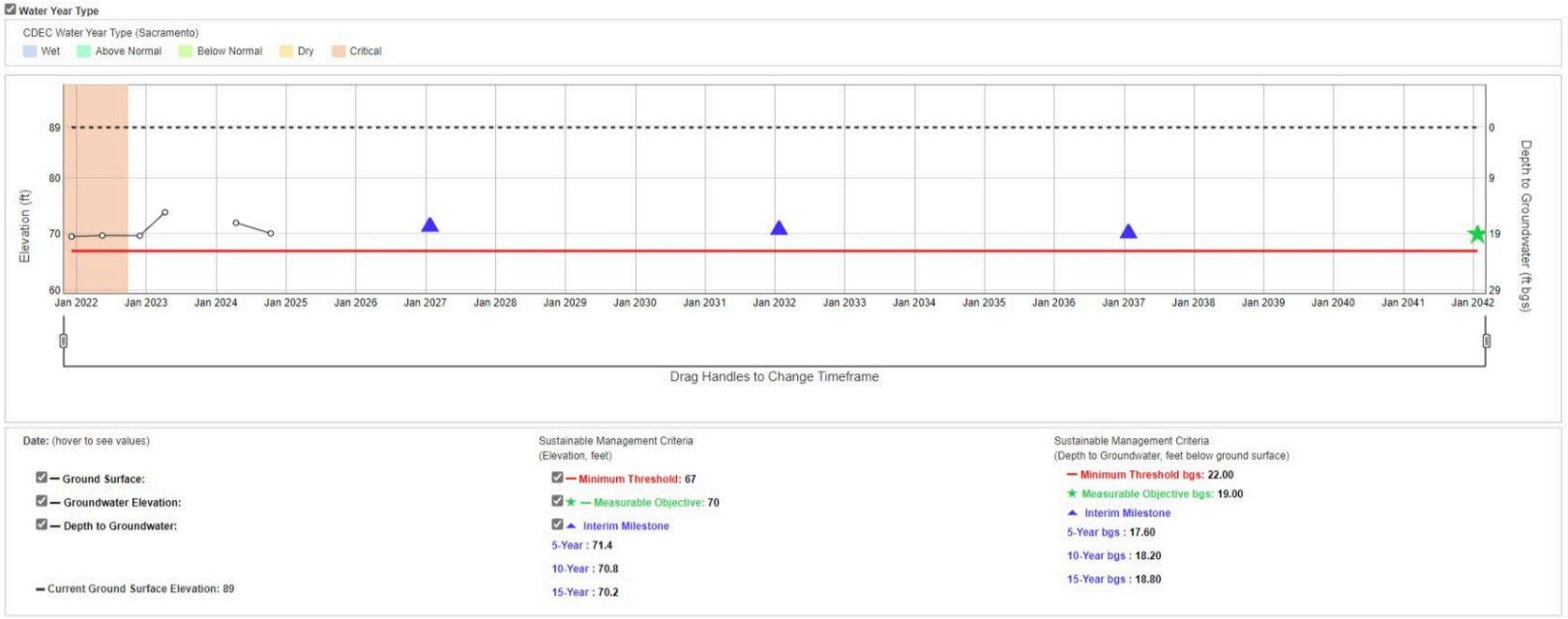
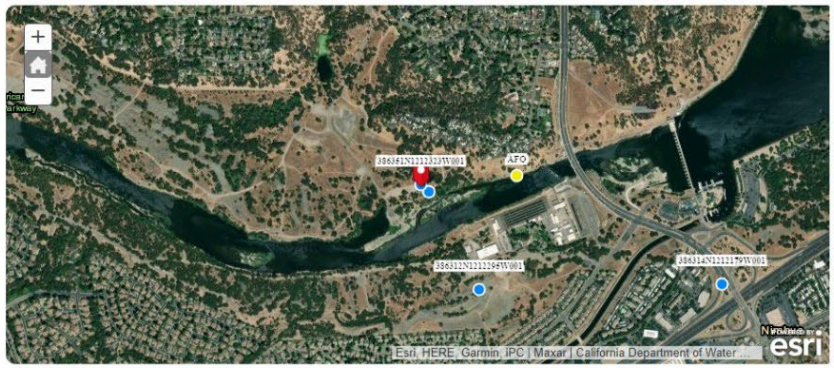


Figure A-34. Aerojet- 1518

Site Code: 386351N1212323W001 **State Well Number:** **Local Well Name:** Aerojet-1518

Site Code: 386351N1212323W001
Local Well Name: Aerojet-1518
State Well Number:
Station ID: 57534
WCR Number:
Latitude: 38.63513
Longitude: -121.23231
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 80
Top Perforation (feet bgs): 55
Bottom Perforation (feet bgs): 75
Ground Surface Elevation: 131
Reference Point Elevation: 130.71
Reference Point Description: Top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

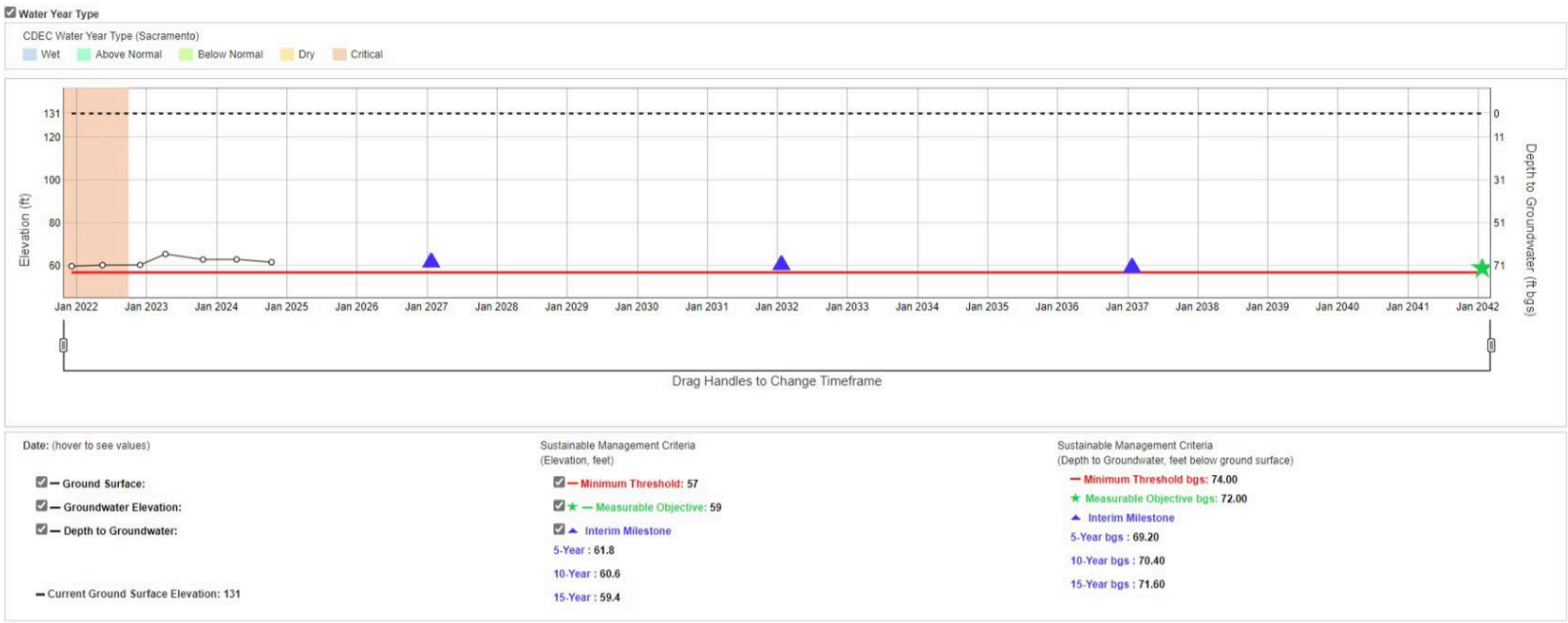


Figure A-35. URS71000-700+00C

Site Code: 386397N1215624W001 **State Well Number:** **Local Well Name:** URS71000-700+00C

Site Code: 386397N1215624W001
Local Well Name: URS71000-700+00C
State Well Number:
Station ID: 57536
WCR Number:
Latitude: 38.63970
Longitude: -121.56243
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 44
Top Perforation (feet bgs):
Bottom Perforation (feet bgs):
Ground Surface Elevation: 42
Reference Point Elevation: 41.7
Reference Point Description: Top of casing
Station Comments:

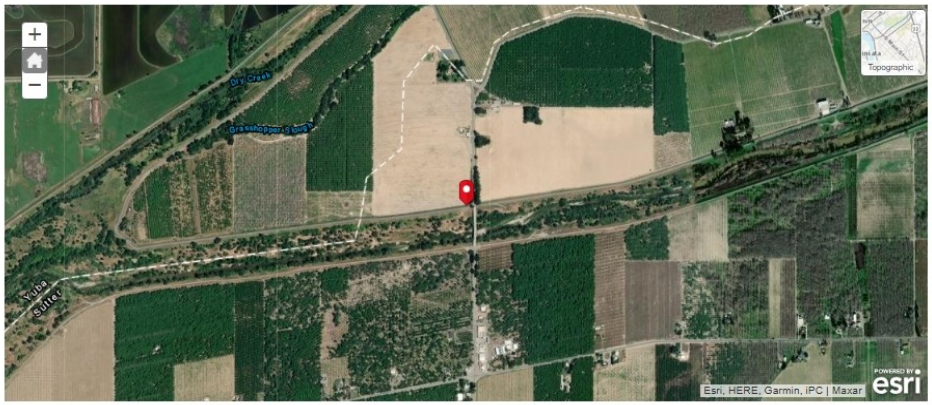
Well Completion Report

Groundwater Elevation

Figure A-36. BR-1B

Site Code: 389857N1214880W001 **State Well Number:** 13N04E11R002M **Local Well Name:** BR-1B

Site Code:	389857N1214880W001
Local Well Name:	BR-1B
Monitoring Network Type:	SGMA
Station ID:	39886
Latitude:	38.9857
Longitude:	-121.488
Well Depth (feet bgs):	98.0
Top Perforation (feet bgs):	78.0
Bottom Perforation (feet bgs):	98.0
Ground Surface Elevation:	62.77
Reference Point Elevation:	65.57
Sustainability Indicators:	Groundwater Levels,Interconnected Surface Waters

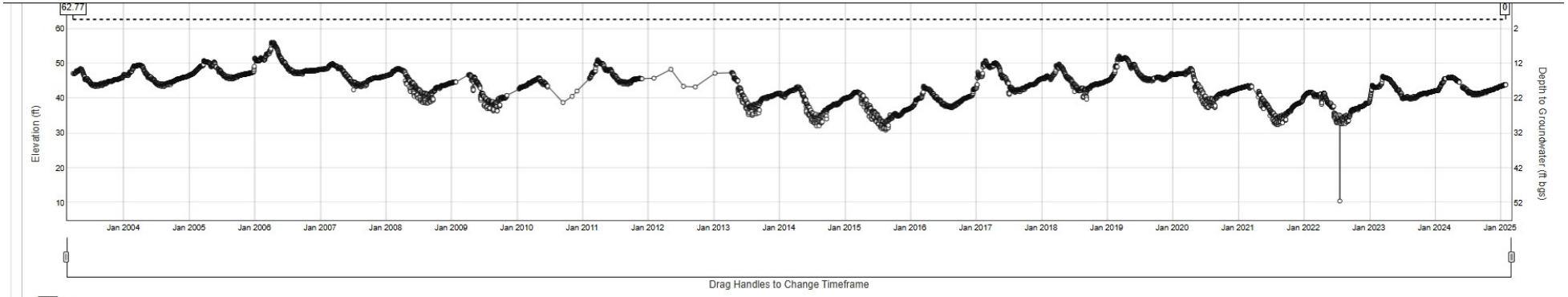


Download Well Data

Well Completion Report (WCR2003-004795)

Groundwater Elevations

Site Code: 389857N1214880W001 - Yuba Water Agency GSA - South Yuba



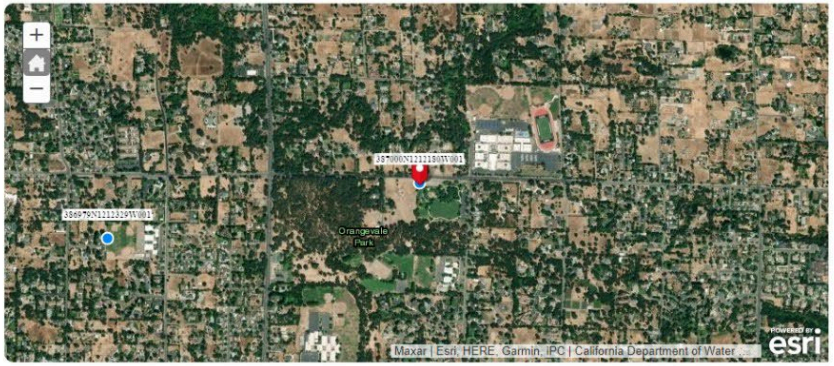
Date: (hover to see values)

- - Ground Surface:
- — Groundwater Elevation:
- — Depth to Groundwater:

Figure A-37. SGM_MW08

Site Code: 387000N1212180W001 **State Well Number:** **Local Well Name:** SGA_MW08

Site Code: 387000N1212180W001
Local Well Name: SGA_MW08
State Well Number:
Station ID: 48015
WCR Number:
Latitude: 38.69998
Longitude: -121.21795
Station Organization ID:
Station Organization Name:
Well Location Description: Northwest corner Orangevale Park off Oak Ave
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 145
Top Perforation (feet bgs): 130
Bottom Perforation (feet bgs): 140
Ground Surface Elevation: 215.19
Reference Point Elevation: 218.06
Reference Point Description: top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

Date: (hover to see values)

- **Ground Surface:**
- **Groundwater Elevation:**
- **Depth to Groundwater:**

Current Ground Surface Elevation: 215.19

Sustainable Management Criteria
(Elevation, feet)

- **Minimum Threshold: 97**
- **Measurable Objective: 99**
- Interim Milestone

5-Year : 107.4
10-Year : 103.8
15-Year : 100.2

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

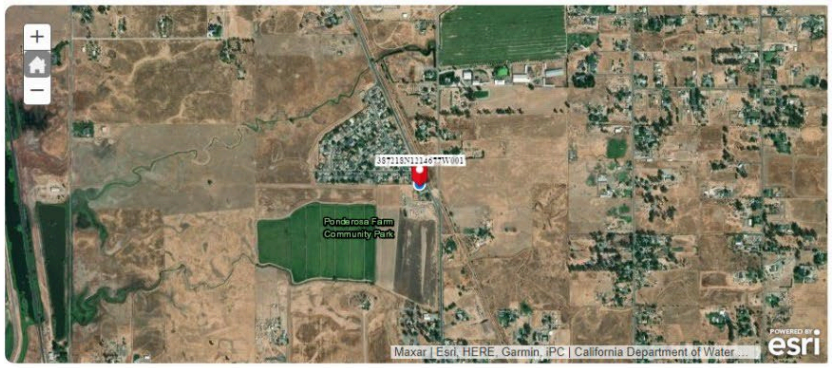
- **Minimum Threshold bgs: 118.19**
- **Measurable Objective bgs: 116.19**
- Interim Milestone

5-Year bgs : 107.79
10-Year bgs : 111.39
15-Year bgs : 114.99

Figure A-38. SGA_MW01

Site Code: 387218N1214677W001 **State Well Number:** **Local Well Name:** SGA_MW01

Site Code: 387218N1214677W001
Local Well Name: SGA_MW01
State Well Number:
Station ID: 48009
WCR Number:
Latitude: 38.72178
Longitude: -121.46771
Station Organization ID:
Station Organization Name:
Well Location Description: Rio Linda Blvd, 120 feet south of Rafael Dr
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 110
Top Perforation (feet bgs): 100
Bottom Perforation (feet bgs): 110
Ground Surface Elevation: 45.04
Reference Point Elevation: 47.59
Reference Point Description: top of casing
Station Comments:



Well Completion Report

Groundwater Elevation

Figure A-39. Old Well #2

Site Code: 389791N1213727W001 **State Well Number:** 13N05E13D003M **Local Well Name:** Old Well #2

Site Code: 389791N1213727W001
Local Well Name: Old Well #2
State Well Number: 13N05E13D003M
Station ID: 51327
WCR Number:
Latitude: 38.97913
Longitude: -121.37269
Station Organization ID:
Station Organization Name:
Well Location Description: In the Town of Sheridan. Two block east of old Highway 65 on south side of F Street.
Well Use Type: Industrial
Well Completion Type: Single Well
Well Depth (feet bgs): 209
Top Perforation (feet bgs): 144
Bottom Perforation (feet bgs): 209
Ground Surface Elevation: 107
Reference Point Elevation: 107
Reference Point Description: Top of casing
Station Comments:

Well Completion Report

Groundwater Elevation

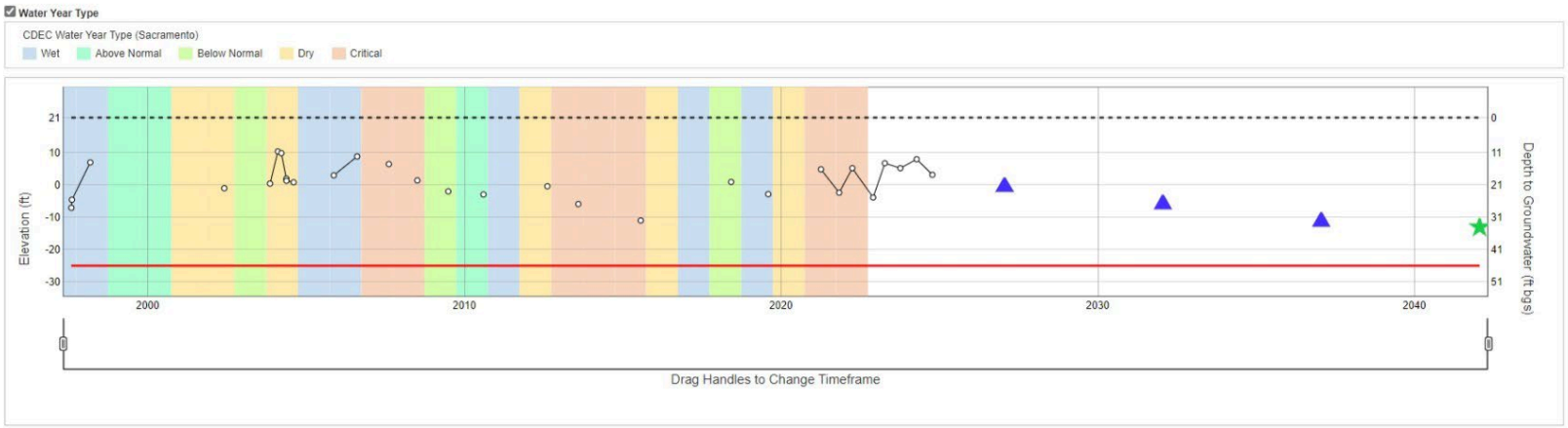
Figure A-40. DeWit

Site Code: 387251N1214954W001 **State Well Number:** 10N04E13F001M **Local Well Name:** DeWit

Site Code: 387251N1214954W001
Local Well Name: DeWit
State Well Number: 10N04E13F001M
Station ID: 57535
WCR Number:
Latitude: 38.72512
Longitude: -121.49544
Station Organization ID:
Station Organization Name:
Well Location Description:
Well Use Type: Observation
Well Completion Type: Single Well
Well Depth (feet bgs): 50
Top Perforation (feet bgs):
Bottom Perforation (feet bgs):
Ground Surface Elevation: 21
Reference Point Elevation: 22
Reference Point Description: Top of casing
Station Comments:

Well Completion Report

Groundwater Elevation



Date: (hover to see values)

Ground Surface:
Groundwater Elevation:
Depth to Groundwater:

Current Ground Surface Elevation: 21

Sustainable Management Criteria
(Elevation, feet)

Minimum Threshold: -25
Measurable Objective: -13
Interim Milestone
5-Year : -0.4
10-Year : -5.8
15-Year : -11.2

Sustainable Management Criteria
(Depth to Groundwater, feet below ground surface)

Minimum Threshold bgs: 46.00
Measurable Objective bgs: 34.00
Interim Milestone
5-Year bgs : 21.40
10-Year bgs : 26.80
15-Year bgs : 32.20

APPENDIX B: GSP IMPLEMENTATION TRACKER

Implementation Action	Action Due / Requirements	Status	Comments
Monitoring			
Groundwater Elevation Monitoring			
1. Continue ongoing semi-annual monitoring of the groundwater elevation monitoring network.	*Semi-annual*	Complete for 2024	Complete for spring 2024 and fall 2024.
2. Conduct confirmation water level monitoring, as needed.	*As needed*	Complete for 2024	More frequent monitoring being conducted at sites that measured below MT in fall 2024.
3. Download transducer data semi-annually.	*Semi-annual*	Complete for 2024	Spring 2024 and fall 2024 data downloaded.
Groundwater Quality Monitoring			
1. Download public supply well water quality monitoring data for TDS and Nitrates from the State DDW by December 31st of each year for MT and MO evaluation.	*December 31st*	Complete for 2024	For Water Year 2024, downloaded 62 distinct data points for TDS and 200 distinct values for N in February 2025.
2. Download data for Arsenic, Hexavalent Chromium, Iron, and Manganese from DDW as it becomes available for individual public supply wells and observe for trends. *If future upward trends emerge for these constituents, assess if establishing sustainable management criteria for them would be beneficial.*	*As available*	Complete for 2024	For Water Year 2024, downloaded 85 distinct data points for Arsenic, 42 distinct data points for Hexavalent Chromium, 81 distinct data points for Iron, and 76 distinct data points for Manganese in February 2025. Based on this analysis, no significant or sustained upward trends have been observed in the Subbasin.
3. Collect water quality samples in the shallow water quality monitoring network in the fall of odd numbered years (e.g., 2023).	*October 2023*	Complete for 2024	Water Year 2024 was the first year implementing this effort and SGA contracted GEI (and subconsultants) to complete in fall 2023. Water quality samples were collected for the shallow water quality monitoring network and results were included in the Water 2023 Annual Report and details of the sampling can be found in Appendix C of the Water Year 2023 Annual Report. The next monitoring event is tentatively scheduled for October 2025.
Subsidence Monitoring			
1. No current action required unless water level MT exceedances are occurring or if optional DWR InSAR monitoring indicates a potential undesirable result.	*None*	In Progress	More frequent monitoring being conducted at sites that measured below MT in fall 2024. Additionally, West Placer GSA is conducting a well investigation to help assess areas that measured below the MT.
Other Monitoring			
1. Collect additional monitoring data (e.g., surface water stages) from the CDEC on an as-needed basis (e.g., during preparation of Annual Report).	*As needed*	In Progress	To be incorporated into future annual reports, amended GSP, and 2027 Periodic Evaluation.

Data Management			
1. Upload groundwater elevation data on an ongoing basis to CASGEM (or other applicable State SGMA database) within one month after semi-annual monitoring.	*One month after semi-annual monitoring*	Complete for 2024	Complete for spring 2024 and fall 2024.
2. Upload water quality data from shallow monitoring well network by December 31 of each year that it is collected.	*December 31st*	In Progress	To be uploaded following October 2025 sampling.
3. Update NASb Data Management System with appropriate data by December 31 of each year.	*December 31st*	Complete	The Data Management System was updated with spring and fall 2024 data.
Data Analysis			
Sustainability Indicators			
1. Review all representative groundwater levels in comparison to MOs and MTs by December 31 of each year for potential emergence of undesirable results.	*December 31st*	Complete for 2024	Included in Water Year 2024 Annual Report.
2. Calculate the public water supply wells TDS and N rolling averages to determine if the Subbasin is meeting MOs and MTs by January 31 each year.	*January 31st*	Complete for 2024	Included in Water Year 2024 Annual Report.
3. Review shallow monitoring network TDS and N data to determine if the Subbasin is meeting MOs and MTs by January 31 of each year following its collection.	*January 31st*	Complete for 2024	Sampling was conducted by GEI and its consultants in October 2023 (Water Year 2024) and the results are included in the Water Year 2024 Annual Report. The next shallow aquifer monitoring event is scheduled for October 2025.
Annual Report			
1. Complete the recurring Annual Report for review by GSAs by February 28 each year and submit to DWR by April 1 each year.	*Review: February 28 Submit to DWR: April 1*	Complete for 2024	Preparation of the Water Year 2024 Annual Report began November 2024, the GSAs initiated their review on February 27, and the report was submitted to DWR on March 31, 2025.
CoSANA Groundwater Model			
1. In 2025, a comprehensive assessment and update of the CoSANA model will begin. This will be coordinated with the South American and Cosumnes subbasins. Update to the model will include the use of the most updated urban water supplier demand projections, the latest climate change projections (using multiple future projection scenarios), consideration of an extreme scenario, consideration of the model recommendations in Section 6 of the CoSANA model report included in Appendix P of the GSP.	*Continuous*	In Progress	Annual land use and hydrology are being routinely updated as part of the annual report preparation. Additionally, the North American Subbasin (NASb) was awarded funding through the Department of Water Resources (DWR) SGM Grant Round II funding which includes a comprehensive assessment and update of the CoSANA model. NASb is currently working with adjacent Subbasins to assess opportunities for interbasin coordination for this effort.

Coordination and Outreach			
1. Continue quarterly meetings of the NASb GSAs.	*Quarterly*	Complete for 2024	During Water Year 2024 the GSAs met on November 6, 2023, March 9, 2024, and May 29, 2024. The GSAs have scheduled bi-monthly coordination meetings in WY 2025 to continue this implementation action.
2. Hold at least one public meeting each year in which basin conditions will be presented and upcoming year activities will be described. The meeting will be scheduled when the Annual Report has been completed each year.	*At least one meeting each year (scheduled after completion of the Annual Report)*	Complete for 2024	The GSAs presented the Water Year 2023 Annual Report, along with current and upcoming GSP Implementation activities, on June 26, 2024 via Zoom. Meeting materials can be found at: https://nasbgroundwater.org.
3. Meet with each adjacent subbasin at least annually. The meeting will be scheduled as the Annual Report is being prepared, so that any observations about potential concerns near common boundaries can be discussed.	*Annually (scheduled during preparation of the Annual Report)*	Complete for 2024	The GSAs met with the South American Subbasin on November 6, 2023, and May 22,2024 to discuss enhancements to the CoSANA model. The GSAs are in process of scheduling additional interbasin GSA coordination meetings as part of the Lower Sacramento Valley GSAs initiative and the Subbasin's intent to amend the GSP.
4. Meet with County and City land use planning staff of respective counties once each year to share the results of the Annual Report and discuss any upcoming anticipated changes to land use designations or General Plans. The meetings will be scheduled shortly after the Annual Report is submitted.	*Once per year (scheduled shortly after Annual Report is submitted)*	Complete for 2024	WPGSA has engaged the Placer County Planning Department to discuss the impact of land use designations on groundwater conditions. The other GSAs have also engaged their respective land use planning agencies and information on these engagements will be provided in subsequent annual reports, the Amended GSP, and 2027 Periodic Evaluation.
5. Continue quarterly meetings of the Regional Contamination Issues Committee to identify and report on potential emerging issues of contamination or constituents of concern. The committee is facilitated by SGA staff and includes State and Federal regulatory agencies, local water agencies, responsible parties, and members of the public.	*Quarterly*	Complete for 2024	Meetings were held on October 26, 2023, January 24, 2024, and April 24, 2024. The meeting scheduled for July 2024 was cancelled, but quarterly meetings resumed in October 2024.
Other Management Activities			
1. Fill data gaps identified in the monitoring well network.	*December 31, 2025*	In Progress	Installation activities are expected to begin in June 2025 and end by October 2025.
2. Track implementation of urban area conjunctive use program as part of Annual Report preparation. Identify if there are barriers to its planned expansion.	*Continuous*	Complete for 2024	Water use reported in Water Year 2024 Annual Report.

Other Management Activities			
3. Work with the Regional Water Authority in its development of the Sacramento Regional Water Bank to ensure that it is consistent with achieving the sustainability goal in the NASb.	*Continuous*	Complete for 2024	RWA began public engagement for the Water Bank and held its first Stakeholder Forum on October 26, 2022. The second Stakeholder Forum was held February 13, 2023. The third Stakeholder Forum was held December 12, 2023. The fourth Stakeholder Forum is currently scheduled for February 4, 2025.
4. Begin technical work on well construction practices (e.g., depth and spacing) to protect the most sensitive beneficial uses and users of groundwater in the NASb. Work will commence in early 2022 and be completed by the end of 2023. This will require a cooperative effort with local permitting agencies.	*Began early 2022 Expected completion by 2026*	In Progress	Original scope of this task was postponed in Water Year 2023 due to the Governor's Executive Order related to drought requiring GSAs to determine consistency with new well permits. WPGSA is in discussions with the Placer County Environmental Health Department on potential updates to well standards.
5. Commence shallow/domestic well analysis.	*Begin 2025 Expected completion by 2026*	In Progress	SGA and WPGSA staff have initiated study. Approach is to identify parcels in subbasin that have homes that are not served by public water suppliers. SGA concluded the desktop analysis in October 2024 and is preparing a report detailing the results. WPGSA is in the process of identitying parcels not served by public water systems and not identified in the DWR database; this work scheduled to begin spring/summer of 2025.
6. Commence GDE assessment management action in early 2022 and conclude major assessment by early 2024. Continue annual monitoring of GDE health.	*Began early 2022 Continuous yearly annual monitoring of GDE health*	Postponed	SGA staff are researching options for assessing GDE health. Several coordination meetings were held with adjacent subbasins and The Nature Conservancy to determine the best approach.
7. Track progress on supplemental projects on an annual basis. Update progress and any information on newly proposed supplemental projects in the Annual Report.	*Annually*	Complete for 2024	Included in Water Year 2024 Annual Report.