WY 2025 Annual Report

Monterey Subbasin

Marina Coast Water District Groundwater Sustainability Agency
Salinas Valley Basin Groundwater Sustainability Agency

April 1, 2026

TABLE OF CONTENTS

1 Executive Summary 1
2 Introduction 11
2.1 Purpose 11
2.2 Monterey Subbasin Groundwater Sustainability Plan 11
2.3 Organization of This Report 12
3 Subbasin Setting 13
3.1 Principal Aquifers and Aquitards 13
3.2 Natural Groundwater Recharge and Discharge 14
3.3 Precipitation and Water Year Type 15
4 Subbasin Conditions 17
4.1 Groundwater Elevations 17
4.1.1 Groundwater Elevation Contours 17
4.1.2 Long-Term Groundwater Elevation Trends 41
4.2 Water Use and Supply 50
4.2.1 Groundwater Extraction 50
4.2.2 Total Water Use 52
4.3 Groundwater Storage 53
4.3.1 Marina-Ord Area WBZ 53
4.3.2 Corral de Tierra WBZ 60
4.4 Seawater Intrusion 63
4.4.1 Salinity Concentrations 63
4.4.2 Induction Logs 79
4.4.3 Geochemical Analysis 85
4.5 Water Quality 92
4.6 Land Subsidence 94
4.7 Interconnected Surface Water 94
4.7.1 Marina-Ord Area 94
4.7.2 Corral de Tierra Area 94

5 Annual Progress Towards Implementation of the Monterey GSP 96
5.1 Sustainable Management Criteria 96
5.1.1 Chronic Lowering of Groundwater Levels 97
5.1.2 Reduction in Groundwater Storage 101
5.1.3 Seawater Intrusion 101
5.1.4 Water Quality 102
5.1.5 Land Subsidence 103
5.1.6 Interconnected Surface Water 104
5.2 GSP Implementation Activities 104
5.2.1 General Administration 104
5.2.2 Coordination and Engagement 111
5.2.3 Data Expansion and SGMA Compliance 118
5.2.4 Projects and Management Actions 136
6 References 144

List of Tables

Table 3-1 Water Year Type
Table 4-1 Groundwater Extraction by Sector in WY 2025 in the Marina-Ord Area
Table 4-2 Groundwater Extraction by Sector in WY 2025 in the Corral de Tierra Area
Table 4-3 Total Water Use in WY 2025 in the Monterey Subbasin
Table 4-4 Estimated Change in Groundwater Storage in the Marina-Ord Area WBZ
Table 4-5 Estimated Change in Groundwater Storage in the Corral de Tierra Area
Table 4-6 Screen Depths and Chloride Concentrations in USGS Well 014S001E24L
Table 4-7 Water Quality in WY 2025
Table 4-8 Marina-Ord Area Interconnected Surface Water Representative Monitoring Sites
Table 5-1 Groundwater Elevations and Relevant Sustainable Management Criteria for Chronic Lowering of Groundwater Levels Sustainability Criteria
Table 5-2 Water Quality Exceedances in WY 2025
Table 5-3 Progress on General Administrative Tasks as of December 2025
Table 5-4 Progress on Interested Parties Coordination and Outreach as of December 2025

Table 5-5 Progress on Data Expansion and SGMA Compliance as of December 2025

Table 5-6 Status of Addressing Monterey Subbasin RCAs

Table 5-7 Progress on Projects and Management Actions as of December 2025

List of Figures

Figure 1-1 Monterey Subbasin

Figure 1-2 Management Areas

Figure 1-3 Comparison of WY 2025 and Historical Average Monthly and Cumulative Precipitation

Figure 1-4 Historical Groundwater Extraction in the Monterey Subbasin

Figure 1-5 Exceedance of the Groundwater Elevation MT and Undesirable Result

Figure 1-6 Estimated Seawater Intrusion Extent in the Lower 180-Foot, 400-Foot Aquifer, WY 2025

Figure 3-1 Comparison of WY 2025 and Historical Average Monthly and Cumulative Precipitation

Figure 4-1 Groundwater Level Contours in the Dune Sand Aquifer – Spring 2025

Figure 4-2 Groundwater Level Contours in the Dune Sand Aquifer – August 2025

Figure 4-3 Groundwater Level Contours in the Dune Sand Aquifer – Fall 2025

Figure 4-4 Groundwater Level Contours in the Upper 180-Foot Aquifer – Spring 2025

Figure 4-5 Groundwater Level Contours in the Upper 180-Foot Aquifer – August 2025

Figure 4-6 Groundwater Level Contours in the Upper 180-Foot Aquifer – Fall 2025

Figure 4-7 Groundwater Level Contours in the Lower 180 Foot, 400-Foot Aquifer – Spring 2025

Figure 4-8 Groundwater Level Contours in the Lower 180 Foot, 400-Foot Aquifer – August 2025

Figure 4-9 Groundwater Level Contours in the Lower 180 Foot, 400-Foot Aquifer – Fall 2025

Figure 4-10 Groundwater Level Contours in the Upper Deep Aquifer Zone – Spring 2025

Figure 4-11 Groundwater Level Contours in the Upper Deep Aquifer Zone – August 2025

Figure 4-12 Groundwater Level Contours in the Upper Deep Aquifer Zone – Fall 2025

Figure 4-13 Groundwater Level Contours in the Lower Deep Aquifer Zone – Spring 2025

Figure 4-14 Groundwater Level Contours in the Lower Deep Aquifer Zone – August 2025

Figure 4-15 Groundwater Level Contours in the Lower Deep Aquifer Zone – Fall 2025

Figure 4-16 Groundwater Level Contours in the El Toro Primary Aquifer – Spring 2025

Figure 4-17 Groundwater Level Contours in the El Toro Primary Aquifer – August 2025

Figure 4-18 Groundwater Level Contours in the El Toro Primary Aquifer – Fall 2025

Figure 4-19 Representative Groundwater Elevation Hydrographs in the Dune Sand Aquifer

Figure 4-20 Representative Groundwater Elevation Hydrographs in the Upper 180-Foot Aquifer

Figure 4-21 Representative Groundwater Elevation Hydrographs in the Lower 180-Foot Aquifer

Figure 4-22 Representative Groundwater Elevation Hydrographs in the 400-Foot Aquifer

Figure 4-23 Representative Groundwater Elevation Hydrographs in the Deep Aquifers

Figure 4-24 Representative Groundwater Elevation Hydrographs in the El Toro Primary Aquifer (South)

Figure 4-25 Representative Groundwater Elevation Hydrographs in the El Toro Primary Aquifer (North)

Figure 4-26 Historical Groundwater Extraction in the Monterey Subbasin

Figure 4-27 Total Water Use in WY 2025 by Sector and Source

Figure 4-28 Groundwater Elevation Contours for Storage Calculation in the 400-Foot Aquifer – Fall 2025

Figure 4-29 Groundwater Elevation Contours for Storage Calculation in the Deep Aquifers - Fall 2025

Figure 4-30 Cumulative and Annual Change in Storage in the Marina-Ord Area

Figure 4-31 Change in Groundwater Elevations in the Marina-Ord Area, Fall 2024 to Fall 2025

Figure 4-32 Cumulative and Annual Change in Storage in the Corral de Tierra Area

Figure 4-33 Change in Groundwater Elevations in the El Toro Primary Aquifer System, Fall 2024 to Fall 2025

Figure 4-34 Relationship Between TDS and Chloride Concentrations, Marina-Ord Area

Figure 4-35 Equivalent Freshwater Head in 014S001E24L005M and 014S001E24L004M

Figure 4-36 WY 2025 Chloride Concentration, Marina-Ord Area

Figure 4-37 WY 2025 TDS Concentration and Conductivity Measurements, Marina-Ord Area

Figure 4-38 Estimated Seawater Intrusion Extent in the Lower 180-Foot, 400-Foot Aquifer, WY 2025

Figure 4-39 Estimated Seawater Intrusion Extent in the Upper Deep Aquifer Zone, WY 2025

Figure 4-40 Estimated Seawater Intrusion Extent in the Lower Deep Aquifer Zone, WY 2025

Figure 4-41 Long-Term Chloride Concentrations in the Lower 180/400-Foot Aquifers

Figure 4-42 Long-Term Chloride Concentrations in the Upper Deep Aquifer Zone

Figure 4-43 Long-Term Chloride Concentrations in the Lower Deep Aquifer Zone

Figure 4-44 Induction Logging in 014S001E24L, 2022-2025

Figure 4-45 Induction Logging in 014S001E24L, 2000-2025

Figure 4-46 Induction Logging in 14S02E33E

Figure 4-47 Sodium-Chloride Molar Ratios

Figure 4-48 Chloride and Nitrate Concentrations

Figure 4-49 Estimated InSAR Subsidence

Appendices

Appendix A WY 2025 Hydrologic Condition and Water Management in the Salinas Valley Basin

Appendix B Long-term Groundwater Elevations in Groundwater Level RMS Wells

Appendix C Depth-Discrete Specific Conductivity Measurements from 014E001S24L and MPWMD#FO-11

Appendix D Long-term Chloride and TDS Concentrations in Seawater Intrusion RMS Wells

List of Abbreviations

AC	Advisory Committee
AEM	airborne electromagnetic
AF	acre-feet
AFY	acre-feet per year
ASGSA	Arroyo Seco Groundwater Sustainability Agency
ASR	aquifer storage and recovery
BGR	Brackish Groundwater Restoration
CCR	California Code of Regulations
CCRWQCB	Central Coast Regional Water Quality Control Board
CCWG	Central Coast Wetlands Group
COC	constituents of concern
DDW	Division of Drinking Water
DM	Demand Management
DMS	data management system
DWR	California Department of Water Resources
EDF	Environmental Defense Fund
FO	Fort Ord
ft	feet
ft bgs	below ground surface
FY	fiscal year
GAMA	Groundwater Ambient Monitoring and Assessment
GDE	groundwater dependent ecosystem
GEMS	Groundwater Extraction Management System
GMP	Groundwater Monitoring Program
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GTAC	Groundwater Technical Advisory Committee
GWE	groundwater elevation
HEC-RAS	Hydrologic Engineering Center's River Analysis System
HCM	Hydrogeologic Conceptual Model
ILRP	Irrigated Lands Regulatory Program
IM	interim milestone
IM5	first interim milestone
InSAR	Interferometric Synthetic Aperture Radar
IPR	indirect potable reuse
ISW	interconnected surface water
JPA	Joint Powers Authority
M&A	Mongomery & Associates
MBAS	methylene blue active substances4
MBGWFM	Monterey Subbasin Groundwater Flow Model
MCEHB	Monterey County Health Department’s Environmental Health Bureau

MCL	Maximum Contaminant Level
MCWD	Marina Coast Water District
MCWDGSA	Marina Coast Water District Groundwater Sustainability Agency
MCWRA	Monterey County Water Resources Agency
mg/L	milligram per liter
MO	measurable objective
MPWMD	Monterey Peninsula Water Management District
MT	minimum threshold
NAVD 88	North American Vertical Datum of 1988
P&MA	Projects and Management Action
PRISM	Parameter-elevation Regressions on Independent Slopes Model
PVWMA	Pajaro Valley Water Management Agency
RCA	Recommended Corrective Action
RCDMC	Resource Conservation District of Monterey County
RGS	Regional Government Services
RMS	Representative Monitoring Site
SGM	Sustainable Groundwater Management
SGMA	Sustainable Groundwater Management Act
SMCL	Secondary Maximum Contaminant Level
SMCs	Sustainable Management Criteria
SRDF	Salinas River Diversion Facility
SVA	Salinas Valley Aquitard
SVBGSA	Salinas Valley Basin Groundwater Sustainability Agency
SVGB	Salinas Valley Groundwater Basin
SVIHM	Salinas Valley Integrated Hydrologic Model
SWI	seawater intrusion
SWIM	Seawater Intrusion Model
SWIG	Seawater Intrusion Working Group
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TCE	trichloroethene
TDS	total dissolved solids
UCCE	University of California Cooperative Extension
µg/L	microgram per liter
µmhos/cm	micromhos per centimeter
UR	undesirable result
U.S.	United States
USGS	United States Geological Survey
WBZ	Water Budget Zone
WCR	well completion reports
WY	water year

1 EXECUTIVE SUMMARY

The Monterey Subbasin (referred to herein as "the Subbasin"), California Department of Water Resources (DWR) Basin No. 3-004.10, is classified as a medium priority basin (Figure 1-1; DWR, 2019). To address the long-term reliability of groundwater within the Subbasin, the Marina Coast Water District Groundwater Sustainability Agency (MCWDGSA) and the Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) co-authored a Groundwater Sustainability Plan[1] (Monterey GSP or GSP), which was adopted by both Groundwater Sustainability Agencies (GSAs) and submitted to DWR on January 31, 2022 (MCWDGSA and SVBGSA, 2022). The GSP was approved by DWR in April 2023 (DWR, 2024).

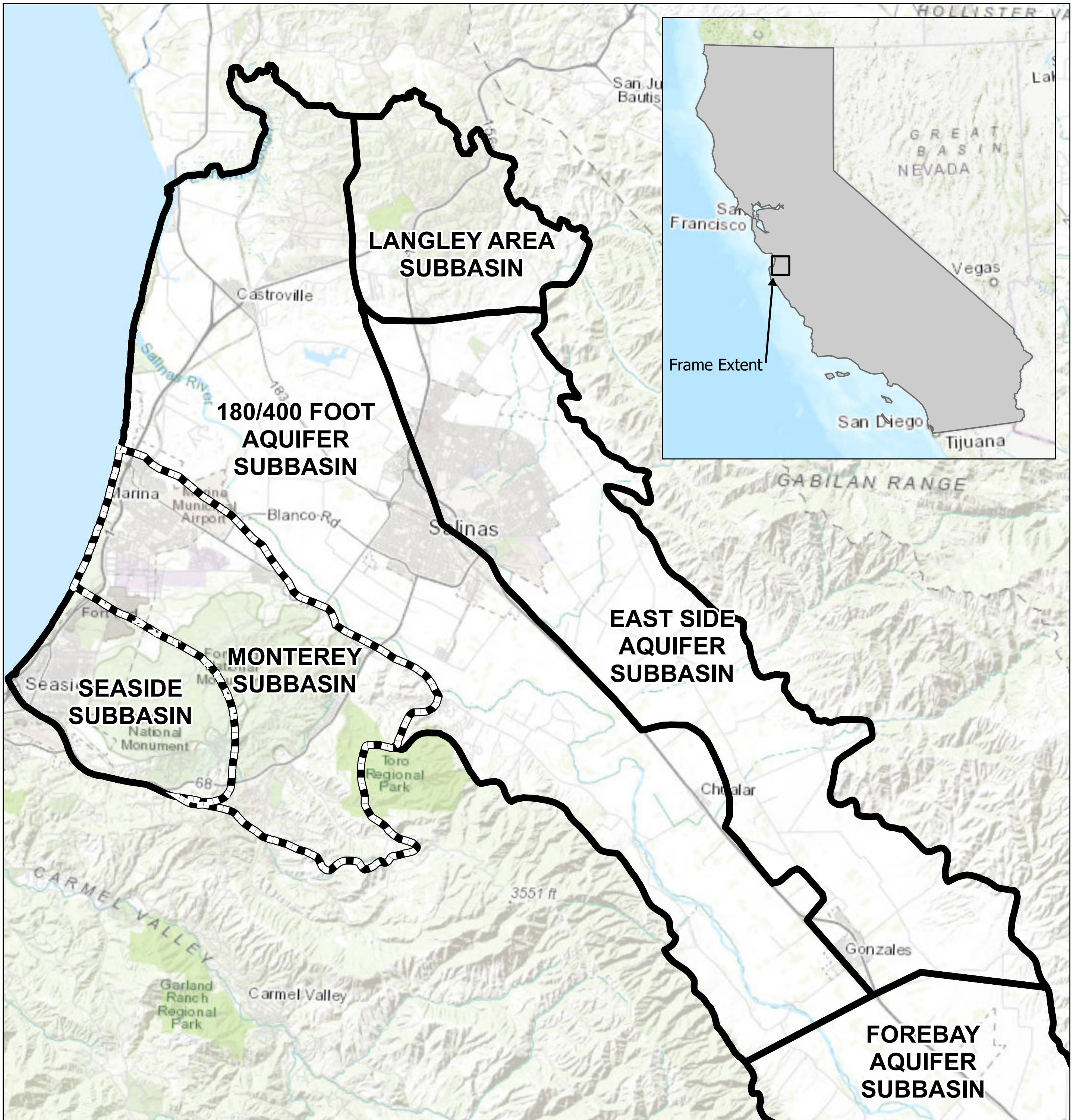
The GSP defined the sustainability goal of the Monterey Subbasin as follows:

> *"…to manage groundwater resources for long-term community, financial, and environmental benefits to the Subbasin's residents and businesses. The goal of this GSP is to ensure long-term water supplies to local communities at a reasonable cost. In addition, because the Subbasin is hydrologically connected with other Salinas Valley Basin Subbasins, this GSP aims to develop a coordinated approach to groundwater management within this Subbasin and neighboring Subbasins. The Subbasin will achieve long-term sustainability through the implementation of inter- and intra- basin coordination as well as projects and management actions."*

The Monterey GSP establishes two Management Areas within the Subbasin. These Management Areas include the Marina-Ord Management Area (Marina-Ord Area) and the Corral de Tierra Management Area (Corral de Tierra Area) (Figure 1-2). The Marina-Ord Area consists of the lands within the City of Marina, the City of Seaside, and the former Fort Ord (FO). The Corral de Tierra Area consists of the remainder of the Subbasin, which includes lands generally located south of State Route 68 and a few parcels along the northern subbasin boundary with the 180/400-Foot Aquifer Subbasin (180/400 Subbasin).

MCWDGSA has developed information for the Monterey GSP and ongoing Annual Reports for the Marina-Ord Area, and the SVBGSA has developed information for the Corral de Tierra Area. This Water Year (WY) 2025 Annual Report for the Subbasin has been prepared in compliance with the California Code of Regulations (CCR) 23 §356.2. WY 2025 includes the period from October 1, 2024, through September 30, 2025.

[1] The Monterey GSP can be downloaded via the SGMA Portal: https://sgma.water.ca.gov/portal/gsp/preview/128



Legend

Monterey Subbasin

Other Groundwater Subbasins within Salinas Valley Basin

N

0 4 8

(Scale in Miles)

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2020 Update.

Monterey Subbasin

Monterey Subbasin

WY 2025 Annual Report

March 2026

Figure 1-1

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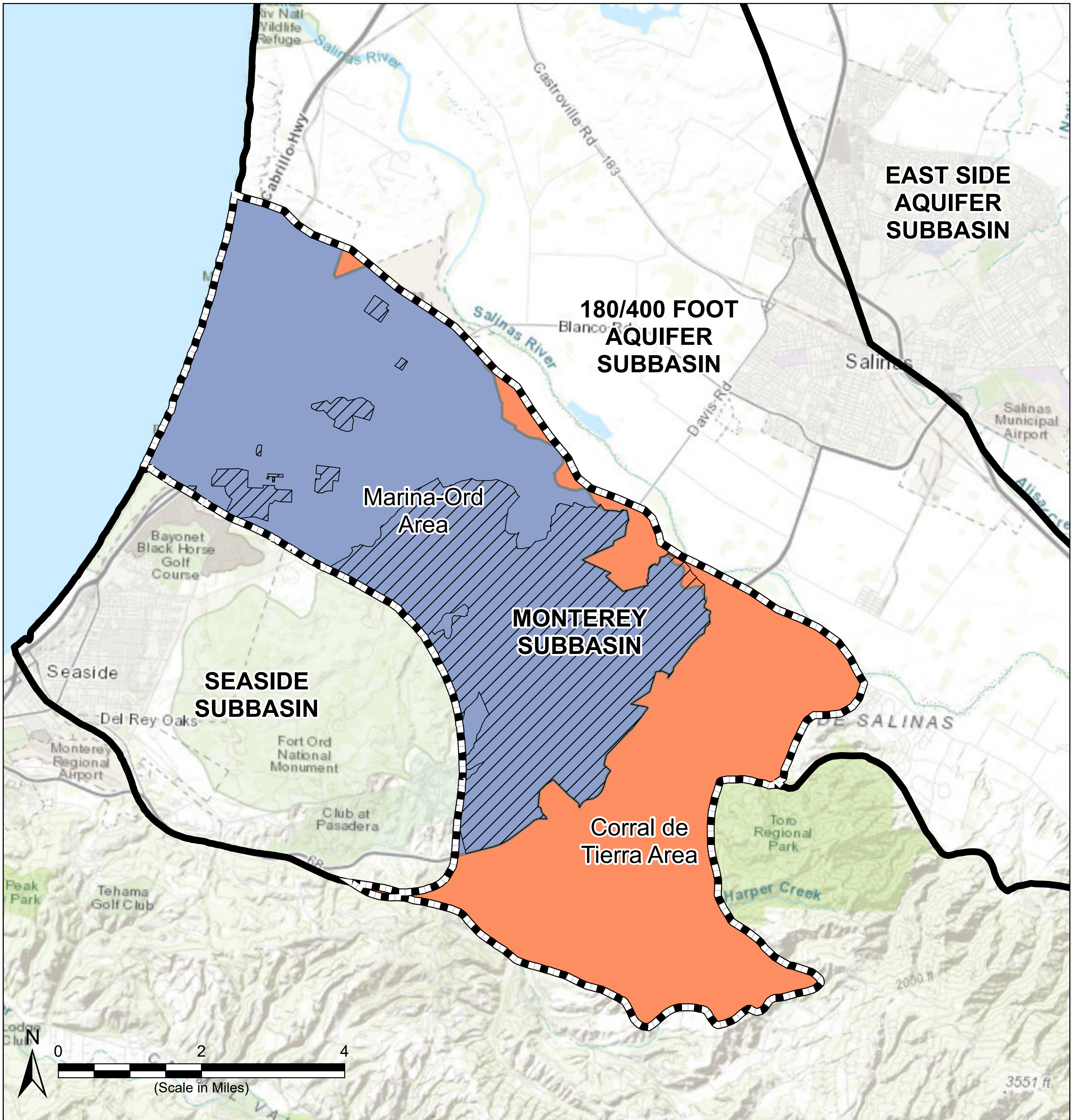

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- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin
- Federal Lands

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2020 Update.

Management Areas

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 1-2

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Using the Water Year Type methodology developed by DWR (2021), WY 2025 was classified as a below-normal year, following the wet conditions observed in WY 2023 and WY 2024 (Figure 1-3). Total groundwater extraction within the Subbasin remained comparable to prior years, totaling 4,512 acre-feet (AF) in WY 2025, including 3,556 AF extracted from the Marina-Ord Area and 955 AF from the Corral de Tierra Area (Figure 1-4).

In WY 2025, groundwater levels showed short-term improvement, reflecting delayed recovery from the two preceding wet years. The number of minimum threshold (MT) exceedances within each principal aquifer were similar compared to prior years (Figure 1-5). However, a new undesirable result (UR) related to seawater intrusion (SWI) was identified, triggered by increasing chloride concentrations in the lower 180-Foot/400-Foot Aquifer that exceeded the established threshold (Figure 1-6).

An update of the hydrogeologic conceptual model (HCM) was completed in 2024 for the Monterey Subbasin based on new data available since completion of the Monterey GSP. The findings of the update are incorporated in the analysis of this Annual Report.

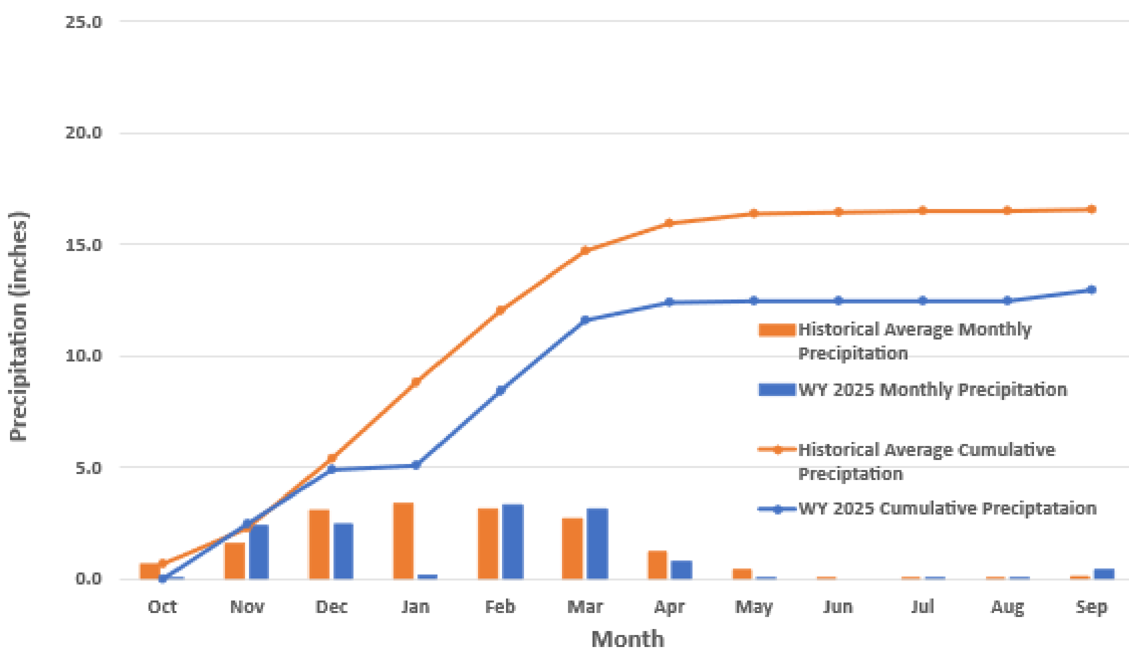


Figure 1-3 Comparison of WY 2025 and Historical Average Monthly and Cumulative Precipitation

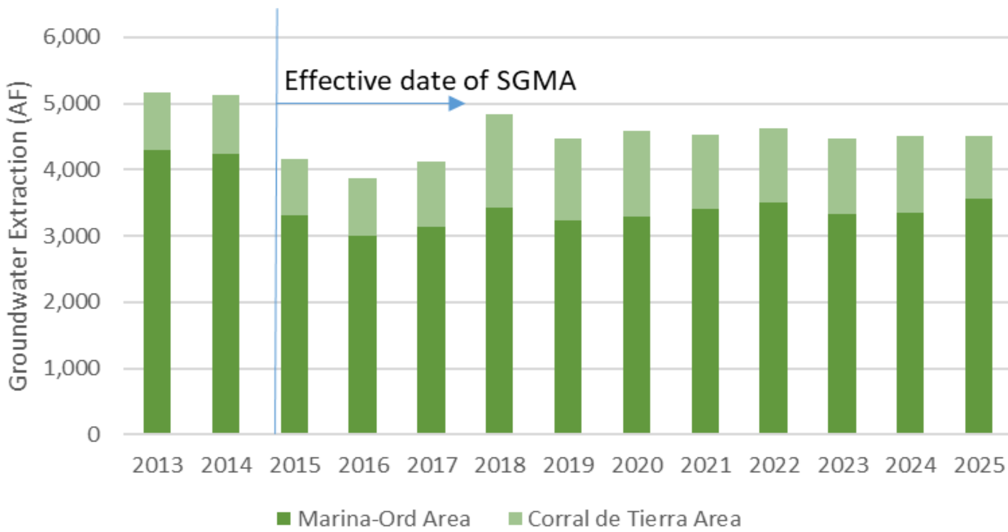


Figure 1-4 Historical Groundwater Extraction in the Monterey Subbasin

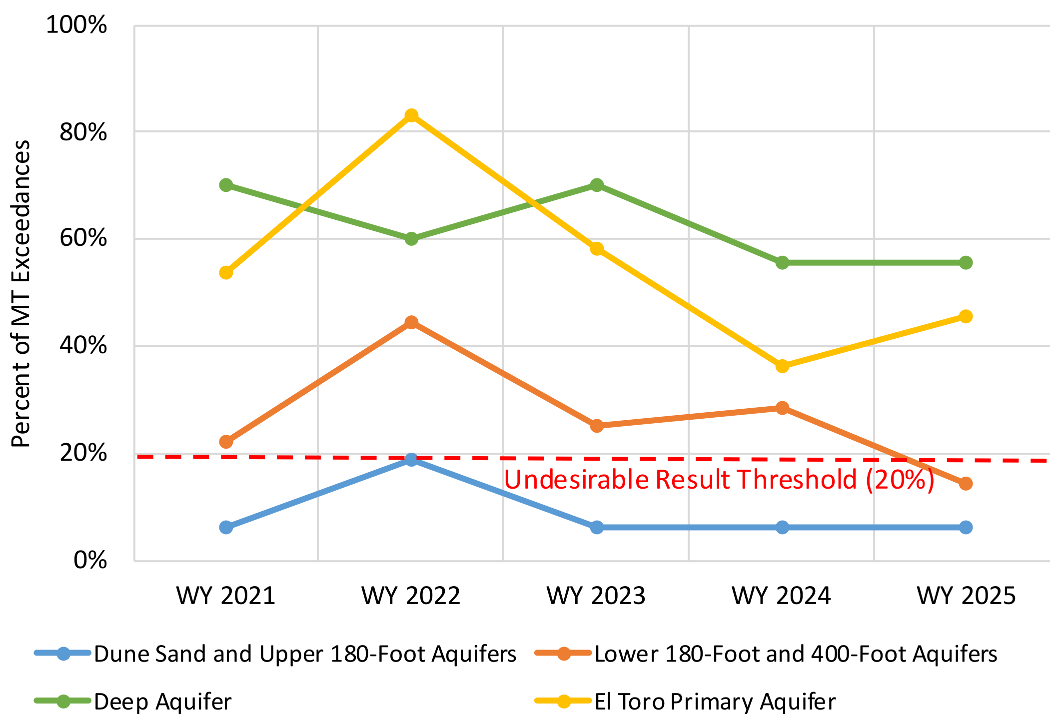
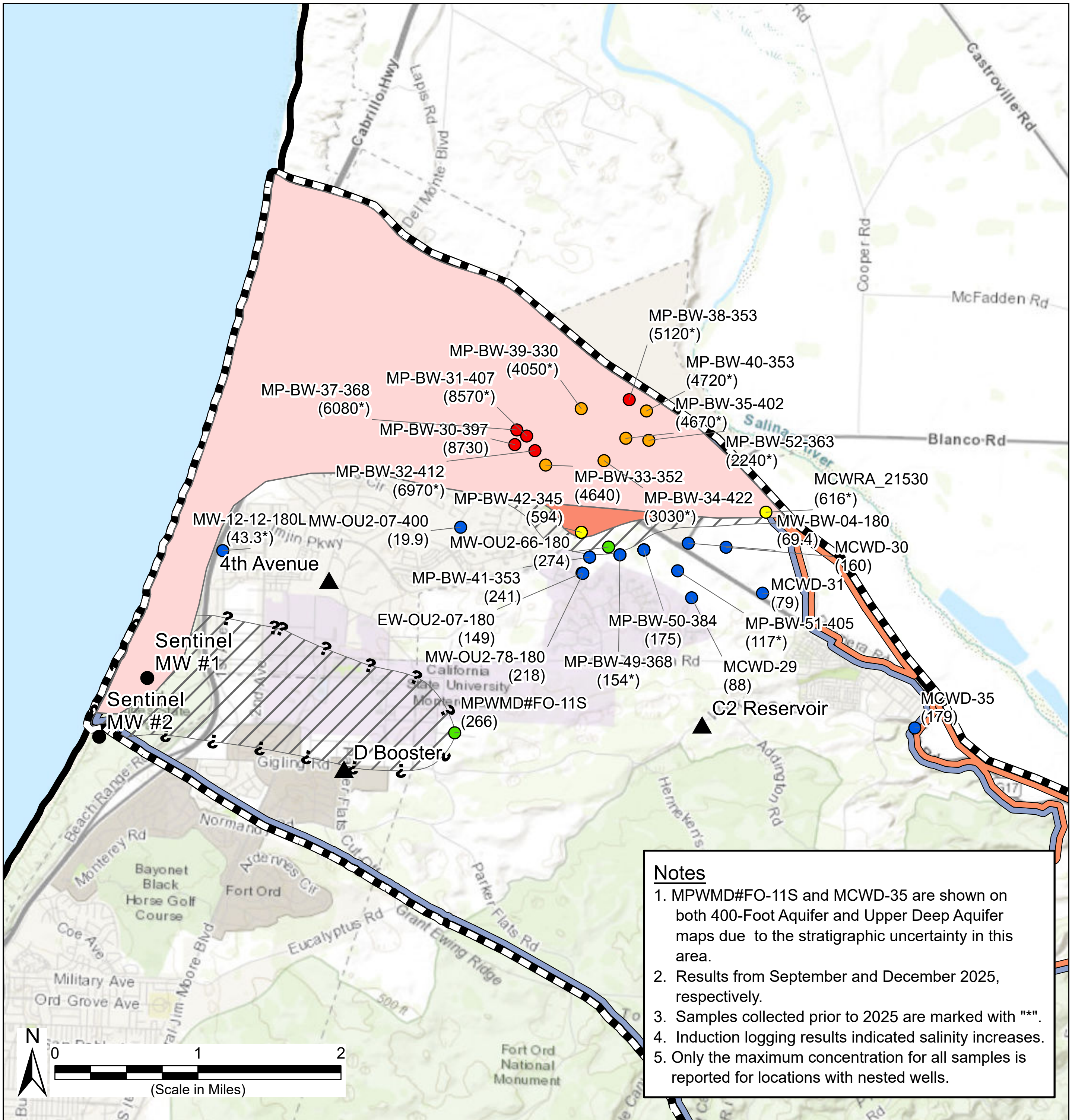


Figure 1-5 Exceedance of the Groundwater Elevation MT and Undesirable Result



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Seawater Intruded Area by Year

- 2015
- 2025
- 250 mg/L Area

Maximum 2025 Chloride Concentration (Note 3)

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- Locations with Known Seawater Intrusion (Note 4)

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

- ▲ Monitoring Wells Under Construction

Abbreviations

mg/L = milligrams per liter

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Estimated Seawater Intrusion Extent in the Lower 180-Foot, 400-Foot Aquifer Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 1-6

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Groundwater monitoring data for the Marina-Ord Area and the Corral de Tierra Area during WY 2025 are summarized below relative to their respective sustainable management criteria (SMCs) defined in the Monterey GSP:

Marina-Ord Area

- Stable or increases of groundwater elevations (GWEs) in representative monitoring site (RMS) wells screened in the Dune Sand Aquifer, 180-Foot Aquifer, and the northern portion of the 400-Foot Aquifer were observed during WY 2025, indicating a lagged response to increases in aerial recharge from wet years that occurred in WY 2023 and WY 2024. Groundwater elevations in these aquifers have been stable over the past thirty years with fluctuations that correlate to precipitation. Groundwater elevations in Deep Aquifer RMS wells have been declining since the 2000s, but the rate of decline appears to have slowed in some Deep Aquifer wells since 2018.
- One well out of 16 in the Dune Sand and upper 180-Foot Aquifers, one well out of seven in the lower 180-Foot and 400-Foot Aquifers, and five wells out of nine in the Deep Aquifers exceeded their GWE MTs during the Fall 2025 monitoring event. MT exceedances in the Deep Aquifers constitute an UR per the Monterey GSP.
- The estimated change in groundwater storage in the Marina-Ord Area was -2,594 AF between Fall 2024 and Fall 2025. This estimated change in storage incorporates contributions from both groundwater elevation-driven storage variations and migration of the seawater intrusion front[2]
- Data collected from the expanded MCWDGSA seawater intrusion monitoring program shows progression of the seawater intrusion front since 2015. Measured chloride concentrations in one RMS well exceeded the seawater intrusion MT and constitutes an UR per the Monterey GSP. In addition, MCWDGSA obtained access to Deep Aquifer monitoring wells in WY2025 that had not been sampled for over a decade. Groundwater sampling and analytical results from these wells indicate that increases in both TDS and chloride concentrations have occurred since these wells were last sampled. Although concentrations remain below the seawater intrusion threshold of 500 mg/L, these trends suggest that seawater intrusion is occurring within the upper Deep Aquifer.
- No MTs for the constituents of concern (COCs) were exceeded in water quality RMS wells in the Marina-Ord Area in WY 2025.
- No significant land subsidence occurred in the Subbasin during WY 2025 based on land subsidence measurements collected from Interferometric Synthetic Aperture Radar (InSAR) data provided by DWR.

[2] The Updated HCM has resulted in a reassessment of groundwater gradients in the 400-Foot Aquifer and Deep Aquifers with gaps to be verified after data from new MCWDGSA monitoring wells are available. Additionally, updated aquifer-specific water budgets and storage change calculations utilizing the updated HCM and data from new monitoring wells will be developed as part of the 2027 GSP Periodic Evaluation.

- The GWE measured at the interconnected surface water (ISW) RMS well in the Marina-Ord Area was higher than its MT and measurable objective (MO).

Corral de Tierra Area

- Groundwater elevations in the El Toro Primary Aquifer System showed fluctuations during WY 2025 with no specific spatial pattern; on average groundwater elevation rose by approximately 4.5 feet (ft). However, this rise in groundwater elevations is mostly driven by 2 wells that increased dramatically. In all other wells, groundwater elevations remained fairly stable. Based on changes in groundwater elevation contours, a decrease in groundwater storage was estimated between Fall 2024 and Fall 2025.
- Five wells out of 11 in the El Toro Primary Aquifer System exceeded their groundwater elevation MTs during the Fall 2025 monitoring event. These MT exceedances in the El Toro Primary Aquifer System constitute an UR per the Monterey GSP.
- No seawater intrusion has been detected in the Corral de Tierra Area.
- Arsenic was the only groundwater quality constituent of concern (COC) that exceeded its MT in WY 2025. However, these MT exceedances were not attributed to actions or inactions associated with GSA groundwater management. SVBGSA is assessing the relationship between groundwater quality and extraction and plans to include the analysis in the GSP 2027 Periodic Evaluation.
- As mentioned above, no significant subsidence was detected in the Subbasin.
- Last year SVBGSA installed a shallow monitoring well in the Corral de Tierra Area to monitor ISW. This well is currently dry, indicating a lack of groundwater-surface water connection. GWE monitoring will continue at this well to capture any potential future connection.

During WY 2025, the Subbasin GSAs took numerous actions to implement the Monterey GSP. These include:

- ***General Administration*** – The Subbasin GSAs are administering the Sustainable Groundwater Management (SGM) Round 2 Implementation Grant for the Monterey Subbasin. The grant includes efforts to support data expansion and Sustainable Groundwater Management Act (SGMA) compliance, regional project planning, and outreach and engagement activities. SVBGSA finalized its 5-year evaluation of the Groundwater Sustainability Fee and implemented associated fee changes. In addition, SVBGSA more clearly defined the roles of the Subbasin Committees (SBCs) and the Advisory Committee (AC) and implemented several administrative improvements.
- ***Coordination and Engagement*** – The Subbasin GSAs continued to coordinate regularly through staff and consultant meetings and strengthened collaboration with key agencies and partners. The Subbasin GSAs continued to regularly engage interested parties through their Boards of Directors, stakeholder workshops, and committees. MCWDGSA

continued to meet and coordinate with regional agency partners to facilitate data sharing, expansion of the monitoring network, and project planning. MCWDGSA also conducted public outreach during well construction and held education events for the public. SVBGSA expanded outreach efforts with support from a communications firm. SVBGSA also partnered with the Environmental Defense Fund (EDF) and the Rural Community Development Program to plan a Water Leadership Institute and developed the Water Efficiency Pilot Program (WEPP) to increase awareness of water use efficiency among rural residents.

- ***Data Expansion and SGMA Compliance*** – During WY 2025, the Subbasin GSAs continued to build momentum in filling data gaps, expanding monitoring networks, and advancing groundwater modeling efforts. Collectively, the GSAs focused on enhancement of the numerical models, achieving major milestones during the reporting year. These updates provide a strong technical foundation for evaluating projects and management actions (P&MAs). Joint efforts include:
    - Convening and participating in the Groundwater Technical Advisory Committee (GTAC);
    - Completing a round of coordinated updates of the Seawater Intrusion Model and the Salinas Valley Integrated Hydrologic Model to improve alignment between these two regional models and to improve their representation of local conditions;
    - Convening and participating in the Groundwater Dependent Ecosystem (GDE) Workgroup as part of the effort to address DWR's Recommended Corrective Actions (RCAs).

  MCWDGSA continued expanding its monitoring network, seawater intrusion monitoring program, and weather stations program, while making substantial progress towards construction of the new monitoring wells in 2025. Completion of new monitoring wells is anticipated to occur in the first quarter of 2026. MCWDGSA is also developing a Public Data Portal for viewing monitoring locations and exploring groundwater and hydrologic data. SVBGSA, in addition to the joint data expansion efforts, implemented the Groundwater Monitoring Program and well registration by the Monterey County Water Resources Agency (MCWRA).

- ***Projects and Management Actions*** – The SVBGSA led regional project planning efforts with the SGM Round 1 Implementation Grant for the 180/400 Subbasin and conducted feasibility efforts for three approaches that could be implemented to mitigate seawater intrusion. The GSAs collaboratively improved the groundwater models to support the feasibility studies.

  Within the Marina-Ord Area, the MCWDGSA is moving the indirect potable reuse (IPR) project into preliminary design and environmental review. The District is also bringing the Reservation Road Pilot Desalination Plant back into operation and evaluating other new projects, including the Armstrong Ranch Groundwater Recharge project. In the Corral de

Tierra Area, SVBGSA initiated subbasin-specific dialogues of demand management (DM), and developed a Valley-wide Demand Management Framework. SVBGSA also conducted the Water Efficiency Pilot Program to support residential water efficiency in rural residential areas and installed one new groundwater level monitoring well.

2 INTRODUCTION

2.1 Purpose

The 2014 California Sustainable Groundwater Management Act (SGMA) requires that, following the adoption of a Groundwater Sustainability Plan (GSP), Groundwater Sustainability Agencies (GSAs) annually report on the condition of the Subbasin and show that the Monterey GSP is being implemented in a manner that will likely achieve the sustainability goal for the Subbasin. This report fulfills that requirement for the Salinas Valley – Monterey Subbasin (Subbasin; California Department of Water Resources (DWR) Basin 3-004.10).

This water year (WY) 2025 Annual Report for the Subbasin has been prepared in compliance with CCR 23 §356.2. WY 2025 includes the period from October 1, 2024, through September 30, 2025. This Annual Report also contains available and appropriate historical data back to calendar year 2015, the effective date of SGMA as required by CCR 23 §356.2 (b). The data provides an understanding of Subbasin conditions through the current reporting year. This Annual Report describes Subbasin conditions and includes hydrographs, groundwater elevation contour maps, estimates of changes in groundwater storage, and maps depicting the distribution of groundwater extraction across the Subbasin. It compares WY 2025 data to Sustainable Management Criteria (SMCs) as a measure of where groundwater conditions within Subbasin are with respect to the Sustainability Goal that must be reached and maintained by 2042.

2.2 Monterey Subbasin Groundwater Sustainability Plan

The Monterey GSP was co-authored by MCWDGSA and Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) and submitted to DWR on January 30, 2022 (MCWDGSA and SVBGSA, 2022). The GSP was approved by DWR in April 2023 (DWR, 2024). The MCWDGSA is a single-agency GSA formed by the MCWD. The SVBGSA is a Joint Powers Authority (JPA) with membership comprising the County of Monterey, Monterey County Water Resources Agency (MCWRA), City of Salinas, City of Soledad, City of Gonzales, City of King, and the Castroville Community Services District.

The GSAs developed the Monterey GSP in coordination with the five other Salinas Valley Subbasin GSPs: the Eastside Aquifer Subbasin (DWR subbasin 3-004.02), the Forebay Aquifer Subbasin (DWR subbasin 3-004.04), the Upper Valley Aquifer Subbasin (DWR subbasin 3-004.05), the Langley Area Subbasin (DWR subbasin 3-004.09) and the 180/400-Foot Aquifer Subbasin (DWR subbasin 3-004.01; 180/400 Subbasin).

The Monterey GSP covers the entire Subbasin, which encompasses 30,850 acres (or 48.2 square miles) in the northwestern Salinas Valley Groundwater Basin (SVGB) in the Central Coast region of California (Figure 1-1). The Subbasin has been designated as medium priority by DWR. The Monterey GSP established two Management Areas within the Subbasin (Figure 1-2): the Marina-Ord Area and the Corral de Tierra Area.

2.3 Organization of This Report

This Annual Report has been developed pursuant to GSP Emergency Regulations §356.2 and DWR's guidelines for annual reports (DWR, 2023). The Report outlines subbasin conditions, including groundwater elevations, groundwater extractions, surface water use, total water use, and changes in groundwater storage. The Report also reports on actions taken to implement Monterey GSP and identifies progress towards reaching interim milestones (IMs).

3 SUBBASIN SETTING

The Subbasin is located at the northwestern end of the SVGB. The SVGB is an approximately 90-mile-long alluvial basin that underlies the elongated intermountain valley formed by the Salinas River. The Subbasin includes (a) portions of the Monterey Bay coastal plain, south of the approximate location of the Reliz Fault; and (b) upland areas to the southeast of the coastal plain. As further detailed in the Monterey GSP, the Subbasin has complex local hydrostratigraphy and represents a transition zone between the more defined, laterally continuous aquifer system that exists along the central axis of the Salinas Valley and the less continuous aquifer systems that exists towards the Sierra de Salinas.

3.1 Principal Aquifers and Aquitards

The Monterey GSP defined a series of principal aquifers and aquitards respectively for the Marina-Ord Area and the Corral de Tierra Area. In 2024, MCWDGSA and SVBGSA completed an update of the Monterey Subbasin hydrogeologic conceptual model (HCM) to fill known data gaps based on new information that has become available since the development of the GSP. The HCM Update confirmed the distinct hydrostratigraphy in the area north of the Laguna Seca Anticline. The findings of the HCM Update are highlighted below in *blue, italic text* and further described in the WY 2024 Annual Report (MCWDGSA & SVBGSA, 2025). The analyses in this annual report are updated to reflect findings of the HCM Update.

Hydrostratigraphy in the Marina-Ord Area consists of a series of laterally continuous aquifers consistent with the aquifers that form the distinguishing features of the northern Salinas Valley. The principal aquifers within the Marina-Ord Area include the unconfined Dune Sand Aquifer and the confined aquifers known as the 180-Foot Aquifer, the 400-Foot Aquifer, and the Deep Aquifers. In the coastal portion of the Marina-Ord Area, the 180-Foot Aquifer is subdivided into the upper 180-Foot Aquifer and the lower-180-Foot Aquifer, separated by the Intermediate 180-Foot Aquitard. Hydraulic conductivity of the aquifers underlying the Marina-Ord Area varies by aquifer and location. Groundwater production principally occurs from the 180-Foot, 400-Foot, and Deep Aquifers.

The location and extent of aquitards separating principal aquifers in the Marina-Ord Area have been updated based on both well completion reports (WCR) and airborne electromagnetic (AEM) data, and incorporate the results of the Deep Aquifers Study (M&A, 2024). The Deep Aquifers Study indicates that the 400/Deep Aquitard extends, within the Monterey Subbasin, to the Laguna Seca Anticline and into the Seaside Subbasin (M&A, 2024). This aquitard overlies the Deep Aquifers, which are composed of the Lower Paso Robles Formation, the Santa Margarita Sandstone, and the Purisima Formation. In many areas of the Salinas Valley, these formations are grouped into one hydrostratigraphic unit, because long-screened agricultural wells mix their respective productive zones, effectively combining them into one aquifer unit. However, within the Monterey Subbasin, available data shows that the Deep Aquifers are separated into an upper and lower zone. The lower zone overlies the bedrock and extents to approximately 2,000 feet below ground surface at the Monterey-180/400 Subbasin boundary. Water levels in the upper Deep Aquifer zone are significantly lower than in the lower Deep Aquifer zone, given that the *majority of groundwater extraction occurs from the upper Deep Aquifer zone. The Deep Aquifers in the Seaside Subbasin are similarly separated into a shallower Paso Robles Aquifer and a deeper Santa Margarita Aquifer, which likely connects to the upper and lower Deep Aquifer zones within the Marina Ord Area, respectively.*

The reassessment of the depth of the 400/Deep Aquitard indicates that many Paso Robles wells located in the Marina-Ord Area and Seaside Subbasin, historically believed to be associated with the 400-Foot Aquifer, are screened in the upper Deep Aquifer zone. Groundwater elevation contours presented in Section 4.1.1 for the 400-Foot Aquifer and upper and lower Deep Aquifer zones reflect the Updated HCM. These contours will be further updated after data from the new MCWDGSA monitoring wells are available. Additionally, updated aquifer-specific water budgets and storage change calculations utilizing the updated HCM and data from new monitoring wells will be developed as part of the 2027 GSP Periodic Evaluation.

The Corral de Tierra Area has one principal aquifer, the El Toro Primary Aquifer System, which includes the Aromas Sands, Paso Robles Formation, and Santa Margarita Sandstone (Geosyntec, 2007). *The recent HCM updates revealed a bedrock surface that is both shallower and more undulating than previously understood. This bedrock surface, defined as the Monterey Formation or the crystalline rocks, dips down to form a bowl shape in the El Toro area mostly isolating the southern Corral de Tierra Area hydrogeologically from the Salinas Valley Basin. This is defined in the HCM Update as the El Toro bowl. The bedrock rises to the northwest of Highway 68 with the Laguna Seca Anticline, as well as along Highway 68 east of San Benancio Road. The revised bedrock surface also shows a smaller, less isolated bowl near the confluence of Toro Creek and the Salinas River established as the Highway 68 East bowl in the HCM Update. The results of these revisions impact how the data for the SMC are analyzed and displayed.*

3.2 Natural Groundwater Recharge and Discharge

Natural groundwater recharge occurs through the infiltration of precipitation, overlying surface water bodies, and excess applied irrigation water. Most of the Marina-Ord Area has good recharge potential (i.e., “A” and “B” hydrologic soil types) due to the high permeability of the Dune Sand Aquifer, which subsequently recharges the underlying 180-Foot and 400-Foot Aquifers where their respective aquitards end. Most of the Corral de Tierra Area also has good recharge potential due to high permeability soils that recharge the underlying sandy, gravelly layers of the Aromas Sand and Paso Robles Formation; however, there is also high runoff during storm events due to the topography.

Primary surface water bodies in the Subbasin include the Salinas River and Toro Creek. The Salinas River crosses into the Subbasin in two locations in the Corral de Tierra Area and may provide some recharge in areas that are not underlain by the Salinas Valley Aquitard (SVA) that generally exists in the 180/400 Subbasin. Toro Creek is generally perennial below the confluence with Watson Creek (Feikert, 2001). Recorded streamflows at U.S. Geological Survey (USGS) gage 11152540 from 1961 to 2001 indicate a mean annual streamflow of 1,590 acre-feet (AF) per year (AFY) for Toro Creek, however, not all years registered flow (GeoSyntec, 2007). Additionally, most flow occurs in the winter and spring months (GeoSyntec, 2007).

3.3 Precipitation and Water Year Type

Precipitation that falls within the Subbasin contributes to runoff and recharge components of the water budget.

In 2024 and 2025, MCWDGSA installed eight weather stations in the Monterey Subbasin, with twelve stations ultimately planned. Continuous data through WY 2025 were available from two local weather sensors. As the period of record expands, these stations will support more refined water year characterization and improved recharge estimates for the Monterey Subbasin water budget. At present, however, the local weather station network does not yet have a sufficiently long historical record to independently characterize water year type.

Therefore, WY 2025 precipitation continued to be estimated using the 4-kilometer gridded dataset from the Parameter-elevation Regressions on Independent Slopes Model (PRISM)[3], which reasonably reflects the spatial distribution of precipitation at a daily resolution over the entire extent of the Subbasin. Based on PRISM, total precipitation in WY 2025 was estimated approximately at 12.9 inches (in), compared to an average of approximately 11.8 inches from the two local weather sensors with continuous data available throughout WY 2025.

DWR's methodology was used to assign a water year type of critical, dry, below normal, above normal, or wet based on precipitation that occurred in the Subbasin during the current year and prior years (DWR, 2021). Under this methodology, water year type is determined using a rolling 30-year historical ranking approach based on a calculated annual water year index. The water year index is computed as a weighted precipitation metric defined as 0.4 times the total annual precipitation of the previous water year plus 0.6 times the total annual precipitation of the current water year. For each water year, the water year index is ranked relative to the current year and the preceding 29 years, with ranks 1–4 classified as Critical, 5–9 as Dry, 10–15 as Below Normal, 16–21 as Above Normal, and 22–30 as Wet. This approach defines water year type relative to the most recent 30-year period rather than fixed precipitation thresholds. Using DWR's methodology, WY 2025 was classified as a below normal year.

Table 3-1 identifies the assigned water year type for each water year since 2015.

Figure 3-1 presents monthly and cumulative precipitation for WY 2025 compared to the historical average. WY 2025 precipitation was generally below average, with cumulative totals remaining under the historical trend throughout the water year.

[3] https://prism.oregonstate.edu/recent/

Table 3-1 Water Year Type

WY	Precipitation (in)	Water Year Index (a)	Water Year Type
2015	12.9	11.1	Dry
2016	19.4	16.8	Above Normal
2017	23.7	22.0	Wet
2018	11.6	16.5	Above Normal
2019	20.5	17.0	Above Normal
2020	14.6	17.0	Above Normal
2021	8.8	11.1	Critical
2022	12.2	10.9	Critical
2023	24.9	20.0	Wet
2024	19.1	21.4	Wet
2025	12.9	15.4	Below Normal

Notes:

(a) The Water Year Index is calculated as a weighted metric of the total annual precipitation of the current water year and the prior water year. The water year index over a recent 30-year period is ranked to determine the current water year type.

A summary of the water year context for water use and management in the larger Salinas Valley Basin is provided in Appendix A. Groundwater use, management, and conditions in the larger Salinas Valley Basin, particularly the adjacent 180/400 Subbasin, significantly affect outflows and the water budget in the Monterey Subbasin. As such, they provide context for interpreting water use fluctuations and trends in the Monterey and adjacent Subbasins.

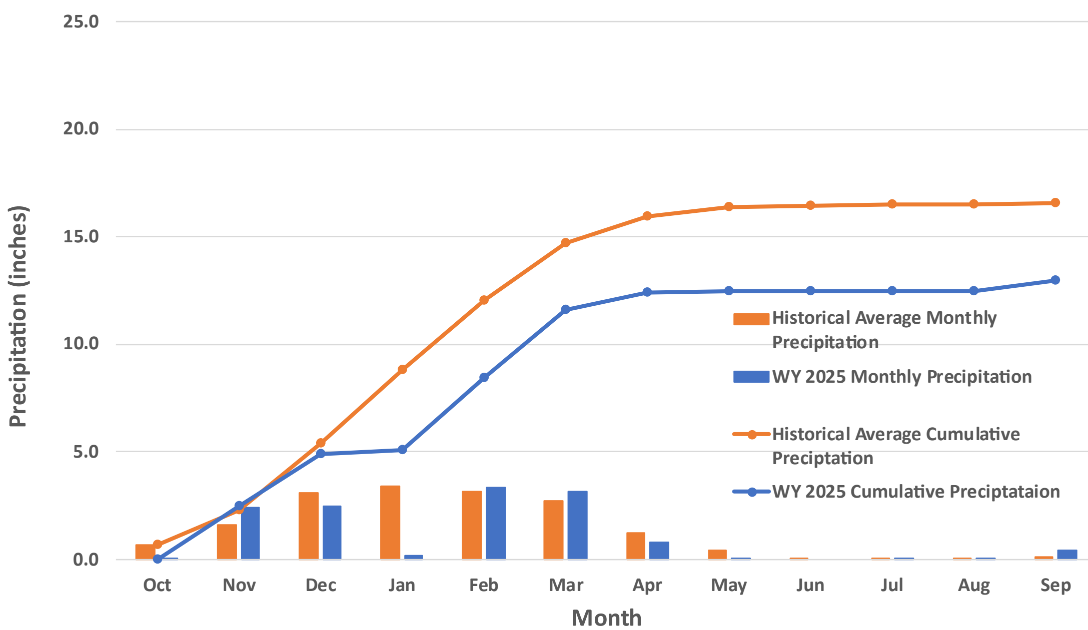


Figure 3-1 Comparison of WY 2025 and Historical Average Monthly and Cumulative Precipitation

4 SUBBASIN CONDITIONS

Groundwater conditions within the Subbasin were assessed based on monitoring data collected during WY 2025. Where WY 2025 data are not available, groundwater conditions are evaluated based on the most recent data available as further described below.

The groundwater elevation and seawater intrusion monitoring networks and Representative Monitoring Site (RMS) networks for each Management Area are broken out by principal aquifer. However, as further discussed in Monterey GSP, the 180-Foot Aquifer is separated into an "upper" and a "lower" portion by a clay layer in the coastal areas of the Marina-Ord Area. In these areas, groundwater elevation and seawater intrusion conditions in the upper 180-Foot Aquifer are distinct from those in the lower 180-Foot Aquifer. Conditions in the lower 180-Foot Aquifer are generally more consistent with those observed in the 400-Foot Aquifer. Therefore, the monitoring network and RMS network are selected to additionally distinguish the upper 180-Foot Aquifer and the lower 180-Foot Aquifer.

4.1 Groundwater Elevations

The groundwater elevation monitoring network in the Subbasin currently consists of 43 RMS wells, including 32 RMS wells in the Marina-Ord Area and 11 RMS wells in the Corral de Tierra Area. The locations of the current groundwater elevation RMS wells within the Marina-Ord Area and the Corral de Tierra Area are shown on the figures in Section 4.1.2. In WY 2025, SVBGSA installed 1 new RMS wells in the Corral de Tierra Area along San Benancio Road and last year 3 wells were installed. Transducers are installed in these wells and will be monitored by MCWRA. Groundwater elevations for these wells will be included beginning with the next annual report. The GSAs regularly collect data from both inside and outside the RMS network. The GSAs are working to address data gaps with additional wells to the monitoring network. This section presents groundwater elevation contours from WY 2025 and long-term hydrographs for selected wells in the Subbasin's monitoring network.

4.1.1 Groundwater Elevation Contours

In the Marina-Ord Area, groundwater elevation contours have been developed for Spring (February and March) and August 2025, which reflect seasonal high and low groundwater elevations, respectively. In addition, groundwater elevation contours were prepared for Fall 2025, which corresponds to the October, November, and December monitoring timeframe upon which MTs and MOs for the Subbasin and neighboring subbasins within the greater Salinas Valley Basin have been established. Groundwater elevation contour maps for each principal aquifer are presented on Figure 4-1 through Figure 4-15.

In the Corral de Tierra Area, groundwater elevation contour maps are presented for Spring 2025, August 2025 and Fall 2025 on Figure 4-16 through Figure 4-18. Like in the Marina-Ord Area, the Spring groundwater elevation contours represent seasonal high conditions and the August groundwater elevation contours represent the seasonal low conditions. The spring contours presented for the Corral de Tierra Area are based on limited data because few wells are monitored in the spring season in the SVBGSA subbasins and in the Corral de Tierra Area. SVBGSA and MCWRA are working together to increase the frequency of monitoring throughout these areas to improve monitoring during the seasonal high. The Fall contours show the conditions during November and December upon which MTs and MOs have been established. Additionally, the Fall contours are included to remain consistent with the other SVBGSA subbasins that use fall to represent the seasonal high conditions. Groundwater elevations measured in the fall are more reflective of neutral groundwater conditions that are generally not heavily influenced by either summer irrigation pumping or winter rainfall recharge.

Groundwater flow directions and groundwater levels observed during these periods in the Marina-Ord Area and Corral de Tierra Area are summarized below.

4.1.1.1 Marina-Ord Area

As mentioned in Section 3.1 above, principal aquifers in the Marina-Ord Area include the Dune Sand Aquifer, 180-Foot Aquifer, 400-Foot Aquifer, and Deep Aquifers. Since completion of the last Annual Report, wells screened in the Paso Robles portion of the 400-Foot and Deep Aquifers have been reassigned to reflect findings of the HCM Update.

Dune Sand Aquifer

As discussed in *Section 4* of the Monterey GSP, within the Monterey Subbasin, the Dune Sand Aquifer only exists in the Marina-Ord Area. Groundwater elevations and flow directions observed in the Dune Sand Aquifer during WY 2025 were generally consistent with those observed in the recent past. The groundwater elevations in the Dune Sand Aquifer are further described below.

- Groundwater elevations in the Dune Sand Aquifer are highest in the central portion of the Marina-Ord Area, where a groundwater divide exists (Figure 4-1 through Figure 4-3). At the top of this divide, groundwater elevations were approximately 96 feet (ft) above the North American Vertical Datum of 1988 (ft NAVD 88) during Fall 2025. Groundwater elevations were lowest at the coast at approximately 10 ft NAVD 88 where the Dune Sand Aquifer merges with the upper 180-Foot Aquifer west of the SVA. Groundwater level data for the Dune Sand Aquifer are limited in the southern portion of the Marina-Ord Area near the Monterey-Seaside Subbasin boundary and at the eastern extent of the Dune Sand Aquifer.
- West of the groundwater divide, groundwater in the Dune Sand Aquifer flows westward towards the Pacific Ocean and recharges the 180-Foot Aquifer where the SVA pinches out. Upon entering the 180-Foot Aquifer, groundwater abruptly reverses direction and flows eastward (i.e., inland). East of the groundwater divide, groundwater in the Dune Sand Aquifer flows to the northeast toward the 180/400 Subbasin and the Salinas River.
- Limited seasonal variations were observed in groundwater elevations within Dune Sand Aquifer during Spring 2025 and August 2025.

180-Foot Aquifer

In the coastal portion of the Marina-Ord Area, the 180-Foot Aquifer is subdivided into the upper 180-Foot Aquifer and the lower-180-Foot Aquifer. Conditions in both portions of the 180-Foot Aquifer during WY 2025 were generally consistent with those observed in the recent past. The Groundwater elevations in the upper 180-Foot Aquifer are described below.

Upper 180-Foot Aquifer

- Groundwater elevations in the upper 180-Foot Aquifer are highest at the coastline and generally decrease inland to the east/northeast. Flow directions are generally to the northeast toward the 180/400 Subbasin.
- Groundwater elevations in the upper 180-Foot Aquifer were approximately 8 ft NAVD 88 at the coastline during Fall 2025 and generally decreased inland to the east/northeast, where groundwater elevations were approximately -5 ft NAVD 88. As discussed below in Section 4.1.2, seasonal variation in groundwater levels between the seasonal-high (Spring) and seasonal-low (August) is limited to a few feet.
- Groundwater elevations are slightly higher than sea level at the coastline and are below sea level further inland. This inland gradient allows high salinity water to flow into the northwestern portion of the Subbasin in the lower-180 Foot Aquifer. However, inflow from the Dune Sand Aquifer near the coastline protects the upper 180-Foot Aquifer from seawater intrusion in the Marina-Ord Area.

Lower 180-Foot Aquifer

As discussed in *Section 4* of the Monterey GSP, the lower 180-Foot Aquifer is hydraulically connected to the 400-Foot Aquifer in the Marina-Ord Area due to the discontinuous nature of the 180/400-Foot Aquitard within this region. As such, groundwater elevations and gradients in the lower 180-Foot Aquifer are similar to those in the 400-Foot Aquifer in the Marina-Ord Area of the Subbasin, as further described below.

400-Foot Aquifer

In the Monterey Subbasin GSP and the WY 2021-2023 Annual Reports, groundwater elevations in the 400-Foot Aquifer were plotted in combination with those from the Paso Robles Aquifer in the adjacent Seaside Subbasin. However, the recent HCM Update (Section 3.1) determined that these wells screened in the Lower Paso Robles Formation are in fact included within the Deep Aquifers. As a result, groundwater elevations from the Lower Paso Robles Formation wells have been excluded from 400-Foot Aquifer contours.

- Similar to those in the upper 180-Foot Aquifer, groundwater elevations in the lower 180-Foot Aquifer and 400-Foot Aquifer are highest at the coastline and generally decrease inland to the east/northeast. Flow directions are generally to the northeast toward the 180/400 Subbasin.
- Groundwater elevations in the 400-Foot Aquifer were approximately -0.5 ft NAVD 88 at the most seaward well during Fall 2025 and generally decreased towards the center of

the Salinas Valley to the northeast, where groundwater elevations were approximately -11 ft NAVD 88. Groundwater elevations during Fall 2025 were similar to those observed during Spring 2025 in the Marina-Ord Area. Groundwater elevations during August 2025 were generally lower than those observed during the spring, but the variation in groundwater levels among these time periods was limited to less than 10 feet.

- Groundwater elevations in the 400-Foot Aquifer are below sea level at the coastline and further below sea level inland. As discussed in *Section 4* of the Monterey GSP, the geologic formations that make up this aquifer extend offshore below Monterey Bay and outcrop beneath a veneer of Pleistocene or Holocene marine sediments that are thin (i.e., less than 5 meters) across much of the offshore shelf but thicker (i.e., up to 32 meters) near the Salinas River Delta (Johnson et al., 2016). The combination of groundwater levels in this aquifer, which are below sea level in the northern portion of the Monterey Subbasin, and offshore outcrops below Monterey Bay allow high salinity water to flow into this aquifer in the northern portion of the Subbasin.
- Groundwater elevation contours for the 400-Foot Aquifer that have been constructed on the basis of the HCM Update and do not include data from MPWMD#FO-11S. The RMS well MPWMD#FO-11S is located in the southern portion of the Marina-Ord Area and is believed to be screened above the 400/Deep Aquitard based on AEM data reviewed as part of the HCM Update. However, as shown below on Figure 4-22 and discussed in Section 5.1.3 of the Monterey GSP, there is no known extraction in the vicinity of the well and groundwater levels are significantly lower than those measured in other 400-Foot Aquifer wells. Groundwater levels in this well are similar to those measured in the upper Deep Aquifer, suggesting it is hydraulically connected to the Upper Deep Aquifer zone. Further evaluation of the stratigraphy in the southern portion of the Monterey Subbasin will be conducted once new 400-Foot and Deep Aquifer monitoring wells are installed in early 2026 (as discussed in Section 5.2.3.2).

Deep Aquifers

The Deep Aquifers Study completed by SVBGSA for the Salinas Valley identified the Deep Aquifers as the water-bearing sediments that underlay the 400/Deep Aquitard and are comprised of the Lower Paso Robles Formation, the Santa Margarita Sandstone, and the Purisima Formation. The 400/Deep Aquitard, and as a result the Deep Aquifers, extend from the coast to the Laguna Seca Anticline in the southern portion of the Monterey Subbasin and northern portion of the Seaside Basin. No evidence of direct surficial recharge to the Deep Aquifers, which are only defined to exist below the 400/Deep Aquitard, has been found based on the data collected. However, natural recharge from adjacent aquifers, such as aquifers in the southern Seaside Subbasin and the Corral de Tierra area, likely flow into the Deep Aquifers as subsurface inflow.

Within the Monterey Subbasin, available data suggests that the Deep Aquifers are separated into an upper and lower zone, similar to the separation of the Lower Paso Robles and Santa Margarita portions of the Deep Aquifers in the Seaside Subbasin. Further evaluation of Deep Aquifer groundwater elevations will be conducted once new monitoring wells are installed in early 2026 (as discussed in Section 5.3.4).

Groundwater elevation contours for the Deep Aquifers presented in this Annual report have been updated to reflect the updated HCM which incorporates the results of the Deep Aquifers Study. Separate groundwater level contours have been prepared for the upper and lower portions of the Deep Aquifers, as nested wells show that groundwater levels in these aquifers differ by tens of feet. Groundwater elevations and flow directions observed in the Deep Aquifers during WY 2025 are further described below.

Upper Deep Aquifer Zone

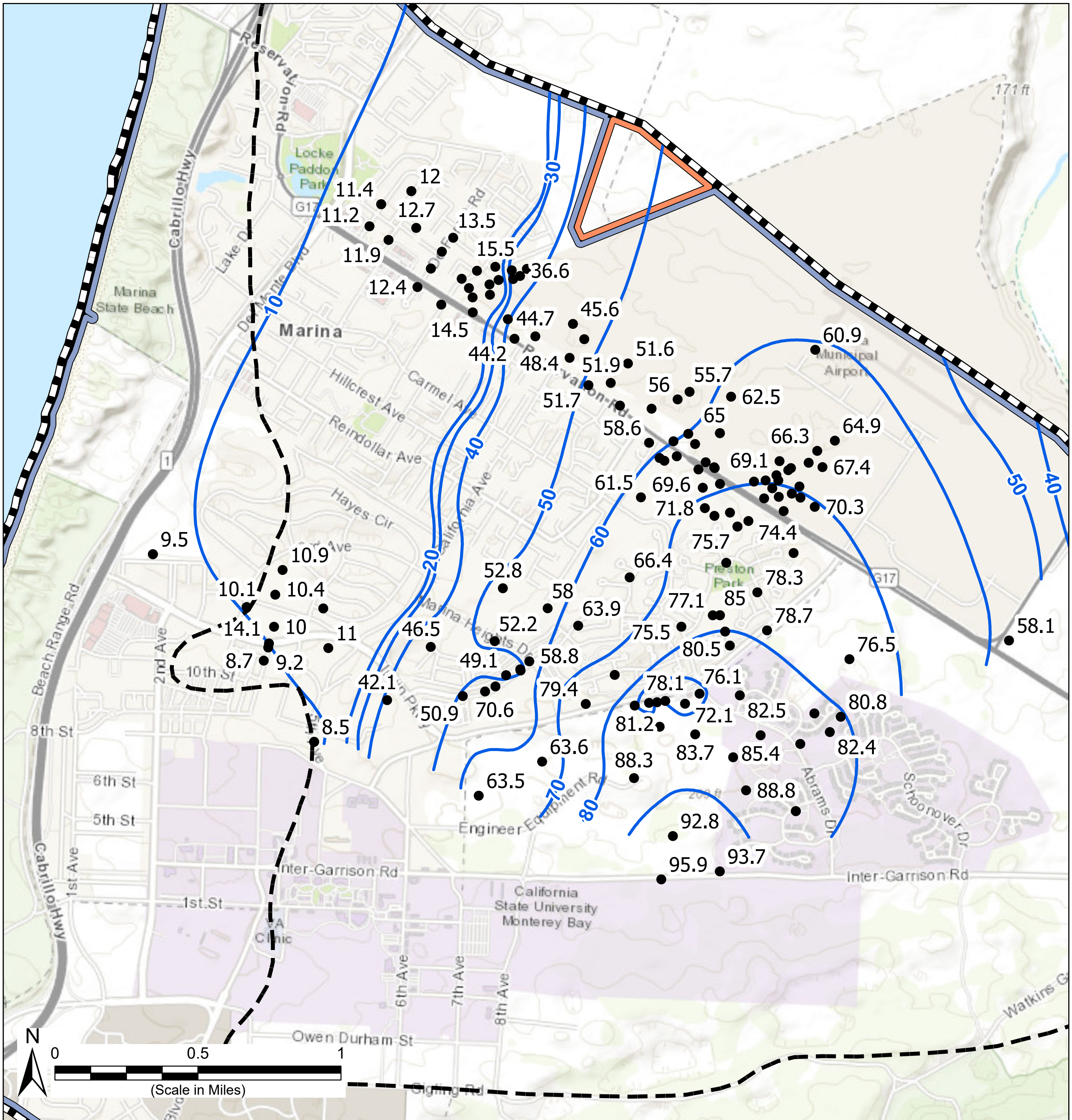
- Groundwater elevations in the upper Deep Aquifer zone are highest in the southeastern portion of the Marina-Ord Area and generally decrease toward the northwest. The Monterey-Seaside groundwater divide in the upper Deep Aquifer zone is located close to the Seaside /Monterey Subbasin boundary. South of this groundwater divide, groundwater flows toward the pumping depression in the Seaside subbasin, while to the north of the divide, groundwater flows northward across the Monterey Subbasin toward a pumping trough located in the 180/400 Subbasin near West Blanco Road and Nashua Road.
- During Fall 2025, groundwater elevations in the upper Deep Aquifer zone in the Monterey Subbasin are highest at the Laguna Seca Anticline and lowest to the north near the Monterey-180/400 Subbasin boundary at approximately -60 ft NAVD 88. Groundwater elevations are up to 40 ft higher during seasonal-high (Spring) compared to seasonal-low (August).
- In the Marina-Ord Area, groundwater elevations in the upper Deep Aquifer zone are 10 to 25 ft lower than those in the lower Deep Aquifer zone. The difference in groundwater elevations between these aquifers is likely caused by greater rates of extraction from the upper Deep Aquifer zone within the Monterey Subbasin and 180/400 Subbasin.

Lower Deep Aquifer Zone

- The natural northerly direction of groundwater flow in the lower Deep Aquifer zone is similar to that in the upper Deep Aquifer zone. However, significant groundwater extraction occurs from the lower Deep Aquifer zone in the Seaside basin, which causes groundwater to flow southward in the southern portion of the Monterey Subbasin toward the pumping depression in the Seaside Basin. As such, an (east/west) groundwater divide exists in the center of the Monterey Subbasin within the lower Deep Aquifer zone.
- Groundwater elevations ranged from approximately 140 ft NAVD 88 near the Laguna Seca Anticline to approximately -25 ft NAVD 88 in the north near the Monterey-180/400 Subbasin boundary during Fall 2025. Groundwater elevations are up to 15 ft higher during seasonal-high (Spring) compared to seasonal-low (August).

4.1.1.2 Corral de Tierra Area

Figure 4-18 shows the Fall 2025 groundwater elevation contours within the El Toro Primary Aquifer System in the Corral de Tierra Area. Based on the HCM Update, separate contours were developed for the Highway 68 East and El Toro bowls. In the Highway 68 East bowl, groundwater generally flows from the south toward the north. In the El Toro bowl, generally groundwater flows from southeast to northwest toward a pumping depression near the boundary with the Seaside Subbasin. There may be potential groundwater flow divide that occurs near the Monterey-Seaside Subbasin boundary in the Laguna Seca area, however, the revised bedrock surface shows that these two areas share the El Toro bedrock bowl, and a groundwater divide reflects pumping centers rather than differing hydrostratigraphy. Additionally, the uplift in the top of the Monterey Formation east of the Hwy 68 intersection with San Benancio Road, which separates the El Toro and Highway 68 East bowls, likely restricts flow northward from the El Toro bowl towards the 180/400 Subbasin. In Fall 2025, the groundwater elevations in the El Toro bowl ranged from approximately 210 ft to 800 ft NAVD 88 and 0 ft to 20 ft NAVD 88 in the Highway 68 East bowl.



Legend

Spring 2025 Groundwater Contours

GWE Measurement Locations

Monterey Subbasin

Management Areas

Marina-Ord Area

Corral de Tierra Area

Other Groundwater Subbasins within Salinas Valley Basin

Southern Extent of FO-SVA (Harding ESE, 2001)

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

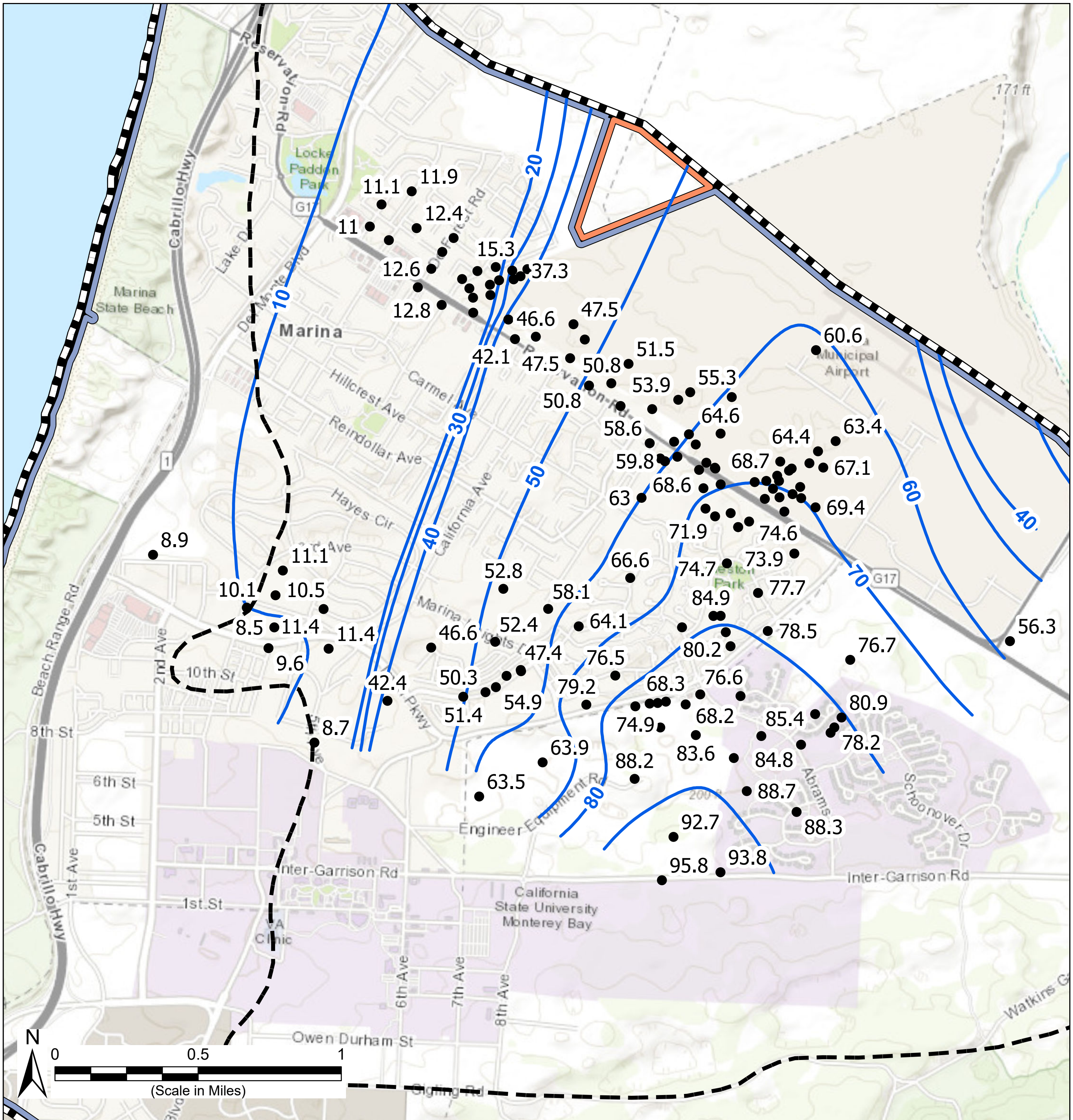
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 12 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Spring 2025 Dune Sand Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-1

Path: X:\B60094\Maps\2026\02\Contour_spring.aprx



Legend

- August 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of FO-SVA (Harding ESE, 2001)

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

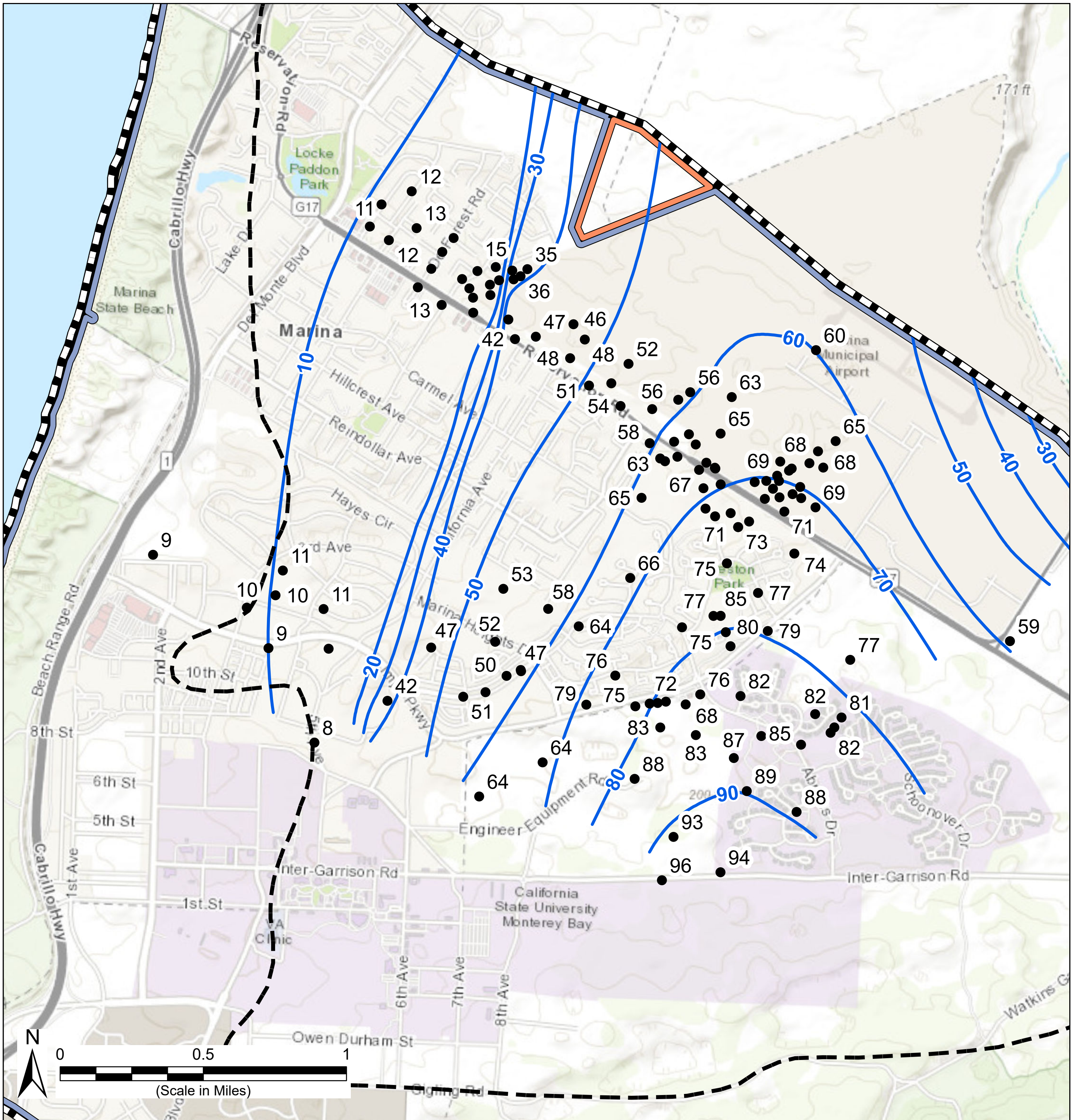
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 27 March 2026.

Groundwater Level Contours in the Marina-Ord Area - August 2025 Dune Sand Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-2

Path: X:\B60094\Maps\2026\02\Contour_august.aprx



Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of FO-SVA (Harding ESE, 2001)

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Notes

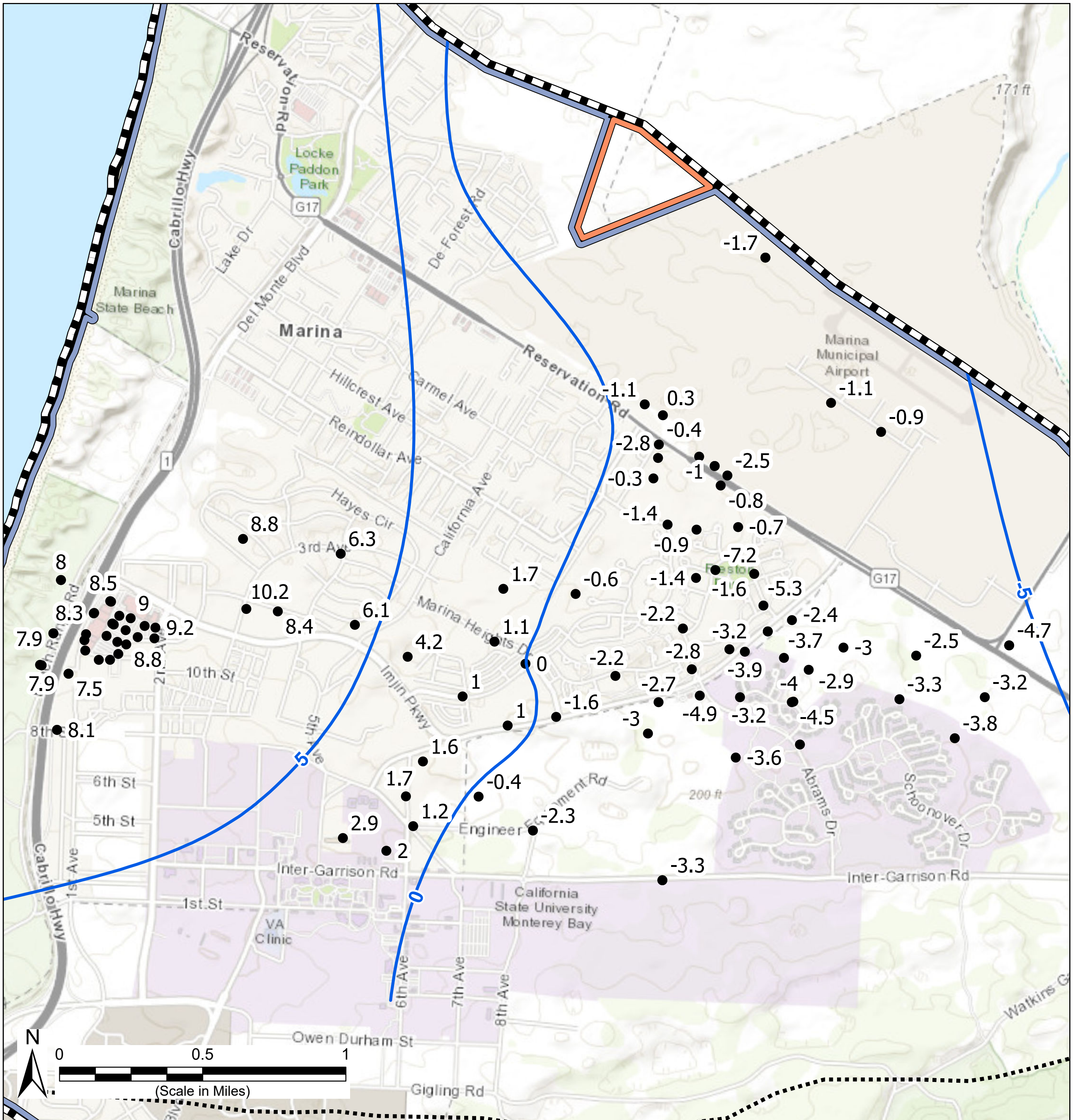
1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Groundwater Level Contours in the Marina-Ord Area - Fall 2025 Dune Sand Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-3

Path: X:\B60094\Maps\2026\02\Contour_fall.aprx



Legend

- Spring 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of Valley Fill Deposits (Harding ESE, 2001)

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

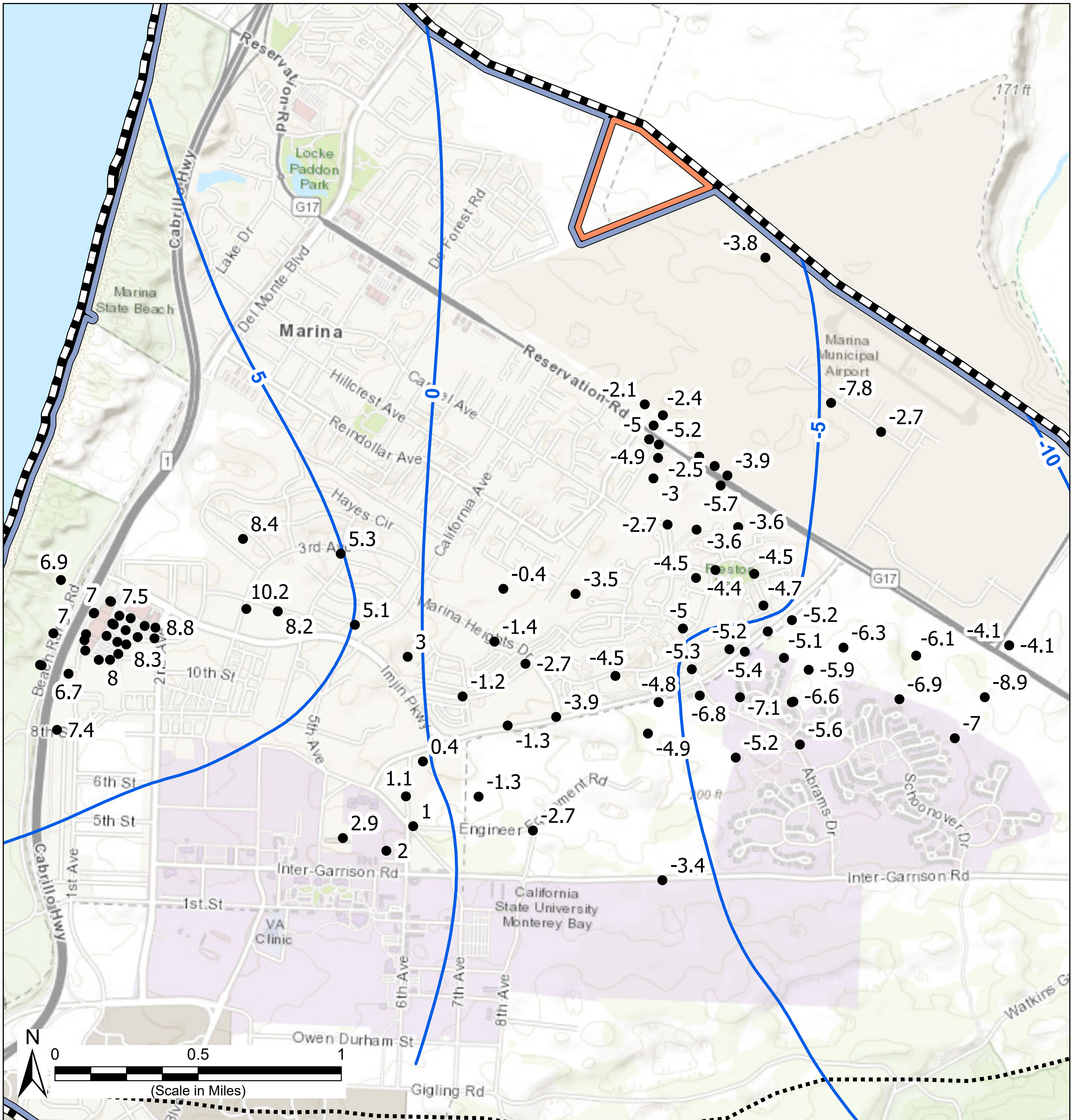
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 12 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Spring 2025 Upper 180-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-4

Path: X:\B60094\Maps\2026\02\Contour_spring.aprx



Legend

- August 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of Valley Fill Deposits (Harding ESE, 2001)

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

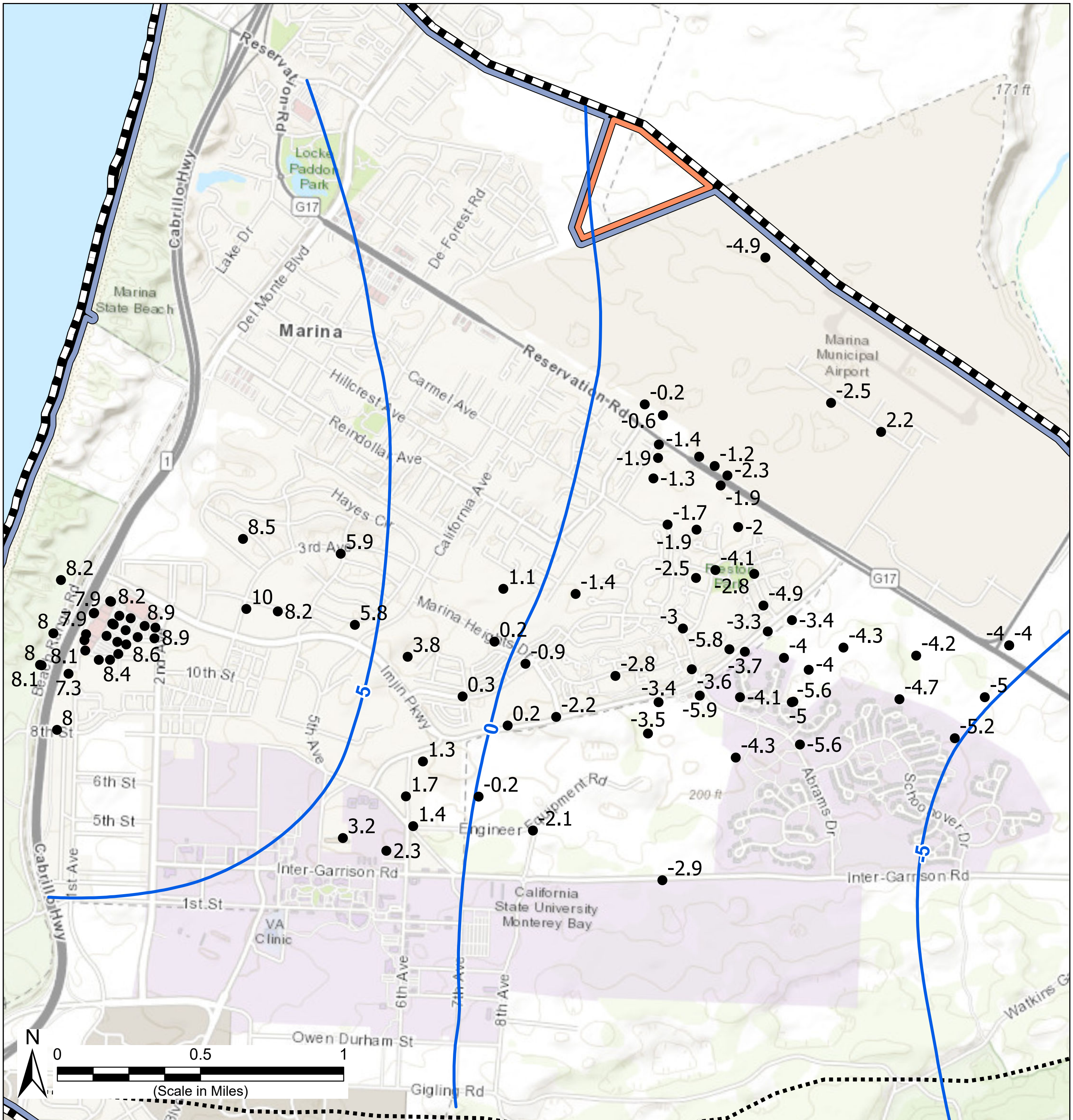
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 17 March 2026.

Groundwater Level Contours in the Marina-Ord Area - August 2025 Upper 180-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-5

Path: X:\B60094\Maps\2026\02\Contour_august.aprx



Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of Valley Fill Deposits (Harding ESE, 2001)

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

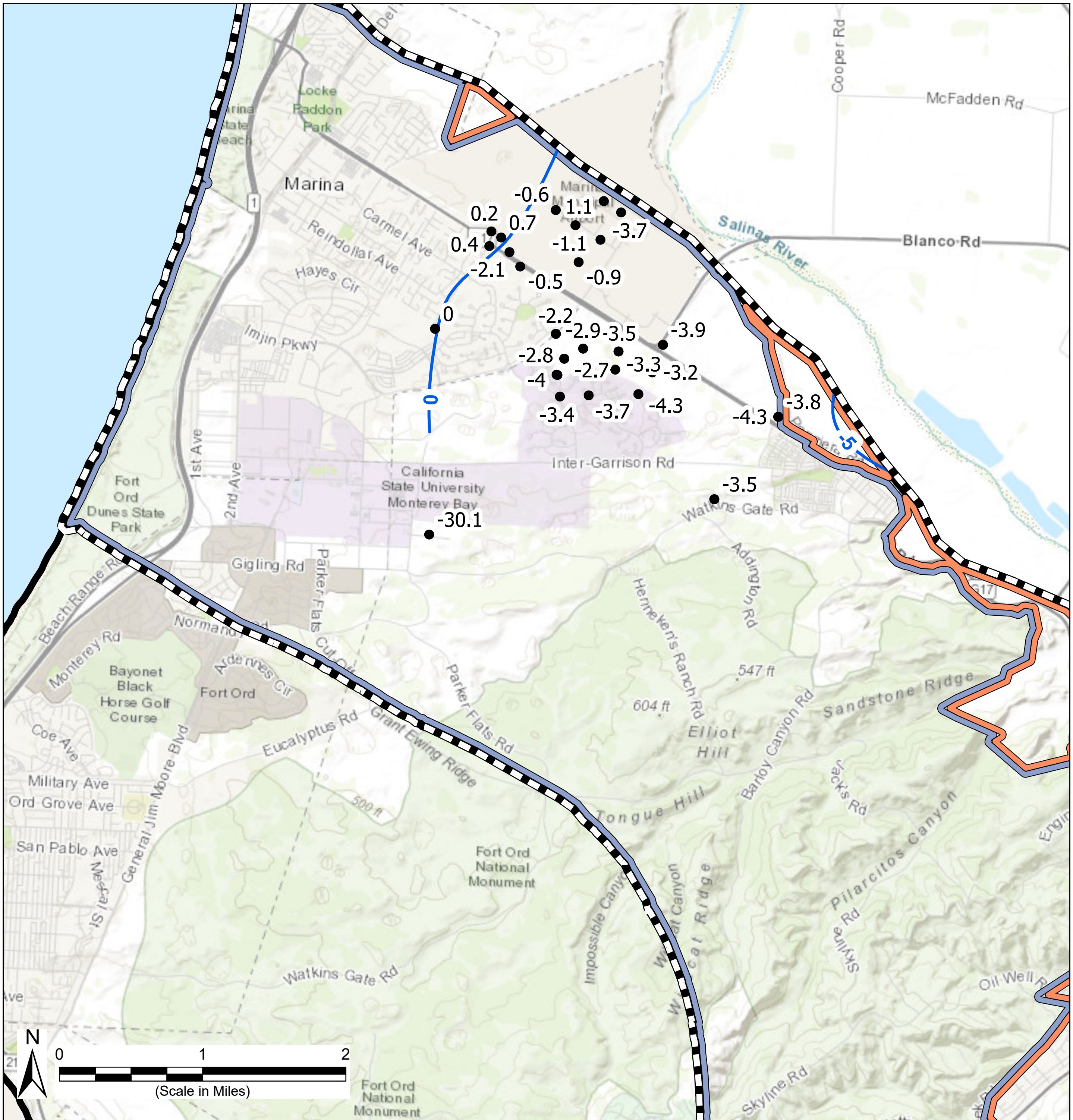
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Fall 2025 180-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-6

Path: X:\B60094\Maps\2026\02\Contour_fall.aprx



Legend

- Spring 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Sources

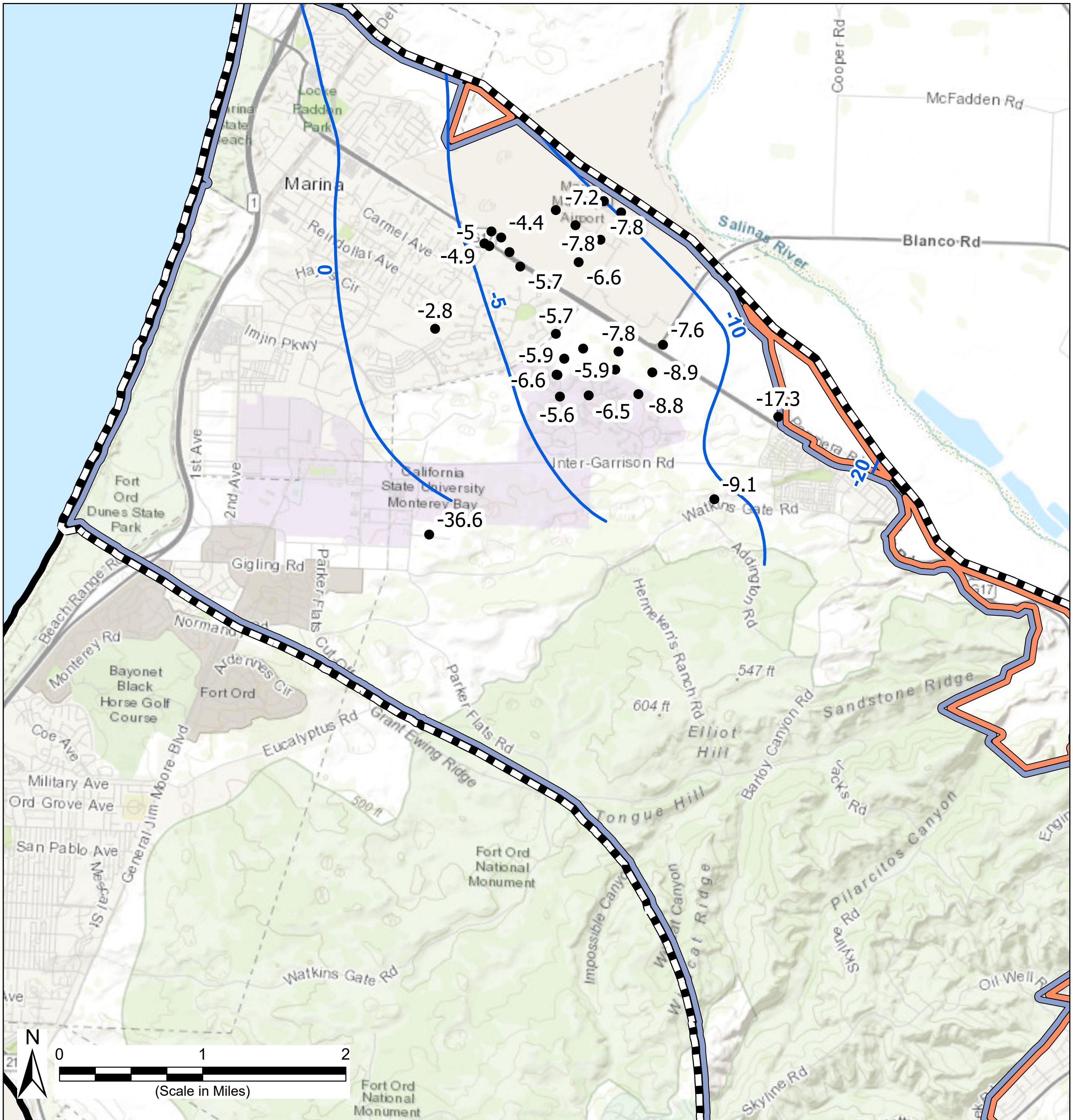
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 12 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Spring 2025 Lower 180-Foot, 400-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-7

Path: X:\B60094\Maps\2026\02\Contour_spring.aprx



Legend

- August 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Sources

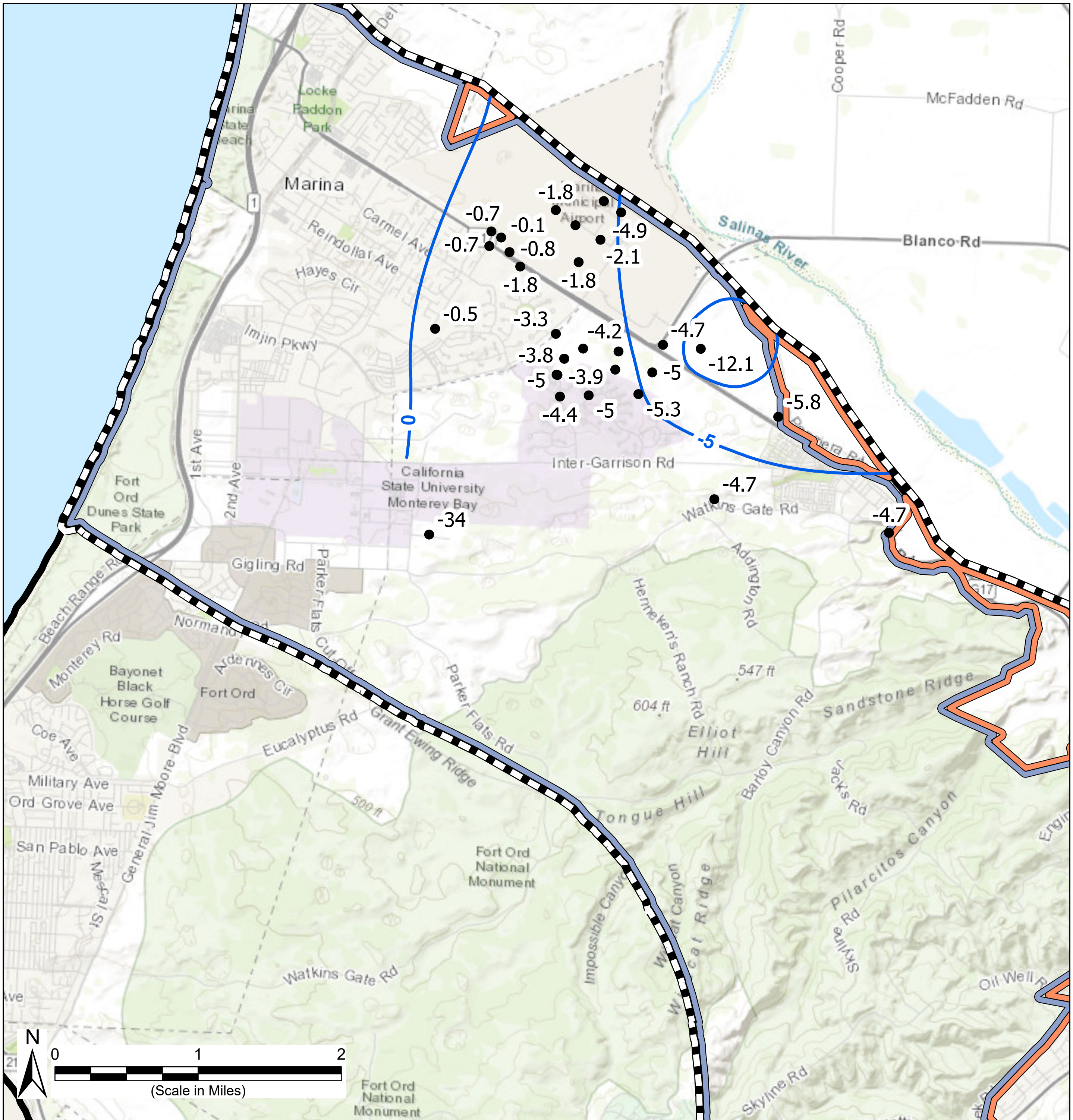
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 17 March 2026.

Groundwater Level Contours in the Marina-Ord Area - August 2025 Lower 180-Foot, 400-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-8

Path: X:\B60094\Maps\2026\02\Contour_august.aprx



Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 20 March 2026.

Notes

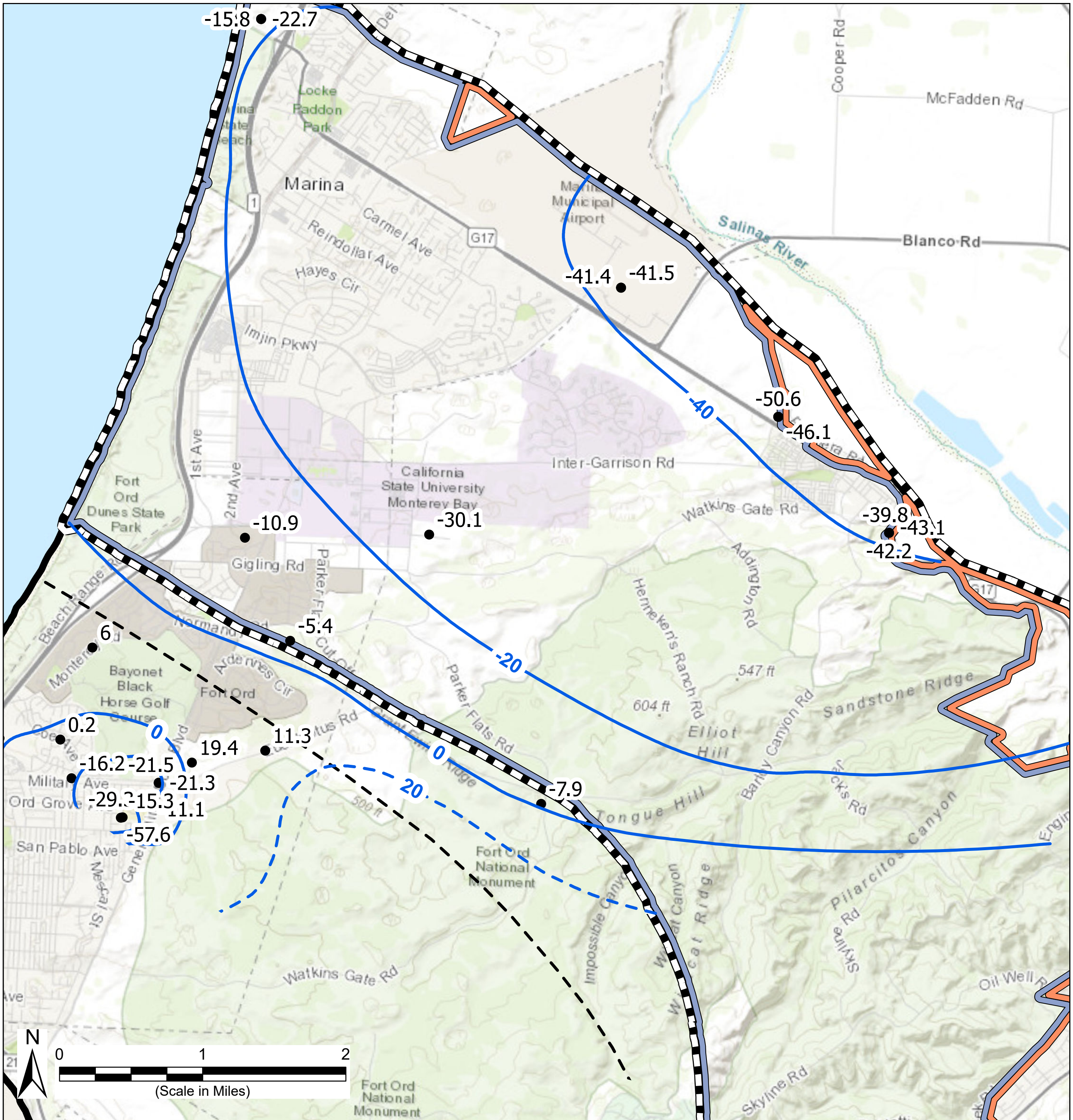
1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Groundwater Level Contours in the Marina-Ord Area - Fall 2025 Lower 180-Foot, 400-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-9

Path: X:\B60094\Maps\2026\02\Contour_fall.aprx



Legend

- Spring 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Groundwater Divide

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3,

Sources

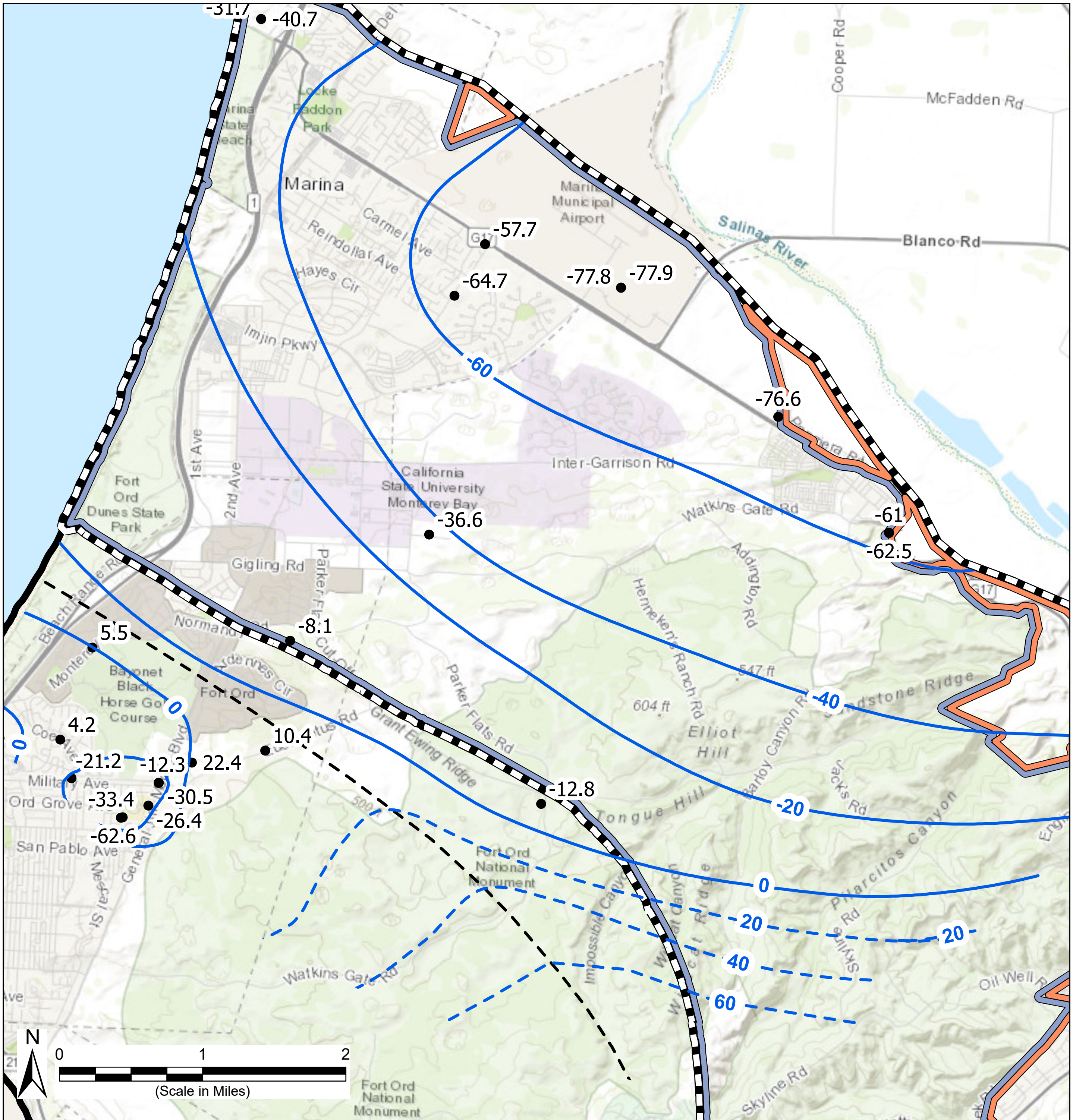
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 12 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Spring 2025 Upper Deep Aquifer Zone

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-10

Path: X:\B60094\Maps\2026\02\Contour_spring.aprx



Legend

- August 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Groundwater Divide

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Sources

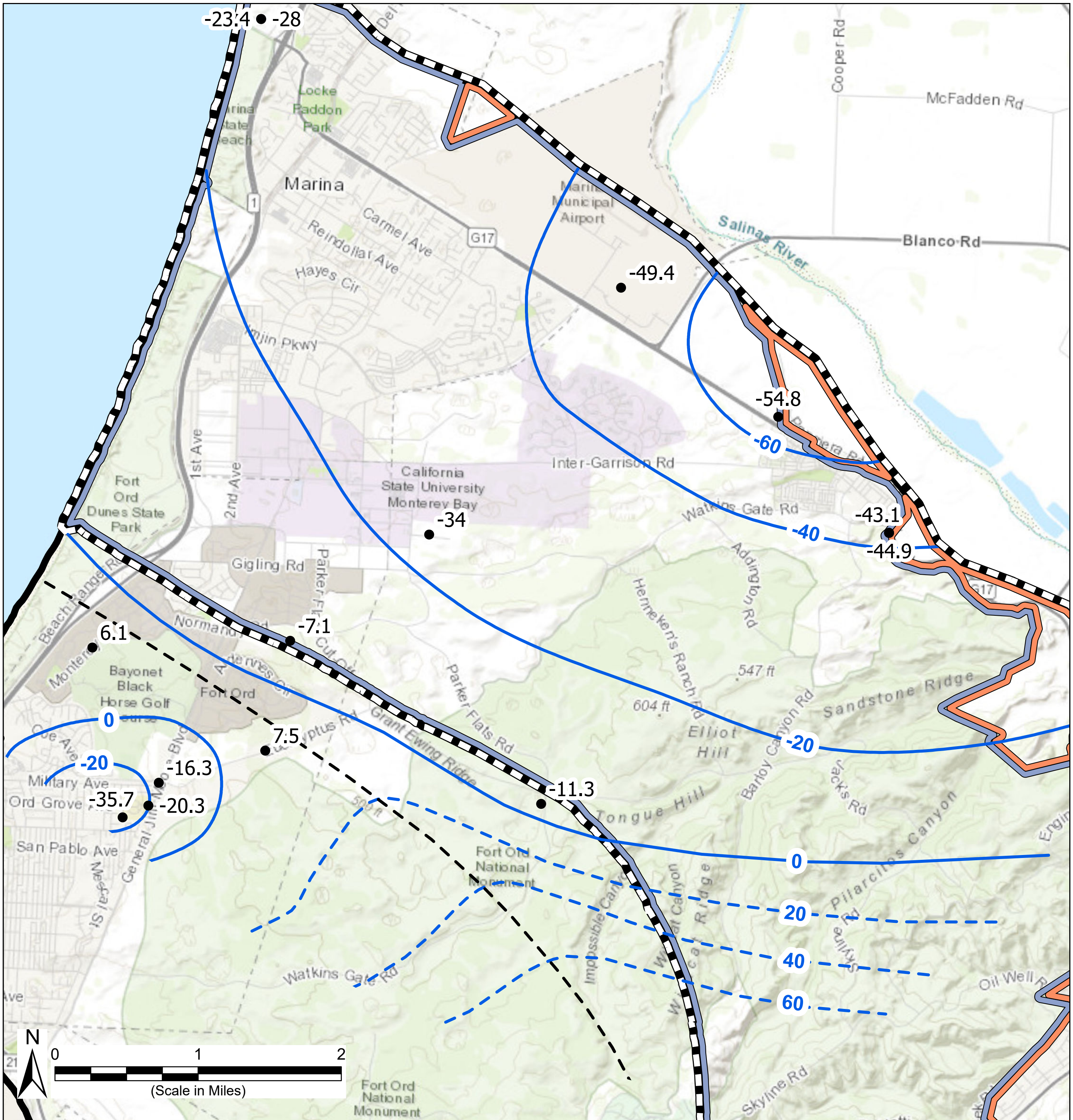
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 17 March 2026.

Groundwater Level Contours in the Marina-Ord Area - August 2025 Upper Deep Aquifer Zone

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-11

Path: X:\B60094\Maps\2026\02\Contour_august.aprx



Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Groundwater Divide

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Sources

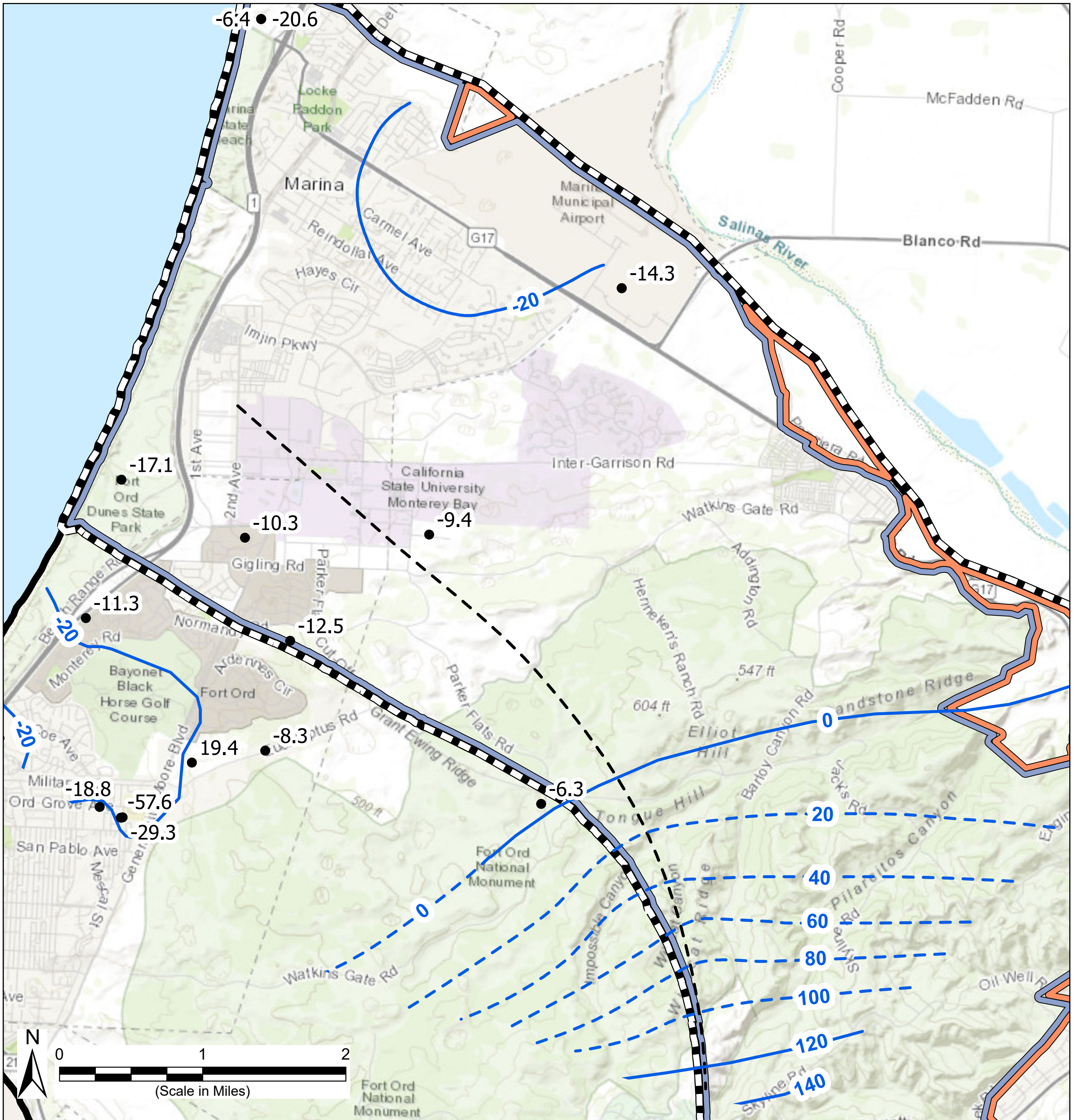
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Fall 2025 Upper Deep Aquifer Zone

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-12

Path: X:\B60094\Maps\2026\02\Contour_fall.aprx



Legend

- Spring 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Groundwater Divide

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

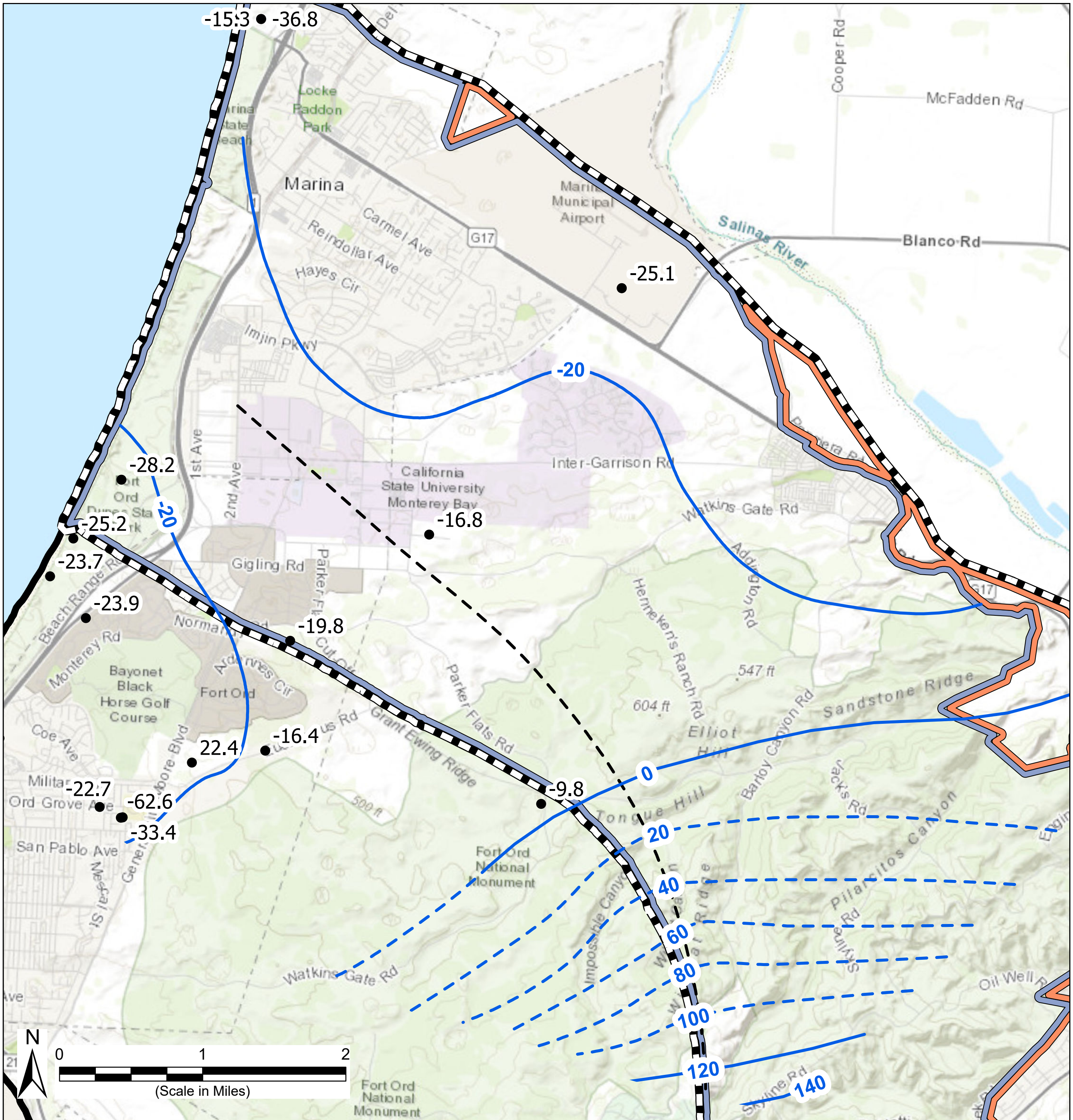
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 20 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Spring 2025 Lower Deep Aquifer Zone

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-13

Path: X:\B60094\Maps\2026\02\Contour_spring.aprx



Legend

- August 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Groundwater Divide

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

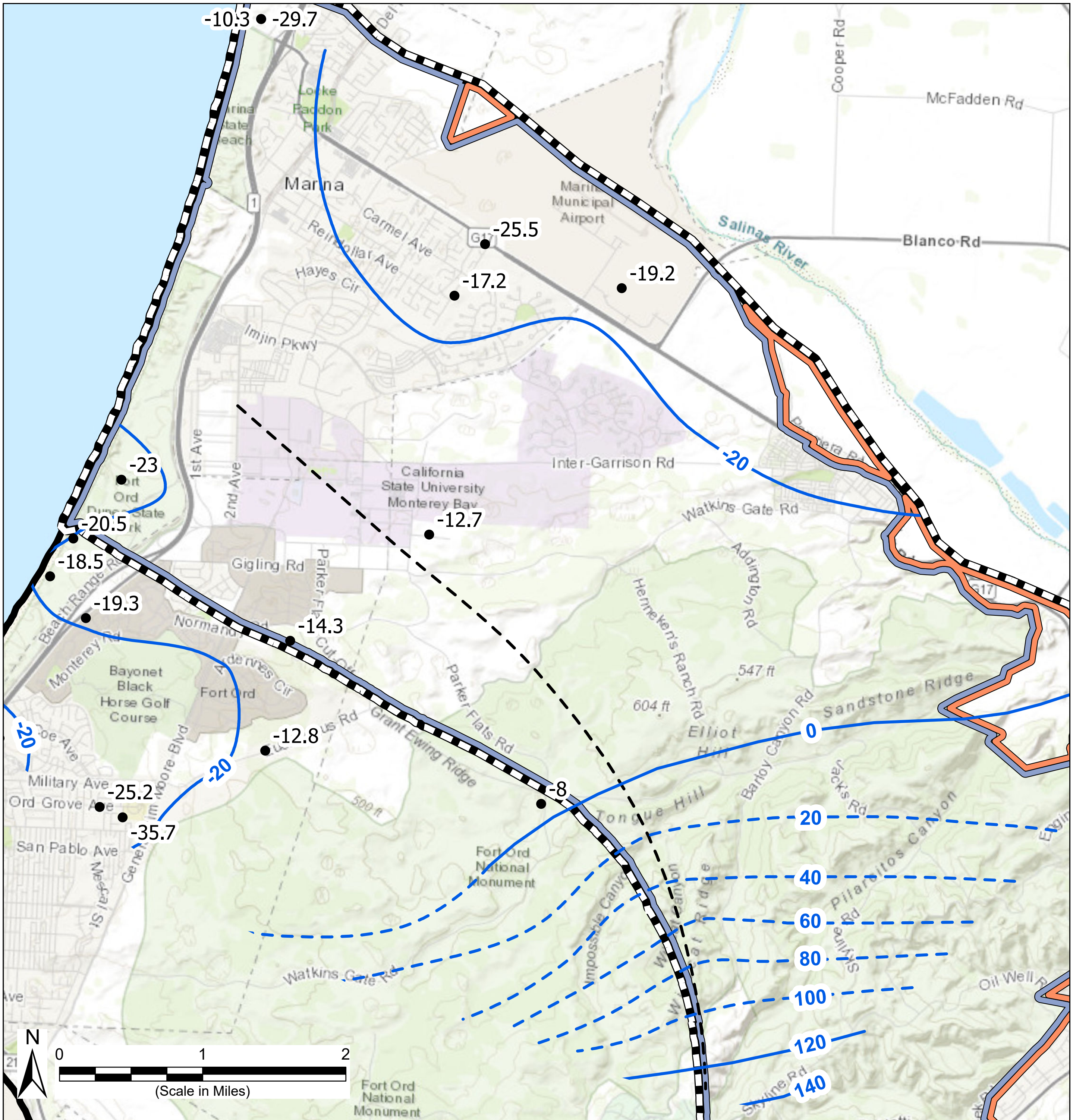
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 20 March 2026.

Groundwater Level Contours in the Marina-Ord Area - August 2025 Lower Deep Aquifer Zone

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-14

Path: X:\B60094\Maps\2026\02\Contour_august.aprx



Legend
- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas
- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Groundwater Divide

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes
1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

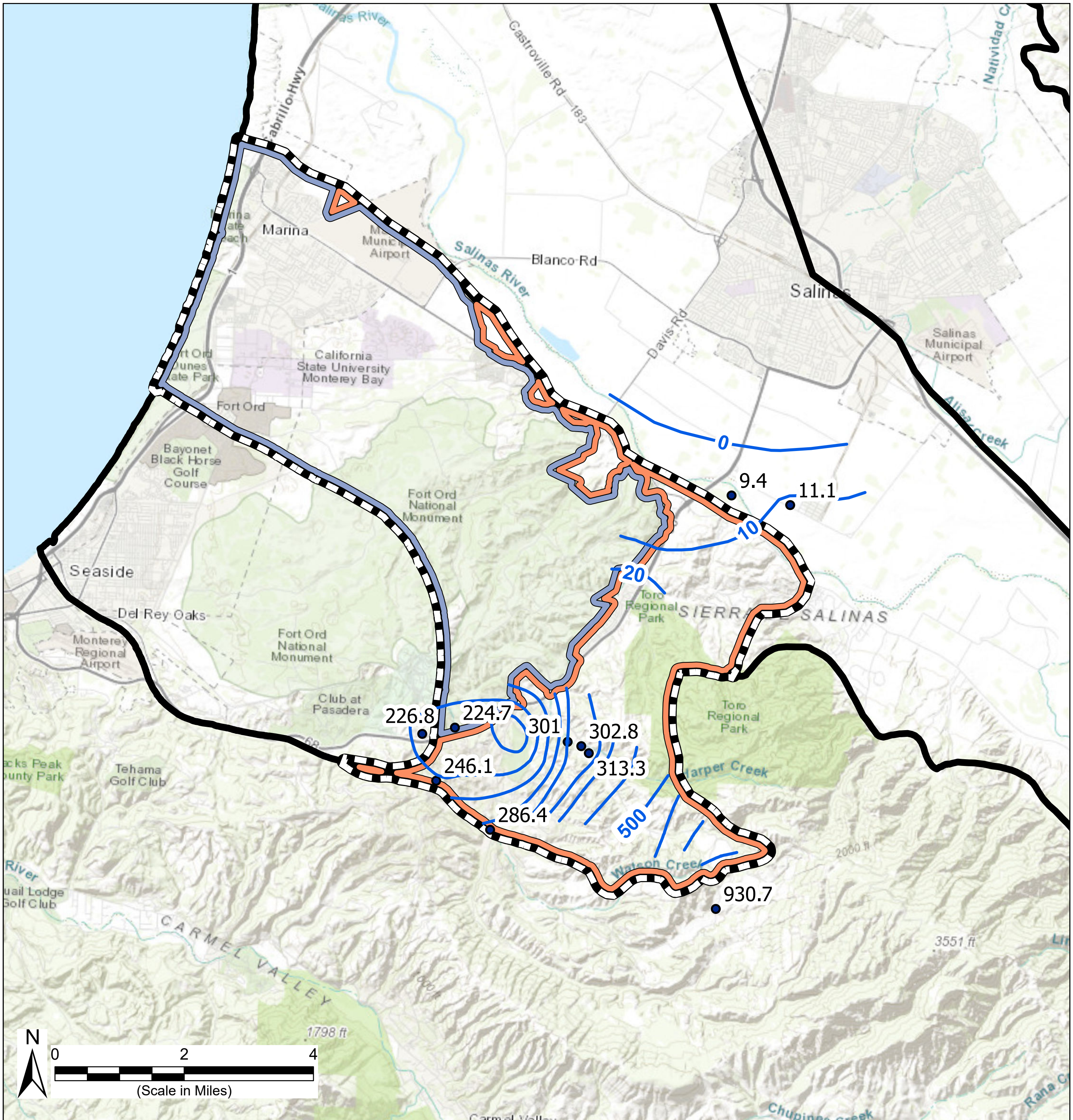
Sources
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Groundwater Level Contours in the Marina-Ord Area - Fall 2025 Lower Deep Aquifer Zone

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-15

Path: X:\B60094\Maps\2026\02\Contour_fall.aprx



Legend

Spring 2025 Groundwater Contours

GWE Measurement Locations

Monterey Subbasin

Management Areas

Marina-Ord Area

Corral de Tierra Area

Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

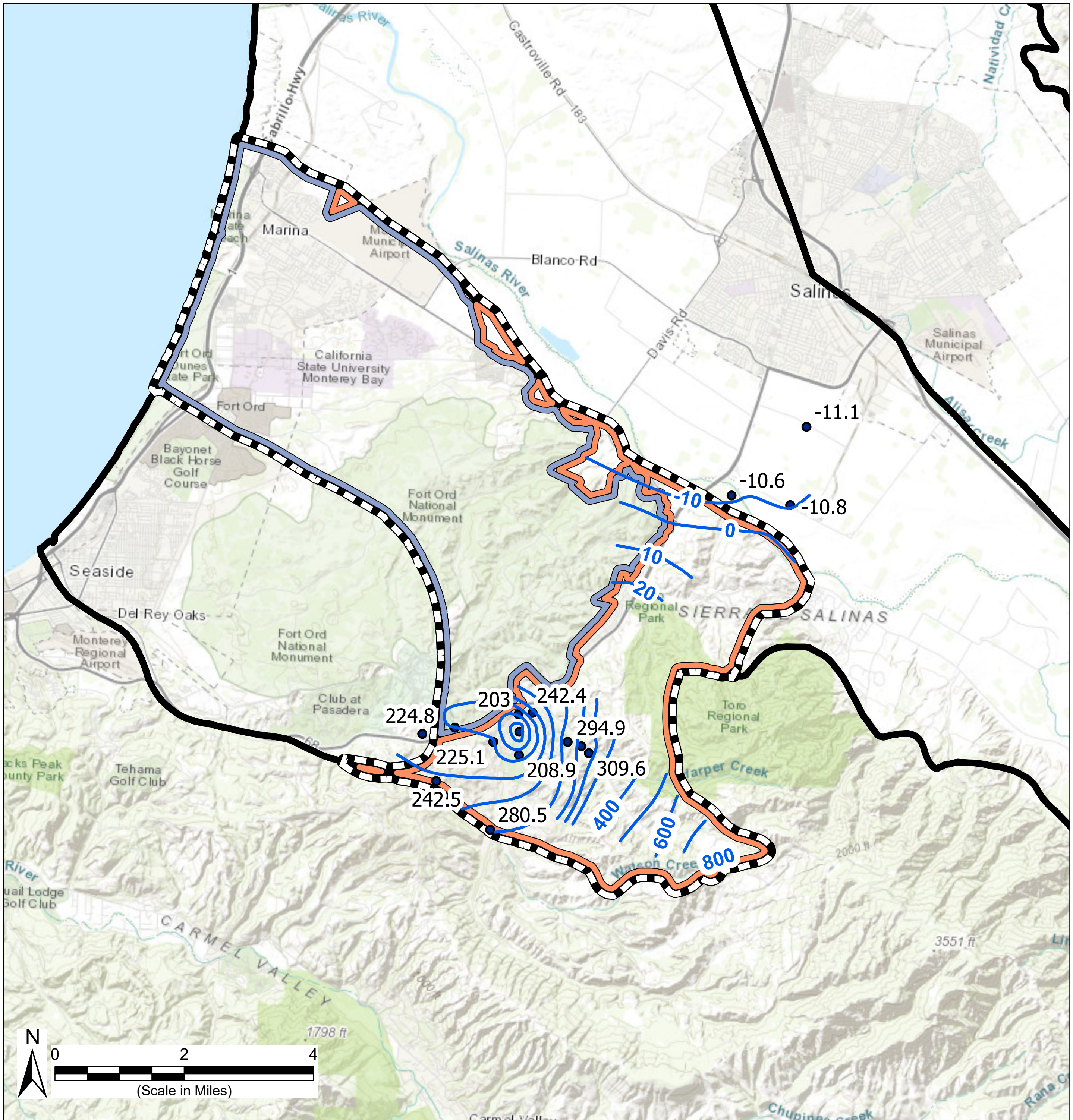
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 30 March 2026.

Groundwater Level Contours in the El Toro Primary Aquifer System - Spring 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-16

Path: X:\B60094\Maps\2026\03\Contour_Corral.aprx



Legend

- August 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

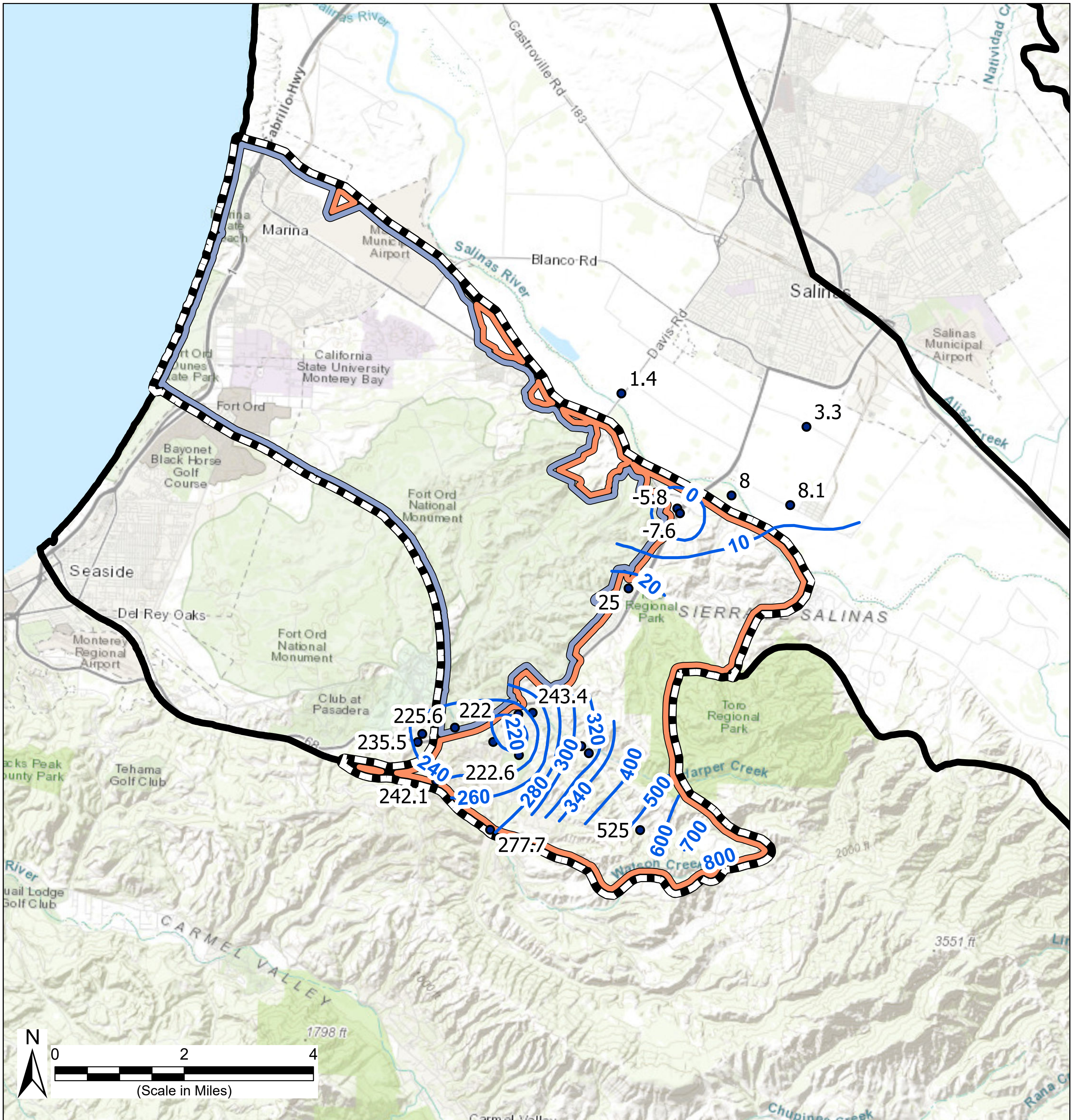
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 30 March 2026.

Groundwater Level Contours in the El Toro Primary Aquifer System - August 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-17

Path: X:\B60094\Maps\2026\03\Contour_Corral.aprx



Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 30 March 2026.

Groundwater Level Contours in the El Toro Primary Aquifer System - Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-18

Path: X:\B60094\Maps\2026\03\Contour_Corral.aprx

4.1.2 Long-Term Groundwater Elevation Trends

Temporal trends in groundwater elevations can be assessed with hydrographs that plot changes in groundwater elevations over time. Hydrographs for selected monitoring wells within the Subbasin are shown on Figure 4-19 through Figure 4-25, with the full extent of these data provided in Appendix B.

4.1.2.1 Marina-Ord Area

Dune Sand Aquifer

- Groundwater elevations in the Dune Sand Aquifer have been generally stable for over three decades and show long-term fluctuations corresponding to hydrologic conditions. Following the historic drought in 2014-15, groundwater elevations recovered slightly during a series of above normal and wet years between 2016 and 2020, declined during the consecutive dry years of 2021-22, and rebounded again after 2023 in response to the wet years. Groundwater elevations continued to increase during WY 2025.
- Groundwater elevations in the Dune Sand Aquifer do not show significant seasonal variations.

180-Foot Aquifer

Upper 180-Foot Aquifer

- Groundwater elevations have been generally stable in the upper 180-Foot Aquifer for the past thirty years and show long-term trends similar to those observed in the Dune Sand Aquifer. Groundwater elevations increased during WY 2025 in all except one upper 180-Foot Aquifer RMS well near the 180/400 Subbasin boundary. Seasonal variations are greater than those observed in the Dune Sand Aquifer and typically range between 3 to 7 feet.
- A larger seasonal variation is observed in wells located inland near the Monterey Subbasin and 180/400 Subbasin boundary (MW-BW-55-180 and MW-B-05-180) and is likely the result of recharge and seasonal agricultural pumping in the 180/400 Subbasin.

Lower 180-Foot Aquifer

- Groundwater elevations have been stable in the lower 180-Foot Aquifer for the past thirty years and show long-term trends similar to those observed in the upper 180-Foot Aquifer. Groundwater elevations showed significant increases during WY 2025 across the lower 180-Foot Aquifer.
- Seasonal variations in the lower 180-Foot Aquifer typically range between 5 to 10 ft.

400-Foot Aquifer

- In the northern Marina-Ord Area, groundwater elevations in the 400-Foot Aquifer are similar to those in the lower 180-Foot Aquifer and have been generally stable for the past thirty years. Groundwater elevations in the northern 400-Foot Aquifer show long-term fluctuations corresponding to hydrologic conditions and a continued increase during WY 2025. Seasonal variations in these wells are typically around 7ft.

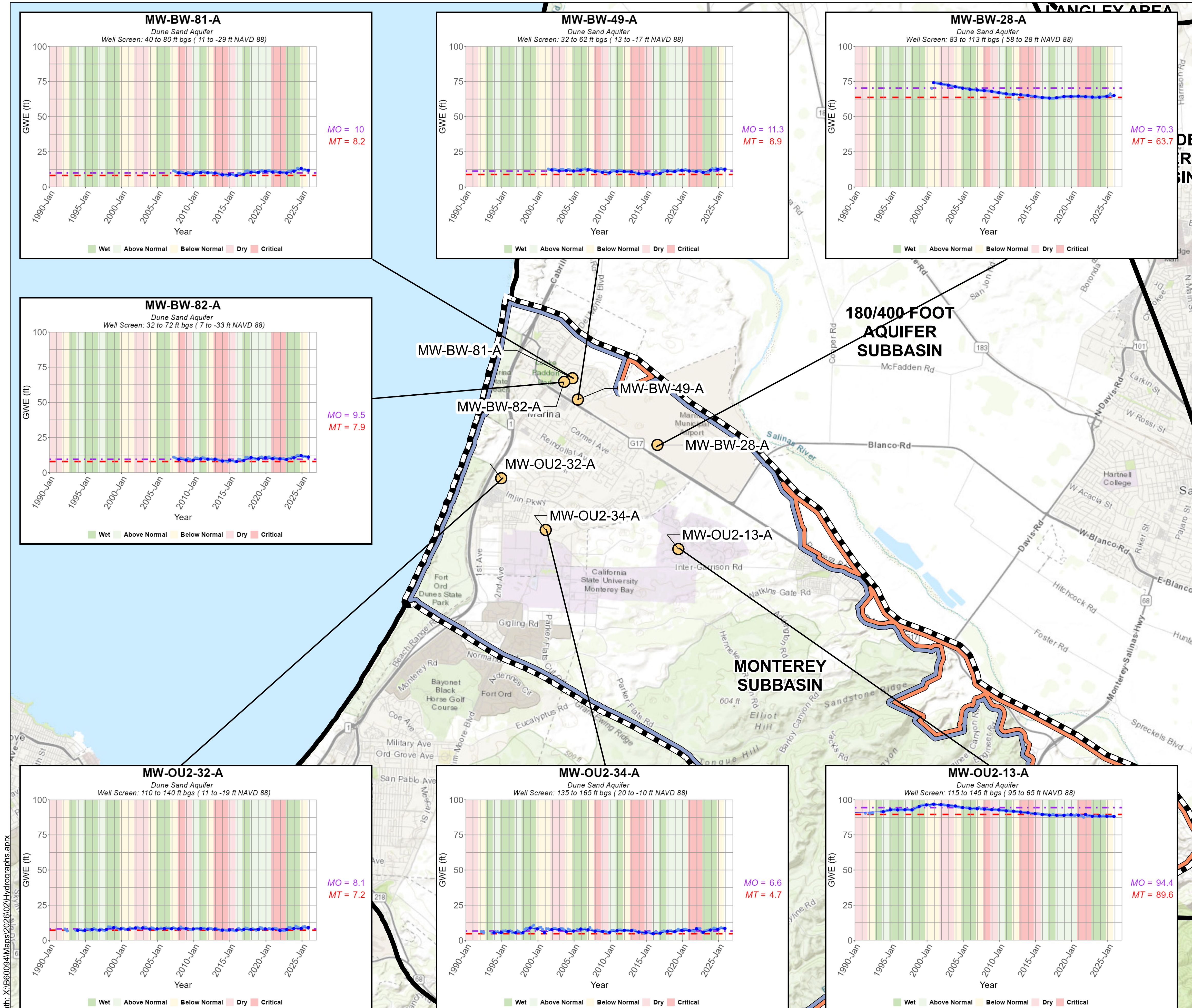
- However, in MPWMD#FO-11S located in the southern Marina-Ord Area, groundwater elevations have been declining consistently since the 2000s. The cause of this local depression is not known as there is no known groundwater extraction in its vicinity. As discussed in Section 4.1.1.1, the groundwater elevations in this well are similar to those in the upper Deep Aquifer zone. Therefore, groundwater at this location may be hydraulically connected to the upper Deep Aquifer zone. Further information regarding groundwater conditions in this area will be obtained once data from MCWDGSA's new monitoring wells is available in 2026, as described in Section 5.2.3.2.

Deep Aquifers

- Groundwater elevations have been declining in the Deep Aquifers since the 2000s. The rate of decline was steepest following the historic drought that occurred in WY 2014 and WY 2015. Groundwater elevations in upper Deep Aquifer monitoring wells (i.e., 014S001E24L004M, 014S001E24L005M, 14S02E33E01, and PZ-FO-32-910), increased between WY 2018 and WY 2022, and stabilized between WY 2023 and WY 2025. Groundwater elevations in RMSs screened in the lower Deep Aquifers (i.e., 014S001E24L002M, 014S001E24L003M, 14S02E33E02, MPWMD#FO-11D, and Sentinel MW #1), have been relatively stable between 2018 and 2025.

4.1.2.2 <u>Corral de Tierra Area</u>

Figure 4-24 and Figure 4-25 show example hydrographs for the RMS wells in the Corral de Tierra Area. Groundwater elevations in the Corral de Tierra Area have been declining on average since the 2000s. Between WY 2024 and WY 2025, groundwater elevations fluctuated in this area with no discernible prevalence of spatial patterns with the current RMS wells. Of the 11 RMS wells, 5 wells experienced a rise in groundwater elevations. On average groundwater elevations rose 0.8ft; however, the rise in groundwater elevations is mostly driven by 2 wells that increased dramatically. Excluding these wells, the average groundwater elevations decreased slightly by 0.4ft.



Legend

- Representative Monitoring Sites for Groundwater Elevations
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- Measurable Objectives
- Minimum Thresholds

Abbreviations

DWR	= California Department of Water Resources
ft	= foot
GWE	= groundwater elevation
MO	= Measurable Objectives
MT	= Minimum Thresholds
NAVD 88	= North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 23 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

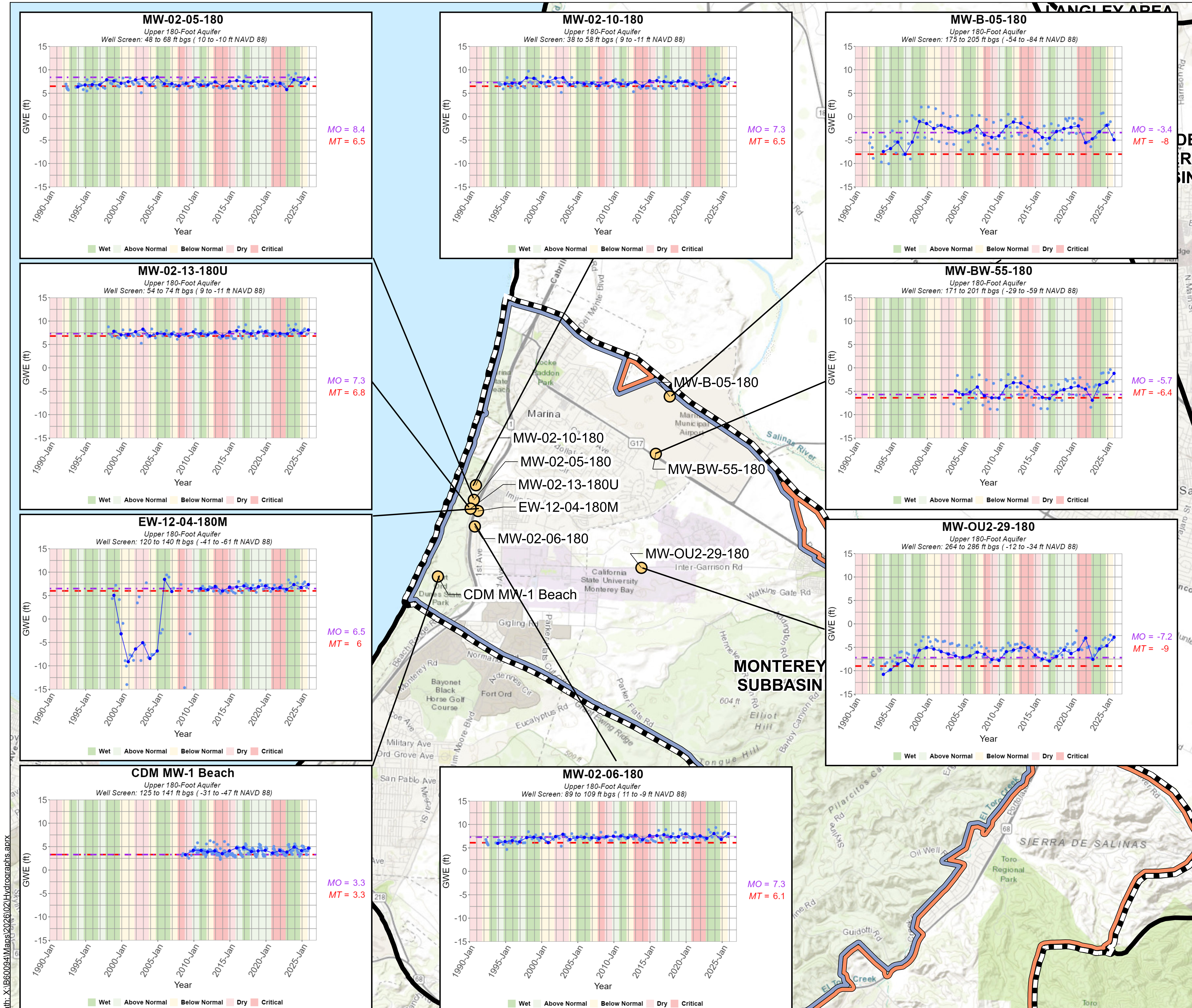
N 0 1.5 3 (Scale in Miles)

Representative Groundwater Elevation Hydrographs in the Dune Sand Aquifer

Monterey Subbasin
WY 2025 Annual Report
February 2026

Figure 4-19

Path: X:\B60094\Maps\2026\02\Hydrographs.aprx



Legend

- Representative Monitoring Sites for Groundwater Elevations
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- MO
- MT

Abbreviations

DWR	= California Department of Water Resources
ft	= foot
GWE	= groundwater elevation
MO	= Measurable Objectives
MT	= Minimum Thresholds
NAVD 88	= North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.
3. EW-12-04-180M is a former extraction that stopped pumping in 2009.

Sources

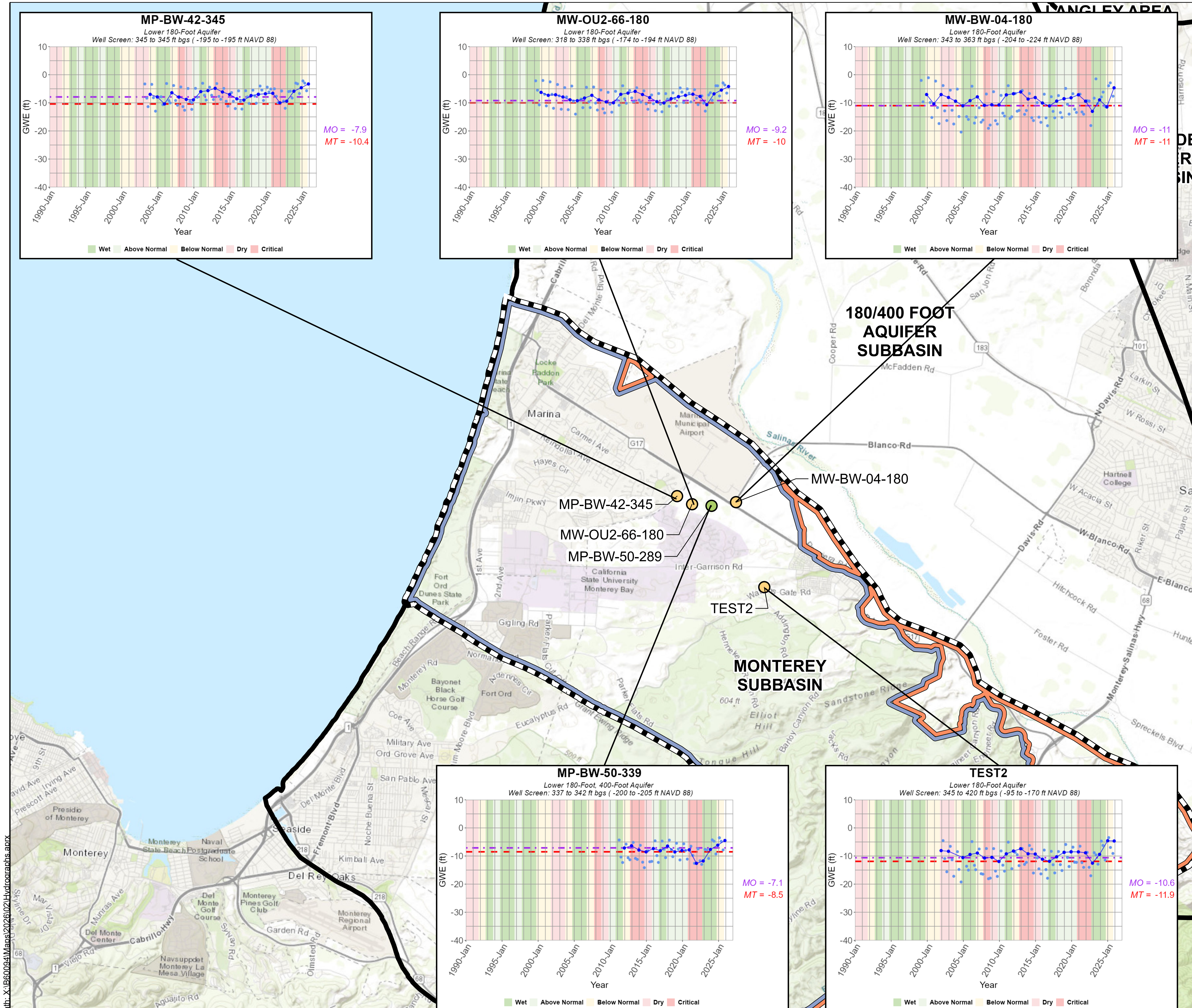
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 23 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

N 0 1.5 3 (Scale in Miles)

Representative Groundwater Elevation Hydrographs in the Upper 180-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
February 2026

Figure 4-20



Legend

Representative Monitoring SItes for Groundwater Elevation

- Lower 180-Foot Aquifer
- Lower 180-Foot, 400-Foot Aquifer
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- MO
- MT

Abbreviations

DWR	= California Department of Water Resources
ft	= foot
GWE	= groundwater elevation
MO	= Measurable Objectives
MT	= Minimum Thresholds
NAVD 88	= North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.

Sources

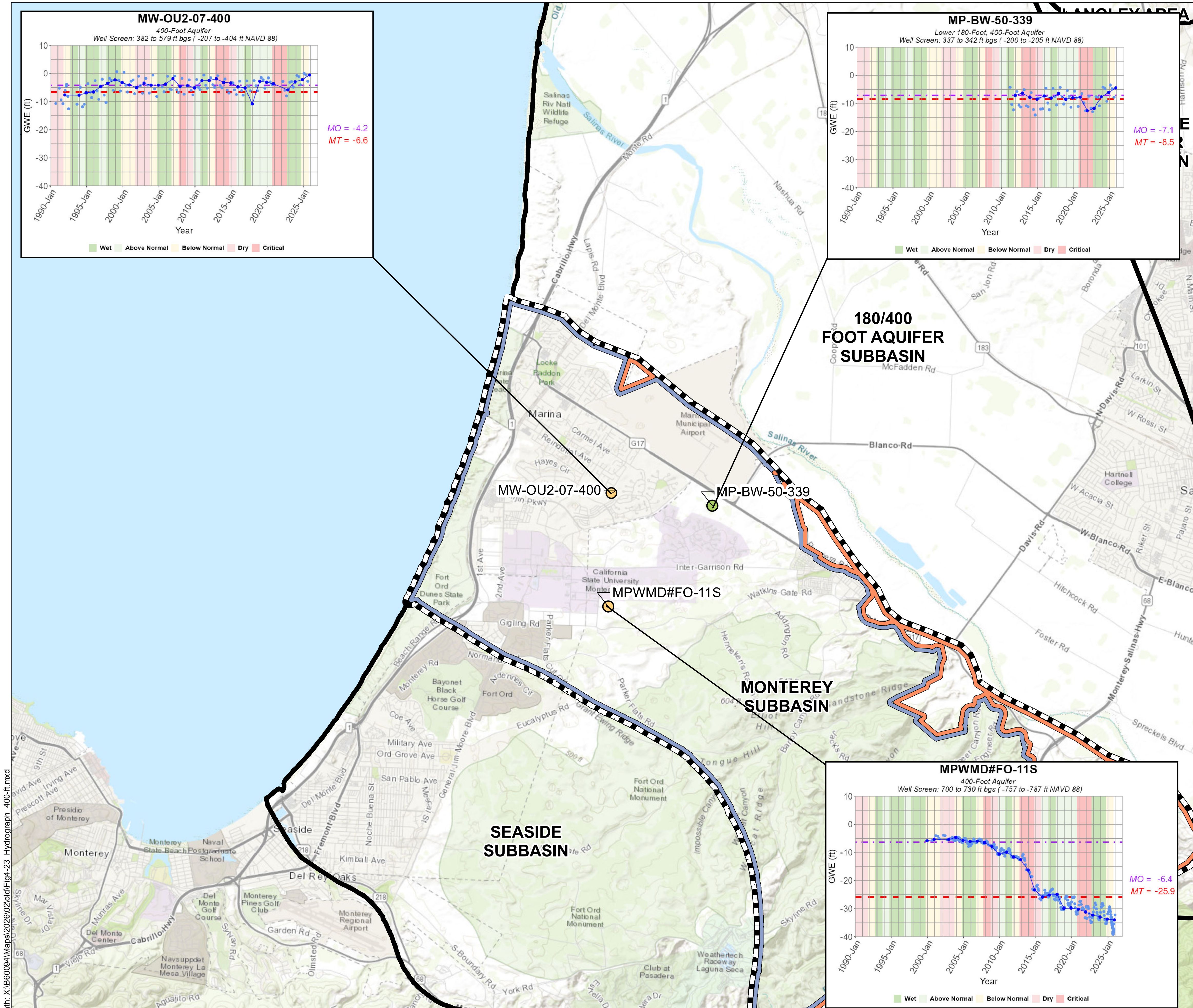
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 23 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

N 0 1.5 3 (Scale in Miles)

Representative Groundwater Elevation Hydrographs in the Lower 180-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
February 2026

Figure 4-21



Legend

Representative Monitoring Sites for Groundwater Elevations

- 400-Foot Aquifer
- Lower 180-Foot, 400-Foot Aquifer
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- MO
- MT

Abbreviations

DWR = California Department of Water Resources
ft = foot
GWE = groundwater elevation
MO = Measurable Objectives
MT = Minimum Thresholds
NAVD 88 = North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

Representative Groundwater Elevation Hydrographs in the 400-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-22

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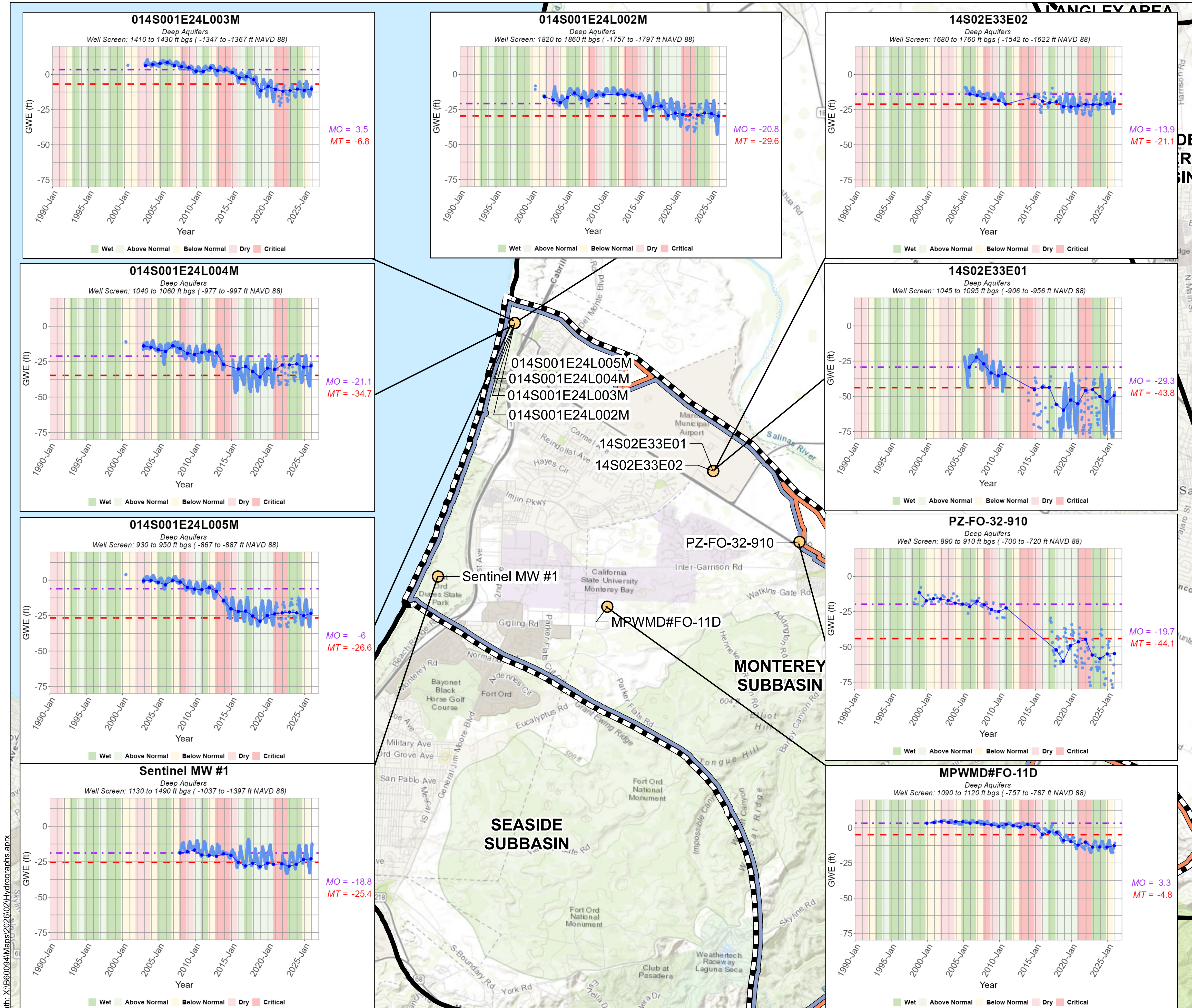


Legend

- Representative Monitoring Sites for Groundwater Elevations
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- MO
- MT

Abbreviations

DWR	= California Department of Water Resources
ft	= foot
GWE	= groundwater elevation
MO	= Measurable Objectives
MT	= Minimum Thresholds
NAVD 88	= North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.

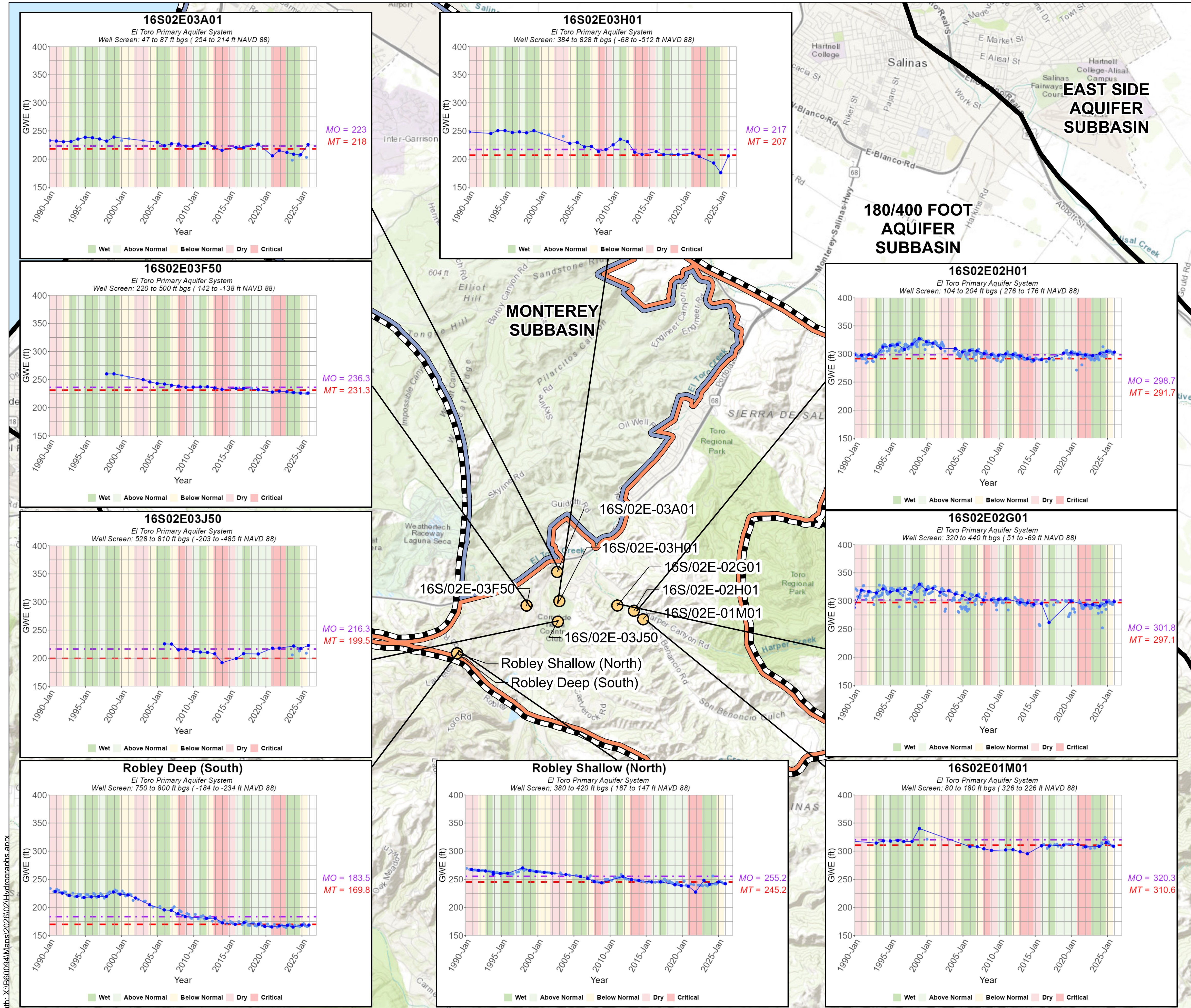
Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 27 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

N 0 1.5 3
(Scale in Miles)

Representative Groundwater Elevation Hydrographs in the Deep Aquifers

Monterey Subbasin
WY 2025 Annual Report
February 2026
Figure 4-23



Legend

- Representative Monitoring Sites for Groundwater Elevations
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- MO
- MT

Abbreviations

DWR = California Department of Water Resources
ft = foot
GWE = groundwater elevation
MO = Monterey County Water Resources Agency
MT = Measurable Objectives
NAVD 88 = Minimum Thresholds
= North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.

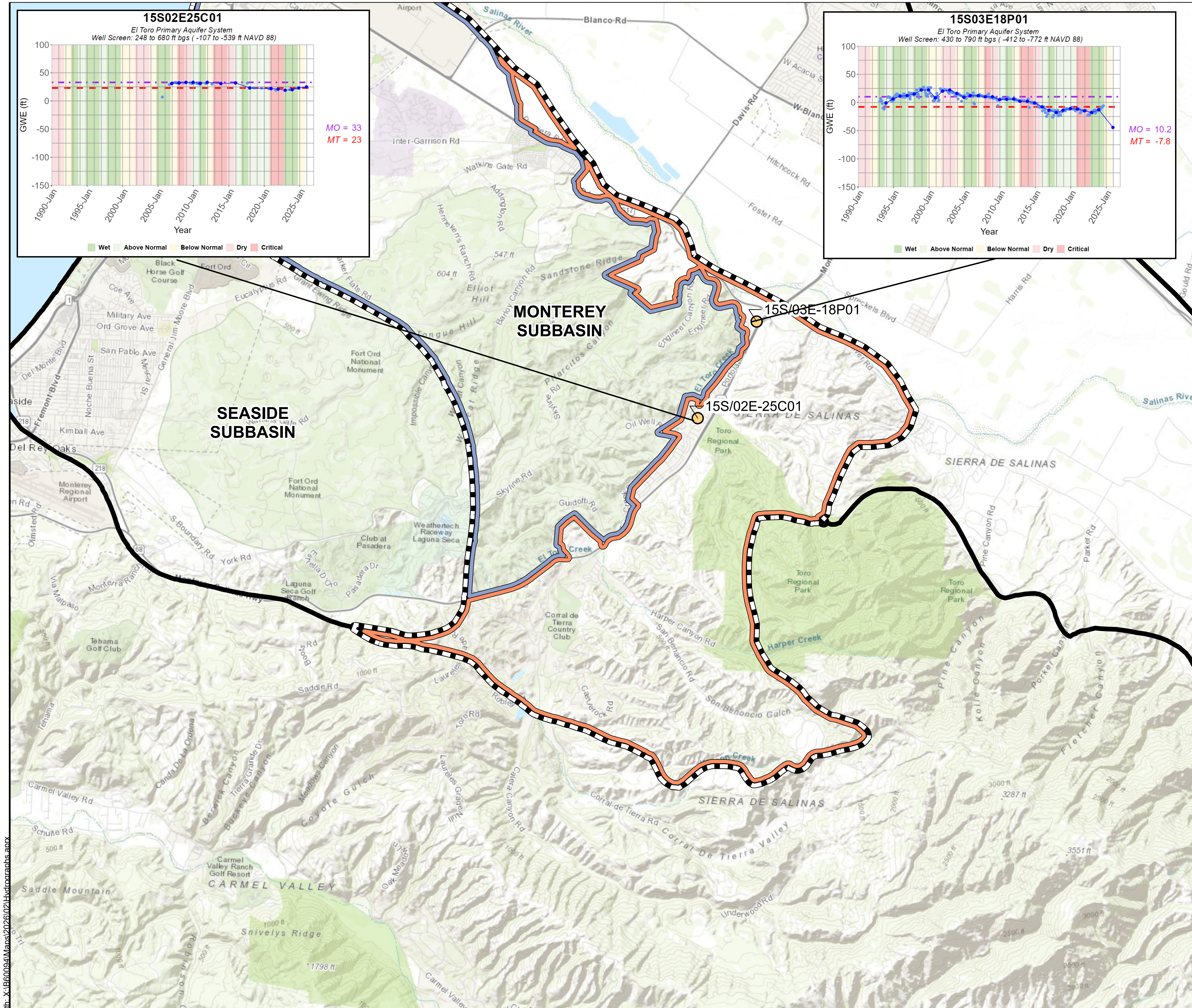
Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 23 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

Representative Groundwater Elevation Hydrographs in the El Toro Primary Aquifer (South)

Monterey Subbasin
WY 2025 Annual Report
February 2026
Figure 4-24

Path: X:\B60094\Maps\2026\02\Hydrographs.aprx



Legend

- Representative Monitoring Sites for Groundwater Elevations
- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Representative Monitoring Sites

- Selected Fourth Quarter GWE Measurements
- Other GWE Measurements
- MO
- MT

Abbreviations

DWR	= California Department of Water Resources
ft	= foot
GWE	= groundwater elevation
MO	= Measurable Objectives
MT	= Minimum Thresholds
NAVD 88	= North American Vertical Datum of 1988

Notes

1. Selected fourth quarter measurements are measurements closest to December 1st of the year.
2. Groundwater elevations are in ft NAVD 88.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 23 March 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

N 0 1.5 3 (Scale in Miles)

Representative Groundwater Elevation Hydrographs in the El Toro Primary Aquifer (North)

Monterey Subbasin
WY 2025 Annual Report
February 2026
Figure 4-25

4.2 Water Use and Supply

Water use in the Subbasin primarily includes municipal, domestic, and agricultural uses. Groundwater is the only water source in the Subbasin. Only a relatively small amount of water is used by wetlands and native vegetation.

4.2.1 Groundwater Extraction

Table 4-1 and Table 4-2 show groundwater extraction rates within each Management Area by sector.

Groundwater extraction within the Marina-Ord Area is primarily conducted by Marina Coast Water District (MCWD) for municipal water use. A small volume of groundwater is extracted by the United States (U.S.) Army for remediation purposes at the former Fort Ord (FO) and is then returned to the groundwater basin. Therefore, the water extracted for remediation purposes is not included in groundwater extraction totals. MCWD is the sole water purveyor within the Marina-Ord Area and collects groundwater extraction data by metering its production wells. As shown in Table 4-1, groundwater extraction rates within the Marina-Ord Area totaled approximately 3,556 AF during WY 2025.

Table 4-1 Groundwater Extraction by Sector in WY 2025 in the Marina-Ord Area

Year	Water Use Sector	Groundwater Extraction (AF)	Method of Measurement	Accuracy of Measurement
WY 2025	Urban	3,556	Direct/Meter	Estimated to be +/- 5%.

Water use sectors in the Corral de Tierra Area include agricultural, municipal—supplied by various small and large water systems—and rural domestic. Agricultural water use is derived from pumping compiled as part of the MCWRA Groundwater Monitoring Program (GMP), which replaced the historical monitoring program, Groundwater Extraction Management System (GEMS). Urban water use in the Corral de Tierra Area is calculated based on extraction reported through GMP and the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW). Pumping data from SWRCB for 2025 is not available yet so 2024 data is provided as an estimate. Table 4-2 shows the groundwater extraction for the Corral de Tierra Area. The urban and total groundwater extraction estimates are likely less than actually occurred, since not all public drinking water systems reported pumping to the SWRCB. Both agricultural and urban pumping is reported by MCWRA from October 1 through September 30, starting in WY 2024 based on MCWRA Ordinance 5426. Pumping reported to SWRCB is reported on a calendar year basis.

Rural domestic pumping is estimated using the number of drinking water connections based on data compiled for water systems and 2024 County of Monterey parcel data. To estimate water use, the number of connections first were estimated and then that number was multiplied by a constant pumping rate of 0.35[4] per connection across all subbasins. This constant was verified using reported urban pumping to assess the accuracy of the connections and water use estimates. Based on MCWRA Ordinance 5426 adopted in 2024, future annual reports will include groundwater extraction data for non-de minimis wells in all areas within the SVBGSA subbasins , as reported to MCWRA.

Table 4-2 Groundwater Extraction by Sector in WY 2025 in the Corral de Tierra Area

Water Use Sector	Groundwater Extraction (AF)	Method of Measurement	Accuracy of Measurement
Rural Domestic (b)	133	Estimated	N/A
Urban (c)	615	Direct, Estimated	Estimated to be +/- 5%.
Agricultural (c)	208	Direct	Estimated to be +/- 5%.
Total	**955**	--	

Notes:

(a) N/A = Not Applicable.
(b) Estimated using number of drinking water connections based on data compiled for water systems and 2024 County of Monterey parcel data and a constant pumping rate of 0.35 AFY/yr per connection.
(c) Urban pumping is comprised of 2025 pumping data from MCWRA and 2024 pumping data from SWRCB until 2025 data is available.

Figure 4-26 shows historic groundwater extraction in Monterey Subbasin since 2013. As shown on Figure 4-26, groundwater extraction in the Monterey Subbasin declined between 2014 and 2016 due to urban water conservation during the historic drought, rebounded between 2016 to 2018, and remained stable at approximately 4,500 AFY since 2018.

[4] The 0.35 AF/yr per connection estimate was determined by comparing pumping data reported to the state for several public water systems in the Corral de Tierra Area to the number of residential connections in those systems. This constant closely approximates reported pumping for residential water systems based on data reported to the state.

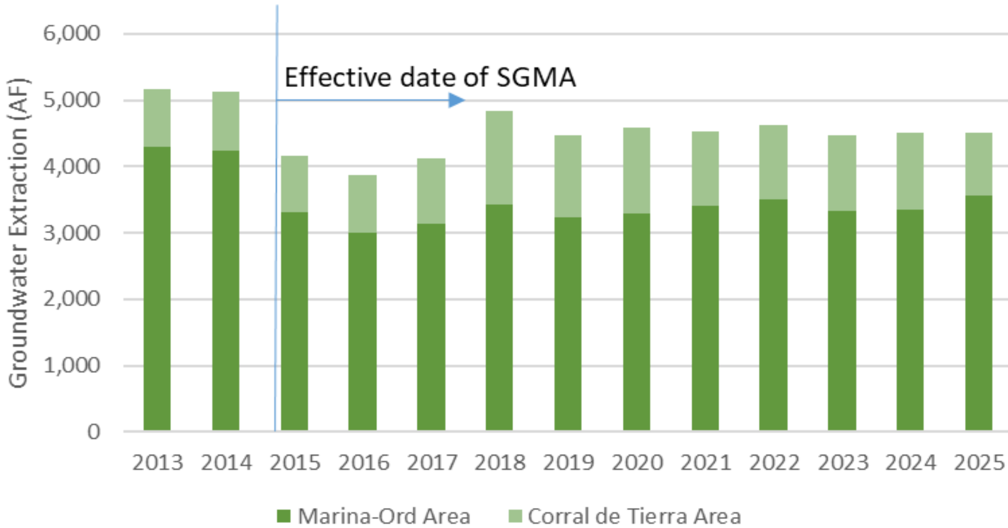


Figure 4-26 Historical Groundwater Extraction in the Monterey Subbasin

4.2.2 Total Water Use

Total water use for WY 2025 is summarized in Table 4-3 and illustrated by sector and by source on Figure 4-27. As shown on Figure 4-27, urban water use was the predominant water use sector and accounted for 92% of the water use in the basin. Rural domestic and agricultural uses accounted for 3% and 5% of the Subbasin's total water use, respectively. No recycled water use occurred in the subbasin during WY 2025.

Table 4-3 Total Water Use in WY 2025 in the Monterey Subbasin

Management Area	Water Use Sector	Groundwater Extraction (AF)	Recycled Water (AF)	Total Use by Sector (AF)
Marina-Ord Area	Urban	3,556	0	3,556
Corral de Tierra Area	Rural Domestic	133	0	133
Corral de Tierra Area	Urban	615	0	615
Corral de Tierra Area	Agricultural	208	0	208
	Total	**4,512**	**0**	**4, 512**

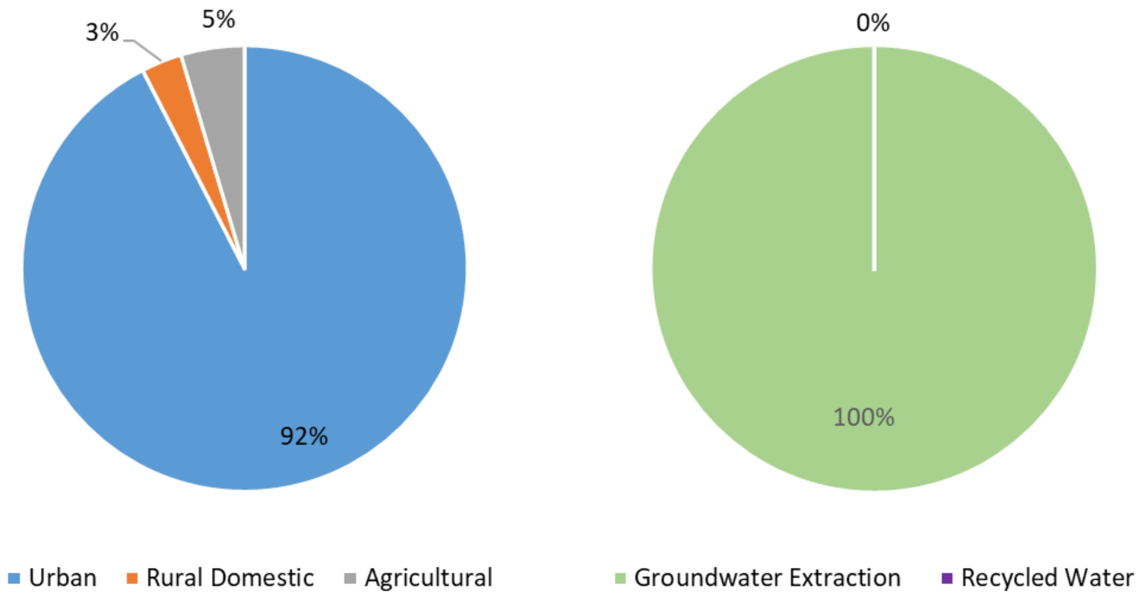


Figure 4-27 Total Water Use in WY 2025 by Sector and Source

4.3 Groundwater Storage

The total change in groundwater storage within the Subbasin is equivalent to the change in storage due to groundwater elevation changes and the change in storage due to seawater intrusion. The change in groundwater storage is calculated for the Marina-Ord Area Water Budget Zone (WBZ) and the Corral de Tierra Area WBZ, as presented below.[5]

4.3.1 Marina-Ord Area WBZ

The groundwater storage change in the Marina-Ord Area WBZ during WY 2025 was estimated by (a) comparing the estimated water level surface in Fall 2024 with the estimated water level surface in Fall 2025 for each principal aquifer and (b) calculating the change in storage based on the observed change in water levels and the estimated storage coefficient within the contoured portion of the Marina-Ord Area WBZ. The estimated storage coefficient defined spatially using parameters derived from the calibrated Monterey Subbasin Groundwater Flow Model (MBGWFM). As described in Section 4.4 and Section 5.1.3 below, available data shows an advancement of the seawater intrusion extent during WY 2025. Therefore, the change in groundwater storage estimated herein is based on both the estimated change in storage due to groundwater elevation changes and progression of the seawater intrusion extent.

[5] The Marina-Ord Area WBZ includes the Marina-Ord Area as well as the Reservation Road portion of the Corral de Tierra Area, as they share the same principal aquifers; The Corral de Tierra WBZ includes the main portion of the Corral de Tierra Area underlain by the El Toro Primary Aquifer System.

As discussed in Section 4.1 above, 2025 water level contours for the 400-Foot and Deep Aquifers reflect the updated HCM and findings of the Deep Aquifers Study. However, finalization of this updated HCM within the Marina-Ord Area will be performed once data from additional 400-Foot Aquifer and Deep Aquifer monitoring wells are installed in this management area. These wells will provide crucial data in areas where data gaps exist that will further inform the updated HCM and will ultimately be incorporated into the groundwater flow model. These wells are scheduled to be completed in early 2026. As such, the estimated change in groundwater storage within the Marina-Ord Area WBZ, has been conducted based on the HCM presented in the GSP and reflected in the MBGWFM. It is anticipated that aquifer specific water budgets and storage change estimates will be revisited utilizing the update HCM as part of the 2027 GSP Periodic evaluation.

4.3.1.1 <u>Change in Groundwater Storage due to Elevation</u>

The MBGWFM has been utilized to estimate the water budget for the Marina-Ord Area WBZ and provide storage coefficients to facilitate the calculation of the change in storage of this WBZ for Monterey Subbasin WY 2022 through WY 2024 Annual reports. As such, Fall 2025 water level contours were drawn utilizing the originally established HCM presented in the GSP and utilized to estimate the change in storage between Fall 2024 and Fall 2025 for the Marina-Ord Area WBZ. These water level contours are shown on Figure 4-28 and Figure 4-29. Specifically, geospatial (raster) surfaces of groundwater elevations were created from Fall 2024 water level contours and Fall 2025 contours and associated with the MBGWFM grid. Average water levels within each MBGWFM grid cell were subsequently compared to the top and bottom elevations of each principal aquifer defined in the MBGWFM and were multiplied by their respective storage coefficients to determine the total unconfined and confined storage volume at the cell during each bookend date. Storage coefficients used in the MBGWFM are discussed in *Section 2.5.2, Appendix 6B* of Monterey GSP. Cell-specific storage volumes were then summed for cells located within the contoured areas of the Marina-Ord WBZ to calculate the groundwater available in storage within each principal aquifer in Fall 2024 and Fall 2025. Total storage volumes were then compared to calculate the change in groundwater storage within each principal aquifer between Fall 2024 and Fall 2025. The calculation was only performed for cells outside the seawater intruded area.

4.3.1.2 <u>Change in Groundwater Storage due to Seawater Intrusion</u>

Groundwater storage loss due to seawater intrusion is estimated based on the change in seawater intrusion area in WY 2025. The progression of seawater intrusion 2025, as shown in the orange shaded area on Figure 4-31, is multiplied by the assumed aquifer thickness of the lower 180-Foot Aquifer and 400-Foot Aquifer and a total porosity of 0.3 to estimate the average loss due to seawater intrusion during WY 2025. Total porosity is used in lieu of specific yield herein because it represents the full volume of pore space within an aquifer that can be occupied by water. In the case of seawater intrusion, the incoming seawater disperses throughout all saturated pore spaces in the sediment, including those that are not accessible to advective flow. Average aquifer thickness is approximately 75 feet in the lower 180-Foot Aquifer and 135 feet in the 400-Foot Aquifer based on the MBGWFM at this location. The estimated groundwater storage loss due to seawater intrusion during WY 2025 was 4,093 AF.

4.3.1.3 Total Change in Groundwater Storage

The estimated change in groundwater storage for each principal aquifer in the Marina-Ord Area WBZ is shown in Table 4-4 and Figure 4-30. Estimated groundwater elevation changes in the Marina-Ord Area between Fall 2024 and Fall 2025 are shown on Figure 4-31.

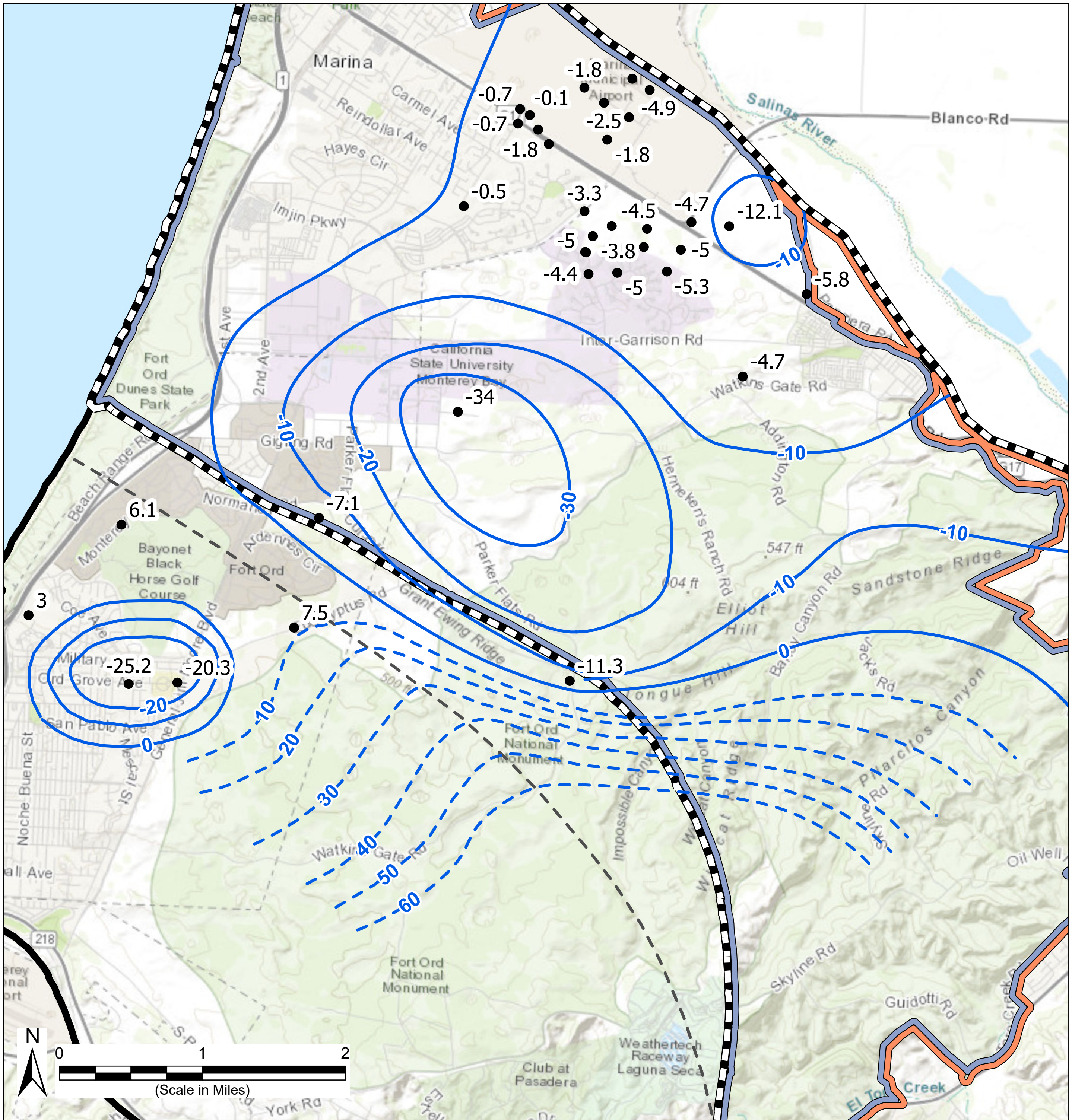
- Between Fall 2024 and Fall 2025, increases in groundwater storage were observed in the Dune Sand Aquifer, 180-Foot Aquifer, and Deep Aquifers. The observed storage increases are consistent with rising or stabilizing groundwater levels measured during WY 2025 (see Section 4.1.2).
- Due to the inland advancement of the seawater intrusion front in the lower 180-Foot/400-Foot Aquifer observed during WY 2025 (see Section 4.4) , an additional change in groundwater storage associated with newly seawater-intruded areas was estimated using the methodology described in Section 4.3.1.2. This newly identified seawater intrusion resulted in an estimated storage loss of 4,093 AF, which offsets the storage gains attributed to groundwater elevation increases at 251 AF in the lower 180-Foot/400-Foot Aquifer. There was a net storage loss in the lower 180-Foot/400-Foot Aquifer of 3,842 AF.
- There was a net storage loss in the Marina-Ord Area WBZ of 2,594 AF during WY 2025.

Table 4-4 Estimated Change in Groundwater Storage in the Marina-Ord Area WBZ

Aquifer	Change in Groundwater Storage due to Groundwater Elevation, Fall 2024 – Fall 2025 (AF)	Change in Groundwater Storage due to Seawater Intrusion[1], Fall 2024 – Fall 2025 (AF)	Total Change in Groundwater Storage, Fall 2024 to Fall 2025 (AF)
Dune Sand Aquifer	799	0	799
180-Foot Aquifer	234	0	234
400-Foot Aquifer	251	-4,093	-3,842
Deep Aquifers	215	0	215
Total Marina-Ord Area WBZ	**1,500**	**-4,093**	**-2,594**

Notes:

(a) Change in Storage due to Seawater Intrusion is calculated herein as the saturated volume between the 2024 and 2025 500 mg/L chloride isocontour lines, multiplied by total porosity of 0.3, consistent with common literature values for unconsolidated alluvial sediments. The total porosity was used in lieu of specific yield herein because, as the seawater intrusion front moves inland, additional TDS/chloride will diffuse into all saturated sediment pore spaces, including the pore space that is otherwise inaccessible to advection.



Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot

NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. These contours are prepared for storage calculation purposes and does not reflect the updated HCM. Groundwater elevations in the 400-Foot Aquifers have been plotted with those within the Paso Robles Aquifer in the Seaside Subbasin.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Groundwater Elevation Contours for Storage Calculation in the 400-Foot Aquifer – Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-28

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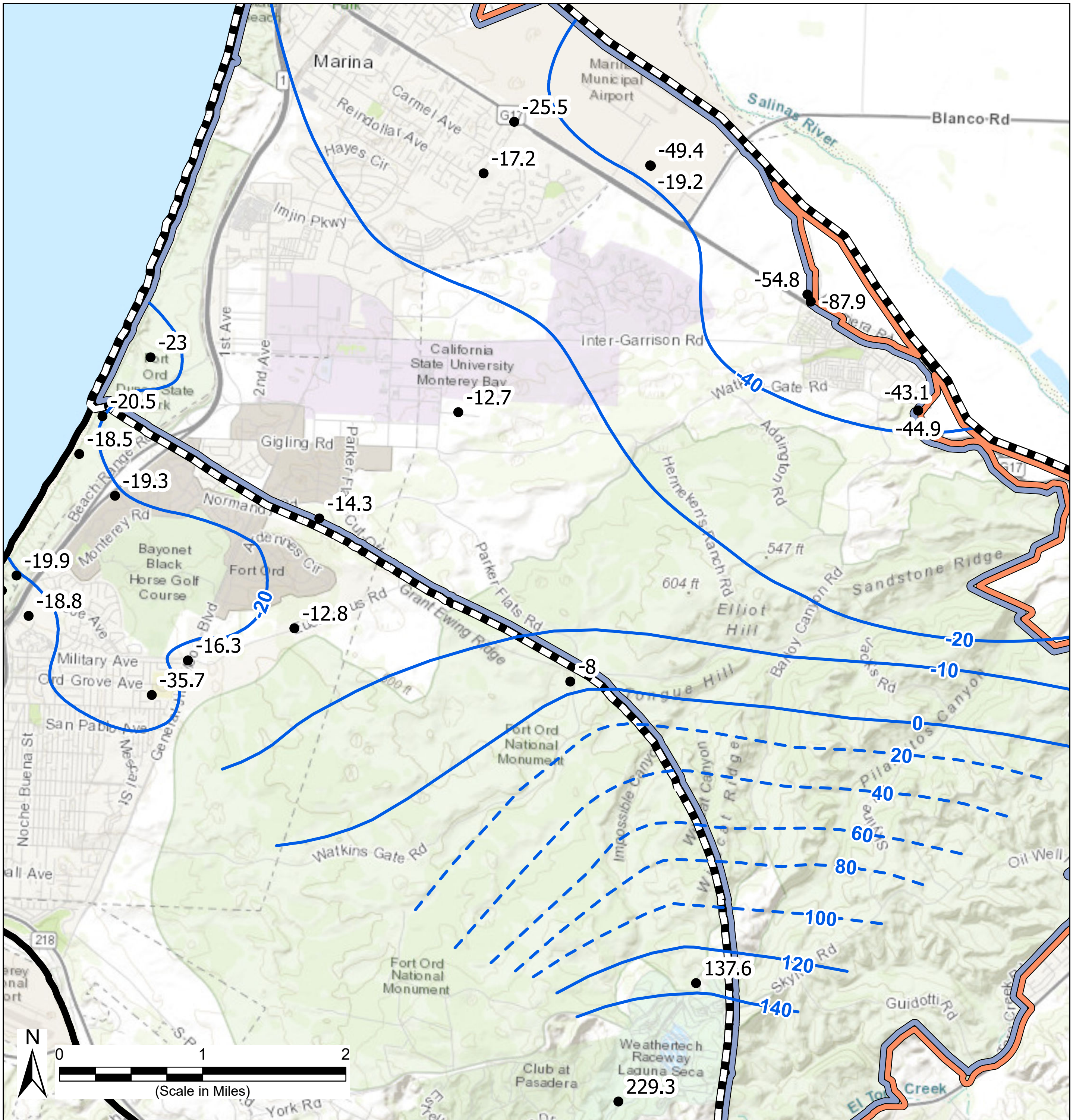

Legend

- Fall 2025 Groundwater Contours
- GWE Measurement Locations
- Monterey Subbasin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. These contours are prepared for storage calculation purposes and does not reflect the updated HCM. Groundwater elevations in the Deep Aquifers have been plotted with those within the Santa Margarita Aquifer in the Seaside Subbasin.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Groundwater Elevation Contours for Storage Calculation in the Deep Aquifers – Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-29

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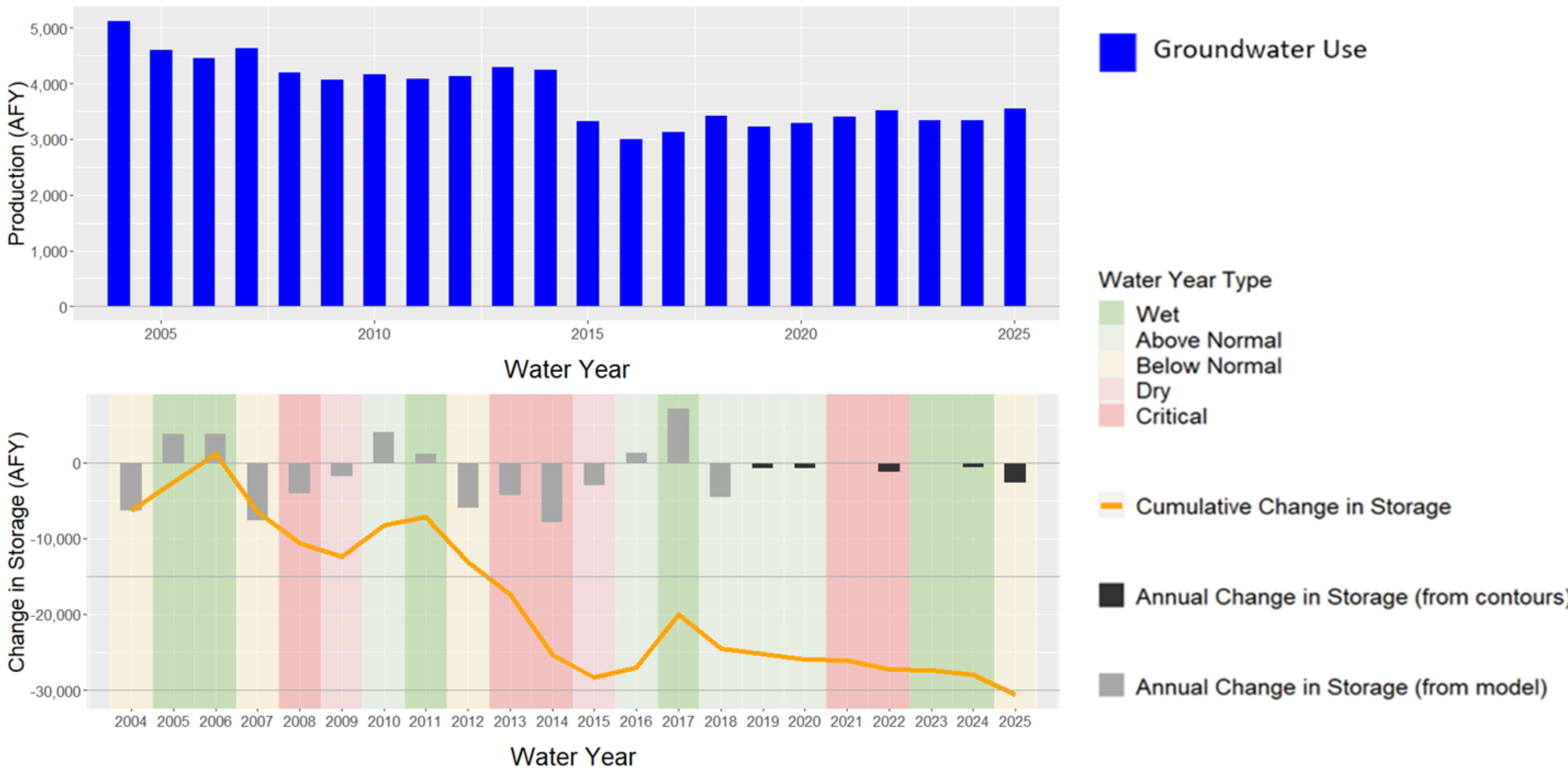
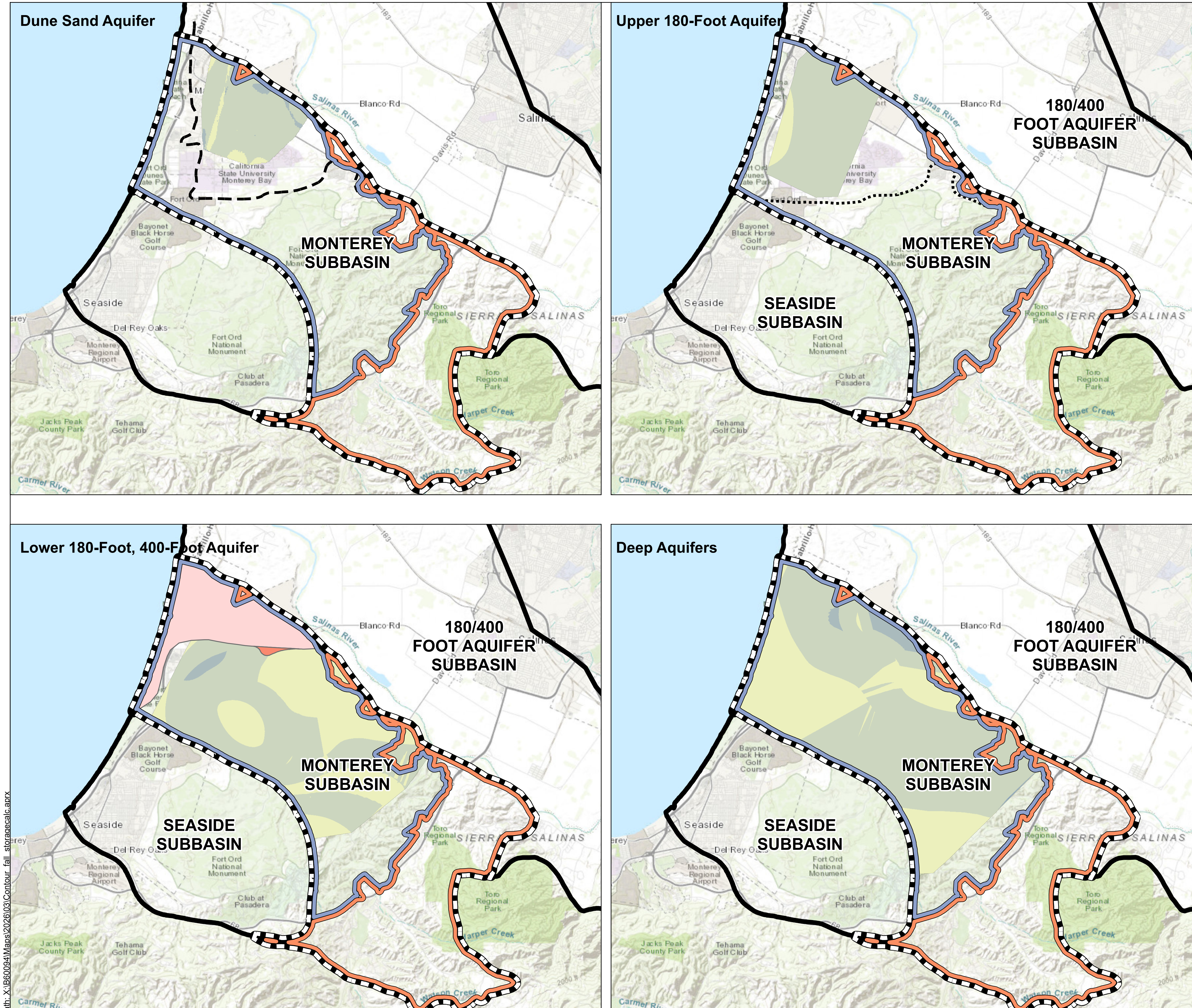


Figure 4-30 Cumulative and Annual Change in Storage in the Marina-Ord Area



Legend

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of FO-SVA (Harding ESE, 2001)
- Southern Extent of Valley Fill Deposits (Harding ESE, 2001)

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Seawater Intruded Area by Year

- 2015
- 2025

Change in Groundwater Elevations (ft)

- -30 - -25
- -24.9 - -20
- -19.9 - -15
- -14.9 - -10
- -9.9 - -5
- -4.9 - 0
- 0.1 - 5
- 5.1 - 10
- 10.1 - 15
- 15.1 - 20
- 20.1 - 25

Abbreviations

ft = foot
NAVD 88 = North American Vertical Datum of 1988

Notes

1. All locations are approximate.
2. The change in groundwater elevation reflects the changes from Fall 2024 to Fall 2025.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 20 March 2026.

N
0 2.5 5
(Scale in Miles)

Change in Groundwater Elevations in the Marina-Ord Area, Fall 2024 to Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-31

Path: X:\B60094\Maps\2026\03\Contour_fall_storagecalc.aprx

4.3.2 Corral de Tierra WBZ

Groundwater storage change in the Corral de Tierra WBZ was estimated by comparing groundwater elevation data from one year to another from Fall 2024 to Fall 2025. The change in storage is calculated by multiplying a change in groundwater elevation by a storage coefficient and the land area of the contoured portion of the Corral de Tierra WBZ. The estimated groundwater elevation changes in the Corral de Tierra WBZ are shown on Figure 4-33. A storage coefficient of 0.1 is used to calculate the change in storage for the El Toro Primary Aquifer (GeoSyntec, 2007). The average change in groundwater elevation was calculated using the average change in groundwater elevations estimated based on the groundwater elevation contours. The storage change was not calculated in the areas that were not contoured and not covered by the RMS network.

A summary of components used for estimating the change in groundwater storage due to groundwater elevation changes in the Corral de Tierra Area is shown in Table 4-5 and Figure 4-32. The estimated groundwater elevation changes in the Corral de Tierra Area are shown on Figure 4-33. Annual groundwater storage changes due to changes in groundwater elevation from Fall 2024 to Fall 2025 decreased by 1,000 AF in the Corral de Tierra Area. The cumulative change in groundwater storage is shown on Figure 4-32.

Table 4-5 Estimated Change in Groundwater Storage in the Corral de Tierra Area

Component	Fall 2024 to Fall 2025	
	Hwy 68 East bowl	El Toro bowl
Area of contoured portion of Subbasin (acres)	1,400	4,300
Storage coefficient	0.1	0.1
Average change in groundwater elevation (feet)	-1.70	-1.91
Annual change in groundwater storage (AF/year)	-200	-800
Total annual change in groundwater storage (AF/year)	**-1,000**	

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

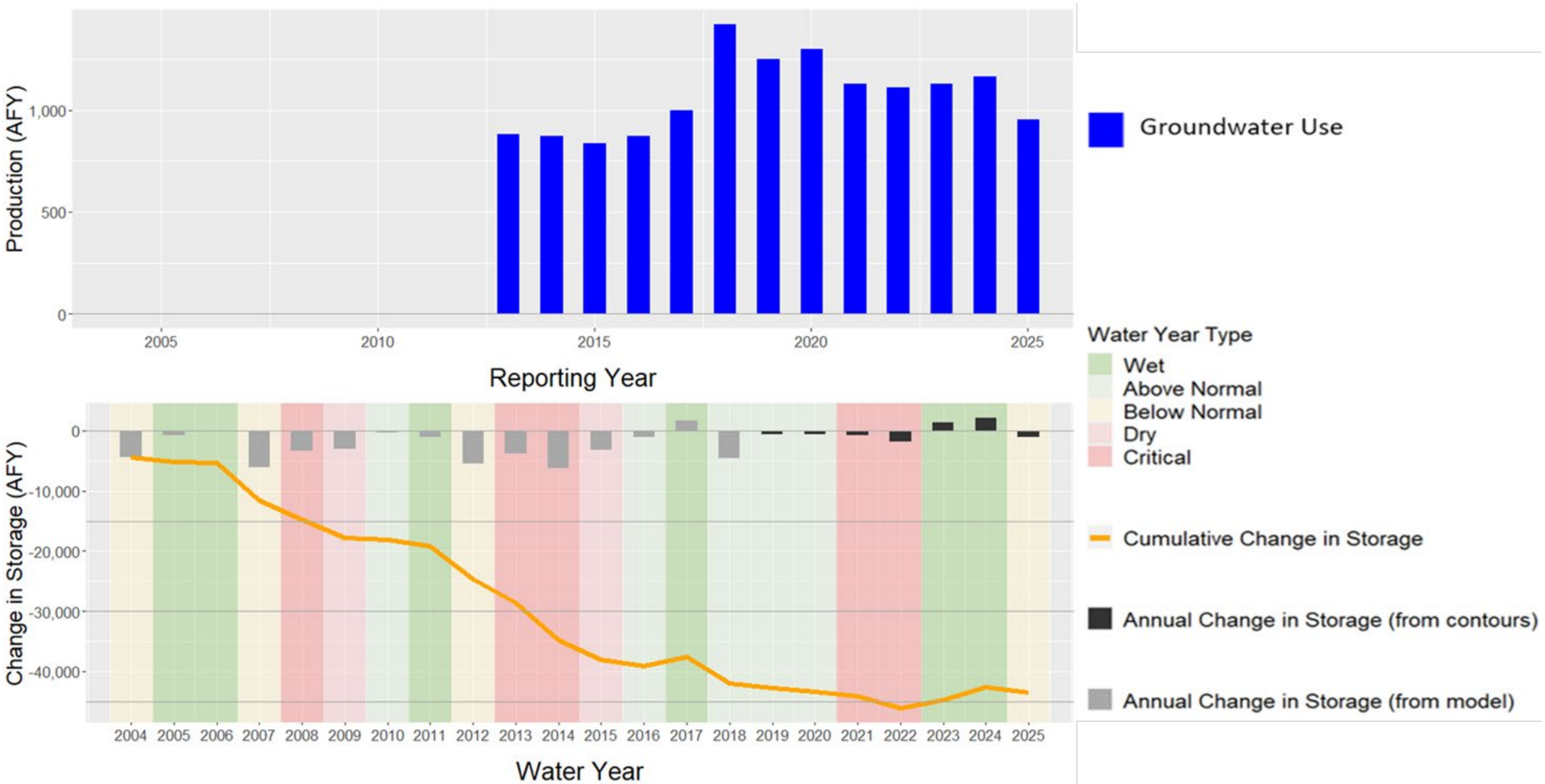
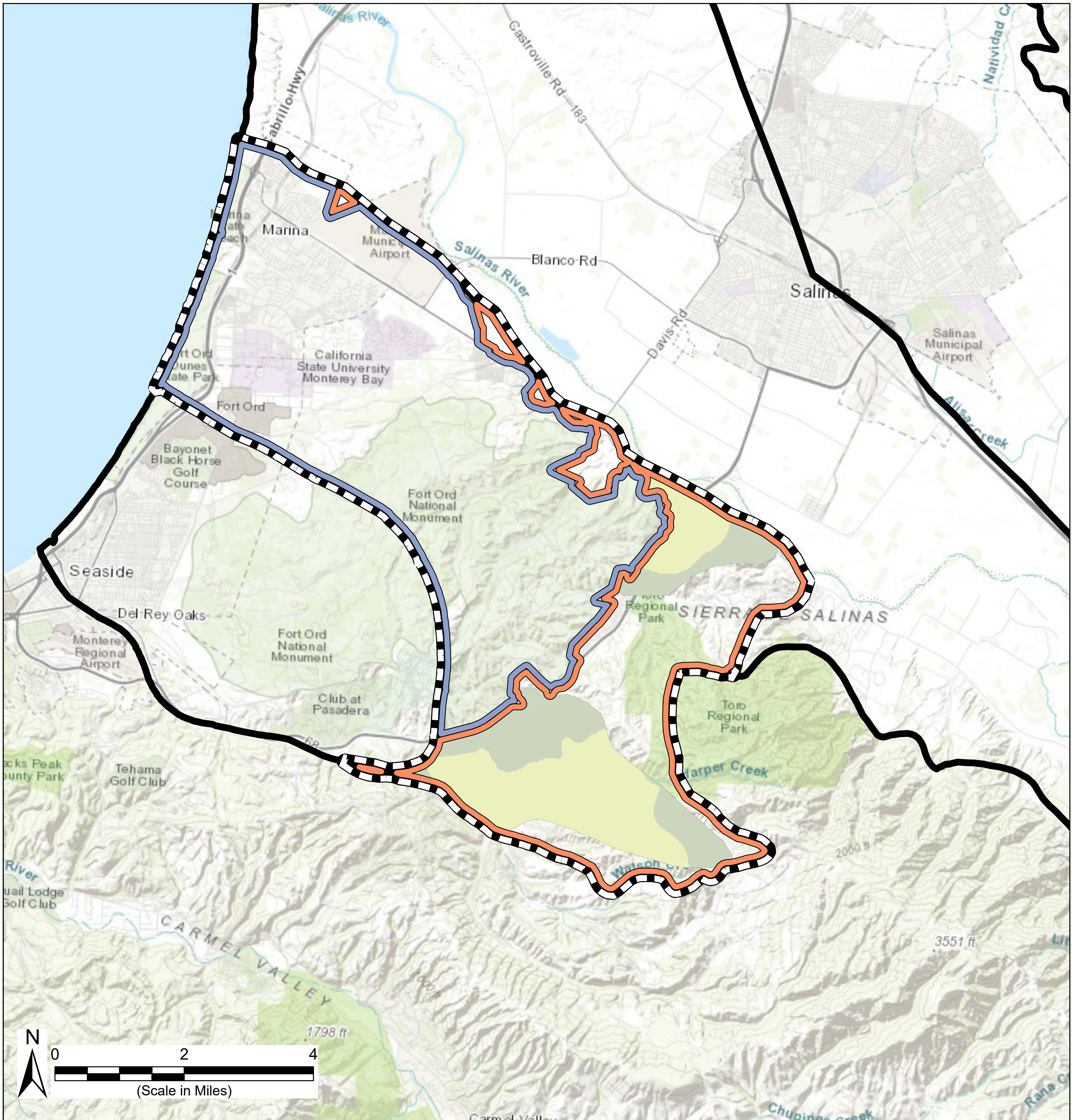


Figure 4-32 Cumulative and Annual Change in Storage in the Corral de Tierra Area



Legend

Monterey Subbasin

Other Groundwater Subbasins within Salinas Valley Basin

Change in Groundwater Elevations in the El Toro Aquifer System (ft)

-4.9 - 0

0.1 - 5

Management Areas

Marina-Ord Area

Corral de Tierra Area

Abbreviations

ft = feet

NAVD 88 = North American Vertical Datum of 1988

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 20 March 2026.

Notes

1. All locations are approximate.
2. Groundwater contours are in ft NAVD 88.
3. The change in groundwater elevation reflects the changes from Fall 2024 to Fall 2025

Change in Groundwater Elevations in the El Toro Primary Aquifer System, Fall 2024 to Fall 2025

Monterey Subbasin

WY 2025 Annual Report

March 2026

Figure 4-33

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4.4 Seawater Intrusion

Seawater intrusion is being monitored in the coastal Marina-Ord Area of the Subbasin. Section 4.4.1 discusses recent and historical seawater intrusion monitoring data utilized to track seawater intrusion within the Monterey Subbasin. These monitoring data include:

- Collection and laboratory analysis of groundwater samples for geochemical constituents, including chloride and total dissolved solids (TDS) from selected groundwater wells in the Subbasin.
- Collection of depth-discrete specific conductivity measurements utilizing an electrical conductivity (EC) probe/sensor that is lowered down the water column and into the well screen interval.

Periodic induction logging of selected deep monitoring wells and other geochemical parameters being tracked to assess seawater intrusion as discussed in Sections 4.4.2 and 4.4.3, respectively.

As part of the preparation of the Monterey GSP, MCWDGSA actively compiled available historical data related to seawater intrusion in the Monterey Subbasin and incorporated this data into the Monterey GSP (MCWDGSA & SVBGSA, 2022). MCWDGSA has also actively pursued collecting additional data since the completion of the Monterey GSP in 2022 and has incorporated new data into subsequent Annual Reports. In addition to monitoring its own wells, MCWDGSA has engaged with other agencies to obtain access and/or a contract with these agencies to collect data and better assess seawater intrusion, as discussed in Section 5.2.3.2.

Due to sporadic historical data collection prior to the completion of the Monterey GSP, large temporal gaps exist in salinity data at many RMS wells in the Monterey Subbasin. To supplement these data gaps, additional data have been collected, where possible, from nearby wells showing increases in chloride to better characterize groundwater conditions. However, in some cases, no nearby wells exist, and recent data are insufficient to verify that apparent increases in chloride or TDS are the result of seawater intrusion.

Similar temporal gaps also exist between induction logging events at many deep wells, further complicating interpretation of salinity trends. Differences in logging tools between events introduce additional uncertainty. As such, additional data are needed in some areas to verify observed changes in salinity and evaluate their sources.

MCWDGSA is currently installing new groundwater monitoring wells to better characterize seawater intrusion within the Subbasin (Section 5.2.3.2). Although data from these new monitoring wells are not yet available, they are expected to aid in better understanding and tracking of seawater intrusion.

4.4.1 Salinity Concentrations

Within the Monterey Subbasin, the sustainability indicator of seawater intrusion is evaluated using the location of the 500 milligrams per liter (mg/L) chloride isoconcentration contour, equivalent total dissolved solids (TDS) concentrations, and/or specific conductivity measurements. As discussed in Section 5.3.2 of the GSP, TDS has identified as an effective surrogate for chloride in the Marina-Ord Area, as groundwater in the Marina-Ord aquifers has low natural TDS, and the primary source of salinity in this area is seawater intrusion. Based on water quality data collected in the lower 180-Foot and 400-Foot Aquifers, a strong correlation can be developed between these parameters, as shown below. Based on this relationship, a 500 mg/L chloride concentration is approximately equivalent to 1,250 mg/L of TDS. An empirical relationship is also developed between TDS and conductivity. Specific conductance to TDS conversion is based on a derived slope of 0.7025 mg/L per µS/cm from a linear regression model with existing data.

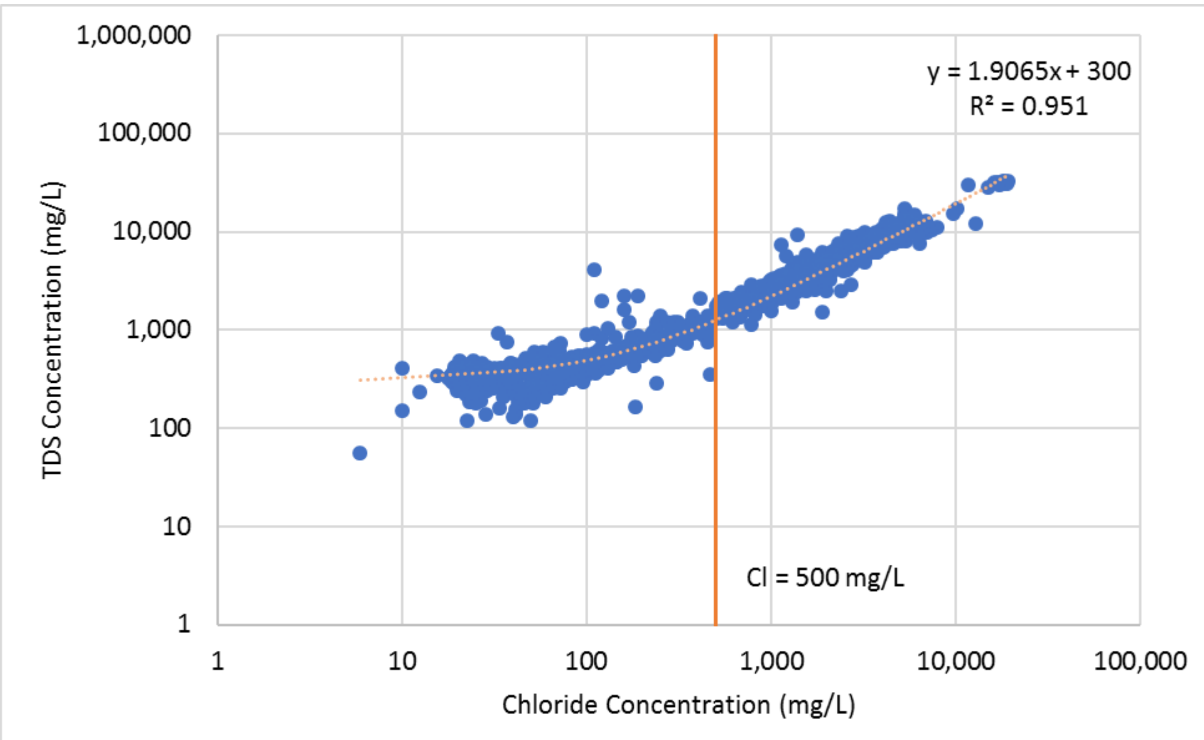


Figure 4-34 Relationship Between TDS and Chloride Concentrations, Marina-Ord Area

As noted above and discussed in Section 5.2.3.2, MCWDGSA has been working to establish its seawater intrusion monitoring program over the past two years. The program now consists of (1) direct water quality sampling of chloride and TDS from wells within the RMS network and (2) additional sampling and collection of specific conductivity measurements in non-RMS wells.

In Deep Aquifer monitoring wells, where groundwater sampling is more difficult due to the depth to water and/or the size of the wells, conductivity measurements are taken with a Temperature, Level, and Conductivity meter at screen depths. In WY 2024 and WY 2025, MCWDGSA collected depth-discrete specific conductivity measurements in Deep Aquifer monitoring wells that had not been sampled for many years. Depth-discrete specific conductivity measurements obtained from these wells are presented in Appendix C[6]. In WY 2025, MCWDGSA was able to collect and analyze groundwater samples for TDS and chloride from deep monitoring wells MPWMD#FO-11S, MPWMD#FO-11D, owned by Monterey Peninsula Water Management District (MPWMD), which had not been sampled since 2012 and the United States Geological Survey (USGS) nested well 014S001E24L, which had not been sampled since 2003.

Figure 4-36 and Figure 4-37 show maximum detected chloride and TDS concentrations, respectively, in groundwater samples collected in 2025 from wells completed in each of the coastal aquifers. As discussed above, conductivity measurements have been converted to TDS concentrations and incorporated into the data shown on Figure 4-37. The figures identify the seawater intrusion minimum threshold (MT) chloride isocontour of 500 mg/L.

More detailed figures showing the estimated extent of seawater intrusion in the lower 180-Foot/400-Foot Aquifer (Figure 4-38), upper Deep Aquifer zone (Figure 4-39), and lower Deep Aquifer zone (Figure 4-40) have also been prepared. These figures present maximum detected chloride concentrations in groundwater samples collected in 2025 or in the most recent groundwater sample collected near the seawater intrusion front. Long-term chloride concentrations at RMS wells in the lower 180-Foot/400-Foot Aquifer, upper Deep Aquifer zone, and upper Deep Aquifer zone are presented on Figure 4-41, Figure 4-42, and Figure 4-43, respectively. Chemographs depicting chloride and TDS concentrations for all RMS wells are included in Appendix D**Error! Reference source not found.**.

Further discussion regarding these data by aquifer is provided below.

4.4.1.1 <u>Dune Sand Aquifer and Upper 180-Foot Aquifer</u>

As shown on Figure 4-36 and Figure 4-37, chloride concentrations are generally below 250 mg/L and TDS concentrations are generally below 780 mg/L in both the Dune Sand Aquifer and the upper 180-Foot Aquifer inland of the MT isoconcentration contour, which is located approximately 3,500 ft from the coast. These data confirm that limited seawater intrusion exists in the Dune Sand and Upper 180-Foot Aquifers.

Elevated TDS concentrations exceeding 1,250 mg/L were detected in 2025 at Dune Sand Aquifer well EW-BW-160-A (Figure 4-37), located inland near Reservation Road at the Marina Municipal Airport. No chloride data are available for this well. Historical TDS concentrations at this location have been low, ranging from approximately 150 to 400 mg/L. The elevated 2025 value appears to be an isolated occurrence, as surrounding wells exhibit consistently low TDS and chloride concentrations. Based on available data, the elevated TDS is unlikely to reflect active seawater

[6] Specific conductivity measurements collected <u>within the well screens</u> of these wells were averaged to estimate the specific conductivity of groundwater within the aquifer at that well location. These Specific Conductivity values were converted to TDS concentrations based on a derived slope of 0.7025 mg/L per µS/cm from a linear regression model developed from with existing data in the Monterey Subbasin and vicinity. In cases where the probe was not long enough to reach the depth of the screen, the Specific Conductivity measurements/TDS were not reported on chemographs, however, EC profiles are still included in Appendix C for reference.

intrusion and may instead represent a data anomaly or the influence of localized, temporary activities at the airport.

TDS concentrations ranging from approximately 780 to 1,250 mg/L (equivalent to approximately 250 to 500 mg/L chloride) were also observed in 2025 at Dune Sand Aquifer wells EW-OU2-16A and EW-OU2-19A, and at 180-Foot Aquifer well MCWRA_227. However, chloride concentrations at these locations have consistently remained below 250 mg/L, which is representative of background conditions for fresh groundwater in the Monterey Subbasin. Accordingly, these TDS values are not indicative of seawater intrusion. Wells EW-OU2-16A and EW-OU2-19A are located near the former FO landfill, and together with EW-BW-160-A, are monitored by the U.S. Army under regulatory programs.

Long-term chloride and TDS concentrations for RMS wells in the Dune Sand Aquifer and Upper 180-Foot Aquifer presented in Appendix D**Error! Reference source not found.** do not show any increasing trends while some variability does exist.

4.4.1.2 Lower 180-Foot/400-Foot Aquifer

Seawater intrusion has historically occurred within the Monterey Subbasin in the lower 180-Foot Aquifer/400-Foot Aquifer. The seawater intrusion MT isocontour line is based on the estimated location of the 500 mg/L chloride isocontour in 2015 as presented on Figure 4-36, Figure 4-37, Figure 4-38, and Figure 4-41.

In 2025, chloride concentrations in groundwater samples collected from lower 180-Foot/ 400-Foot Aquifer wells inland of the seawater intrusion MT isocontour line remained below 500 mg/L, with one exception. Chloride concentrations in groundwater samples collected in 2025 from MP-BW-42-345 increased to 594 mg/L. This well is located less than 500 ft beyond (i.e., southeast) of the seawater intrusion MT line.

Chloride concentrations detected in groundwater samples collected from nearby well MW-OU2-66-180 were above 250 mg/L in 2025, indicating that increases in chloride concentrations at well MP-BW-42-45 are not an isolated or anomalous result, but that seawater intrusion is slowly spreading in this area. These wells are located generally cross-gradient from the primary direction of groundwater flow; however, groundwater levels remain below sea level and subtle changes in hydraulic gradients can result in the spreading of the seawater intrusion front.

Chemographs for these lower 180-Foot/400-Foot wells (Figure 4-41) show that chloride concentrations have been increasing in groundwater in this area. MP-BW-42-345 and MW-OU2-66-180 are located upgradient of lower 180-Foot/400-Foot Aquifer MCWD production wells MCWD-29, MCWD-30, and MCWD-31. Chloride concentrations in these production wells remain well below 250 mg/L; however, the MCWD-30 chemograph indicates that chloride concentrations at this well are also increasing. Geochemical evaluations, including analysis of sodium-to-chloride molar ratios (Section 4.4.3), confirm that the increasing chloride concentrations observed in these wells are due to seawater intrusion rather than other anthropogenic sources.

Apparent increases in chloride and TDS concentrations have also been observed at well MPWMD#FO-11S (Figure 4-38 and Figure 4-41, Appendix D**Error! Reference source not found.**). As discussed in Section 4.1.1, although MPWMD#FO-11S is believed to be screened above the 400/Deep Aquitard, groundwater elevation data indicate that the screened interval is hydraulically connected to the upper Deep Aquifer zone. Therefore, it has been identified as a 400-Foot/Upper Deep Aquifer well herein, and salinity data for this well is presented on both the lower 180-Foot/400-Foot Aquifer and upper Deep Aquifer maps.

As shown on Figure 4-38 and Figure 4-41, up to 266 mg/L of chloride were detected in groundwater samples collected from well MPWMD#FO-11S in 2025. This well, owned by MPWMD, has no salinity data available between its installation in 1996 and the recent specific conductivity measurements collected by MCWDGSA in 2024. Records indicate that in 1996 following installation, chloride concentrations of 75 mg/L were detected in groundwater samples from this well. However, initial sampling results collected immediately after well installation can be affected by drilling fluids and are therefore often unreliable. More recent data collected by MCWDGSA in 2025 show chloride concentrations of approximately 250 mg/L and TDS concentrations exceed 1,000 mg/L.

MPWMD#FO-11S is located downgradient of Sentinel MW#1 (or SBWM-1) and Sentinel MW#2 (or SBWM-2), approximately 2.3 miles inland of the coast. Sentinel MW#1 and Sentinel MW#2 are owned by the Seaside Watermaster and screened in the lower Deep Aquifer zone along the coastline. As discussed in Section 4.4.2, annual induction logging at the Sentinel wells indicates increasing salinity at elevations corresponding to the screened interval of MPWMD#FO-11S. This pattern suggests inland migration of saline water from offshore portions of the aquifer. Consistent with this interpretation, the geochemical analyses presented in Section 4.4.3 indicate that measured increases in salinity at MPWMD#FO-11S are likely attributable to seawater intrusion.

4.4.1.3 <u>Upper Deep Aquifer Zone</u>

Figure 4-39 presents chloride concentrations detected in groundwater samples collected from the upper Deep Aquifer zone. As shown, there have been no exceedances of the seawater intrusion threshold of 500 mg/L chloride within the upper Deep Aquifer zone. However, increasing salinity is evident at select locations.

MPWMD#FO-11S and MPWMD#FO-10S

As discussed in Section 4.4.1.2 above and presented on Figure 4-39, chloride concentrations of 266 mg/L were detected in 2025 at 400-Foot/upper Deep Aquifer well MPWMD#FO-11S. In addition, induction logging has identified increases in salinity at elevations corresponding to the screened interval of this well, indicating potential migration of saline water within the aquifer.

Increases in chloride concentrations have also been observed at upper Deep Aquifer zone monitoring well MPWMD#FO-10S since 2019. This well is located approximately 1.2 miles inland, between Sentinel Wells MW#1 and MW#2 and MPWMD#FO-11S (Figure 4-39). Chloride concentrations in this well increased from approximately 40 mg/L in 2019 to 90 mg/L in 2020 and were most recently measured at 86 mg/L in September 2024 (Appendix D**Error! Reference source not found.**). However, recent hydraulic testing on behalf of MCWDGSA (EKI, 2025) indicates that the nested screens in this well are hydraulically connected, and therefore neither water-level nor salinity data collected from this well are reliable. No water quality measurements were collected in this well in WY2025. A new replacement well is currently being installed by MCWDGSA near the location of MPWMD#FO-10. Data from this well will provide more insight regarding the magnitude and areal extent of seawater intrusion in this area.

014S001E24L005M

Elevated chloride concentrations of 241 mg/L were detected in 2025 in groundwater samples collected from upper Deep Aquifer monitoring well 014S001E24L005M. These values are significantly higher than chloride concentrations of approximately 60 mg/L historically detected in groundwater samples collected from this well between 2001 and 2003 (Figure 4-42). 014S001E24L005M is located immediately adjacent to the coast at Reservation Road and is screened at 930-950 ft below ground surface (ft bgs) (-867 to -887 ft NAVD88). It is the uppermost completion of the nested USGS monitoring well known as DMW1 or 014S001E24L, which was installed in 2001 to monitor seawater intrusion in the Deep Aquifers upgradient of MCWD's production wells MCWD-10, MCWD-11, and MCWD-12.

The USGS well 014S001E24L includes four nested wells screened at various depths within the Deep Aquifers. Table 4-6 identifies the well name, aquifer screened, depth, and elevation of the screen interval, range of chloride concentrations detected after installation between 2001 and 2023, and chloride concentrations detected in 2025.

Table 4-6 Screen Depths and Chloride Concentrations in USGS Well 014S001E24L

Well Name	Aquifer Zone Screened	Depth of Screen (ft bgs)	Elevation of Screen (ft NAVD88)	Chloride Concentration Range, 2001-2003 (mg/L)	Chloride Concentration 2025 (mg/L)
014S001E24L005M	Upper Deep	930 - 950	-867 to - 887	55 - 69	241
014S001E24L004M	Upper Deep	1,040 – 1,060	-977 to - 997	9,585 – 12,000	11,600
014S001E24L003M	Lower Deep	1,410 – 1,430	-1347 to -1367	39 - 52	50
014S001E24L002M	Lower Deep	1,820 – 1,860	-1757 to -1797	77 - 180	160

Three of the four nested wells contain fresh groundwater with chloride concentrations below 500 mg/L. In contrast, well 014S001E24L004M contains saline water, with chloride concentrations greater than 10,000 mg/L (Figure 4-42). Based on lithologic data from core samples and geochemical analyses performed at the time of installation, the USGS concluded that the elevated chloride concentrations are likely due to marine sediments through which the well is screened, rather than to active seawater intrusion. However, saline water within this layer may migrate vertically and laterally, impacting water quality in surrounding stratigraphic layers.

Review of TDS chemographs for well 014S001E24L005M (**Error! Reference source not found.**), indicates that TDS concentrations increased from approximately 500 mg/L to over 1,000 mg/L in 2025. It is currently unclear whether the recent increases in chloride and TDS concentrations are the result of active seawater intrusion from submarine sediments or the upward migration of saline water present in an underlying marine layer. Induction logs indicate that saline water present at depths of approximately 1,010 to 1,140 ft and may be migrating upward; however, no corresponding increase in salinity was identified on the induction logs within the screen interval of 014S001E24L005M (see Section 4.4.2 below). Hydrograph analysis, accounting for the density of saline water, indicates an upward gradient from 014S001E24L004M to 014S001E24L005M (Figure 4-35). As such, the observed increases in salinity in 014S001E24L005M could result from vertical migration from the underlying marine layer.

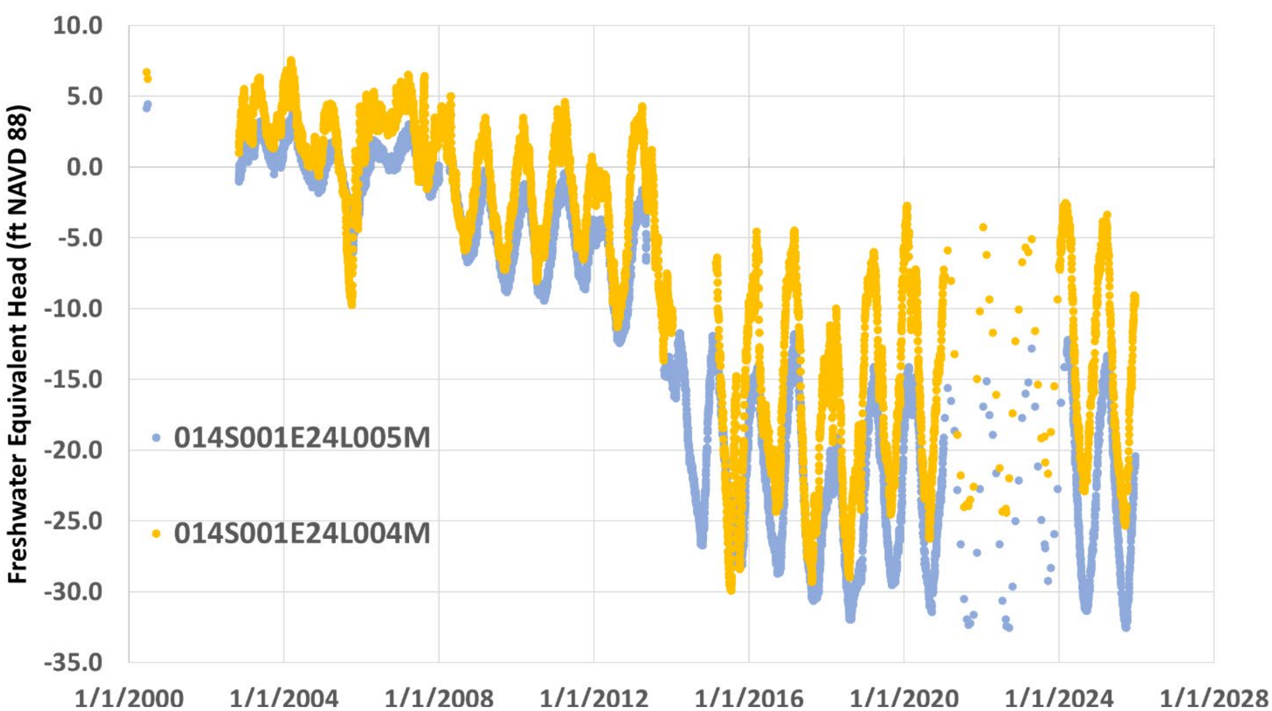
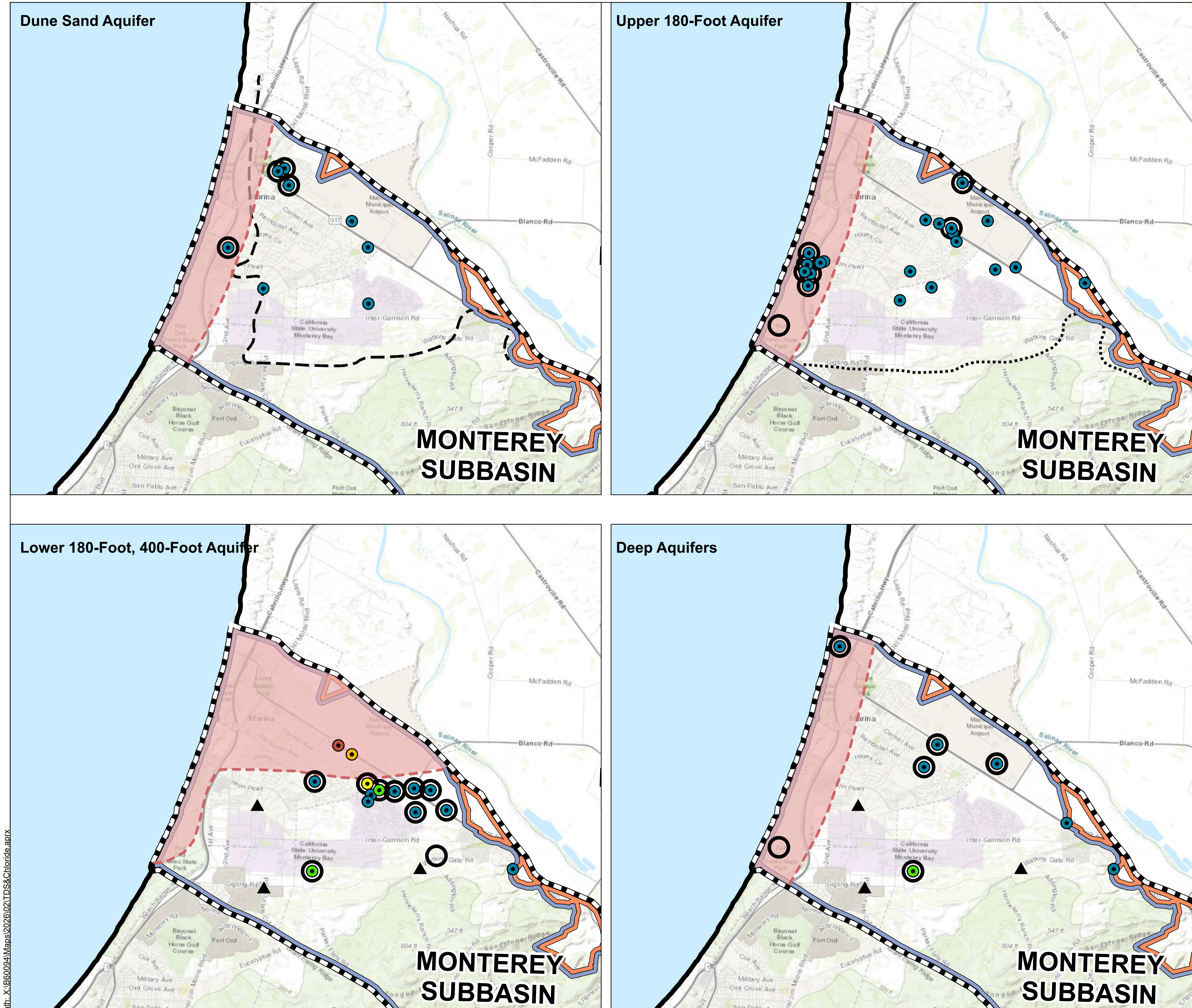


Figure 4-35 Equivalent Freshwater Head in 014S001E24L005M and 014S001E24L004M

Chloride concentrations exceeding 500 mg/L at well 014S001E24L005M would not constitute an undesirable result (UR) within the Monterey Subbasin pursuant to the GSP due to its proximity (within 3,500ft) to the coastline. However, this well is located upgradient of MCWD's Deep Aquifer production wells. Therefore, regular monitoring and further evaluation of the source of increasing chloride concentrations in this well is recommended.

4.4.1.4 Lower Deep Aquifer

Figure 4-40 presents chloride concentrations detected in groundwater samples collected from wells screened in the lower Deep Aquifer zone. As shown on this figure, there have been no exceedances of the seawater intrusion threshold of 500 mg/L chloride within the Lower Deep Aquifer Zone. Chemographs also do not show any increases in chloride or TDS concentrations in these wells (Figure 4-43; Appendix D**Error! Reference source not found.**).



Legend

- Monterey Subbasin
- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of FO-SVA (Harding ESE, 2001)
- Southern Extent of Valley Fill Deposits (Harding ESE, 2001)
- RMW-SWI
- Location of the Seawater Intrusion MT
- Area Between the Ocean and SWI MT
- Monitoring Wells Under Construction

Max 2025 Chloride Concentration

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L

Abbreviations

mg/L = miligram per liter
MT = Minimum Threshold
RMW = Representative Monitoring Well
SWI = Seawater Intrusion

Notes

1. All locations are approximate.
2. Maximum chloride concentrations observed at each well during Water Year 2025 are shown on the map.
3. MPWMD#FO-11S and MCWD-35 are shown on both 400-Foot Aquifer and Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.
2. Chloride data sources inlcude:
   (1) Chloride data from Fort Ord wells collected during MCWD's sampling event in November 2025;
   (2) Chloride data from MCWD production wells collected in August and October 2025, obtained from and MCWRA Annual Water Sampling Report and California's Drinking Water Watch;
   (3) Chloride data collected by MCWD staff between May 2025 to December 2025.
   (4) Chloride data collected by MCWRA staff between July 2025 to August 2025.

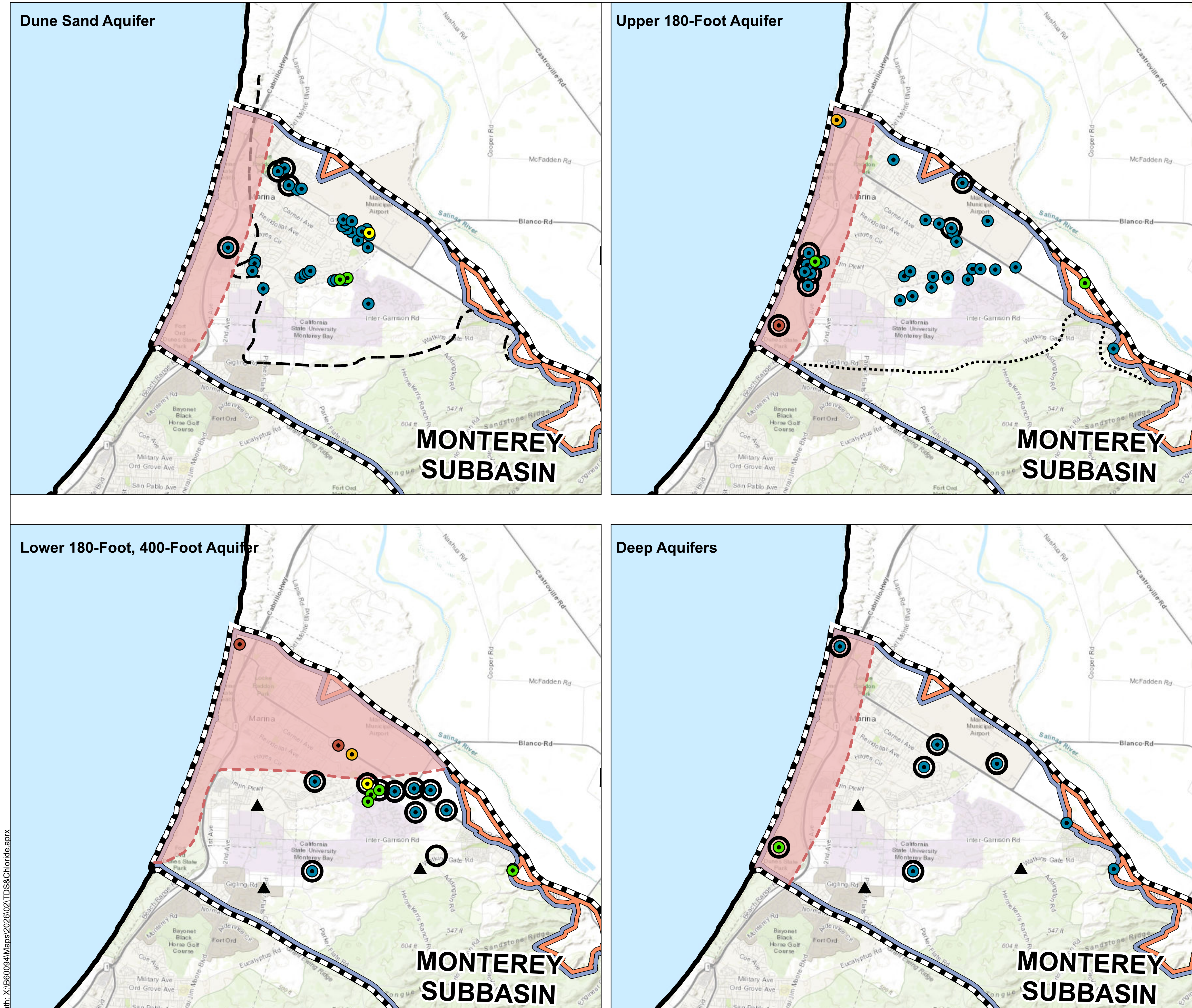
N

0 2 4
(Scale in Miles)

WY 2025 Chloride Concentrations

Monterey Subbasin
WY 2025 Annual Report
February 2026

Figure 4-36



Legend

- Monterey Subbasin
- Marina-Ord Area
- Corral de Tierra Area
- Other Groundwater Subbasins within Salinas Valley Basin
- Southern Extent of FO-SVA (Harding ESE, 2001)
- Southern Extent of Valley Fill Deposits (Harding ESE, 2001)
- RMW-SWI
- Location of the Seawater Intrusion MT
- Area Between the Ocean and SWI MT
- Monitoring Wells Under Construction

Max 2025 TDS Equivalent Concentration

- ≤ 780 mg/L
- 781 - 1,250 mg/L (500 mg/L Chloride)
- 1,251 - 3,000 mg/L
- 3,001 - 10,000 mg/L
- > 10,000 mg/L

Abbreviations

mg/L = miligram per liter
MT = Minimum Threshold
RMW = Representative Monitoring Well
SWI = Seawater Intrusion
TDS = Total Dissolved Solids

Notes

1. All locations are approximate.
2. Specific conductance to TDS conversion is based on a derived slope of 0.7025 mg/L per uS /cm from a linear regression model with existing data from the Monterey Subbasin.
3. Maximum TDS and EC-converted TDS concentrations at each well during Water Year 2025 are shown on the map.
4. MPWMD# FO-11S and MCWD-35 are shown on both 400-Foot Aquifer and Deep Aquifer maps due to the stratigraphic uncertainty in this area.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.
2. TDS and conductivity data sources inlcude:
   (1) TDS data collected from Fort Ord wells from MCWD's sampling event during November 2025;
   (2) Specific conductance from Fort Ord's quarterly sampling event in Fall 2025;
   (3) TDS and specific conductance collected by MCWD staff between May 2025 and December 2025;
   (4) TDS from MCWD production wells collected during August 2025 obtained from MCWRA Annual Water Quality Sampling Report.
   (5) TDS collected by MCWRA staff in July 2025 and August 2025.

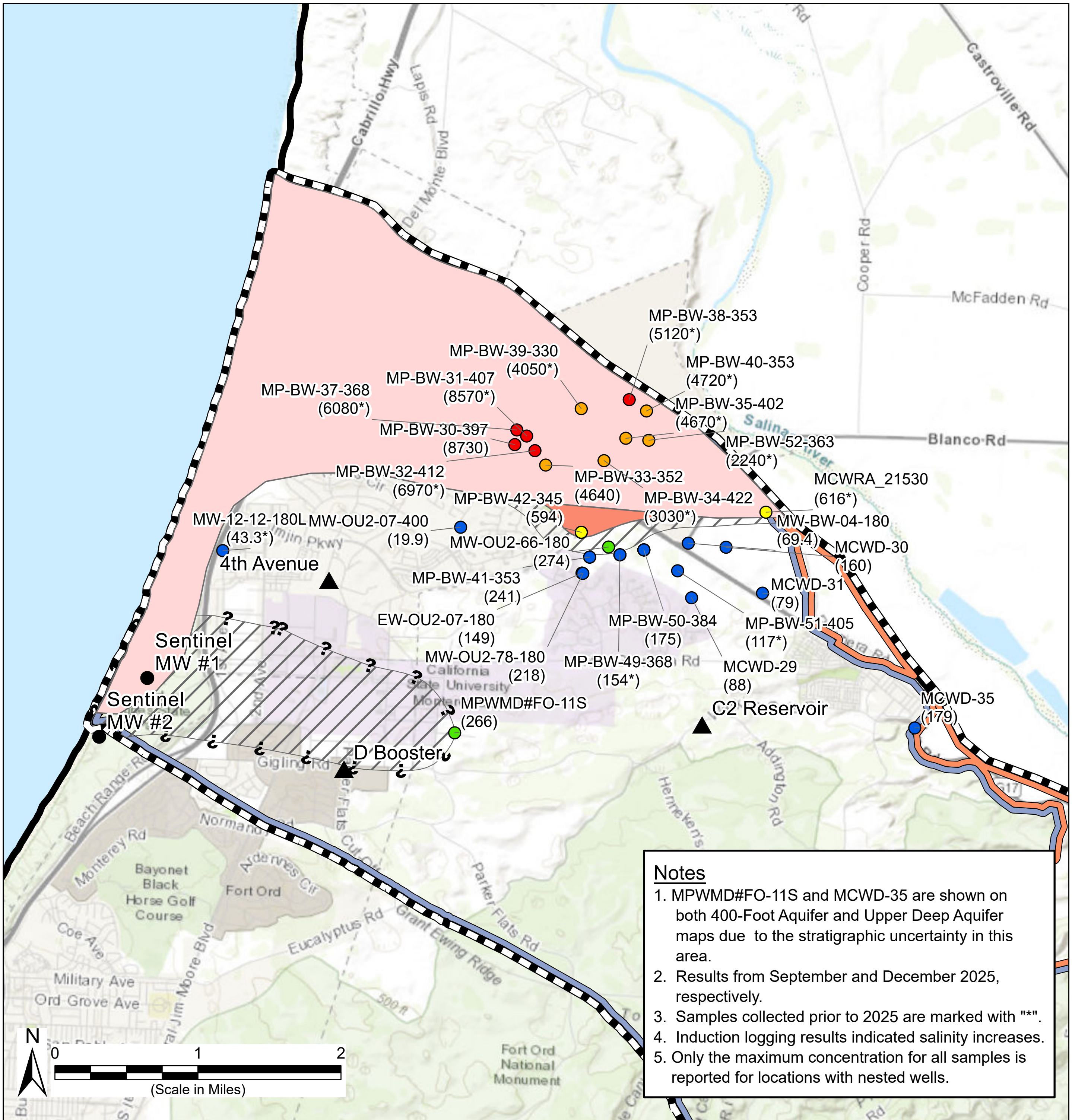
N

0 2 4
(Scale in Miles)

WY 2025 TDS Concentrations

Monterey Subbasin
WY 2025 Annual Report
February 2026
Figure 4-37

Path: X:\B60094\Maps\2026\02\TDS&Chloride.aprx



Notes

1. MPWMD#FO-11S and MCWD-35 are shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.
2. Results from September and December 2025, respectively.
3. Samples collected prior to 2025 are marked with "*".
4. Induction logging results indicated salinity increases.
5. Only the maximum concentration for all samples is reported for locations with nested wells.

Legend

Seawater Intruded Area by Year

- 2015
- 2025
- 250 mg/L Area

Maximum 2025 Chloride Concentration (Note 3)

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- Locations with Known Seawater Intrusion (Note 4)

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area
- Monitoring Wells Under Construction

Abbreviations

mg/L = milligrams per liter

Sources

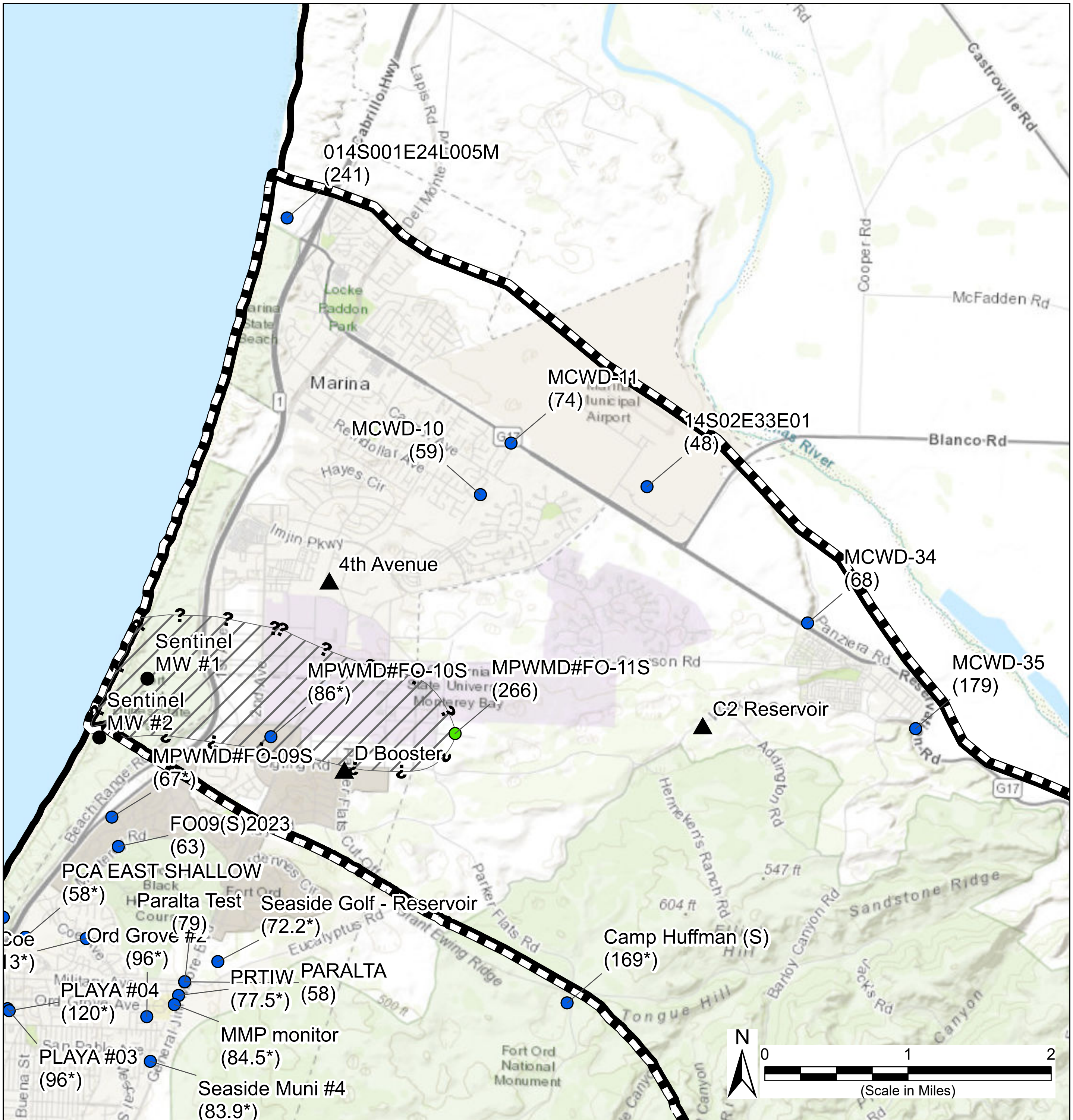
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Path: X:\B60094\Maps\2026\02\SWI_Contour.aprx

Estimated Seawater Intrusion Extent in the Lower 180-Foot, 400-Foot Aquifer Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-38



Legend

Seawater Intruded Area by Year

250 mg/L Area

Maximum 2025 Chloride Concentration (Note 3)

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- Locations with Known Seawater Intrusion (Note 4)
- Monitoring Well Under Construction

Monterey Subbasin

Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Notes

1. MPWMD#FO-11S and MCWD-35 are shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.
2. Results from September and December 2025, respectively.
3. Samples collected prior to 2025 are marked with "*".
4. Induction logging results indicated salinity increases.

Abbreviations

mg/L = milligrams per liter

Sources

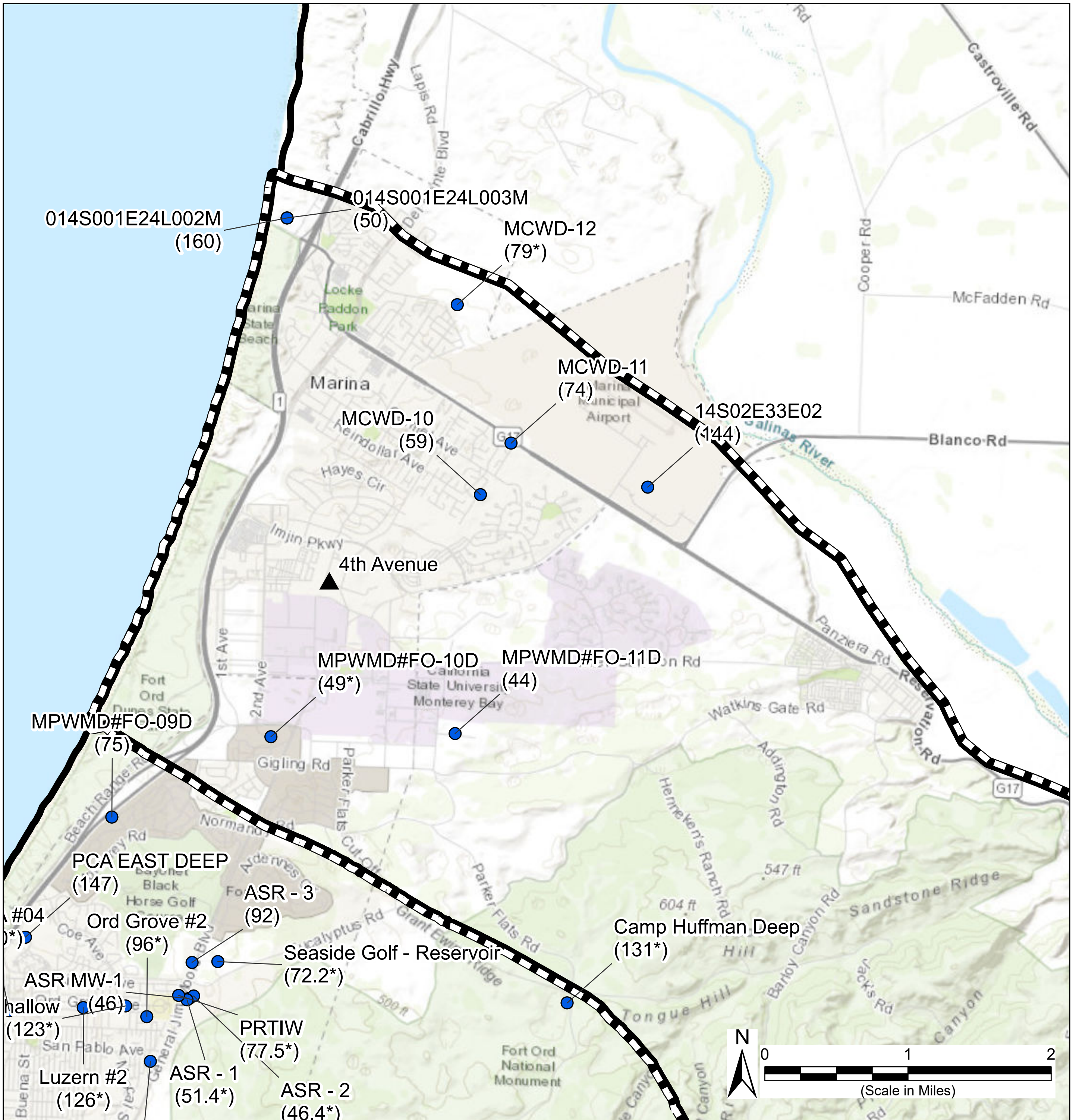
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Estimated Seawater Intrusion Extent in the Upper Deep Aquifer Zone Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-39

Path: X:\B60094\Maps\2026\02\SWI_Contour.aprx



Legend

Maximum 2025 Chloride Concentration (Note 1)

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- Monitoring Well Under Construction

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Abbreviations

mg/L = milligrams per liter.

Notes

1. Samples collected prior to 2025 are marked with "*".
2. No seawater intrusion is observed in the Lower Deep Aquifer.

Sources

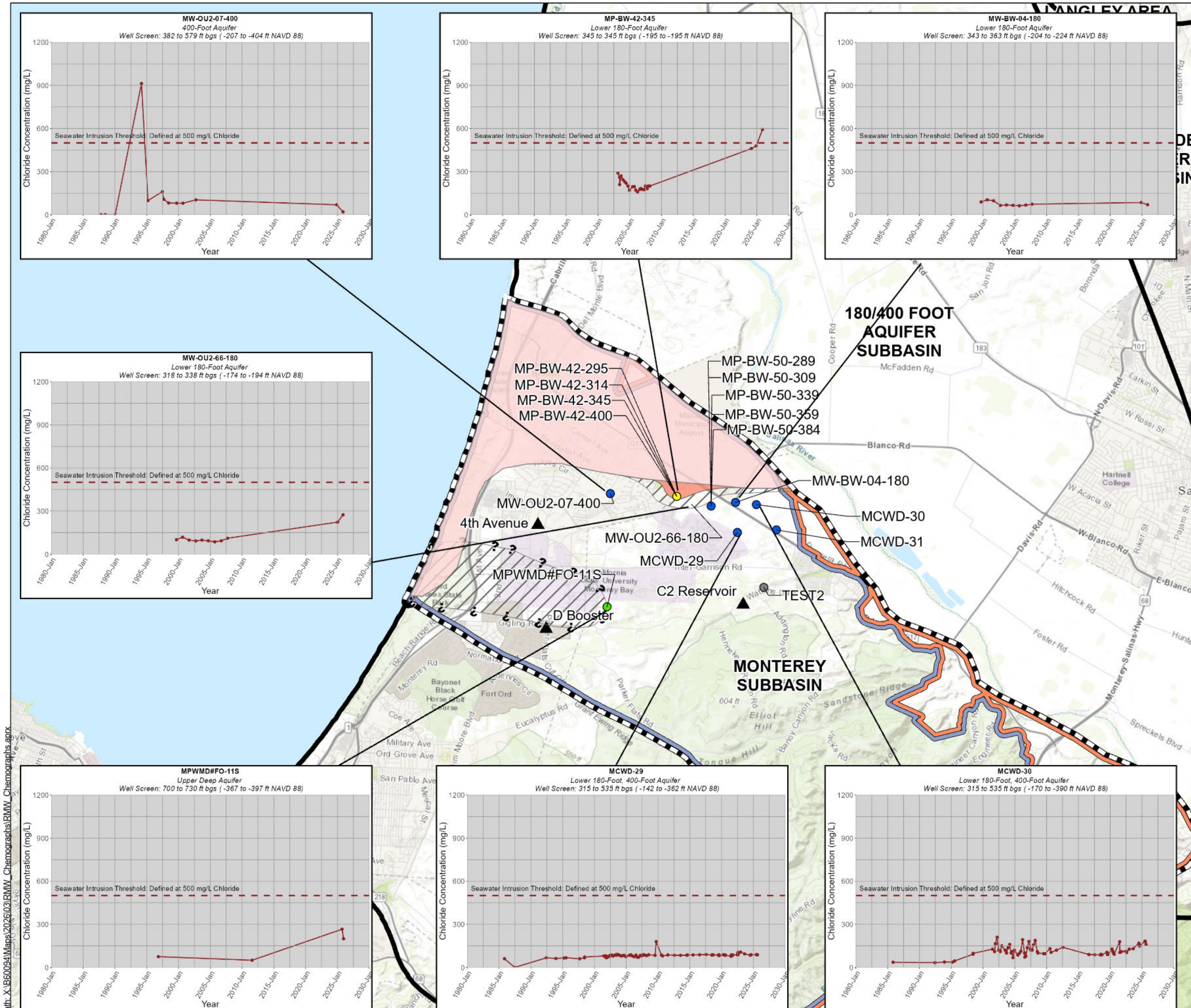
1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.

Estimated Seawater Intrusion Extent in the Lower Deep Aquifer Zone Fall 2025

Monterey Subbasin
WY 2025 Annual Report
March 2026

Figure 4-40

Path: X:\B60094\Maps\2026\02\SWI_Contour.aprx



Legend

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Maximum 2025 Chloride Concentration

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- No Measurement
- Monitoring Wells Under Construction

Seawater Intruded Area by Year

- 2015
- 2025
- 250 mg/L Area

Representative Monitoring Sites

- Chloride Concentrations
- Seawater Intrusion MT at 500 mg/L Chloride

Abbreviations

bgs =	= below ground surface
DWR	= California Department of Water Resources
ft	= foot
RMS	= Representative Monitoring Site

Notes

1. All locations are approximate.
2. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

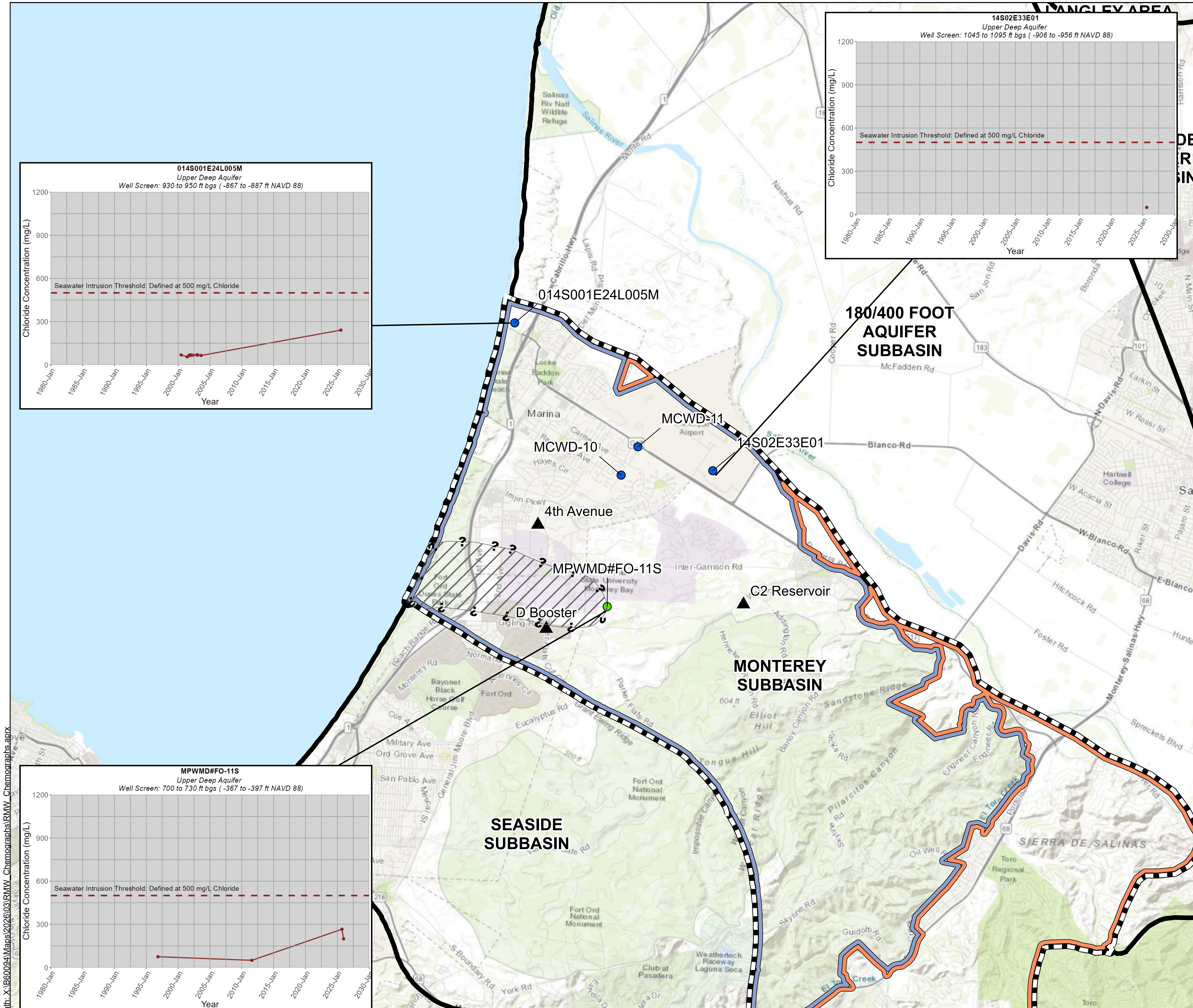
Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 1 April 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

Long-term Chloride Concentration in Seawater Intrusion RMS Lower 180-Foot/400-Foot Aquifer

Monterey Subbasin
WY 2025 Annual Report
April 2026

Figure 4-41



Legend

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Maximum 2025 Chloride Concentration

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- No Measurement
- Monitoring Wells Under Construction

Seawater Intruded Area

- 250 mg/L Area

Representative Monitoring Sites

- Chloride Concentrations
- Seawater Intrusion MT at 500 mg/L Chloride

Abbreviations

bgs =	= below ground surface
DWR	= California Department of Water Resources
ft	= foot
RMS	= Representative Monitoring Site

Notes

1. All locations are approximate.
2. MPWMD#FO-11S is shown on both 400-Foot Aquifer and Upper Deep Aquifer maps due to the stratigraphic uncertainty in this area.

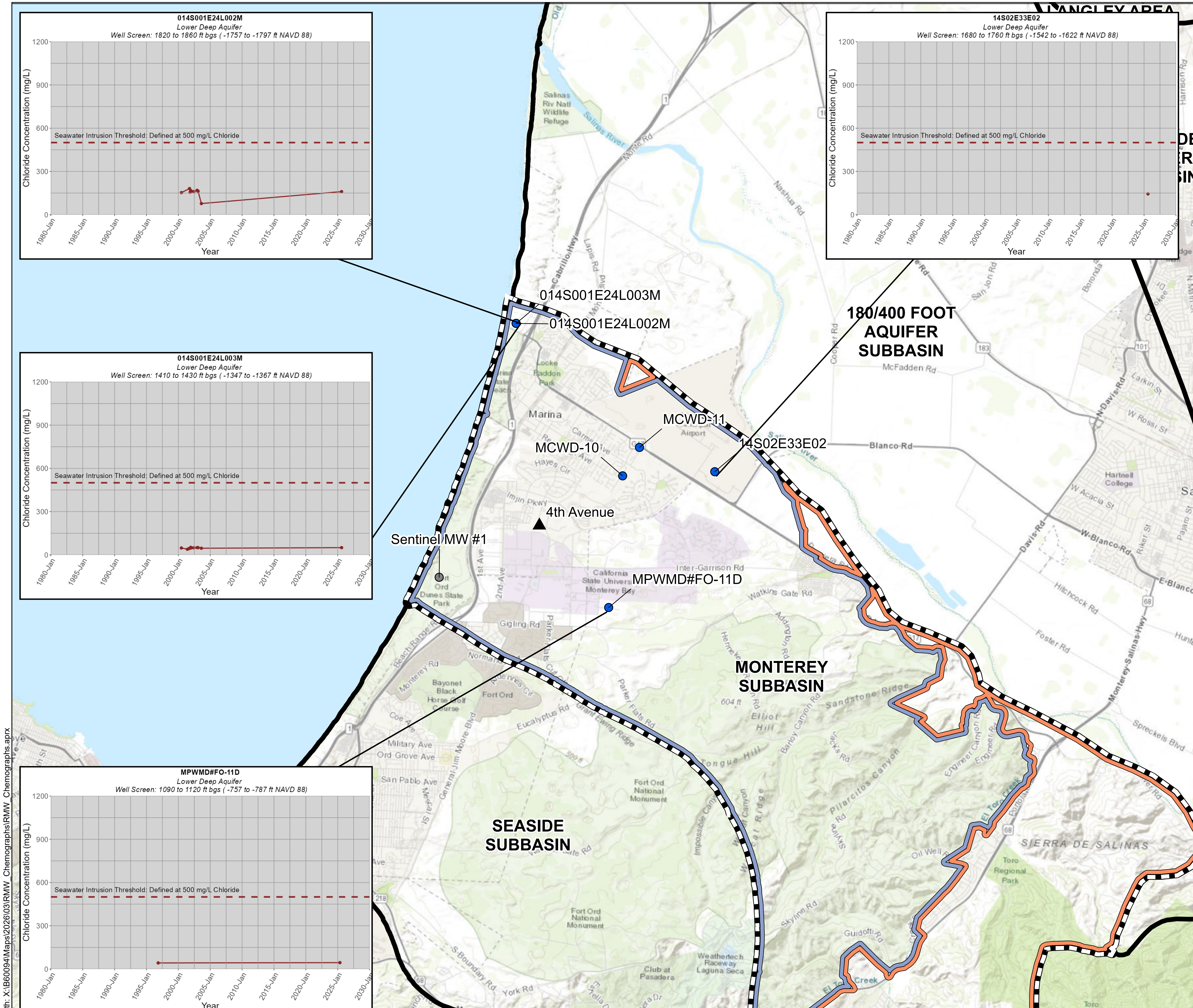
Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 1 April 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

N 0 1.5 3 (Scale in Miles)

Long-term Chloride Concentration in Seawater Intrusion RMS Upper Deep Aquifer

Monterey Subbasin
WY 2025 Annual Report
April 2026
Figure 4-42



Legend

- Monterey Subbasin
- Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

- Marina-Ord Area
- Corral de Tierra Area

Maximum 2025 Chloride Concentration

- ≤ 250 mg/L
- 251 - 500 mg/L
- 501 - 1,500 mg/L
- 1,501 - 5,000 mg/L
- > 5,000 mg/L
- No Measurement
- Monitoring Wells Under Construction

Representative Monitoring Sites

- Chloride Concentrations
- Seawater Intrusion MT at 500 mg/L Chloride

Abbreviations

bgs = = below ground surface
DWR = California Department of Water Resources
ft = foot
RMS = Representative Monitoring Site

Notes

1. All locations are approximate.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 1 April 2026.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018 Update.

N 0 1.5 3 (Scale in Miles)

Long-term Chloride Concentration in Seawater Intrusion RMS Lower Deep Aquifer

Monterey Subbasin
WY 2025 Annual Report
April 2026

Figure 4-43

4.4.2 Induction Logs

Induction logging measures the fluid conductivity within the adjacent formation throughout the depth of the well. Although this method does not provide exact measurements of water quality, it can be used to monitor changes in conductivity (i.e., groundwater salinity) over time. In addition, because induction logging provides a continuous vertical profile, it is an effective way to identify signs of vertical migration of seawater intrusion from shallower to deeper aquifers. This section describes current induction logging programs in the Subbasin and data collected in WY 2025. The monitoring wells mentioned herein are a subset of the 400-Foot and Deep Aquifer RMS wells shown on Figure 4-41 through Figure 4-43.

4.4.2.1 Sentinel MW #1 and MW #2

The Seaside Basin Watermaster constructed and maintains four Sentinel Wells along the coast in the Monterey and Seaside Subbasins to detect potential increases in seawater intrusion. The northern-most well, Sentinel MW #1 (SBMW-1), is located within the Monterey Subbasin (Figure 4-42). Sentinel MW #2 (SBWM-2) is located immediately south of the Monterey/Seaside basin boundary. The Watermaster conducts semi-annual induction logging within these wells. During baseline monitoring of SBWM-1 in 2007, it was documented that very high conductivities indicative of saline groundwater were observed at depths from 125 ft to approximately 350-400 ft below ground surface (Feeney, 2007). These depths correspond to depths of the 180- and 400-Foot Aquifers in the Monterey Subbasin and the well is located within the existing seawater intrusion front identified for these aquifers. Recent induction logs show incremental increases in conductivity in SBWM-1 and at SBWM-2 and 4 within the Paso Robles Formation of the Seaside Basin. As discussed in the Seaside Basin's WY 2025 Seawater Intrusion Analysis Report (Montgomery & Associates, 2025)

> *SBWM-1 has had a modest increase in conductivity since 2019, approximately 400 micromhos per centimeter (µmhos/cm) at an approximate depth of 530 feet bgs (-433 feet amsl). Of the three Sentinel wells with increasing conductivity, SBWM-2 has had the greatest Sentinel well conductivity increase since 2019, approximately 2,500 µmhos/cm at an approximate depth of 350 feet bgs (-276 feet amsl).*
>
> *SBWM-2 conductivity increases are mostly incremental but there are some periods where conductivity fluctuates. Excluding localized conductivity increases in the Upper Paso Robles Formation shown on zone of interest induction logs (Figure 26 through Figure 32), the remaining parts of the induction logs plot similarly to previous years. This suggests increased conductivity is preferentially confined to coarser-grained zones in the Upper Paso Robles Formation and does not extend into the Lower Paso Robles Formation, Purisima Formation, or the Santa Margarita Sandstone. It is unclear if the increase in conductivity in SBWM-2 at a depth of approximately 350 feet bgs (-276 feet amsl) is related to a seawater intrusion front advancing from the coastline, or saline and brackish waters from the Salinas Valley – Monterey Subbasin Marina-Ord Management Area migrating laterally from north to south (Pidlisecky et al., 2016). There does not appear to*

be groundwater pumping in the vicinity of SBWM-2, so the cause of the increase in conductivity at this location is not well understood.

As discussed in Section 4.4.1.3 above, increases in chloride and TDS concentrations have been observed in inland 400-Foot/upper Deep Aquifer monitoring wells, including MPWMD#FO-11S and MPWMD#FO-10S. These wells are located downgradient of Sentinel MW #1 and MW #2, and their screen elevations corresponds to elevations where increases in salinity have been observed in induction logs from Sentinel MW #1 and MW #2.

4.4.2.2 USGS Deep Monitoring Well 014S001E24L

In November 2022 and August 2025, induction logging was performed at USGS deep monitoring well 014S001E24L002M. This well is the deepest of the four nested USGS wells located along the coast of the Monterey Subbasin near Reservation Road (Figure 4-39 and Figure 4-40). Traces from these induction logs are presented on Figure 4-44.

- A decrease in salinity is observed between 100 feet and 175 feet bgs. This decrease in salinity is likely the result of freshwater recharge that occurred in WY 2023 and WY 2024, which were wet years.
- Increases in salinity were observed from approximately 1,000 ft bgs to 1,010 feet bgs and 1,020 ft bgs to 1,040 ft bgs. The increase in salinity at these depths indicates that high salinity groundwater present in the marine layer identified at USGS nested well 014S001E24L004M (screened from 1,040 to 1,060 ft bgs) may be migrating vertically upward and causing the observed increase in chloride and TDS concentrations at well 014S001E24L005M (screened from 930 to 950 ft bgs), or an increase in seawater intrusion at these depths from the submarine portions of these aquifers.
- The induction logs also show an increase in salinity (electrical conductivity) between approximately 1,660 ft bgs and 1,850 ft bgs; however, no corresponding increase in chloride concentrations was observed in well 014S001E24L002M (screened from 1,820 to 1,860 ft bgs). Further, the induction log traces from November 2022 and August 2025 appear to be erratic below 1,700 feet bgs, which may indicate instrument error or seal failure, potentially due to pressure encountered at that depth.

The 2022 and 2025 induction logs were adjusted and overlaid on induction logs completed in November 2000 by the USGS following the well's installation (Figure 16). There is uncertainty about the exact comparability of the 2000 log with the 2022/2025 logs, as different contractors and tools were likely used to complete the 2000 induction log. However, the traces overlap well in many areas and therefore provide insights into the depths at which salinity increases may have occurred over the last 25 years. Comparison of these induction log traces indicates:

- Increases in salinity since 2000 was observed at depths up to approximately 700 ft bgs. These increases in salinity are consistent with continuing increases in TDS and chloride concentrations observed in the lower 180-Foot and 400-Foot Aquifer wells within the seawater intruded area of the Monterey Subbasin.

- The logs also show an increase in salinity concentrations at a depth of approximately 1,000 ft bgs, consistent with salinity increases observed between 2022 and 2025. This supports the conclusion that high salinity groundwater present in the marine layer identified at USGS nested well 014S001E24L004M (screened from 1,040 to 1,060 ft bgs) may be migrating vertically upward and causing the observed increase in chloride and TDS concentrations at the overlying well 014S001E24L005M (screened from 930 to 950 ft bgs).

Regular induction logging of these wells using the same tool is needed to verify the potential salinity increases at the identified depths.

4.4.2.3 Airport Deep Monitoring Well 14S02E33E

In November 2022 and August 2025, induction logging was performed at the Airport deep monitoring well 14S02E33E02. This well is the deeper of the two nested wells at this location. It is located approximately 3 miles inland of the coast at the Marina Municipal Airport in the Monterey Subbasin (Figure 4-39 and Figure 4-40) and screened from 1,680 to 1,780 ft bgs (-1,542 to 1,622 ft NAVD88), and the resulting induction logs are presented on Figure 4-46.

Interpretation of the logs is limited by interference from metal spacers within the well, which produce regular spikes in the log. Despite this limitation, no significant increases in salinity are evident. A small increase in salinity may be present at approximately 450 ft bgs, corresponding to the lower 180-Foot/400-Foot Aquifer, which is seawater intruded in this area.

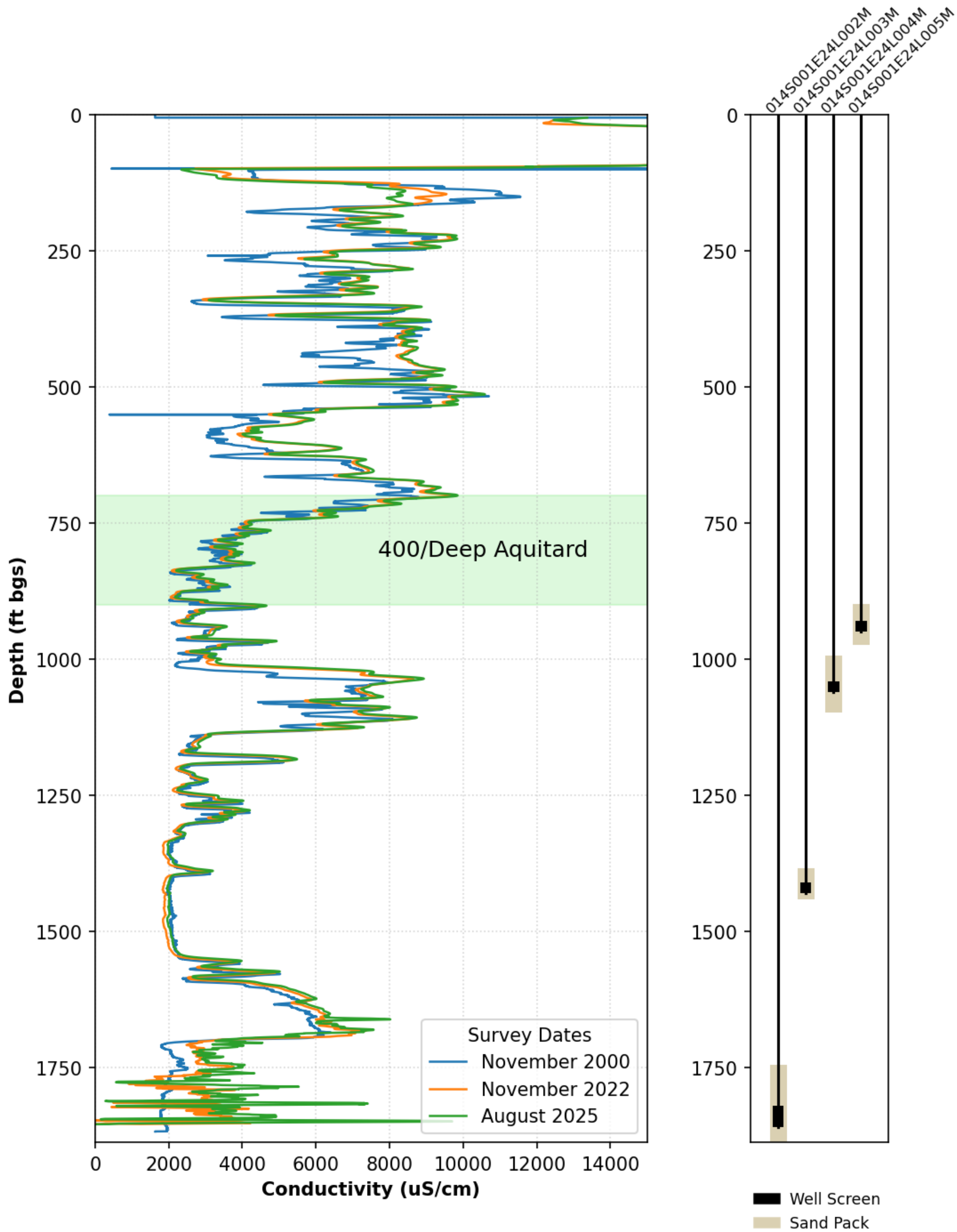


Figure 4-44 Induction Logging in 014S001E24L, 2022-2025

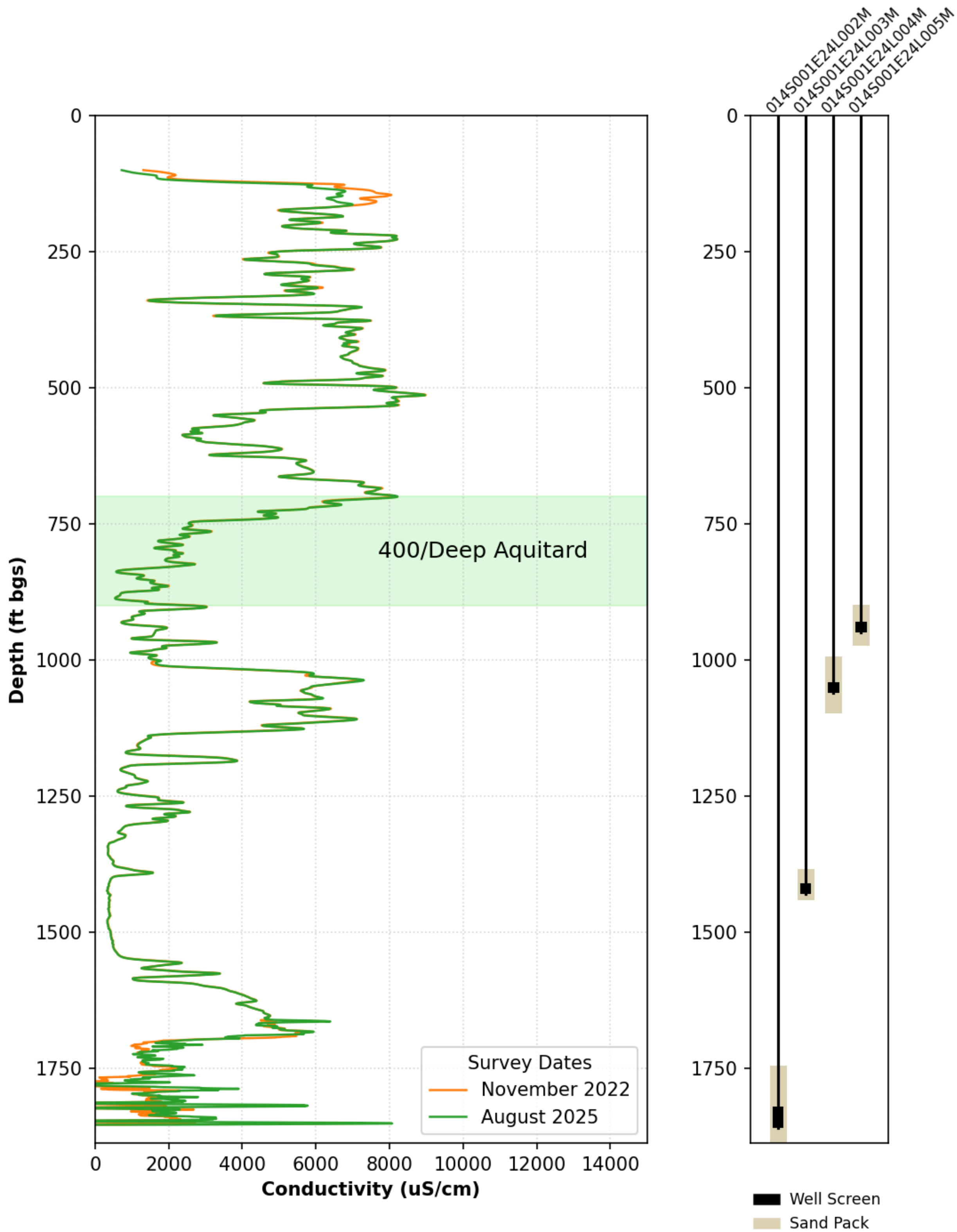


Figure 4-45 Induction Logging in 014S001E24L, 2000-2025

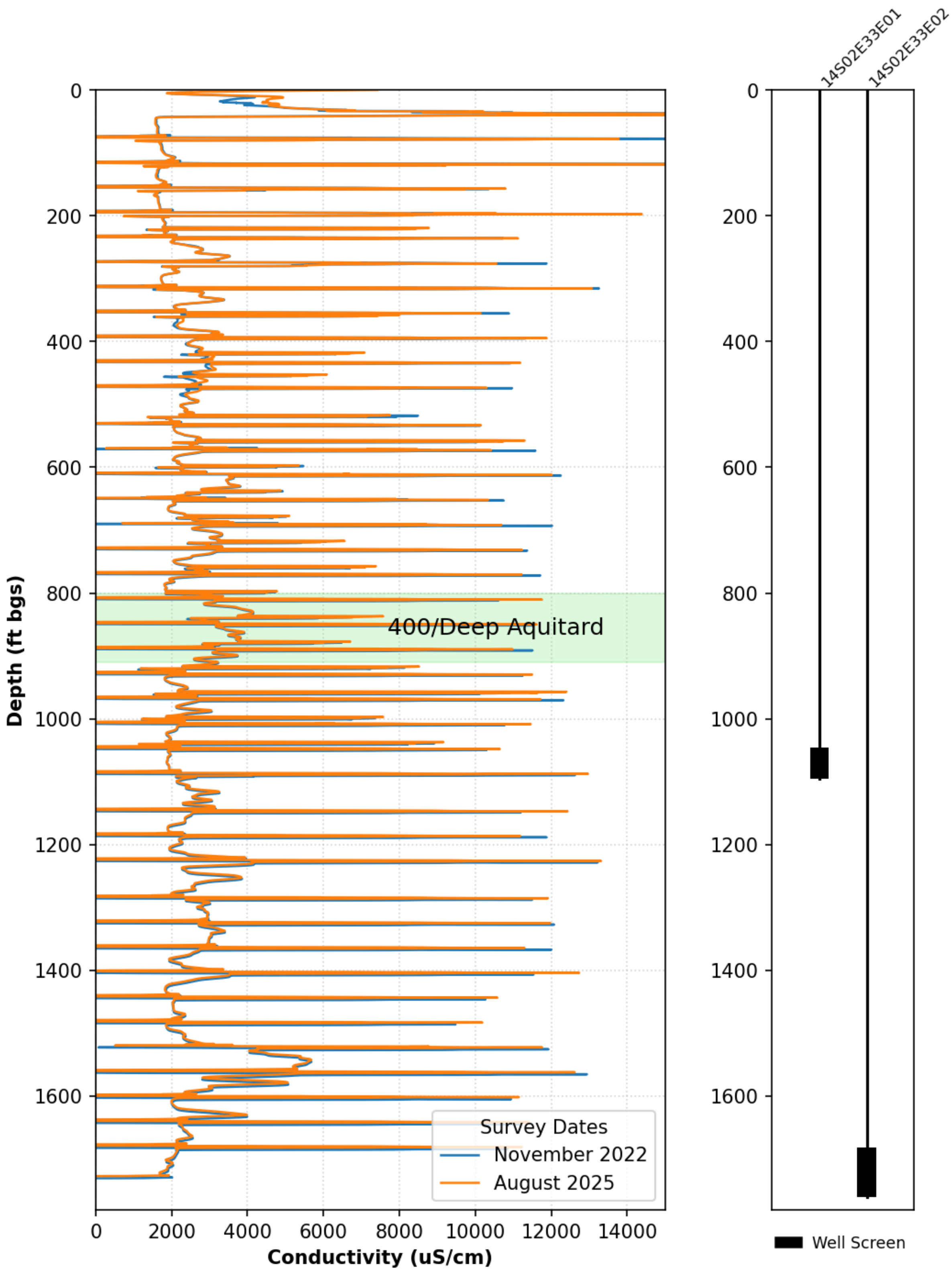


Figure 4-46 Induction Logging in 14S02E33E

4.4.3 Geochemical Analysis

Seawater intrusion is typically identified through groundwater chemistry. Groundwater levels at or below sea level indicate conditions that may allow seawater to migrate inland; however, the presence of intrusion is confirmed by characteristic geochemical changes in groundwater.

Sustained increases in chloride concentrations over time, as evaluated in Section 4.4.1 above, is one of the most widely used indicators of seawater intrusion. However, geochemical processes within the aquifer also provide early evidence of intrusion. As the seawater front advances, sodium in groundwater may be exchanged for calcium on aquifer sediments through cation exchange. This process removes sodium from solution, causing sodium-to-chloride ratios to decrease ahead of the advancing seawater front. As a result, declining sodium/chloride ratios can serve as an early indicator of seawater intrusion.

Sodium-to-chloride ratios are also useful for distinguishing seawater intrusion from other potential sources of salinity. Jones et al. (1999) reports that groundwater influenced by seawater intrusion typically exhibits sodium/chloride molar ratios below 0.86 ahead of the intrusion front, whereas domestic wastewater, which can also cause increases in chloride, generally has sodium/chloride ratios greater than 1.

Anthropogenic sources of chloride may source from road salt, water softeners, septic systems, agricultural return flows, and wastewater treatment plant discharges (Sudaryanto & Naily, 2018). However, in the Marina area, road salt is not used, the area is fully sewered, and urban land uses make it unlikely that anthropogenic chloride sources would significantly affect the confined aquifers. To the extent anthropogenic chloride is present, it would most likely be associated with domestic wastewater or agricultural sources, both of which commonly also contain elevated nitrate concentrations. Accordingly, nitrate is used as an indicator to evaluate whether observed increases in chloride may be related to anthropogenic inputs.

Further evaluation of sodium-to-chloride ratios and nitrate concentrations in wells in the Monterey Subbasin, particularly where increases in chloride concentrations have been observed are further described below.

4.4.3.1 Sodium Chloride Molar Ratios

Sodium-chloride molar ratios were calculated and plotted for wells in which increases in chloride concentrations to levels close to or above 250 mg/L have been observed. These wells include:

1. Lower 180-Foot/400-Foot Aquifer monitoring well MP-BW-42-345 and adjacent well MW-OU2-66-180;
2. 400-Foot/upper Deep Aquifer monitoring Well MPWMD#FO-11S; and
3. Upper Deep Aquifer monitoring well 014S001E24L005M.

In addition, sodium-chloride molar ratios for MCWD production well MCWD-30 have also been included, as a steady increase in chloride concentrations has been observed in this well overtime. These data are presented on Figure 4-47.

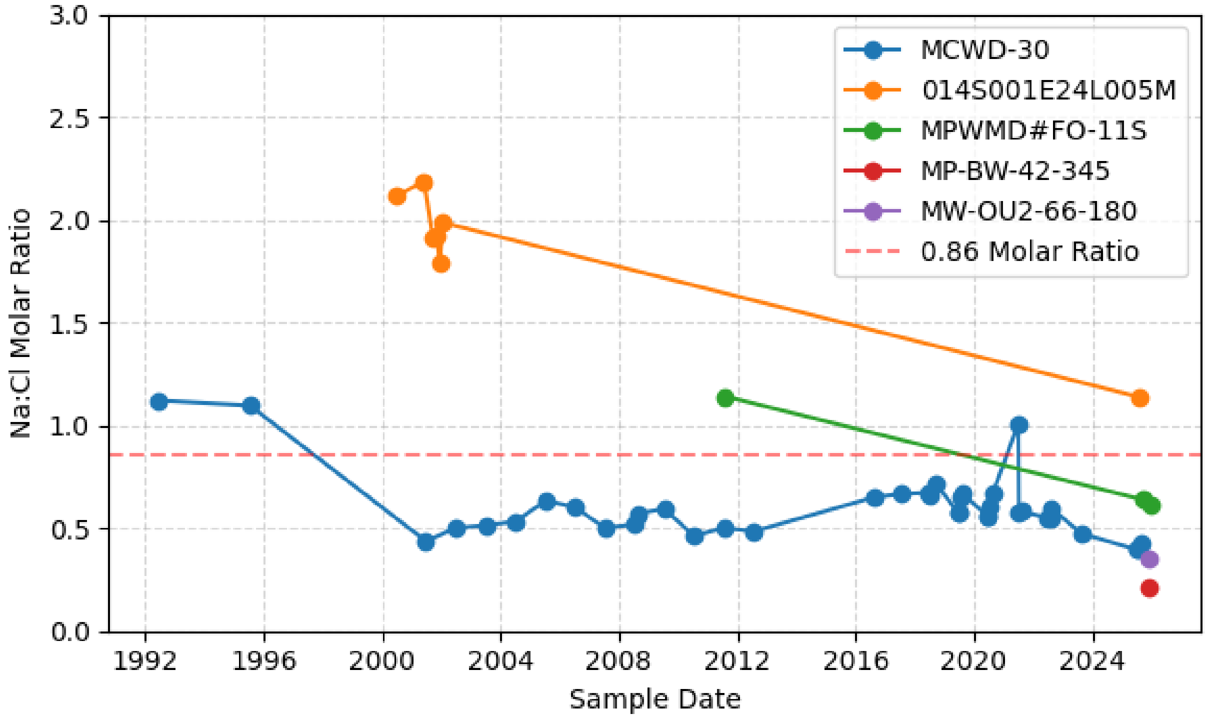


Figure 4-47 Sodium-Chloride Molar Ratios

As shown on this figure:

- The sodium-chloride molar ratio in groundwater samples collected from lower 180-Foot/400-Foot Aquifer monitoring well MP-BW-42-345 and adjacent well MW-OU2-66-180 in 2025 were well below a molar ratio of 0.86, which is consistent with seawater intrusion.
- The sodium-chloride ratios in groundwater samples collected from 400-Foot/upper Deep Aquifer monitoring Well MPWMD#FO-11S in 2024 and 2025 were below a 0.86 and decreased significantly from the sodium-chloride ratio observed in 2011, when this well was last sampled.
- The sodium-chloride ratio in groundwater samples collected from upper Deep Aquifer monitoring well 014S001E24L005M in 2025 was above 0.86 but has decreased significantly from the sodium-chloride ratio observed in 2003, when this well was last sampled.
- The sodium chloride ratio in groundwater samples collected from MCWD production well MCWD-30 has been below 0.86 since 2002 and has been decreasing.

4.4.3.2 Nitrate Concentrations

Long-term trends in chloride and nitrate were evaluated for

1. Wells exhibiting increases in chloride including MP-BW-42-345, MW-OU2-66-180, MCWD-30, MPWMD#FO-11S, and 014S001E24L005M;
2. Nearby monitoring wells in the lower 180-Foot/400-Foot Aquifer (MP-BW-42-314, MP-BW-50-359, and MW-OU2-78-180); and
3. Other MCWD production wells in the lower 180-Foot/400-Foot Aquifer (MCWD-29 and MCWD-31).

These data are shown on Figure 4-48 and indicate:

- Nitrate concentrations are consistently low across all wells, ranging from non-detect to approximately 6 mg/L as nitrogen (N). These results are well below the nitrate maximum contaminant level of 10 mg/L as N and one to two orders of magnitude lower than observed chloride concentrations.
- In MCWD-29 and MCWD-31, nitrate concentrations have increased over time while chloride concentrations remain relatively stable, suggesting that anthropogenic inputs would not be a significant driver of chloride trends.
- A similar long-term nitrate pattern is observed in MCWD-30; however, between 2018 and 2025, nitrate concentrations remained stable at approximately 5 mg/L as N while chloride concentrations increased from approximately 100 mg/L to 180 mg/L, further indicating a decoupling of nitrate and chloride trends.
- Although long-term nitrate data are not available for MP-BW-42-345 and MW-OU2-66-180, their 2025 nitrate concentrations fall within the range observed in nearby wells, providing no evidence of anomalous anthropogenic influence.
- Nitrate concentrations in wells screened in the 400-Foot and upper Deep Aquifers are very low (e.g., 0.5 mg/L as N in 014S001E24L005M and non-detect in MPWMD#FO-11S), consistent with minimal anthropogenic impact in these deeper, confined systems.

The absence of a consistent positive correlation between nitrate and chloride concentrations indicates that observed increases in chloride are unlikely to be associated with anthropogenic sources. Instead, the data support the interpretation that seawater intrusion is the primary driver of elevated chloride.

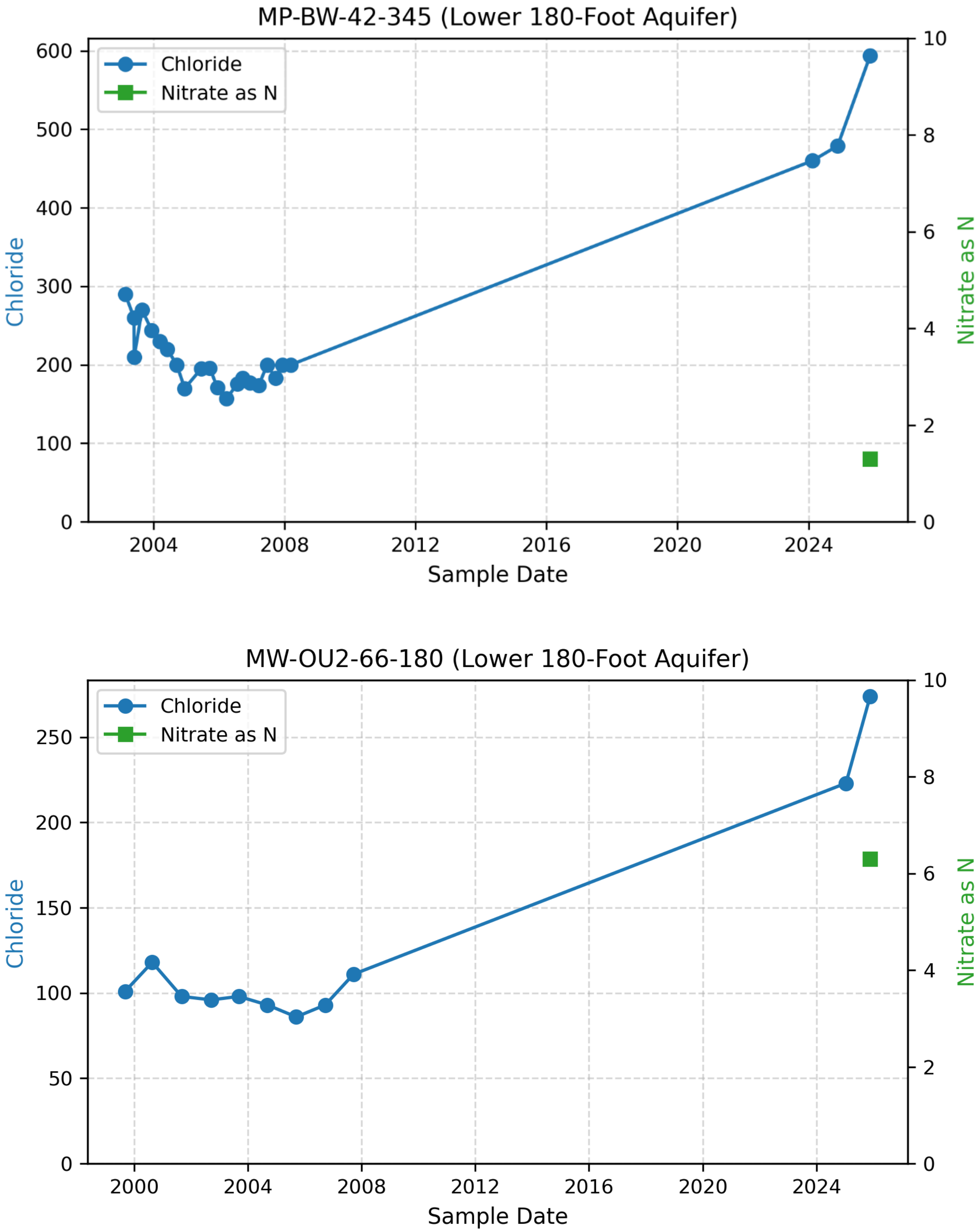
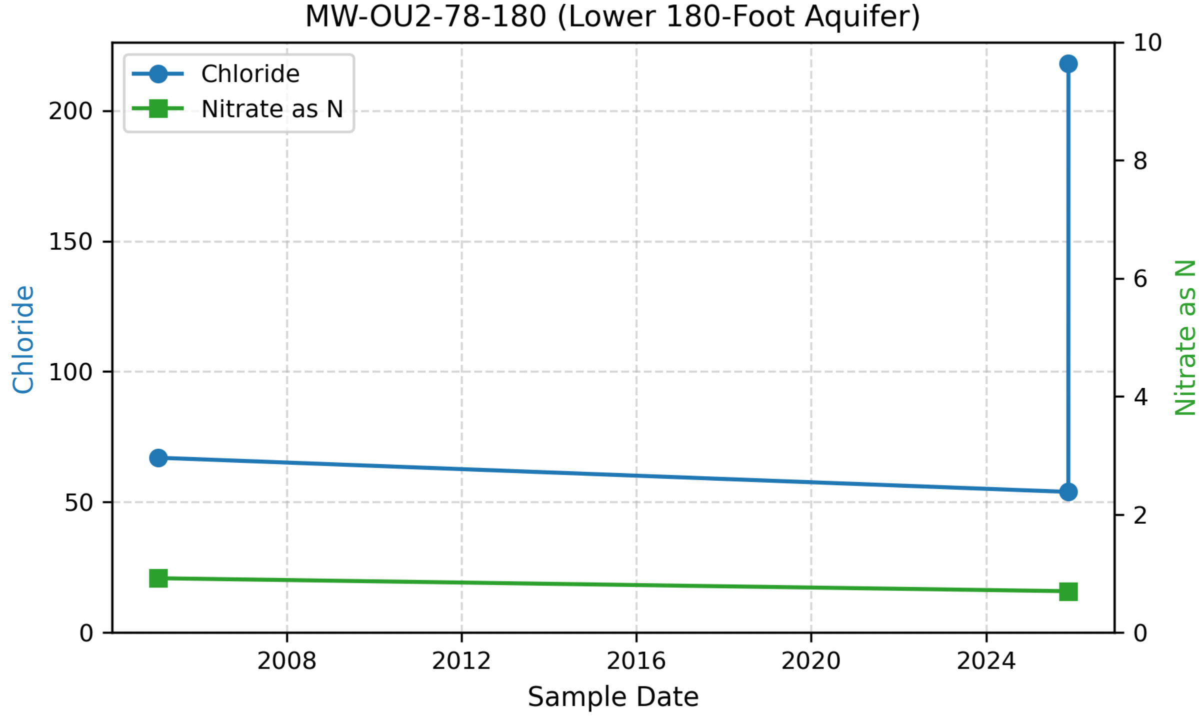


Figure 4-48 Chloride and Nitrate Concentrations



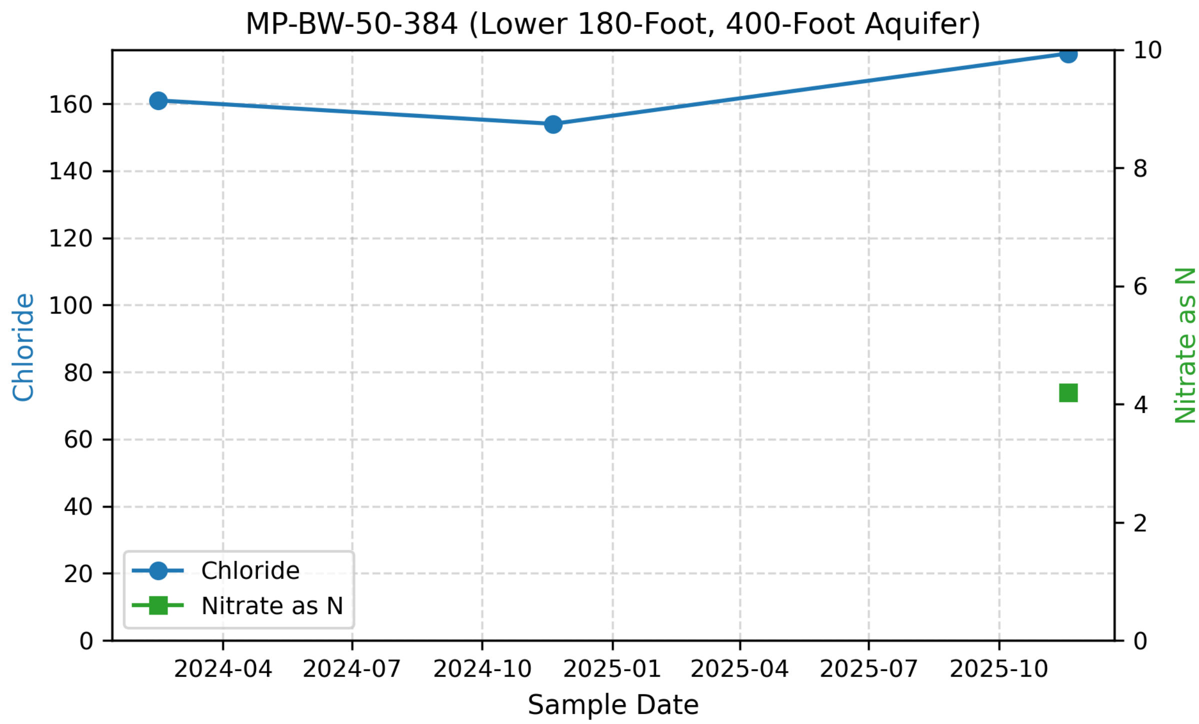
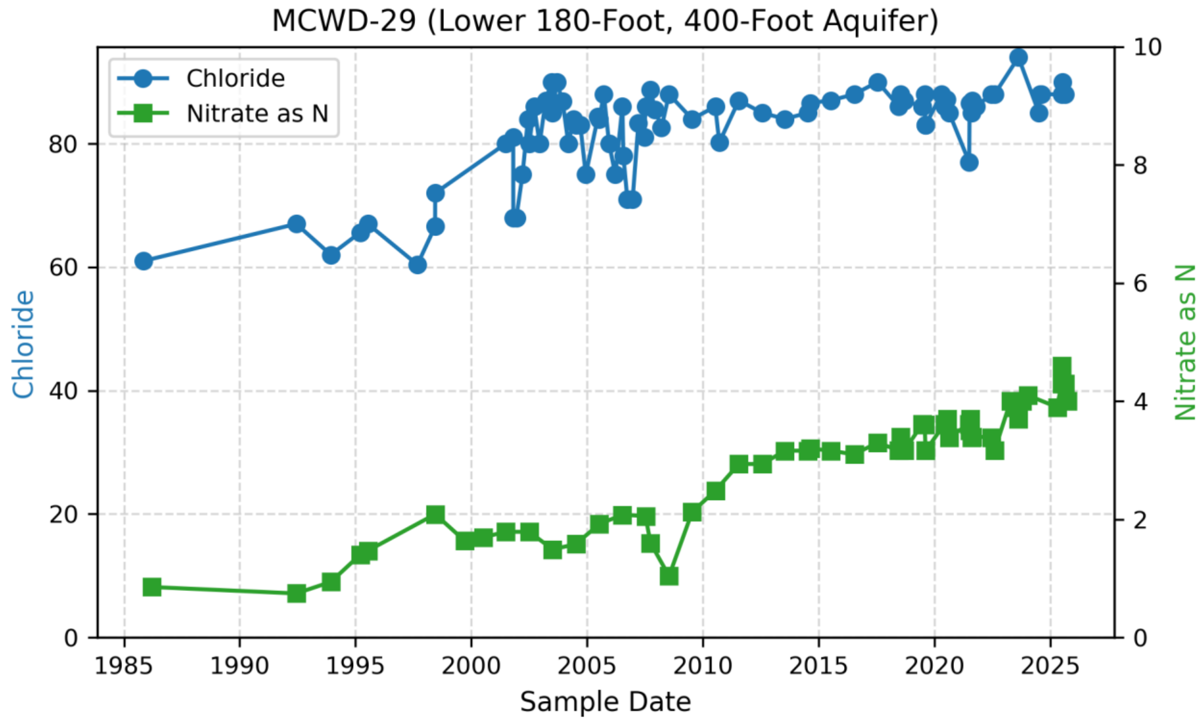


Figure 4-48 Chloride and Nitrate Concentrations (Continued)



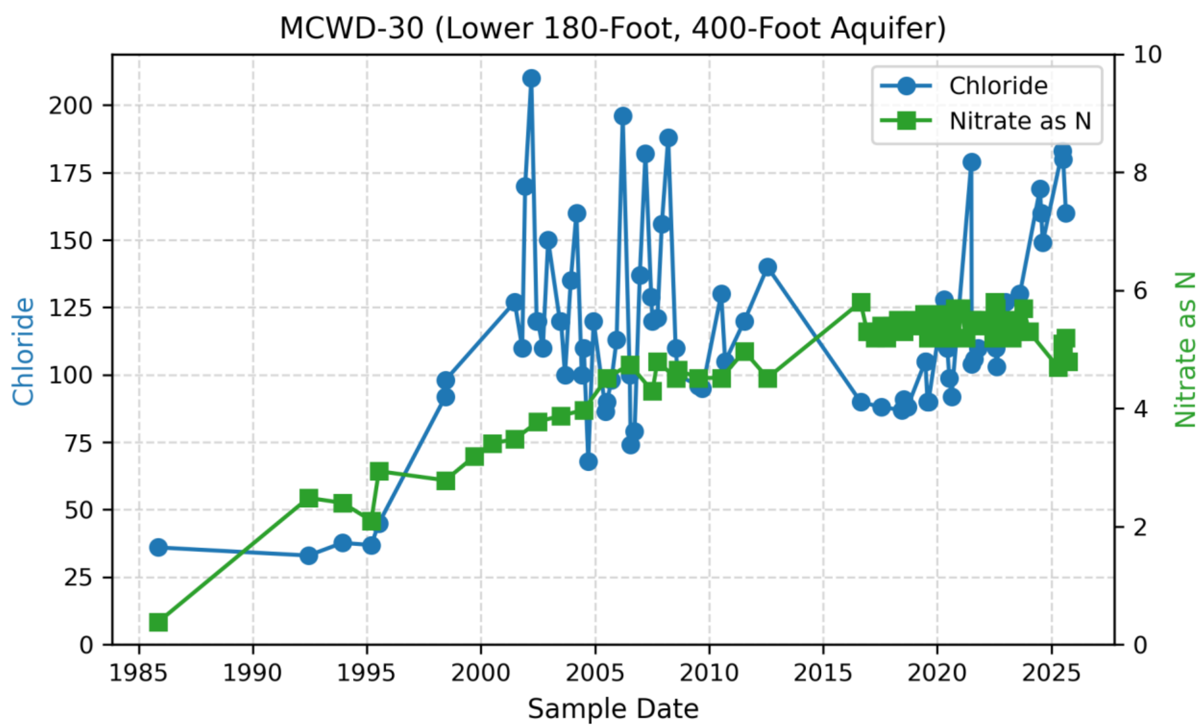
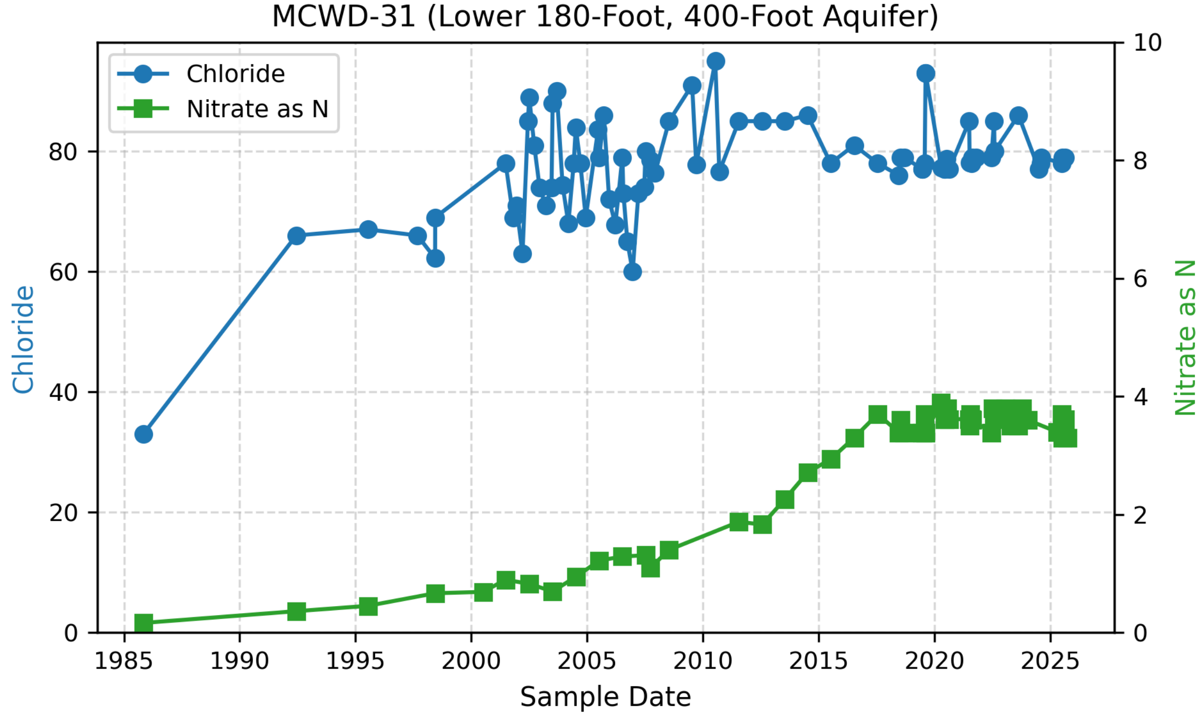


Figure 4-48 Chloride and Nitrate Concentrations (Continued)



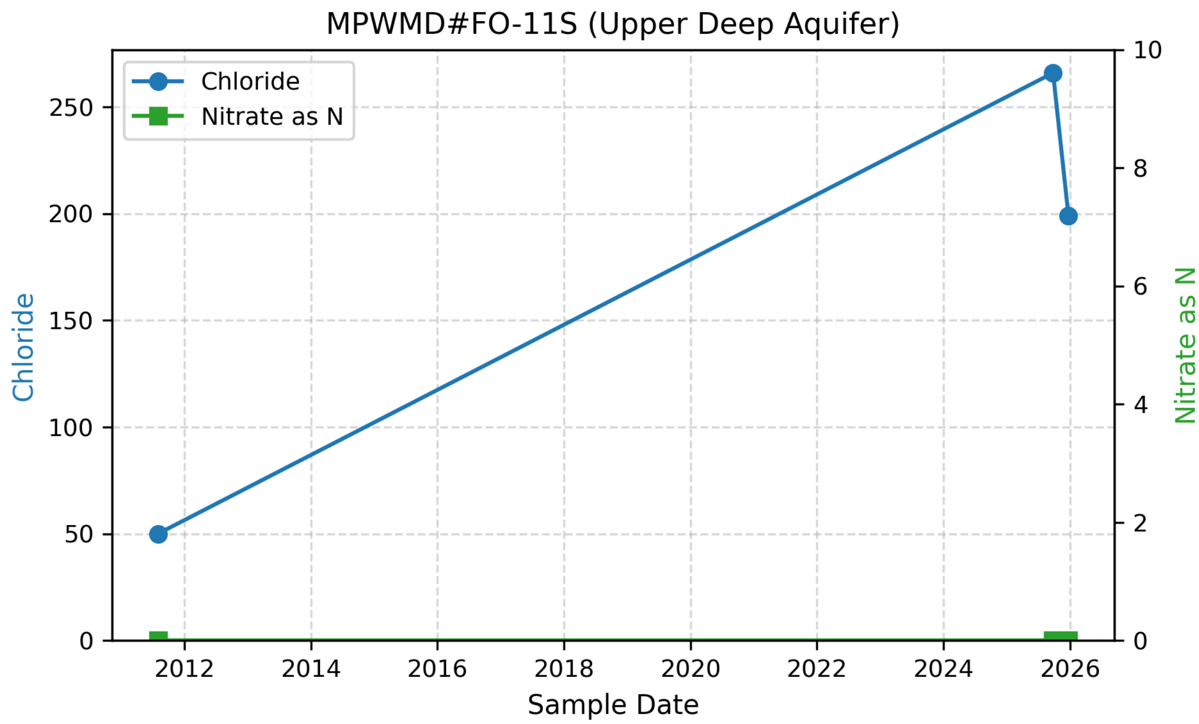


Figure 4-48 Chloride and Nitrate Concentrations (Continued)

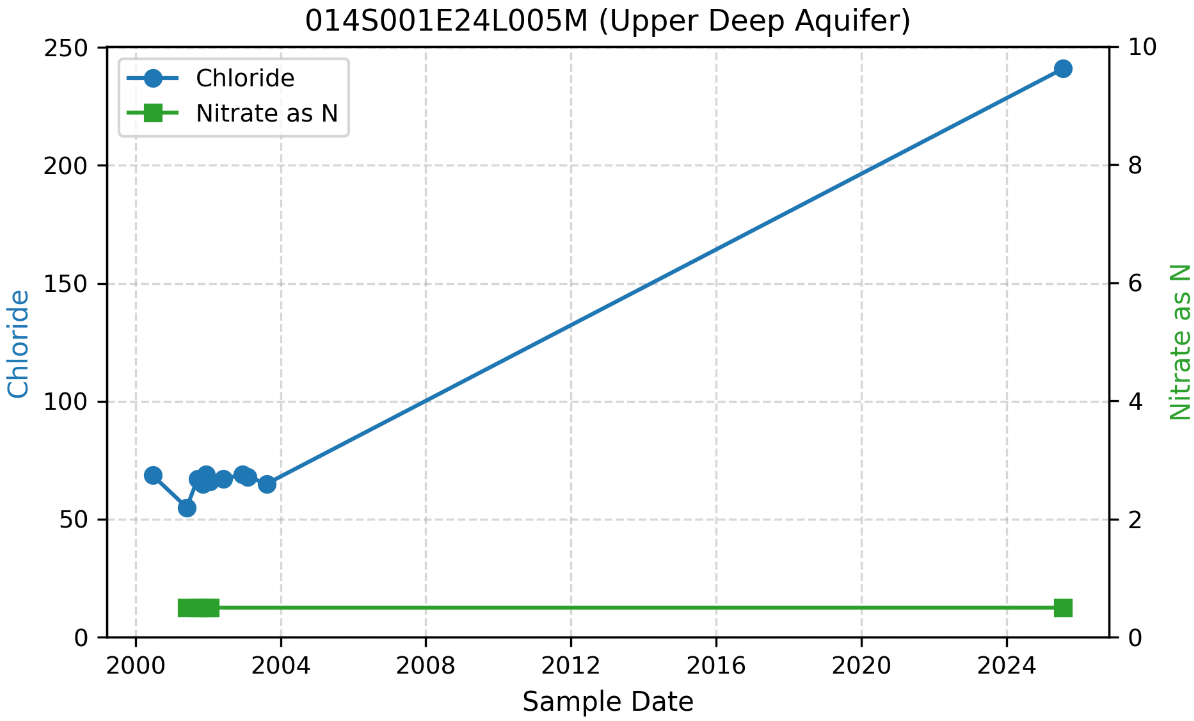


Figure 4-48 Chloride and Nitrate Concentrations (Continued)

4.5 Water Quality

The water quality monitoring network consists of existing water supply wells in the Subbasin. As described in *Section 8* of the Monterey GSP, separate MTs are set for the constituents of concern (COCs) for public water system supply wells, on-farm domestic wells, and irrigation supply wells. COCs for drinking water are assessed at public water supply wells and on-farm domestic wells, and COCs for crop health are assessed at agricultural supply wells.

Groundwater quality in public water system supply wells is evaluated using data collected by the State Water Resources Control Board's Division of Drinking Water. The Central Coast Regional Water Quality Control Board (CCRWQCB) oversees groundwater quality monitoring for on-farm domestic wells and irrigation wells through the Irrigated Lands Regulatory Program (ILRP). Water quality data for both programs can be found on SWRCB's Groundwater Ambient Monitoring and Assessment (GAMA) Program Groundwater Information System (SWRCB, 2024). However, through collaboration with the CCRWQCB and Central Coast Water Quality Preservation, Inc., after the submittal of the WY 2023 Annual Report, it was determined that the GAMA system is missing ILRP data. Therefore, in this annual report and future reports produced by MCWDGSA and SVBGSA, water quality in ILRP wells will be evaluated using data directly from the CCRWQCB.

Table 4-7 Water Quality in WY 2025

Constituent of Concern (COC)	Regulatory Standard	Standard Units	Number of Wells Sampled for COC in WY 2025	Number of Wells Sampled in WY 2025 with COC Concentrations Above the Regulatory Standard
Marina-Ord Area				
DDW Wells				
Carbon Tetrachloride	0.5	µg/L	7	0
Trichloroethene (TCE)	5	µg/L	7	0
Corral de Tierra Area				
DDW Wells				
Aluminum	1000 (MCL) 200 (SMCL)	µg/L	5	0
Arsenic	10	µg/L	12	9
Chromium	50	µg/L	5	0
Foaming Agents [methylene blue active substances (MBAS)]	0	mg/L	5	0
Iron	300	µg/L	7	2
Manganese	50	µg/L	7	3
Radium 226 + Radium 228	5	pCi/L	3	0
Specific Conductance	1600	µmhos/cm	5	0
Total Dissolved Solids	1000	mg/L	6	0
Zinc	5	mg/L	10	0
ILRP On-Farm Domestic Wells				
Specific Conductance	1600	µmhos/cm	4	0
Total Dissolved Solids	1000	mg/L	0	0

Abbreviations:
MCL = Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
µg/L = microgram per liter
mg/L = milligram per liter
µmhos/cm = micromhos per centimeter

Table 4-7 shows the number of wells in the identified water quality monitoring network that were sampled and those wells that had concentrations above regulatory standards (i.e., Maximum Contaminant Levels [MCLs] and Secondary Maximum Contaminant Levels [SMCLs], and Agricultural Water Quality Objectives) in WY 2025. As shown on this table, in WY 2025, no water supply wells sampled in the Marina-Ord Area had any COCs with concentrations above regulatory drinking water standards. In the Corral de Tierra, the COCs that had concentrations above the regulatory standard include arsenic, iron, and manganese. Nine wells in the Corral de Tierra Area had higher concentrations than the regulatory drinking water standard for arsenic. Two and three wells had higher concentrations than the regulatory drinking water standards for iron and manganese, respectively.

4.6 Land Subsidence

Land subsidence is measured using InSAR data. This data is provided by DWR on the SGMA data viewer portal (DWR, 2026). Figure 4-49 shows the annual subsidence for the Subbasin from October 2024 to October 2025. Data continue to show negligible subsidence. All land movement was within the estimated measurement error of +/- 0.1 foot.

4.7 Interconnected Surface Water

4.7.1 Marina-Ord Area

As described in the Monterey GSP, the MT for the depletion of interconnected surface water (ISW) due to pumping is set to the minimum shallow groundwater elevations historically observed between 1995 and 2015 near locations of ISW. As shown in Table 4-8, the groundwater elevation at the RMS during Fall 2025 and Spring 2025 remained higher than its representative MT and MO.

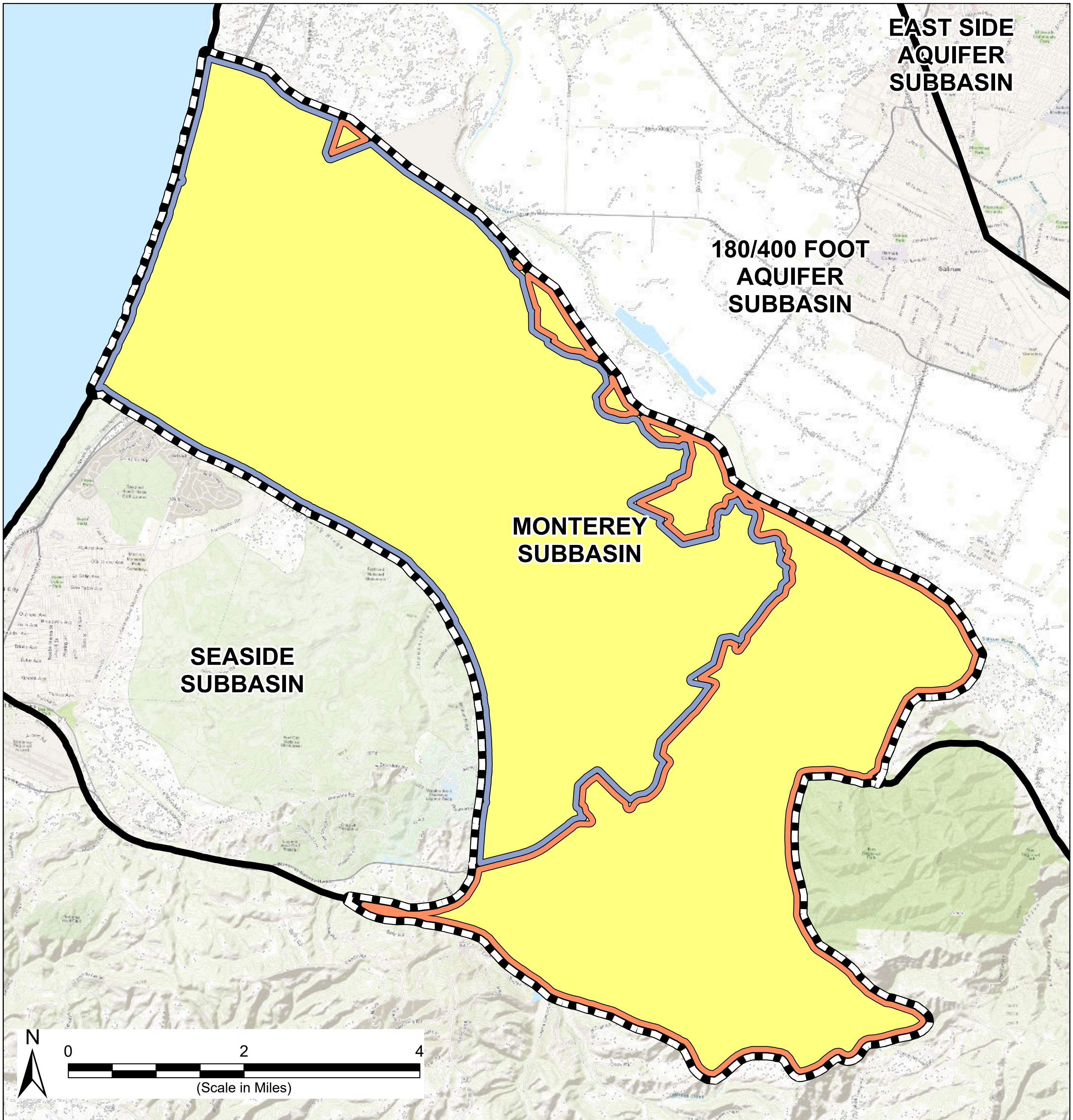
Table 4-8 Marina-Ord Area Interconnected Surface Water Representative Monitoring Sites

Site Name	Aquifer	Collection Agency	Fall 2025	Spring 2025	MT	MO
Marina-Ord Area						
MW-BW-82-A	Dune Sand Aquifer	U.S. Army	11.0	11.4	7.9	7.9

4.7.2 Corral de Tierra Area

In WY 2024, SVBGSA installed one new shallow well along El Toro Creek off Portola Road. The well was screened to capture groundwater levels high enough to be potentially interconnected with surface water. Groundwater elevation measurements were attempted but the well was dry, indicating lack of connection between surface water and groundwater at this time. Monitoring will continue in this well.[7] It is uncertain whether wetter conditions would result in measurable water levels in the well. Once a water level transducer is installed, it will be monitored by MCWRA. A groundwater elevation measurement record is necessary to establish SMC appropriately; therefore, SMC has not been set for this well.

[7] Per Title 23 CCR § 351[o], "Interconnected surface water refers to surface water that is hydrologically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted." The absence of groundwater within the dry well indicates that currently there is not a continuous saturated zone that hydrologically connects the overlying surface water to groundwater in the underlying aquifer. The well will continue to be monitored to see if a continuous saturated zone develops during other seasons or wetter years.



Legend

Monterey Subbasin

Other Groundwater Subbasins within Salinas Valley Basin

Management Areas

Marina-Ord Area

Corral de Tierra Area

Rate of Land Subsidence

-0.1 to 0.1 ft/yr

No Data

Abbreviations

ft/yr = foot per year

Notes

1. All locations are approximate.
2. This figure shows the annual land subsidence rate between October of 2024 and October of 2025.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 19 March 2026.
2. InSAR subsidence data, "SAR\Vertical_Displacement_TRE_ALTAMIRA_Annual_Rate_20241001_20251001 (ImageServer)." Created by DWR and obtained from ArcGIS REST Services Directory.

Estimated InSAR Subsidence WY 2025

Monterey Subbasin
WY 2025 Annual Report
January 2026

Figure 4-49

Path: X:\B60094\Maps\2026\01\Figure 4-39.aprx

5 ANNUAL PROGRESS TOWARDS IMPLEMENTATION OF THE MONTEREY GSP

5.1 Sustainable Management Criteria

The Monterey GSP includes descriptions of significant and unreasonable conditions, MTs, IMs, MOs, and URs for DWR's six sustainability indicators. The MCWDGSA and SVBGSA determined locally defined significant and unreasonable conditions based on public meetings and staff discussions. The quantitative SMCs were developed to reflect the significant and unreasonable conditions and the Subbasin's sustainability goal. The SMCs are individual criterion that will need to be met simultaneously for all Sustainability Indicators. A brief comparison of the data presented in Section 4 and the SMCs are included for each sustainability indicator in the following sections.

Significant and unreasonable conditions qualitatively describe groundwater conditions deemed insufficient by beneficial users of groundwater and stakeholders in the Subbasin. MTs are quantitative indicators of the Subbasin's locally defined significant and unreasonable conditions. An undesirable result is a combination of minimum threshold exceedances that shows a significant and unreasonable condition across the Subbasin as a whole. Measurable objectives (MOs) are the goals that reflect the GSA's desired groundwater conditions for each sustainability indicator and provide operational flexibility above the MTs. The GSP and annual reports must demonstrate that groundwater management will not only avoid undesirable results but can reach - MOs by 2042. DWR uses IMs every 5 years to review progress from current conditions to the MOs.

Since the GSP addresses long-term groundwater sustainability, some of the metrics for the sustainability indicators may not be applicable in each individual future year. The GSP is developed to avoid undesirable results under future hydrogeologic conditions with long-term, deliberate management of groundwater. The Subbasin GSAs' best understanding of future conditions is based on historical precipitation, evapotranspiration, streamflow, and reasonably anticipated climate change and sea-level rise, which have been estimated based on the best available climate science (DWR, 2018). Groundwater conditions that are the result of extreme climatic conditions, which are worse than those anticipated based on the best available climate science, do not constitute an undesirable result. As such, SMCs may be modified in the future to reflect observed future climate conditions.

Pursuant to SGMA Regulations (California Water Code § 10721(w)(1)), "Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods." Therefore, groundwater levels may temporarily exceed MTs during prolonged droughts, which could be more extreme than those that have been anticipated based on historical data and anticipated climate change conditions. Such temporary exceedances do not constitute an undesirable result.

5.1.1 Chronic Lowering of Groundwater Levels

Table 5-1 compares Fall 2025 groundwater elevations to MTs, MOs, and IM in 5 years after GSP implementation first interim milestone (IM5s) set at RMS wells established for chronic lowering of groundwater levels in the Monterey GSP. For SGMA monitoring purposes, fall measurements are those collected during the fourth quarter (i.e., October, November, and December) and correspond to the measurements used to define the Subbasin's SMCs.

The following changes to the groundwater elevation RMS network were made since the completion of the Monterey GSP:

- MPWMD#FO-10S and MPWMD#FO-10D have been removed as recent hydraulic testing found that the screens of these nested wells are hydraulically connected across the well bore and, as such, groundwater levels from these wells do not reflect the water level of the screened aquifer.
- MW-02-13-180M, MW-12-07-180, MP-BW-42-295, MP-BW-50-289 have been replaced by other existing U.S. Army wells, EW-12-04-180M, MW-02-06-180, MP-BW-42-345, and MP-BW-50-339, respectively, because the wells are either decommissioned by the U.S. Army or no longer on the Army's monitoring program.
- MW-12-12-180L was decommissioned by the U.S. Army and removed from the monitoring network. No other U.S. Army wells exist in its vicinity.
- 16S/02E-03H02 has been removed because the well was withdrawn from MCWRA's water level monitoring programs. The old RMS well was not replaced because of the lack of existing monitoring wells in the Corral de Tierra Area.
- 15S/03E-20R50 has been removed because it is outside of the Monterey Subbasin.

The groundwater elevation monitoring network currently consists of 32 RMSs in the Marina-Ord Area and 11 RMSs in the Corral de Tierra Area.

Fall groundwater elevation data are color-coded on Table 5-1: orange cells indicate the groundwater elevation is below the MT, yellow cells indicate the groundwater elevation is above the MT but below the MO, and green cells indicate the groundwater elevation is above the MO.

Table 5-1 Groundwater Elevations and Relevant Sustainable Management Criteria for Chronic Lowering of Groundwater Levels Sustainability Criteria

Site Name	Aquifer	Collection Agency	Fall 2025	MT	MO	IM5
Marina-Ord Area						
MW-BW-28-A	Dune Sand Aquifer	Fort Ord	65.0	63.7	70.3	70.30
MW-BW-49-A	Dune Sand Aquifer	Fort Ord	12.6	8.9	11.3	11.30
MW-BW-81-A	Dune Sand Aquifer	Fort Ord	11.8	8.2	10	10.00
MW-BW-82-A	Dune Sand Aquifer	Fort Ord	11.0	7.9	9.5	9.50
MW-OU2-13-A	Dune Sand Aquifer	Fort Ord	88.1	89.6	94.4	94.40
MW-OU2-32-A	Dune Sand Aquifer	Fort Ord	9.1	7.2	8.1	8.10
MW-OU2-34-A	Dune Sand Aquifer	Fort Ord	8.4	4.7	6.6	6.60
CDM MW-1 Beach	Upper 180-Foot Aquifer (a)	Seaside Basin Water Master	4.7	3.3	3.3	3.30
MW-02-05-180	Upper 180-Foot Aquifer (a)	Fort Ord	8.0	6.5	8.4	8.40
MW-02-10-180	Upper 180-Foot Aquifer (a)	Fort Ord	8.2	6.5	7.3	7.30
EW-12-04-180M	Upper 180-Foot Aquifer (a)	Fort Ord	7.3	6	6.5	6.50
MW-02-13-180U	Upper 180-Foot Aquifer (a)	Fort Ord	8.1	6.8	7.3	7.30
MW-02-06-180	Upper 180-Foot Aquifer (a)	Fort Ord	8.0	6.1	7.3	7.30
MW-B-05-180	Upper 180-Foot Aquifer (a)	Fort Ord	-4.9	-8	-3.4	-3.4
MW-BW-55-180	Upper 180-Foot Aquifer (a)	Fort Ord	-1.2	-6.4	-5.7	-5.7
MW-OU2-29-180	Upper 180-Foot Aquifer (a)	Fort Ord	-2.9	-9	-7.2	-7.2
MP-BW-42-345	Lower 180-Foot Aquifer (a)	Fort Ord	-3.3	-10.4	-7.9	-7.90
MW-BW-04-180	Lower 180-Foot Aquifer (a)	Fort Ord	-4.7	-11	-11	-11.0
MW-OU2-66-180	Lower 180-Foot Aquifer (a)	Fort Ord	-4.2	-10	-9.2	-9.2
TEST2	Lower 180-Foot Aquifer (a)	Fort Ord	-4.7	-11.9	-10.6	-10.6
MP-BW-50-339	Lower 180-Foot, 400-Foot Aquifer (a)	Fort Ord	-4.5	-8.5	-7.1	-7.1
MPWMD#FO-11S	400-Foot Aquifer (a)	Seaside Basin Water Master	-34.0	-25.9	-6.4	-44.4
MW-OU2-07-400	400-Foot Aquifer (a)	Fort Ord	-0.5	-6.6	-4.2	-4.2
014S001E24L002M	Deep Aquifers	USGS	-29.7	-29.6	-20.8	-34.90
014S001E24L003M	Deep Aquifers	USGS	-10.3	-6.8	3.5	-18.90
014S001E24L004M	Deep Aquifers	USGS	-28.0	-34.7	-21.1	-41.60
014S001E24L005M	Deep Aquifers	USGS	-23.4	-26.6	-6	-39.70
14S02E33E01	Deep Aquifers	MCWRA	-78.9	-43.8	-29.3	-69.90
14S02E33E02	Deep Aquifers	MCWRA	-19.2	-21.1	-13.9	-22.60

Site Name	Aquifer	Collection Agency	Fall 2025	MT	MO	IM5
PZ-FO-32-910	Deep Aquifers	MCWRA	-54.8	-44.1	-19.7	-65.60
MPWMD#FO-11D	Deep Aquifers	Seaside Basin Water Master	-12.7	-4.8	3.3	-15.7
Sentinel MW #1	Deep Aquifers (b)	Seaside Basin Water Master	-23.0	-25.4	-18.8	-37.8
Corral de Tierra Area						
15S/02E-25C01	El Toro Primary Aquifer System	MCWRA	25.0	23	33	21.00
15S/03E-18P01 (c)	El Toro Primary Aquifer System	MCWRA	-5.8	-7.8	10.2	-24.00
16S/02E-01M01 (c)	El Toro Primary Aquifer System	MCWRA	308.7	310.6	320.3	313.40
16S/02E-02G01 (c)	El Toro Primary Aquifer System	MCWRA	298.7	297.1	301.8	300.20
16S/02E-02H01 (c)	El Toro Primary Aquifer System	MCWRA	303.3	291.7	298.7	301.30
16S/02E-03A01 (c)	El Toro Primary Aquifer System	MCWRA	225.8	218	223	215.70
16S/02E-03F50 (c)	El Toro Primary Aquifer System	MCWRA	226.1	231.3	236.3	230.90
16S/02E-03H01 (c)	El Toro Primary Aquifer System	MCWRA	205.6	207	217	212.00
16S/02E-03J50 (c)	El Toro Primary Aquifer System	MCWRA	222.6	199.5	216.3	215.40
Robley Deep (South)	El Toro Primary Aquifer System	MCWRA	168.5	169.8	183.5	160.50
Robley Shallow (North)	El Toro Primary Aquifer System	MCWRA	242.1	245.2	255.2	230.70

Notes:

(a) The RMS network is selected to distinguish the upper 180-Foot Aquifer and the lower 180-Foot Aquifer since conditions in the upper 180-Foot are distinct from those in the lower 180-Foot Aquifer, as described in *Section 5* of the Monterey GSP.
(b) Orange cells indicate the groundwater elevation is below the MT, yellow cells indicate the groundwater elevation is above the MT but below the MO and green cells indicate the groundwater elevation is above the MO.
(c) Since the previous annual report, the groundwater elevations that establish the SMC for the RMS wells have been updated based on changes to representative monitoring elevations.

5.1.1.1 Minimum Thresholds

In the Marina-Ord Area, the MTs for chronic lowering of groundwater levels were set to minimum groundwater elevations historically observed between 1995 and 2015, and in the Corral de Tierra Area, groundwater elevations observed in 2015. In WY 2025, one well in the Dune Sand Aquifer, one well in the lower 180-Foot and 400-Foot Aquifers, five wells in the Deep Aquifers, and five wells in the El Toro Primary Aquifer System exceeded their MTs, as indicated by the orange cells.

5.1.1.2 <u>Measurable Objectives and Interim Milestones</u>

The MOs for chronic lowering of groundwater levels represent target groundwater elevations higher than the MTs. These MOs provide operational flexibility to ensure that the Subbasin can be managed sustainably over a reasonable range of hydrologic variability. Five RMS wells in the Dune Sand Aquifer, seven in the upper 180-Foot Aquifer, five in the lower 180-Foot and one in 400-Foot Aquifer, and three in the El Toro Primary Aquifer System had groundwater elevations higher than their MO in WY 2025, as represented by the green cells in Table 5-1**.** No RMS well in the Deep Aquifers had groundwater elevations higher than their MO.

To help reach MOs, the MCWDGSA and SVBGSA set IMs at 5-year intervals. The 2027 IM (IM5) for groundwater elevations are also shown in Table 5-1. The WY 2025 groundwater elevations in 36 wells are higher than the 2027 Ims.[8]

In the lower 180-Foot and 400-Foot Aquifers, the Deep Aquifers, and the El Toro Primary Aquifer System, the 2027 IMs continue the downward trend of groundwater elevations in most RMS wells before increasing toward the MOs because of the time lag associated with seeing groundwater benefits from (P&MAs). This was done to set more realistic IMs where groundwater elevations have been declining historically; however, the goal is to raise groundwater levels as quickly as possible. It is acknowledged that these groundwater level declines may have additional impact to beneficial uses and users beyond those associated with the MT.

5.1.1.3 <u>Undesirable Result</u>

The chronic lowering of groundwater levels UR is a quantitative combination of groundwater elevation MT exceedances. For the Subbasin, the groundwater elevation UR is:

Over the course of any one year, exceedance of more than 20% of the groundwater level MTs in either:

a) both the Dune Sand Aquifer and upper 180-Foot Aquifer, or
b) both the lower 180-Foot and 400-Foot Aquifer, or
c) the Deep Aquifers, or
d) the El Toro Primary Aquifer System.

<u>Marina-Ord Area</u>

Dune Sand Aquifer and Upper 180-Foot Aquifer

- One RMS well in the Dune Sand Aquifer, out of 16 RMS wells that screened the Dune Sand and upper 180-Foot Aquifers, exceeded its MT, which represents 6% of the total RMS wells in the Dune Sand and upper 180-Foot Aquifers.

[8] The IMs at the Deep Aquifers were lower than MT since most P/MAs will not be implemented by 2027, and the water levels at the Deep Aquifers were assumed to decrease until 2032.

Lower 180-Foot and 400-Foot Aquifer

- One out of seven RMS wells, that screen the lower 180-Foot and 400-Foot Aquifers exceeded their MTs, which represents 14% of the total RMS wells in the lower 180- and 400-Foot aquifers.

Deep Aquifers

- Five out of nine RMS wells that screen the Deep Aquifers exceeded their MTs, which represents 56% of the total RMS wells in the Deep Aquifers.

Corral de Tierra Area

- Five out of 11 RMS wells, or 46%, that screen the El Toro Primary Aquifer exceeded their MTs.

The WY 2025 conditions in the Deep Aquifers and El Toro Primary Aquifer, as described above, constitute an UR per the Monterey GSP. Due to the conditions in the Marina-Ord Area and Corral de Tierra Area, the Subbasin GSAs will work to implement P&MAs to improve groundwater conditions.

5.1.2 Reduction in Groundwater Storage

The SMCs for chronic lowering of groundwater levels and seawater intrusion are proxies for the reduction in groundwater storage SMC. As discussed in Sections 5.1.1 and 5.1.3, undesirable results in groundwater elevation and seawater intrusion have been observed in WY 2025, and therefore, by definition, it constitutes an undesirable result for reduction in groundwater storage.

5.1.3 Seawater Intrusion

Section 4.4 above discusses WY 2025 seawater intrusion monitoring in RMS and non-RMS wells of the seawater intrusion monitoring network. The seawater intrusion MT and MO chloride isocontour line in the Monterey Subbasin is defined as:

- *Approximately 3,500 feet from the coast in the Dune Sand Aquifer, upper 180-Foot Aquifer and Deep Aquifers. This distance is generally consistent with the location of Highway 1 in the Monterey Subbasin and seaward of groundwater extraction in the Subbasin; and*
- *The approximate location in 2015 of the 500 mg/L chloride concentration isocontour in the lower 180-Foot and 400-Foot Aquifers.*

As shown in Section 4.4, one well inland of the seawater intrusion MT isocontour line in the lower 180-Foot and 400-Foot Aquifers exceeded the threshold defined in the Monterey GSP at 500 mg/L of chloride. As such, the most recent 500 mg/L chloride concentration isocontour is inland of its location in 2015 and therefore constitutes an exceedance of the MT (Figure 4-38).

The seawater intrusion UR in the Subbasin is defined as any exceedance of the MT. The WY 2025 conditions as described above constitute a seawater intrusion UR per the Monterey GSP.

5.1.4 Water Quality

The water quality MTs are set at no additional wells with COC concentrations above the regulatory standard for each constituent, above those that existed in 2019. The MT for each COC is provided in Table 5-2. Based on the additional ILRP data provided by CCRWQCB, the ILRP COCs were reevaluated. No MTs for the ILRP wells need to be revised. Table 5-2 also shows (1) the wells sampled in WY 2025 that had higher concentrations than the regulatory standard and (2) the total number of wells that have had higher concentrations than the regulatory standard in its most recent sample, and (3) the number of wells that exceeded the MT based on most recent results.

The water quality MTs represent conditions that were determined to be significant and unreasonable because groundwater quality with higher concentrations than these values may cause a financial burden on groundwater users. Public water systems with COC concentrations above the MCL are required to add treatment to the drinking water supplies or drill new wells. Agricultural wells with COCs that significantly reduce crop production may reduce growers' yields and profits.

In WY 2025, there was 1 exceedance of the MTs established for DDW public water system supply wells for arsenic and none for the ILRP on-farm domestic and irrigation wells in the Corral de Tierra Area. There were no exceedances of the MTs in the Marina-Ord Area. The last column in Table 5-2 includes the number of wells above the MTs, with the COCs that exceeded the MT highlighted in orange. The negative numbers in the last column indicate that the number of wells with COC concentrations above the regulatory limit is now lower than the number of wells with COC concentrations above the regulatory limit in 2019.

Table 5-2 Water Quality Exceedances in WY 2025

Constituent of Concern (COC)	Minimum Threshold/ Measurable Objective (Baseline number of wells with COC concentrations above the regulatory standard in 2019) (b)	Number of Wells Sampled in WY 2025 with COC Concentrations Above the Regulatory Standard	Total Number of Wells with COC Concentrations Above the Regulatory Standard in Most Recent Sample[1]	Number of Wells above the Minimum Threshold (negative if fewer than MT)
Marina-Ord Area				
DDW Wells				
Carbon Tetrachloride	0	0	0	0
Trichloroethane	0	0	0	0
Corral de Tierra Area				
DDW Wells				
Aluminum	0	0	0	0
Arsenic	10	9	12	2
Chromium	1	0	0	-1
Foaming Agents (MBAS)	3	0	0	-3
Iron	10	2	10	0
Manganese	11	3	11	0
Radium 226 + Radium 228	0	0	0	0
Specific Conductivity	1	0	0	-1
Total Dissolved Solids	1	0	0	-1
Zinc	1	0	0	-1
ILRP On-Farm Domestic Wells				
Specific Conductance	0	0	0	0
Total Dissolved Solids	1	0	1	0

Notes:

(a) highlighted cells indicate the exceedance of MT.

(b) The Monterey GSP did not include the baseline number of wells with COC concentrations above the regulatory standard for the Marina-Ord Area, because no RMS wells were detected above the MCL. Therefore, the baseline for these COC is 0.

5.1.5 Land Subsidence

The MT for land subsidence in the Monterey GSP is zero net long-term subsidence, with no more than 0.1 foot per year of estimated land movement to account for InSAR measurement errors. Because the MTs of zero net long-term subsidence are the best achievable outcome, the MOs and IMs are identical to the MTs. The land subsidence UR for the Subbasin is defined as zero exceedances of the MTs for subsidence in any one year.

Annual subsidence data from October 2024 to October 2025 demonstrated land subsidence of less than 0.1 ft/year, as shown on Figure 4-49. Therefore, the land subsidence IM and MO are being met, and the Subbasin has not experienced a land subsidence UR.

5.1.6 Interconnected Surface Water

Groundwater elevation is used as a proxy in ISW RMS wells to monitor the potential depletion of ISW due to pumping and the health of Groundwater Dependent Ecosystem (GDE)s located near the City of Marina. As shown in Section 4.7, groundwater elevation in Fall 2025 was above the MT and MO set at the ISW RMS monitoring well. One shallow well was installed in WY 2024 in the Corral de Tierra Area to monitor depletions of ISW; however, the well was dry and no groundwater elevation measurements were taken so no ISW data are presented in this Annual Report.

5.2 GSP Implementation Activities

Groundwater management activities that occurred in WY 2025 associated with GSP implementation are detailed in this section. These include the activities of MCWDGSA and SVBGSA, and partners that promote groundwater sustainability and are important for reaching the sustainability goal defined in the Monterey GSP.

This section reports on activities conducted throughout WY 2025 to the end of calendar year 2025 (i.e., October 2024 to December 2025) with the entire period referred to as 2025. Sections are included for each of the following four categories of activities:

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

In addition, plan implementation activities for the upcoming water year are discussed with their specific work streams within each category. Progress on individual tasks and planned activities within each category are summarized in Table 5-3 through Table 5-7. The tasks carried out by SVBGSA align with the tasks identified in the SVBGSA Work Plan.

In addition, the Subbasin GSAs’ progress towards addressing DWR Recommended Corrective Actions on the Monterey Subbasin GSP is described in the Data Expansion and SGMA Compliance section (Section 5.2.3). Progress on DWR’s Recommended Corrective Actions is summarized in Table 5-6.

5.2.1 General Administration

Progress on general administration tasks and planned activities are described below and summarized in Table 5-3.

5.2.1.1 MCWDGSA and SVBGSA Common Activities

MCWD, acting as the grantee, entered into agreement for the Sustainable Groundwater Management (SGM) Round 2 Implementation Grant for GSP implementation activities in the Monterey Subbasin on January 25, 2024. MCWD and SVBGSA entered into a sub-agreement for

SVBGSA implementation of the Grant. The award included funding for the following components to be completed by the grant end date of March 31, 2026.

- **Data expansion and SGMA compliance**: installation of monitoring wells and data collection to address data gaps identified in the Monterey GSP; update of the HCM with the data collected in preparation of the 5-year GSP periodic evaluation; and refining representation of the Subbasin in the regional SVIHM and Seawater Intrusion Model.
- **Project Update Report**: development of Deep Aquifers management options building upon findings of the Deep Aquifers Study; further assessment of multi-regional project scenarios and impacts on the Monterey Subbasin, building upon the feasibility studies described in Section 5.2.4.
- **Corral de Tierra engagement of interested parties and domestic well owners**: interested party engagement and outreach to underrepresented communities and domestic well owners in the Corral de Tierra Area; and coordination with the Water Quality Coordination Group, Land Use Jurisdiction Coordination Program, and other partner agencies.

During the reporting period, MCWDGSA and SVBGSA continued to carry out implementation activities pursuant to the agreement and conducted grant administrative activities.

5.2.1.2 MCWDGSA Administration

The MCWDGSA continued general administrative tasks associated with the Board, the MCWDGSA/SVBGSA steering committee (described further in Section 5.2.2.1), communications, and collaboration with partner GSAs.

5.2.1.3 SVBGSA Administration

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

In alignment with the SVBGSA work plan, 13 Board of Directors meetings and multiple Board committee meetings—including 5 Executive Committee and 8 Budget Finance Committee meetings—were conducted from October 2024 to December 2025 to ensure effective decision-making and oversight. Coordination efforts with MCWD continued with 4 meetings of the Steering Committee.

Grant administration remained a key focus, with ongoing management of the SGM Round 1 Implementation Grant, SGM Round 2 Salinas Valley Implementation Grant, SGM Round 2 Monterey Implementation Grant with MCWDGSA, and the Multi-benefit Land Repurposing Grant with Central Coast Wetlands Group (CCWG) and partners. A Groundwater Sustainability Fee 5-year evaluation by Hansford Economic Consulting was finalized and accepted by the Board in

November 2024. In February 2025, the Board implemented fee changes for fiscal year (FY) 2026 that they approved in a public hearing in June 2025.

Financial oversight and budget preparation continued through the revised format for budget and financial reports that were introduced in October 2023. The FY 2026 work plan, approved in March 2025, comprised greater detail and included the past and current years for consistency and projections for FY 2027.

The Subbasin Implementation Committees were renamed Subbasin Committees (SBCs) and their role was more clearly defined. Their primary purpose is to facilitate the exchange of information between SVBGSA and local stakeholders within each subbasin. SBC members play a vital role in receiving updates and technical information from the SVBGSA and in disseminating that information back to their communities to promote awareness, transparency, and local engagement in groundwater sustainability efforts.

The Charter and Bylaws for the SVBGSA Advisory Committee (AC) were updated to modify the AC structure and reduce the number of seats while continuing to represent interests which are not directly represented on the Board of Directors. The AC's purpose continues to be to provide input and develop a consensus for recommendations to the Board of Directors.

Multiple administrative improvements were actively pursued. A Board ad-hoc committee was formed to evaluate services provided by RGS and they completed a performance review of the General Manager in September 2025. Staff continued tracking compliance for Form 700 completion, stipend and mileage reimbursement, and agreement to the Code of Conduct. Resolutions were adopted for Real Property Transfer, Information Technology Usage Policy, Procurement Policy, and Contracted Staffing Policy. Board development initiatives included a Brown Act training and review of Board roles and responsibilities in August 2025.

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

Progress according to individual General Administrative tasks within the work plan are summarized in Table 5-3.

Table 5-3 Progress on General Administrative Tasks as of December 2025

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
MCWDGSA and SVBGSA Common Activities						
Grant Administration	SGM Round 2 Implementation Grant Administration.			x		MCWDGSA grant administration as the grantee with SVBGSA support.
Board and Committee Activities	MCWDGSA/SVBGSA Technical and Steering Committee.			x		Regularly occurring Technical Committee and quarterly Steering Committee meetings; the Steering Committee met 3 times during the reporting period.
MCWDGSA Administrative Activities						
Board and Committee Activities	Board of Directors.			x		Ongoing; the MCWDGSA Board of Directors meets monthly.
Grant Administration	SGM Round 2 Implementation Grant Administration.			x		Serving as the grantee for the Monterey Subbasin in addition to administering grant-related work efforts in the Marina-Ord Area.
Policy Development	Develop GSA ordinances to expand regulatory mechanisms.			x		Ongoing; developing a Monitoring MOU in collaboration with SVBGSA and MCWRA.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
SVBGSA Administrative Activities						
	Manage Board of Directors, Executive Committee, Budget and Finance Committee Activities.			x		Ongoing; the Board of Directors meets monthly; the Board met 13 times, Executive Committee met 5 times, and the Budget and Finance Committee met 8 times.
	Manage MCWDGSA and ASGSA SVBGSA partnerships.			x		Held 3 Coordination Committee (CC) and 4 Steering Committee (SC) meetings. Staff is preparing amendments to the coordination/framework agreements.
	Manage SGM Round 1, SGM R2 SVBGSA, and SGM R2 MCWDGSA Implementation Grants.			x		Ongoing.
	Develop scope of work, timeline, and process.				x	Joint Advisory Committee and Board meeting to provide input for scope held in October, survey conducted and shared with AC in December, Board made a final decision in January 2024. Agreement with HEC executed in March 2024.
	Conduct Sustainable Groundwater Fee 5-Yr Evaluation and prepare memorandum. Manage the process, outreach, and implementation.				x	Technical Memorandum by HEC accepted by the Board in Nov 2024. Advisory Committee developed a recommendation for implementing the Fee changes in FY 2026, which was approved by the Board in Feb 2025. FY 2026 fees approved by Board review in June 2025. Developed an interactive fee map.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
	Improve the format and process for financial reports.				x	New budget and financial report format developed in October. Bi-monthly financial reports produced going forward. Continuing to assess and include enhancements for greater transparency.
	Prepare work plan and annual draft budget.		x			FY 2027 work plan prepared for Board review in Feb/Mar 2026.
	Review and update Agency policies.			x		Subbasin Committee Program updated in August 2025. Procurement Policy Updated in Nov 2025. Executive Committee is reviewing potential changes to the JPA and Bylaws.
	Assess and improve administrative processes.			x		Ongoing.
	Determine appropriate staffing support for administrative services.			x		Annual process for GM performance and RGS services review carried out pursuant to Contracted Staffing Policy.
	Engage Board and staff in Agency vision and values discussion.				x	Prepared a Code of Conduct that is included in Amended Bylaws, approved by Board in August 2024.
	Assess structure, goals, and purpose of all committees.				x	Developed SBIC Membership Program, conducted solicitation for new term. Committee members appointed by Board in September 2024. Advisory Committee structure and role updated with revised Charter and Bylaws approved in June 2025.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
	Develop Board development strategy.				x	Board resource library available on svbgsa.org.
	Provide Board development through training and networking opportunities.			x		Ongoing.
	Explore improving Advisory Committee structure and objectives.			x		New committee members seated in Fall 2025. Working on providing clearer guidelines for their responsibilities and alignment with other committees.

5.2.2 Coordination and Engagement

The Subbasin GSAs coordinated regularly through staff and consultant meetings during the reporting period. Additionally, they coordinated and engaged with stakeholders and agencies in their respective Management Areas described below. Progress on individual Interested Parties and Outreach tasks and planned activities are summarized in Table 5-4.

5.2.2.1 MCWDGSA and SVBGSA Coordination

The Subbasin GSAs' staff and consultants continued to meet regularly during 2025 through the Technical Committee to coordinate implementation activities, including data management, monitoring, model development, funding and grant applications, and P&MA development. The MCWDGSA/SVBGSA Technical Committee was established in the 2018 Framework Agreement and includes staff and technical consultants from the two agencies.

The MCWDGSA/SVBGSA Steering Committee continued to meet on a quarterly schedule during 2025. The MCWDGSA/SVBGSA Steering Committee was established in the 2018 Framework Agreement between the two agencies and consists of the General Managers and one board member from each agency. The Steering Committee met three times during 2025.

5.2.2.2 MCWDGSA Activities

Public Education and Engagement

The MCWDGSA practices stakeholder engagement through its GSA website (http://mcwd.org/) and public meetings. During the reporting period, MCWDGSA held Board of Directors public meetings coincidentally with MCWD Board meetings on the third Monday of every month. The GSA will continue to meet regularly in WY 2026. Additionally, MCWDGSA performed the following specific public education and engagement efforts in 2025:

- Public outreach during construction: In support of new monitoring well construction, MCWDGSA conducted proactive outreach to inform residents and stakeholders of construction schedules, anticipated traffic controls, and potential noise. Outreach activities included hosting information sessions, distributing letters to residents, posting signs along major roads, coordinating outreach to the local mountain biking community, and providing notifications to the U.S. Army, the Presidio, and other institutional stakeholders. These efforts were intended to promote transparency, minimize disruptions, and maintain open communication throughout construction activities.
- Public Data Portal: MCWDGSA initiated development of a public data portal to improve transparency and accessibility of groundwater and hydrologic information for the Monterey Subbasin. The web portal will allow the public to view and download groundwater levels, water quality, precipitation, and other data collected by MCWDGSA, supporting a broader understanding of basin conditions and SGMA implementation progress. The public data portal is anticipated to be available online in 2026.

- Water education and outreach for the public: MCWD visited the Crumpton Elementary School to teach students about water conservation, professions within the water industry, and groundwater. Students were taught about local water sources and the process of transporting water from the ground to their homes. Future educational presentations at schools within the MCWDGSA area are anticipated in 2026.

Interagency Coordination

MCWDGSA participates in regular intra- and inter-basin coordination by being a member of the SVBGSA Advisory Committee, Monterey Subbasin Implementation Committee, Seaside Watermaster Technical Advisory Committee (TAC), Deep Aquifers Working Group, Pure Water Monterey Coordination and Management Committee, and MCWRA Water Resources Basin Management Advisory Committee (WRAC), and MCWRA Reservoir Operations Advisory Committee. Its consultant, EKI Environment & Water, serves on the SVBGSA Groundwater TAC.

Additionally, MCWDGSA held as-needed meetings with individual stakeholders and agencies to coordinate. MCWDGSA aimed to establish regular point of contacts with the Seaside Watermaster, MPWMD, MCWRA, and the U.S. Army regarding data sharing, access to monitoring wells, and coordinated monitoring within the Monterey Subbasin and adjacent Subbasins. Because the Marina Ord Area's monitoring network consists largely of wells not owned by MCWD, the District has been working to obtain access agreements with these agencies to initiate its own groundwater elevation monitoring program.

During the reporting period, progress has been made with the U.S. Army: MCWDGSA coordinated with Army BRAC and USACE representatives through Ahtna Global, LLC to formalize access to Army monitoring wells for data logger deployment. A draft MOU was completed and passed MCWD legal review in early 2026; the Army is currently drafting a formal license to authorize deployment. Three wells overlap with a concurrent request from Cal Am Water, and a data-sharing arrangement is being coordinated among parties. MCWDGSA is positioned to be the first to deploy once the license is finalized.

5.2.2.3 SVBGSA Activities

During 2025, SVBGSA continued collaboration. SVBGSA continued to coordinate with partner agencies, conduct extensive engagement of stakeholders, and outreach on groundwater and SGMA activities. The Monterey Implementation Committee met 8 times during 2025, in addition to the MCWDGSA/SVBGSA Steering Committee meetings previously noted.

Staff of SVBGSA had frequent discussions with MCWD and MCWRA counterparts ensuring the alignment between these organizations. SVBGSA and MCWRA continued to strengthen collaboration further, particularly with monitoring and data activities and the tasks under the Round 2 SGM Implementation Grants. SVBGSA also held other ongoing meetings with Monterey County Environmental Health Bureau, land use jurisdictions, and Preservation, Inc., who assists growers with Irrigated Lands Regulatory Program compliance.

SVBGSA convened the Groundwater Technical Advisory Committee (GTAC) 3 times. The GTAC reviewed and provided technical input on the Deep Aquifers Study monitoring recommendations, Seawater Intrusion Model (SWIM) revisions, and the Salinas Valley Integrated Hydrologic Model (SVIHM) revisions.

Broad outreach to a diverse audience about a complex topic remains a challenge. SVBGSA continues to conduct periodic outreach with small water systems, domestic well owners, DACs, growers not currently involved, and other stakeholders. SVBGSA worked with Miller Maxfield, a local communications firm, to implement a communication strategy to expand the reach and enhance the local understanding of groundwater. Miller Maxfield assisted with improving the website, preparing outreach materials, and using social media to effectively engage more people. A "story map"—which is a web-based tool that combines interactive maps, photos and text to share narrative-driven stories—was added to the SVBGSA website. The SVBGSA story map provides an overview of the Salinas Valley, how water moves through the Valley, groundwater challenges, and sustainability goals.

SVBGSA partnered with the Environmental Defense Fund (EDF) to plan a Water Leadership Institute program for the Salinas Valley. The program goals include building water knowledge and leadership skills, centering the voices of underserved and underrepresented community members, and supporting meaningful understanding and participation in local water decision-making. The program is planned for the winter of 2026.

To build awareness about water use efficiency among rural residents and empower them to contribute to sustainable groundwater management, the Salinas Valley Basin Groundwater Sustainability Agency created the Water Efficiency Pilot Program (WEPP) to assist rural residential water users served by small water systems or private wells. A webpage developed in 2025 outlines efficient conservation practices and builds on input collected from a community survey on their interest in water efficiency tools.

SVBGSA's approach to promoting irrigation efficiency involves supporting existing agricultural extension efforts for efficient agricultural irrigation. The goal is for the extension programs to promote voluntary actions that will result in reduced demand. SVBGSA partnered with the University of California Cooperative Extension, a neighboring GSA Pajaro Valley Water Management Agency, and local Resource Conservation Districts to develop a website promoting water-efficient agricultural practices appropriate for the Central Coast. The website is under development and will be published during WY 2026.

Progress on individual Interested Parties and Outreach tasks within the work plan are summarized in Table 5-4.

Table 5-4 Progress on Interested Parties Coordination and Outreach as of December 2025

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
MCWDGSA and SVBGSA Coordination Activities						
Inter-basin Coordination	Technical Committee.			x		Regularly occurring Technical Committee meetings between staff and consultants and as-needed communications.
	Steering Committee.			x		Quarterly Steering Committee meetings; the Steering Committee met 3 times.
MCWDGSA Coordination and Outreach Activities						
Public Education and Engagement	Public outreach during well construction.			x		Prior to and during construction of the new monitoring wells.
	Public Data Portal.		x			Development of a public data portal underway; anticipated completion June 2026.
	Water education and outreach.			x		Ongoing water education and outreach activities conducted during WY 2025, including presentations to CSUMB classes on local water infrastructure.
Agency Committees and Meetings	Seaside Watermaster Technical Advisory Committee.			x		Participates in the Seaside Watermaster TAC and TAC meetings.
	SVBGSA Advisory Committee.			x		Participates in the SVBGSA AC and AC meetings.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
	Subbasin Implementation Committees: Monterey (Corral de Tierra Management Area).			x		District staff currently serves as the chair of the committee and participates in committee meetings.
	Deep Aquifers Working Group.			x		Participates in the Deep Aquifers Working Group.
	MCWRA Basin Management Advisory Committee and Reservoir Operation Advisory Committee.			x		District staff participate in MCWRA committee meetings.
	Pure Water Monterey Coordination and Management Committee.			x		District staff participates in committee meetings and activities to coordinate advanced treated water planning and delivery.
	Groundwater Technical Advisory Committee.			x		Consultant participates in GTAC meetings to review and provide input on Deep Aquifer management, Seawater Intrusion Model, and regional projects planning.
Individual Stakeholder Coordination	Seaside Watermaster, MPWMD, MCWRA, M1W, and the U.S. Army.			x		Staff and consultants held as-needed meetings with individual stakeholders and agencies to coordinate specific work efforts. A draft MOU was completed to formalize access to U.S. Army monitoring wells.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
SVBGSA Coordination and Outreach Activities						
Use SVBGSA Committees and Partnerships for informing constituents	Host Advisory Committee (AC).			x		AC meets bi-monthly or as needed to provide community input to the BOD; held 4 AC meetings.
	Host Subbasin Implementation Committees.			x		Held 7 Monterey, 9 Eastside,4 Langley, 6 Forebay,5 Upper Valley and 13 180/400 Committee meetings.
	Host Groundwater Technical Advisory Committee (GTAC).			x		Meets as needed; held 3 GTAC meetings.
	Coordinate meetings with partner agencies: MCWRA, M1W, MCWDGSA, ASGSA, MCEHB, Water Quality Coordination Group, Land Use Coordination Group.			x		Regularly met with partner agencies for general coordination and on specific work streams.
	Develop scientific communication materials and outreach materials for events.			x		Updated materials for 2025 North Monterey County Community Resource Festival. Overview “story map” completed. Preparing subbasin “one-pagers.”
Engage with Rural and Underrepresented Communities	Form Rural and Underrepresented Communities Working Group.				x	Underrepresented and Rural Communities Working Group met 3 times in fall 2025 to provide input on Water Leadership Institute (WLI) to be held January - March 2026.
	Implement outreach and engagement.			x		Staff meeting with disadvantaged community local non-profit representatives as requested; partnering with EDF and other organizations to plan the Salinas Valley Water Leadership Institute.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Engage with Rural and Underrepresented Communities *(Continued)*	Translation of SVBGSA website and key information.			x		Activated translation feature on svbgsa.org. Regularly produce outreach materials in two languages.
Enhance Partnerships with Domestic Well Owners	Support Dry Well Notification Program.			x		Information about the Dry Well Notification Program distributed to interested parties and shared via social media channels.
	Water Awareness Committee/ Conservation Communication.				x	Water Awareness Committee made a determination that is not serving original purpose and dissolved in Fall 2025.
	Domestic Well Owner Outreach/ Water Use Efficiency Resources.			x		Carrying out Rural Residents Water Efficiency Pilot Program: webpage live in Feb 2025, survey completed in Summer 2025. Free home assessments currently offered through March 2026.
Develop and Support Website for Central Coast Ag Water BMPs	Engage with partner agencies and contract with website developer to create website.			x		Work under way with RCDMC, RCDSC, PVWMA, SVBGSA and UCCE collaborating on website development and content. Executed contract with TreeTop Web Design for building the website. Draft website has been created and partners are adding content. UCCE CropManage website has also been updated.

5.2.3 Data Expansion and SGMA Compliance

During WY 2025, the Subbasin GSAs continued to build momentum in filling data gaps, expanding monitoring networks, and advancing groundwater modeling efforts. Collectively, the GSAs focused on enhancement of the numerical models, achieving major milestones during the reporting year. These updates provide a strong technical foundation for evaluating P&MAs. Progress on individual Data Expansion and SGMA Compliance tasks and planned activities are summarized in Table 5-5.

5.2.3.1 MCWDGSA and SVBGSA Common Activities

The Subbasin GSAs and partner agencies carried out data expansion and groundwater modeling tasks identified in the Monterey Subbasin GSP and the SGM Round 2 Implementation Grant. Monterey Subbasin GSP Implementation Actions are noted with "I#" action numbers below.

- I5 – Groundwater Technical Advisory Committee, formerly the Seawater Intrusion Working Group (SWIG): The GTAC was formed in late 2022 by the SVBGSA and is an ad hoc committee comprised of third-party experts that represent stakeholders within the SVGB. These experts have expertise in hydrology, hydrogeology, hydrological modeling, civil engineering, or related fields. The GTAC continues the responsibilities of the former SWIG TAC and is convened to provide technical input on multi-subbasin groundwater management strategies including management of seawater intrusion and the Deep Aquifers. During the reporting period, SVBGSA held two GTAC meetings in May and October 2025. Through GTAC activities, the Subbasin GSAs continued to work through technical review and feedback on (1) the SWIM and SVIHM updates; and (2) modeling of the regional projects.
- I6 – Future Modeling of Seawater Intrusion and Regional Projects: Two regional models currently exist for purposes of supporting SVBGSA and MCWDGSA's ongoing SGMA planning and implementation efforts: (1) the SWIM and (2) the SVIHM. The SWIM is a publicly available groundwater flow and chloride transport model originally developed by SVBGSA technical consultants Montgomery & Associates (M&A) in 2022 that is designed to estimate the effects of P&MAs on seawater intrusion conditions within the coastal Salinas Valley Basin. Since its initial development, the SWIM has undergone multiple rounds of revisions to incorporate the latest data and representation of the regional HCM and improve model performance to historical water level and chloride concentration observations collected throughout the Monterey, 180/400-Foot Aquifer, and Seaside Subbasins. The most recent version of the SWIM as of Fall 2024 was used for the initial round of 180/400 Subbasin Feasibility studies. The SVIHM is a regional groundwater flow model developed by the USGS that covers the entirety of the SVB. It is anticipated that the SVIHM will ultimately be used to estimate water budgets and cross-boundary flows between basins within the greater SVB; however, the version of the SVIHM that was publicly released by the USGS in 2025 is poorly calibrated in the Monterey and Seaside

Subbasins in particular, and further required substantial improvements to be consistent with the ongoing updates completed to the SWIM over the past several years.

In WY 2025, MCWDGSA and SVBGSA performed a coordinated round of updates to the historical SWIM and SVIHM in attempts to bring these two regional models into greater alignment and to improve their representation of local hydrogeology and calibration to historical water level and chloride conditions within the coastal Salinas Valley Basin. These modifications are were jointly completed by MCWDGSA and SVBGSA's technical consultants, and included the following specific efforts:

- Revising SVIHM layering within the coastal Monterey, Seaside, and 180/400 Subbasins to reflect the geometry and thickness of principal aquifer and aquitard units as represented in the refined Valley-wide HCM and previously incorporated into the SWIM in WY 2024;
- Revising SVIHM recharge rates within the Dune Sands surficial soils complex to reflect estimated recharge rates from prior studies and reflected in the SWIM and MBGWFM;
- Extending the historical SWIM simulation period and calibration datasets through WY 2022 (i.e., October 2022) to be consistent with the SVIHM historical period;
- Revising agricultural, domestic, municipal and industrial groundwater pumping assignments within the SWIM and SVIHM to reflect the latest groundwater extraction metering data from the GEMS database and land use and cropping information collected by DWR and the Subbasin GSAs;
- Revising SVIHM and SWIM ocean boundary conditions to better reflect offshore hydrogeology and near-shore seawater intrusion conditions based on recent geophysical surveys completed by DWR, MCWD, and SVBGSA and the results of the Deep Aquifer Study (SVBGSA, 2024); and
- Recalibrating SVIHM and SWIM aquifer properties to improve model performance to historical water level and chloride concentration monitoring data collected throughout the coastal Salinas Valley Basin.

These updates to the historical SVIHM and SWIM were documented in a series of technical memoranda published to the SVBGSA website in October 2025 (https://svbgsa.org/resources/groundwater-models. These memoranda also identified a list of recommendations for additional updates to the SWIM and SVIHM that would further improve model performance within the Monterey and Seaside Subbasins, particularly within the Deep Aquifers. Additional updates to the SWIM and SVIHM that are continuing into WY 2026 include:

- Revising SWIM/SVIHM recharge rates within the Seaside Subbasin to reflect estimated recharge rates from Seaside Subbasin Watermaster Model;
- Revising SWIM/SVIHM representation of faults and hydrogeologic zonation within the Seaside Subbasin, southern Monterey Subbasin, and Corral de Tierra offshore regions;

- Updating SWIM/SVIHM groundwater pumping and layering assumptions at Seaside Subbasin production wells, particularly within the Cal-Am Aquifer Storage and Recovery (ASR) Project wellfield;
- Revising SVIHM/SWIM layering within the Deep Aquifer, including subdividing the Santa Margarita/Purisima Formation (i.e., model layer 10) into multiple subunits; and
- Further recalibrating SWIM/SBIHM aquifer hydraulic conductivity and storage properties within the Deep Aquifer model layers.

The model updates described above were collectively folded into the predictive versions of the SWIM and SVIHM models, and a new Baseline future (50-year) predictive model scenario was developed reflecting the latest data and assumptions regarding Baseline future hydrology, land use, groundwater extraction and recharge conditions within the Salinas Valley Basin. Baseline predictive SWIM and SVIHM model scenarios will serve as the comparative, “no-SGMA implementation” scenario for which for which various regional SGMA P&MAs alternatives will be evaluated under WY 2026. Additional details regarding specific SGMA P&MAs modeling evaluations are provided in Section 5.2.4 below.

The Subbasin GSAs additionally conducted SGMA compliance activities including preparation of annual reports and addressing the recommended corrective actions of the 2022 Monterey Subbasin GSP. The Work Plan was detailed in the WY 2023 Annual Report and progress towards addressing the Recommended Corrective Actions (RCAs) is summarized in Table 5-6. Key efforts carried out in 2025 include:

5.2.3.2 MCWDGSA Activities

In addition to actively supporting the collaborative activities described above, MCWDGSA continued improving its monitoring network, addressing data gaps, and expanding data collection during WY 2025.

- Monitoring Network Expansion: During WY 2025, MCWDGSA made substantial progress toward construction of the 4th Avenue and C2 Reservoir monitoring wells. Bid solicitation for both projects opened in January 2025, and a drilling contractor was selected in February 2025. However, the first half of the reporting year was dedicated to resolving legal and property-related issues associated with the land deed at monitoring well sites. Resolution required coordination and approval from the U.S. Environmental Protection Agency (EPA), the Regional Water Quality Control Board (RWQCB), and the Department of Toxic Substances Control (DTSC). Following receipt of the necessary approvals, construction activities commenced in October 2025.

  MCWDGSA also received unused Round 2 grant funds from SVBGSA and is applying these funds toward replacement of the compromised deep monitoring well cluster at MPWMD#FO-10 (see Section 5.2.3 of the WY 2024 Annual Report). As of December 2025, MCWDGSA completed design and site planning for the replacement well at the D Booster

Station site. Permitting, environmental review, and construction are anticipated in the first quarter of calendar year 2026.

In addition, MCWDGSA continued evaluating and rehabilitating select wells for inclusion in the monitoring network (11 wells in the Dune Sand and 180-Foot Aquifers and 3 wells in the 400-Foot Aquifer). During WY 2025, MCWDGSA initiated investigations into the destruction of former production Well 8a to address well integrity concerns and eliminate potential vertical conduits.

- Groundwater Elevation Monitoring Program: MCWDGSA's objective is to measure groundwater elevations at least monthly in all RMS wells and District-owned monitoring wells, and to install pressure transducers in RMS wells where feasible to increase temporal resolution. In WY 2025, MCWDGSA purchased and installed an additional 10 pressure transducers, bringing the total number of installed transducers to 16 at the end of the reporting period.

  During WY 2025, MCWDGSA continued efforts to obtain access to monitoring wells on FO properties. To address the U.S. Army's concerns regarding potential leachability of contaminants from monitoring equipment, MCWDGSA conducted a materials evaluation of proposed transducer components. The results of this study supported continued coordination with the Army regarding equipment installation; a draft MOU passed MCWD legal review in early 2026, and the Army is currently drafting a formal license to authorize data logger deployment.

- Seawater Intrusion Monitoring Program**:** MCWDGSA's seawater intrusion (SWI) monitoring program includes two primary objectives:
  - Sample each SWI RMS well at least annually, including wells monitored under the Fort Ord Sampling Program and the Deep Aquifers Sampling Program; and
  - Use electrical conductivity (EC) profiling and induction logging in deep monitoring wells to identify potential vertical migration of seawater and to cross-check against discrete sampling results.

  The Fort Ord Sampling Program and the EC Profiling Program continued during WY 2025. MCWDGSA established a contract with field technicians for EC Profiling to expand field capacity and improve program efficiency. In addition, MCWDGSA initiated the Deep Aquifers Sampling Program during the reporting year. This effort included sampling of Deep Aquifer monitoring wells using a low flow purge methodology. Several of these wells had not been sampled since installation, thereby the effort establishes updated salinity conditions.

- Installation of Weather Stations**:** In 2025, MCWDGSA installed five new weather stations in the Marina-Ord Area to a total of eight stations. A total of twelve stations is planned. Given that the Dune Sand Aquifer receives direct surficial recharge, it is important to quantify precipitation and understand the relationship between precipitation and recharge. These new weather stations will provide data to support groundwater recharge estimates through a soil-moisture balance method used in the Monterey Subbasin GSP water budget. Data from the weather stations installed are presented in Section 3.3.

- California Irrigation Management Information System (CIMIS): MCWDGSA is coordinating with DWR to establish a cooperative CIMIS weather station at Armstrong Ranch. This includes executing a Land Use Agreement with DWR and installing a recycled water irrigation system to maintain the required grass reference surface. Once operational, the station will provide standardized ET data to support GSP water budget calculations

- <u>Public Data Portal and Data Integration Platform</u>: As MCWDGSA's monitoring and implementation activities expand, the volume and diversity of available data have increased, including field measurements, laboratory analytical results, continuous sensor data, vendor-hosted platforms, and datasets maintained by other local water management agencies. At the same time, MCWDGSA recognizes the importance of effectively communicating groundwater conditions and SGMA implementation progress to the public through accessible and interactive tools.

  During WY 2025, MCWDGSA explored the development of a data integration platform prototype. This effort included establishing data connections, automated pipelines, and a demonstration of a public interface. Building upon this prototype, MCWDGSA plans to develop a map-centric web portal hosted on the MCWD website. The web portal will allow public users to view monitoring locations and explore groundwater and hydrologic data through interactive maps, graphs, summary dashboards, and narrative "story" formats. Users will be able to view and download datasets collected or compiled by MCWDGSA. The web portal is anticipated to be available online in 2026.

Additional MCWDGSA SGMA compliance activities during 2025 included updating the Agency's Data Management System and submitting monitoring data to DWR.

5.2.3.3 <u>SVBGSA Activities</u>

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

- <u>Groundwater Monitoring Program with Well Registration and GEMS Expansion:</u> SVBGSA collaborated with MCWRA on the development of a GMP. MCWRA Ordinance 5246 adopted in 2024 updates the previous GEMS program, expands extraction reporting to the SVBGSA geographic boundaries, expands well registration to all wells, and shifts the extraction reporting timeline earlier to make data available for SGMA annual reports. MCWRA completed a Fee Study for the GMP in April 2025. The Monterey County Board of Supervisors approved fees for the GMP in August 2025 and directed the exploration of alternative mechanisms to fund monitoring costs for *de minimis* well owners. MCWRA furthered the existing well registration program with desktop data collection to summarize the locations and depths of all wells with existing information from public records. In addition, outreach was conducted to inform all well owners about the well registration requirement. WY 2025 extraction data was provided by MCWRA in time to be included in the WY 2025 Annual Report.

- Groundwater Dependent Ecosystem Verification: With input from the GDE Working Group, the CCWG developed the methodology to identify, monitor and assess GDEs. CCWG conducted field reconnaissance of GDEs and is completing GDE baseline reports for each subbasin. MCWDGSA is also participating in the GDE workgroup to align GDE monitoring methodologies with SVBGSA and other subbasins in the Salinas Valley.
- Monitoring Networks: SVBGSA installed 5 new groundwater level monitoring wells in the Corral de Tierra Area. These additional wells fill the monitoring network data gaps in the 2022 GSP.

Additional SGMA compliance activities during 2025 included updating SVBGSA's Data Management System and web map, submitting monitoring data to DWR, and completing annual reports.

Progress on individual Data Expansion and SGMA Compliance tasks within the work plan is summarized in Table 43. The approach and progress on RCAs was described in the WY 2024 Annual Report, and the progress toward addressing them is summarized in Table 5-6.

Table 5-5 Progress on Data Expansion and SGMA Compliance as of December 2025

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
MCWDGSA and SVBGSA Common Activities						
I6 - Assess and Refine Seawater Intrusion Model	SWIM and SVIHM Updates.				x	Completed a coordinated round of updates to SWIM and SVIHM, which were released in October 2025. Ongoing updates to improve performance in the Monterey and Seaside Subbasins ongoing through Q1 2026.
	Develop predictive baseline scenario to support projects evaluation.			x		Ongoing.
Maintain, Enhance and Update Groundwater Models (Salinas Valley Integrated Hydrologic Model)	Provide USGS model oversight.				x	In April 2025, the USGS publicly released the completed SVIHM and accompanying predictive Salinas Valley Operations Model (SVOM).
	Manage USGS Tech Services Agreement.				x	SVBGSA fiscal contribution.
	Plan and implement groundwater model updates. Review USGS completed model, update model, evaluate climate assumptions and prepare summary reports.				x	SVIHM and SVIM Model Update reports published in October 2025. SVBGSA Board received reports in November 2025.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Maintain, Enhance and Update Groundwater Models (Salinas Valley Integrated Hydrologic Model) *(Continued)*	Maintain and update SWIM (Seawater Intrusion Model) as needed and recalibrate and update SVIHM in Monterey Subbasin.			x		SVBGSA and MCWDGSA coordinating with Seaside GWM on additional SWIM model update activities related to Monterey Subbasin and Seaside boundary conditions.
Prepare Hydrogeologic Conceptual Model for GSP 5-year Evaluation	Refine and incorporate new data into HCM for Monterey Subbasin.				x	Refined HCM has been finished, presented to Monterey Committee. Documentation included as attachment to this annual report.
	Prepare valley-wide HCM.			x		Refined HCMs will be incorporated into a valley-wide HCM.
Verify Groundwater Dependent Ecosystems	Develop methodology with CCWG.				x	GDE Working Group convened seven times to provide CCWG and SVBGSA input. Additional subject matter experts were consulted for their input on the methodology. Methodology was presented at the June Advisory Committee meeting and summarized in the 180/400 GSP 5-year evaluation.
	Conduct field reconnaissance to verify presence in the Monterey Subbasin.			x		CCWG has conducted field work and is preparing reports.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Prepare Annual Reports	Gather input from Monterey Subbasin Implementation Committee.			x		Input requested from all committees for WY 2025 conditions and narrative.
	Prepare, submit and present annual reports.			x		Work underway to prepare WY 2025 Annual Reports.
	Provide options and recommendations for Annual Report process to SVBGSA BOD.				x	SVBGSA informed Board of Directors on the role of subbasin implementation committees in the preparation of annual reports.
Semi-Annual Data Upload	Semi-annual groundwater elevation submittals to DWR pursuant to 23 CCR § 354.34(c)(1)(B) and § 354.40.			x		
Address RCAs and Prepare 2025 Periodic Evaluation	Review RCAs and develop strategies for addressing them.			x	x	RCAs and proposed strategies for addressing them were presented to the subbasin implementation committees for their review and input. Respective activities will be included in the Work Plans for FY 2025 and beyond.
	Implement RCA strategies.	x				
	Prepare GSP 5-yr Evaluation & GSP Amendments.		x			

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
MCWDGSA Data Expansion and SGMA Compliance Activities						
Monitoring Network Expansion	New Monitoring Wells.			x		Construction of 7 monitoring wells at 3 locations is underway and anticipated to be completed in Q1 2026.
	Repurposing of Inactive Monitoring Wells.				x	Established regular monitoring schedule for 14 previously inactive wells.
Groundwater Elevation Monitoring Program	Groundwater elevation monitoring in MCWD wells.			x		Ongoing monthly measurements.
	Install pressure transducers.			x		Installing transducers in key monitoring wells. 10 transducers were installed in WY 2025 to a total of 16.
Seawater Intrusion Monitoring Program	Fort Ord Sampling Program.			x		Conducted annual sampling in WY 2025.
	Deep Aquifers Sampling Program.			x		Established a Deep Aquifers Sampling Program and conducted one round of sampling in WY 2025.
	EC Profiling Program.			x		Engaged field contractors to expand capacity and conducted annual measurements.
	Induction logging.				x	Conducted induction logging in 3 deep monitoring sites in WY 2025.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Weather Stations	Installation of weather stations.			x		Installed 5 new weather stations in WY 2025 to a total of 8 stations
Data Management and Data Integration	Manage and update data management system (DMS) concurrent with annual report preparation.			x		Facilitate data transfers from partner agencies: Seaside Watermaster, MPWMD, MCWRA, and the U.S. Army. Upload of new water year data into DMS in progress.
	Develop Public Data Portal and Data Integration Platform.			x		Completed Phase 1 to develop functional prototype in mid-2025 and planning to develop a full functional web portal in 2026.
SVBGSA Data Expansion and SGMA Compliance Activities						
Develop Well Registration Program	Conduct desktop data collection.				x	MCWRA completed the desktop analysis for existing well records.
	Develop well registration program, policies and procedures.				x	MCWRA ordinance (No. 5426) was passed for the Groundwater Monitoring Program (GMP) which includes GEMS expansion and well registration. MCWRA has also developed a Program Manual. Service agreements (between MCWRA and SVBGSA) have been completed. MCWRA completed the GMP Fee Study. SVBGSA continues to support outreach efforts.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
	Develop well registration program report (implementation plan).			x		Preparing a summary report of well registration data and data gaps.
	Conduct outreach and data solicitation.			x		MCWRA and SVBGSA have been conducting outreach to inform various interest groups and general public about the GMP.
	Conduct data management options evaluation.			x		MCWRA scoped well registration data management systems options and one will be implemented.
Expand and Enhance Groundwater Extraction Monitoring	Development and adoption of regulatory framework in collaboration with MCWRA.				x	MCWRA ordinance (No. 5426) was passed for the GMP which includes GEMS expansion and well registration. MCWRA has also developed a Program Manual.
	Conduct feasibility study for extraction data collection.				x	Five growers participated in a feasibility study for using satellite data to estimate net groundwater extraction. Cal Poly collected and processed data and produced a report. M&A reviewed the Cal Poly report and completed a recommendation for applications of satellite data related to modeling. "Well bubblers" are used to measure groundwater elevation and might be helpful to pair with extraction data. They were tested on 1 domestic well, 3 agricultural wells, and 1 monitoring well.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
	Develop GEMS expansion and enhancement implementation report.			x		Preparing a summary report of GEMS expansion and data gaps. Report for 180/400 completed.
	Develop GEMS policies and/or procedures.			x		Service agreement between MCWRA and SVBGSA was prepared to formalize the partnership. MCWRA completed the GMP Fee Study. SVBGSA continues to support outreach efforts.
	Conduct GEMS field work and data collection.		x			Service agreement between MCWRA and SVBGSA was prepared to formalize the partnership.
Expand Groundwater Level Monitoring Network	Well design, bid assist, construction management, & monitoring activities.				x	M&A completed technical specifications for the monitoring wells and provides on-site technical oversight during drilling.
	Well construction.				x	Well construction of new monitoring wells completed (5-180/400, 5-Corral, 4-Langley, 5-Eastside, 4-Forebay, 5-Upper Valley.
	Add existing wells to the monitoring network.				x	Existing wells added: 5-Langley, 2-Forebay, 1-Upper Valley.
Test Aquifer Properties	Fill aquifer properties data gap(s) in Corral de Tierra Area.			x		Reviewed Monterey County permit files for existing reports. Worked with landowners to plan tests. Completed tests: 2-180/400, 1-Upper Valley, 1-Monterey. Report underway.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Host and Manage Data Management System	Manage and update DMS concurrent with annual report preparation.			x		Upload of new water year data into DMS in progress.
Review Well Permits (as needed)	Review Well Permits (as needed).			x		Executive Order N-7-23 no longer in place. Review and comment on EIR for new well applications in Deep Aquifers.
Carry out Other GSP Implementation Actions	Prepare Water Quality Coordination Update Report.			x		Coordination focused on data sharing and collaboration between agencies. Will also include coordination on the RCAs for Water Quality and the updated Water Quality SMC.
	Prepare Land Use Update Report.			x		Land use information request sent to County and cities, responses received and being compiled. Follow up meetings being planned.

Table 5-6 Status of Addressing Monterey Subbasin RCAs

No.	RCA	Action to Address	Status
1	Investigate the connectivity of the upper saturated zone to the principal aquifer to determine if a continuous upper saturated zone connects to the principal aquifer.	Corral de Tierra Management Area: SVBGSA will conduct analysis of 2015 groundwater quality in relation to groundwater levels and extraction.	Corral de Tierra Management Area: • Met with DWR in 2023 to gain clarification on DWR expectations. Completed analysis in 2025 and report is underway.
		Corral de Tierra Management Area: • Groundwater elevation near the vernal ponds GDEs aligns with those in the Dune Sand Aquifer, which is defined as a principal aquifer in the Marina-Ord Area.	Marina-Ord Management Area: • No further action.
2	Conduct necessary field reconnaissance for GDE identification. Update future iterations of the GSP with the results of the field studies to identify GDEs in the Subbasin.	Corral de Tierra Management Area: • SVBGSA worked with Central Coast Wetlands Group to map potential GDEs and conduct field reconnaissance.	Corral de Tierra Management Area: • CCGC completed methodology to identify, monitor and assess GDEs. CCWG conducted field reconnaissance of GDEs and is completing GDE baseline reports for each subbasin.
		Marina-Ord Management Area: • Field studies of the Marina vernal pond GDEs were completed in 2020 and summarized in the GSP; MCWDGSA staff is participating in the GDE Workgroup.	Marina-Ord Management Area: • MCWDGSA is participating in the GDE Workgroup's efforts to establish a desktop monitoring approach and data baseline for the vernal ponds.

No.	RCA	Action to Address	Status

3	Provide more information about how the proposed minimum thresholds (MTs) for the chronic lowering groundwater levels may impact beneficial uses and users. Specifically, work to obtain additional well information and perform further analysis to identify and analyze the impact of the selected MT levels on supply wells. The analysis should identify the degree/extent of potential impact including the percentage, number and location of potentially impacted wells at the proposed MTs for chronic lowering of groundwater levels.	Corral de Tierra Management Area:
		• SVBGSA will provide more information to beneficial uses and users, with an initial focus on outreach to domestic well owners.
		  ◦ SVBGSA and MCWRA are developing a valley-wide well registration database
		  ◦ SVBGSA will re-assess impacts after the database is complete.
			Corral de Tierra Management Area:
			• Underway and will increase with SGM Round 2 Implementation Grant.
			• Underway with MCWRA.
			• To be completed when well registration database complete, no later than 2027.

		Marina-Ord Management Area: • Construction of domestic wells is prohibited in the urban areas of the Marina-Ord Area; the only supply wells in the Marina-Ord Area are MCWD production wells.	Marina-Ord Management Area: • MCWD production wells to be included in the Valley-wide analysis above.
4	Revise the definition of undesirable results so that exceedances of MTs caused by groundwater extraction, whether the GSA has implemented pumping regulations or not, are considered in the assessment of undesirable results in the Subbasin.	• SVBGSA will review conditions in the Corral de Tierra Management Area and provide explanations of when exceedances occur. • MCWDGSA and SVBGSA will revise the Water Quality undesirable result in next amendment to include pumping impacts regardless of GSA action. • MCWDGSA and SVBGSA will provide a more thorough analysis in 2027 Periodic Evaluation.	• Underway with this Annual Report. • Planned for 2027 Periodic Evaluation. • Planned for 2027 Periodic Evaluation.
5	Provide the rationale for using 2019 concentration data instead of 2015 concentration data as the baseline for setting MTs for degraded water quality.	• MCWDGSA and SVBGSA will evaluate if using 2015 leads to a different SMC, and based on results the GSAs may reconsider SMC if needed or provide rationale.	• Planned for 2027 Periodic Evaluation.

No.	RCA	Action to Address	Status
6	Department staff understand that estimating the location, quantity, and timing of stream depletion due to ongoing, Subbasin-wide pumping is a complex task and that developing suitable tools may take additional time; however, it is critical for the Department's ongoing and future evaluations of whether GSP implementation is on track to achieve sustainable groundwater management. The Department plans to provide guidance on methods and approaches to evaluate the rate, timing, and volume of depletions of interconnected surface water (ISW) and support for establishing specific sustainable management criteria in the near future. This guidance is intended to assist GSAs to sustainably manage depletions of ISW. In addition, the GSA should work to address the following items by the first periodic update: a. Consider utilizing the ISW guidance, as appropriate, when issued by the Department to establish quantifiable MTs, measurable objectives, and management actions. b. Continue to fill data gaps, collect additional monitoring data, and implement the current strategy to manage depletions of ISW and define segments of interconnectivity and timing. c. Prioritize collaborating and coordinating with local, state, and federal regulatory agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping-induced surface water depletion within the GSA's jurisdictional area.	• MCWDGSA and SVBGSA will review forthcoming DWR guidance and refine SMC based on it, as appropriate for the Subbasin.	• Awaiting DWR guidance on ISW.

No.	RCA	Action to Address	Status
7	Establish a sufficient monitoring network capable of collecting the required information to quantify depletions of ISW.	Corral de Tierra Management Area: • SVBGSA will install 1 shallow well along El Toro Creek to monitor ISW. • SVBGSA will reassess locations of ISW as part of the HCM update and may consider additional wells if findings warrant it.	Corral de Tierra Management Area: • Implemented with SGM Round 2 Implementation Grant.
		Marina-Ord Management Area: • One shallow monitoring well is included in the ISW monitoring network near the Marina vernal ponds. No additional data gaps were identified.	Marina-Ord Management Area: • No further action.

5.2.4 Projects and Management Actions

Section 9 of the Monterey GSP identified P&MAs that collectively will allow the Subbasin to meet and maintain its sustainability goal within the 20-year SGMA implementation period (i.e., by 2042), which are being further developed and prioritized during the first years of GSP implementation.

The Monterey GSP highlighted the hydraulic connection between the Subbasin and the adjacent subbasins, and therefore, the Subbasin GSAs have developed an implementation approach that includes both basin-specific projects and regional coordination actions, and participation in multi-subbasin projects. Many of the P&MAs included in the Monterey GSP are part of a larger set of integrated projects and actions for the entire Salinas Valley Basin.

Building on the Monterey GSP, MCWDGSA and SVBGSA are advancing workstreams to reach sustainability, which include Marina-Ord Area local P&MAs, Corral de Tierra Area local P&MAs, as well as multi-subbasin P&MAs.

The following is a brief overview of the progress made towards implementing the P&MAs during 2025. The SGM Round 2 Implementation Grant funding helped both agencies get additional workstreams underway. The SVBGSA led regional project planning efforts with the SGM Round 1 Implementation Grant for the 180/400 Subbasin and engaged the Monterey Subbasin Implementation Committee in a series of planning discussions for the Corral de Tierra Area and proceeded of monitoring wells. Within the Marina-Ord Area, the MCWDGSA is moving the indirect potable reuse (IPR) project into preliminary design and environmental review, while developing new projects in addition to those identified in the GSP, including the Armstrong Ranch Groundwater Recharge project as well as the Reservation Road Pilot Desalination Plant.

Progress towards implementing the P&MAs during 2025 and planned activities are also summarized in Table 5-7.

Marina-Ord Area Projects and Management Actions

- M3 – Recycled Water Reuse Through Landscape Irrigation and Indirect Potable Reuse: The project consists of recycled water reuse through landscape irrigation and/or IPR within MCWD's service area. MCWD is expanding its recycled water distribution system for landscape irrigation. Expansion efforts were completed in the California State University Monterey Bay subarea and completed in the Dunes Development Area in 2025. Delivery of advanced treated water is anticipated to begin in 2026.

  MCWDGSA is advancing planning efforts for an IPR project at the Sand Tank site, one of two sites evaluated in the 2022 IPR Feasibility Study. In 2026, MCWDGSA plans to retain an Owner's Advisor to assist with overall program management, technical coordination, and implementation strategy. MCWDGSA also anticipates initiating preliminary design and environmental review in 2026. Project planning is being coordinated with anticipated new developments in the surrounding area to optimize integration with the regional pipeline and the District's recycled water distribution system. Additional modeling evaluations of the Project with the SWIM are ongoing, including evaluating the implications of the proposed Sand Tank Project alternative on water level, groundwater storage, and seawater intrusion conditions within the Monterey Subbasin.

Construction of the IPR project is currently included in MCWDGSA's Capital Improvement Program (CIP) as a grant-funded project. MCWDGSA continues to develop a funding strategy and actively explore state and federal funding opportunities. If grant funding is not secured, the project may be financed through GSA funds or alternative financing mechanisms. Project completion is currently estimated within approximately 3.5 to 5 years, depending on funding availability and financing structure.

- M4 – Drill and Construct Monitoring Wells in the Marina-Ord Area: This project consists of constructing new monitoring wells and expanding the groundwater elevation and seawater intrusion monitoring networks in the Marina-Ord Area. Particularly, the Monterey Subbasin GSP identified data gaps near the central coastline and the FO hills area in the 400-Foot and Deep Aquifers. Construction of the monitoring wells is funded by the Round 2 Implementation Grant. As discussed in Section 5.2.3.2, MCWDGSA made substantial progress towards construction of the new monitoring wells in 2025. Completion of the wells are anticipated in the first quarter of 2026.
- Armstrong Ranch Aquifer Storage and Recovery (ASR) Feasibility Assessment: MCWD completed a feasibility assessment for an Armstrong Ranch Aquifer ASR Project in May 2025. The Armstrong Ranch Property is a 220-acre vacant site located northeast of the MCWD service area. The ASR Project would consist of infiltration ponds to recharge surface water from the Salinas River Diversion Facility (SRDF) or alternatively sourced water into the Dune Sand Aquifer at the site and recover stored water through an extraction wellfield at the site. The primary purpose of the feasibility assessment was to analyze the maximum storage and recovery capacity of an ASR project. The feasibility assessment involved identifying potential water supply availability assumptions associated with optimization of the SRDF and/or additional recycled water supplies from the Pure Water Monterey project, and conducting a detailed modeling evaluation of Project recharge and recovery well infrastructure design and operational alternatives with the MBGFWM. Modeling results indicated that the maximum infiltration capacity of the ASR Project is approximately 2,500 AFY with an estimated recovery yield of 76%.
- Reservation Road Desalination Plant Renovation: In 1996, MCWD constructed a pilot seawater desalination facility to explore the feasibility of extracting seawater through shallow wells along the beach. The facility, located at the former wastewater treatment plant site on Reservation Road between Dunes Drive and the Monterey Bay, has a capacity of 0.3 million gallons per day (MGD) (see MCWD's 2015 and 2020 UWMPs for additional details; Schaaf & Wheeler 2016, 2020). The plant was operated between 1997 and 2003 and has been idle since.

  MCWD is currently advancing rehabilitation of the Reservation Road Desalination Plant as a supplemental water supply source. In 2023, MCWD completed a facility condition assessment and prepared a preliminary cost estimate. Following additional data collection and video inspection of key infrastructure components, the District initiated design of the Reservation Road Desalination Plant Renovation Project. The design consultant has completed Phase 1 design documents and is progressing subsequent phase designs. In parallel, MCWD has coordinated with multiple state agencies to address permitting and regulatory requirements.

Phase 1 of the project involves replacing the well pump, piping, vault, the intake well and brine discharge piping, including pipe inspection and testing and comprehensive facility electrical systems. Phase 1 rehabilitation is planned for 2026, and the District awarded a construction contract for Phase 1 in January 2026. The facility is projected to come online in early 2027, delivering 300 AFY of treated water to MCWD customers.

In addition to the progress described above in project design and construction, MCWD continues to evaluate project concepts intended to reduce reliance on groundwater pumping and improve long-term groundwater sustainability within the Monterey Subbasin and the larger Salinas Valley. Projects currently under consideration within the District's CIP include: (1) rehabilitation and restart of Well 12 and evaluation of its use as an injection well to support IPR or recharge into the Deep Aquifers; and (2) an intertie with the Castroville Community Services District (CCSD). These concepts will be further refined as technical studies and funding strategies advance.

Corral de Tierra Area Projects and Management Actions

- <u>C1 - Reducing Demand (Pumping Allocations and Controls in Groundwater Sustainability Plan):</u> SVBGSA Board accepted a Demand Management Framework, which is a planning tool to provide a structure for how to prioritize and implement demand management (DM) measures if and when they are needed to meet SGMA requirements. The Framework builds on community and subbasin committee input and a legal analysis of DM. Subsequent assessment of inter-subbasin impacts of DM will include modeling runs to quantify groundwater benefits and the economic analysis of various DM measures.
- <u>Corral de Tierra – Reducing Demand through Water Efficiency Pilot Program (New):</u> For rural residential users that have not benefited from conservation programs and rebates that many larger water systems have, SVBGSA continued a pilot program to support residential water efficiency in the Monterey and other subbasins. To reduce demand and increase awareness of the groundwater conditions, the pilot program consists of a water use survey, targeted water use efficiency webpage, and free house calls to assess how to improve water efficiency.
- <u>Corral de Tierra – Drill and Construct Monitoring Wells:</u> For the Corral de Tierra Area, the Monterey Subbasin GSP identified several groundwater level monitoring data gaps. With SGM Round 2 Implementation Grant funding, SVBGSA reevaluated those data gaps and identified well locations and conducted well design. In addition to the 4 wells installed in WY 2024, SVBGSA installed one more groundwater level monitoring well in WY 2025.

Regional Projections and Management Actions

The Monterey GSP identified 3 multi-subbasin projects that address groundwater conditions in the Monterey Subbasin and adjacent subbasins. SVBGSA initiated development of feasibility studies for 3 approaches to mitigate seawater intrusion: an extraction barrier coupled with a desalting plant to provide a new regional water supply, seasonal reservoir releases with ASR, and DM. These feasibility studies will inform how the Agency proceeds with the selection of projects to address seawater intrusion. The feasibility studies will culminate in a Project Update Report that will enable the Agency to compare study results and options, solicit feedback from interested parties, and consider project combinations.

- Projects to Address Seawater Intrusion (includes R1 – Seasonal Reservoir Releases with Aquifer Storage and Recovery, and R2 – Brackish Groundwater Restoration Project): In 2025, SVBGSA studied several projects to address seawater intrusion in the 180/400-Foot Aquifer Subbasin (180/400), some of which are identified in the GSP. Projects to address seawater intrusion are recommended also to address seawater intrusion MTs in the Marina-Ord area of the Monterey Subbasin. The Aquifer Storage and Recovery Feasibility Study was completed in the spring of 2025 to evaluate the project described in the 180/400 and Monterey GSPs and identified an alternative project concept. SVBGSA further studied the regional municipal supply project identified in the Monterey GSP, which has evolved and is not referred to as the Brackish Groundwater Restoration Project (BGRP). Phase 1 of the BGRP feasibility study was published in October 2025. SVBGSA has also worked with MCWRA on optimizing the existing Monterey County Recycled Water Projects, including CSIP, and to evaluate a New Seawater Intrusion Project (NSIP), projects included only in the 180/400 GSP. The NSIP study will focus on creating an alternative supply for agricultural users within the seawater intrusion area and areas considered to be at risk. NSIP prioritizes an alternative supply for Deep Aquifers irrigation wells within the seawater intruded areas of concern. Further coordination is planned with MCWDGSA to evaluate the effects of these projects in Monterey Subbasin.
- R3 – Multi-benefit Stream Channel Improvements: SVBGSA continued to partner with the Resource Conservation District of Monterey County (RCD), who continued to work with project partners to maintain the river corridor, map and remove Arundo donax, and estimate associated water savings. SVBGSA continued to support FlowWest to model vegetation removal and sediment management under the Salinas River Stream Maintenance Program. This modeling work will help quantify the groundwater recharge benefits.
- Deep Aquifers Management Options (Deep Aquifers Working Group): The Deep Aquifers Agency Working Group (County, MCWDGSA, MCWRA, SVBGSA) are evaluating management options for the Deep Aquifers. The Working Group will produce a management framework that builds on the Salinas Valley Deep Aquifers Study and the associated monitoring plan. The monitoring plan developed by MCWRA was approved by the SVBGSA Board in November 2025.

Table 5-7 Progress on Projects and Management Actions as of December 2025

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Monterey Subbasin Projects and Management Actions						
M3 – IPR with Injection of Recycled Water	Develop funding plan.			x		Continued to develop a funding plan.
	Design and environmental review.	x				Design and environmental review for injection at the Sand Tank Site planned for 2026 through 2027.
	Modeling assessment of additional IPR locations.	x				Planned for 2026.
M4 – New Monitoring Wells in the Marina-Ord Area	Well design, bid assist, construction management, equip & monitor.				x	Identified candidate well sites and screened aquifers and completed well design.
	Well construction.			x		Currently underway for 7 wells at 3 locations; anticipated completion in Q1 2026.
Armstrong Ranch Recharge	Feasibility Study.				x	Analyzed the maximum storage and recovery capacity of an ASR project.
Pilot Desalination Plant Renovation	Rehabilitation Design.				x	Phase 1 design completed in 2025; subsequent phases underway.
	Phase 1 Construction.		x			Phase 1 construction planned in 2026.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
C1 – Assess and Develop Demand Management	Conduct DM dialogue process.			x	x	Conducted focused discussions with subbasin committees to inform DM Framework and subsequent work.
	Conduct legal analysis of DM.				x	Legal white paper prepared by special counsel and peer reviewed complete. SVBGSA Board accepted paper in March 2025.
	Plan for DM in overdrafted subbasins.			x		
	Assess groundwater level impacts of DM.			x		Conducting modeling runs to quantify groundwater benefits. Preparing economic analysis of various DM measures.
New Monitoring Wells in the Corral de Tierra Area	Well construction.				x	Included in SGM Round 2 Implementation Grant for Monterey Subbasin. 4 wells were completed in WY 2024 and 1 additional well was completed in WY 2025.
Regional Projects and Management Actions						
R3 – Assess Groundwater Benefits of Salinas River Stream Maintenance Programs	Model the program impact to recharge and conduct stakeholder outreach.			x		Executed agreement with FlowWest and initiated coordination meetings with RCDMC, MCWRA, and M&A which continue as HEC-RAS model is updated and various flow scenarios are investigated.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Refine Sustainability Strategies	Assist with implementation of sustainability strategies and projects/management actions.			x		Sustainability strategy and P&MAs under review and discussion by subbasin committees.
	Provide technical support services.			x		M&A to support staff as needed.
Assess Deep Aquifer Study Management Options (Deep Aquifers Working Group)	Evaluate policy approaches and determine management options.			x		Agencies' Working Group (County, MCWDGSA, MCWRA, SVBGSA) management framework under final administrative review.
	Prepare Deep Aquifers monitoring plan.				x	MCWRA prepared monitoring plan for the Deep Aquifers. Monitoring MOU with MCWRA, MCWDGSA, MPWMD, and SGWM approved by Board in November 2025.
R1 – Conduct Aquifer Storage and Recovery Feasibility Study	Conduct phase 1 of the study.				x	Final Phase 1 Study released for public review and posted to SVBGSA website in Jan 2025. Presented to 180/400 Committee in April 2025. Scheduled for presentation to Board in June (postponed to August). Available on SVBGSA website here: https://svbgsa.org/aquifer-storage-and-recovery-2/.
R2 – Conduct Brackish Groundwater Restoration Project (prev. Seawater Extraction	Coordinate project management and meetings.			x		Ongoing coordination with M&A and partner agencies.
	Prepare presentations to board and commitees.			x		Periodic updates presented at various committee meetings.

Activities	Tasks	Not yet started	Scoping/ Planning	In progress	Complete	Comments
Barrier/Regional Water Supply) Feasibility Study	Conduct effectiveness evaluation.				x	Completed Phase 1 Scenarios and Modeling Analysis.
	Prepare alternatives analysis.				x	Completed Phase 1 Scenarios and Modeling Analysis.
	Assess siting and implementation.				x	Completed Phase 1 Scenarios and Modeling Analysis.
	Prepare final phase 1 feasibility study report.				x	Completed Phase 1 Summary Report.

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APPENDIX A

WY 2025 Hydrologic Condition and Water Management in the Salinas Valley Basin

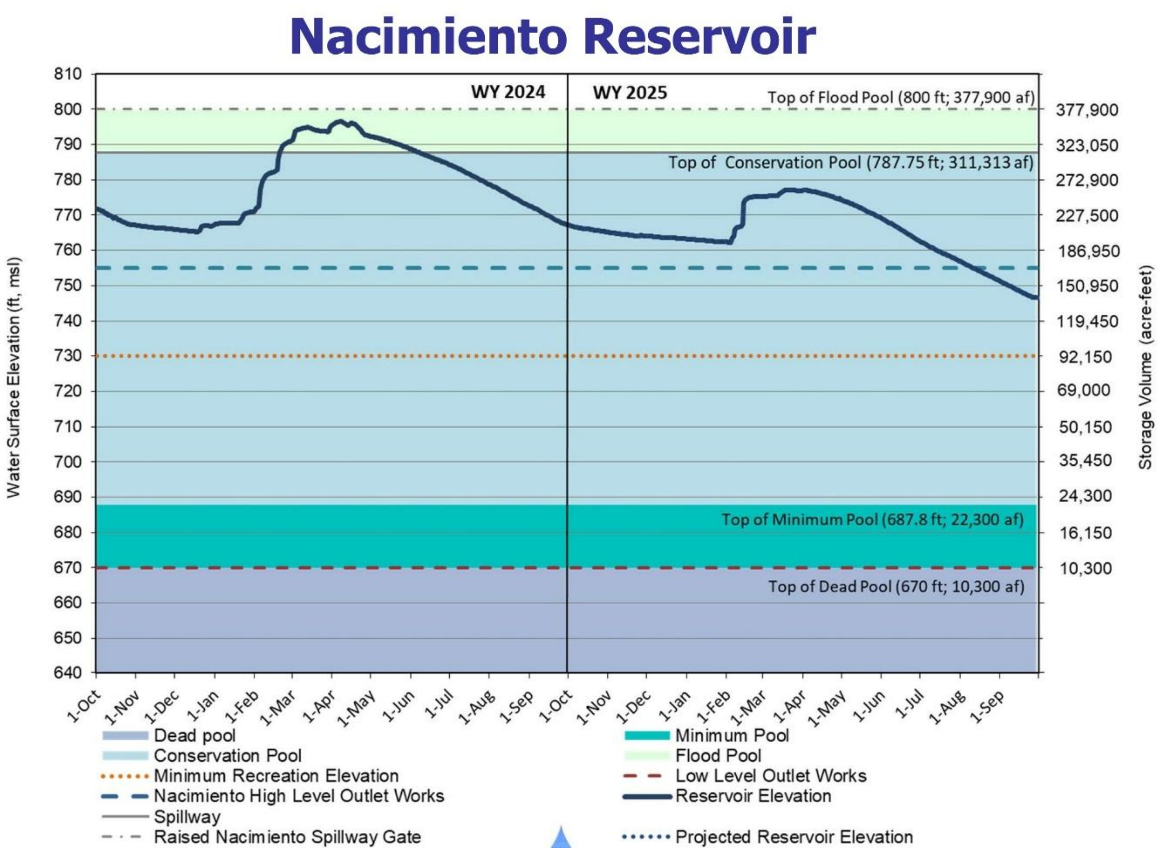
HYDROLOGIC CONDITION AND WATER MANAGEMENT

Many factors affect groundwater use and management. In the Salinas Valley, MCWRA operates the Nacimiento and San Antonio Reservoirs for multiple purposes, including groundwater recharge, and re-diversion of stored reservoir water for delivery to the Castroville Seawater Intrusion Project (CSIP) as an in-lieu irrigation supply in areas impacted or threatened by seawater intrusion, and flood control. Reservoir operation, the amount of surface water diverted to CSIP at the Salinas River Diversion Facility (SRDF), and CSIP use of recycled water provide meaningful context for water use and management in the Salinas Valley. In addition, stakeholders offered commentary on their observations through the subbasin implementation committees on how their operations and water use were affected by factors such as flooding, temperature, pests, and market conditions. While the experiences of subbasin committee members are not necessarily representative of all groundwater users, they provide important context for interpreting water use fluctuations and trends. However, committee members did not identify anything that significantly impacted their operations this water year.

A.1. Reservoir Operations and Streamflow

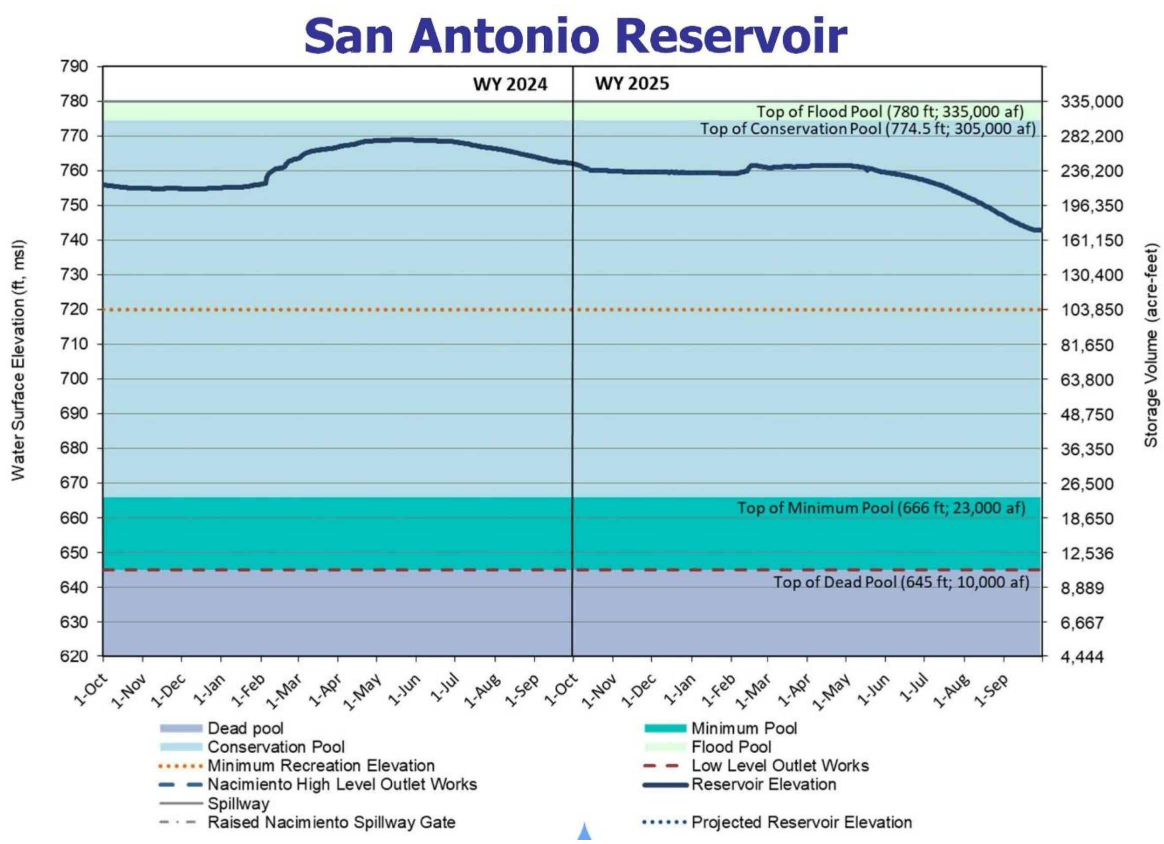
Reservoir elevations and storage are critical factors MCWRA considers in determining releases from Nacimiento and San Antonio Reservoirs. Figure 1 and Figure 2 show reservoir elevations and storage from the beginning of WY 2024 to the end of WY 2025 for the Nacimiento and San Antonio Reservoirs, respectively. In part due to below-normal precipitation in WY 2025, the storage decreased in both reservoirs. Figure 1 shows that from the beginning to the end of WY 2025, Nacimiento Reservoir storage decreased from 57% to 36% of capacity, ending at 139,010 AF of water in storage. Figure 2 shows that San Antonio Reservoir storage decreased from 73% to 51% of capacity, ending at 170,610 AF of water in storage.

During WY 2025, releases were made from Nacimiento and San Antonio Reservoirs for water conservation to provide stored reservoir water for groundwater recharge to the Salinas Valley Groundwater Basin and operation of the SRDF. Operation of the SRDF began in April 2025, and continued through the end of September. Releases during WY 2025 were made in accordance with existing regulations and agreements to provide for fish and wildlife habitat. The timing and quantity of reservoir releases accounted for natural flows in the Salinas River in addition to considerations for minimizing impacts on reservoir levels during peak recreational periods, to the extent possible.



(MCWRA, 2025)

Figure 1. Nacimiento Reservoir Water Surface Elevation and Storage Volume in WY 2025



(MCWRA, 2025)

Figure 2. San Antonio Reservoir Water Surface Elevation and Storage Volume in WY 2025

A.2. Water Use and Management

State urban mandates impact water use within drinking water systems; however, in WY 2025 no state water conservation emergency regulations were in effect.

A.3. CSIP Operations

The CSIP delivers a combination of recycled water, stored reservoir surface water, and groundwater as an irrigation supply to growers in part of the area impacted or threatened by seawater intrusion. While CSIP is only located in the 180/400 Subbasin, it affects MCWRA operation of the reservoirs, which affects recharge along the Salinas River. Storage in Nacimiento and San Antonio Reservoirs allowed MCWRA to make summer conservation releases and re-divert stored reservoir water at the SRDF to CSIP. Recycled and surface water provided the majority of water to CSIP during WY 2025, and groundwater pumping was reduced even more than in the previous 2 wet years. Figure 3 shows monthly CSIP water deliveries by water type since WY 2021. In summer 2025, surface (river) water and recycled water made up the majority of CSIP supply, similar to summer 2024.

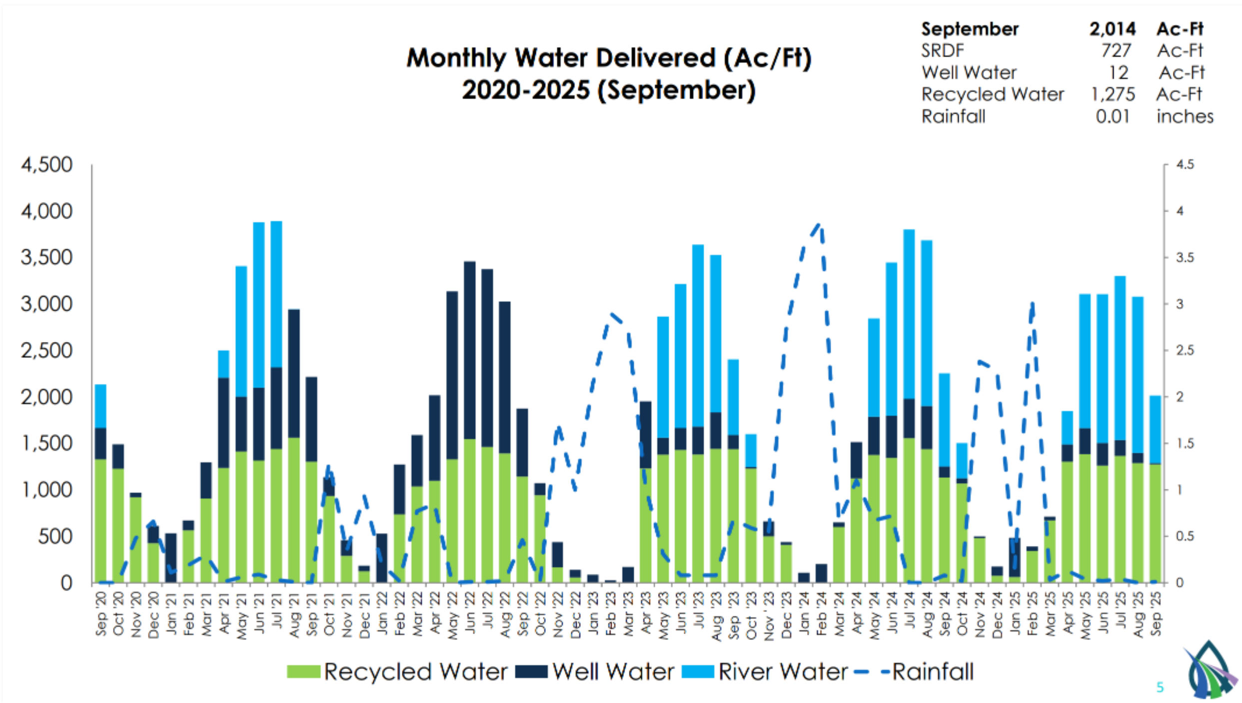


Figure 3. WY 2025 Monthly Water Delivered (AF/yr) to CSIP (M1W, 2025)

REFERENCES

M1W (Monterey One Water). 2025. MCWRP Operations and Maintenance Update. Presented to the Water Quality and Operations Committee. January 2026.

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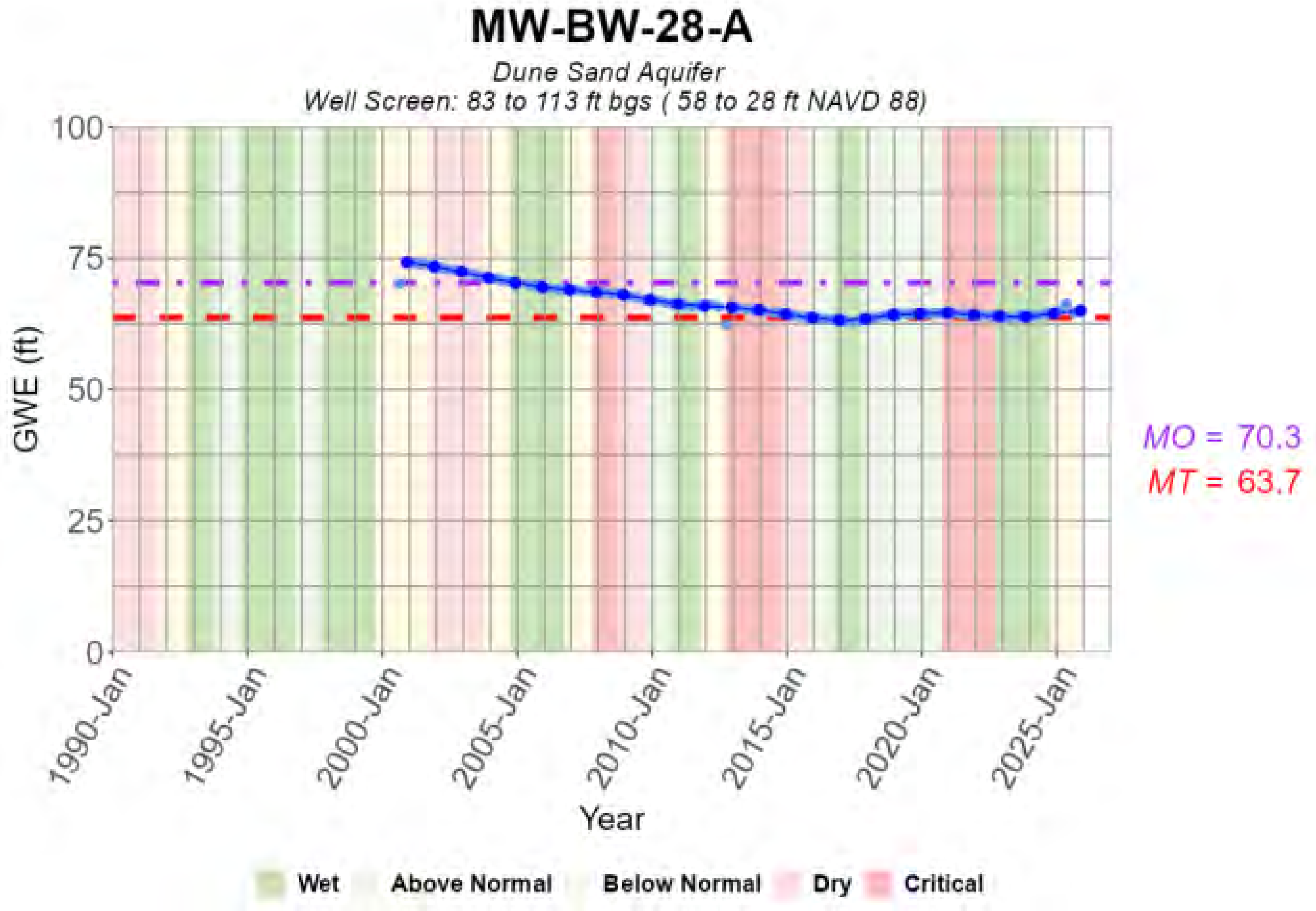
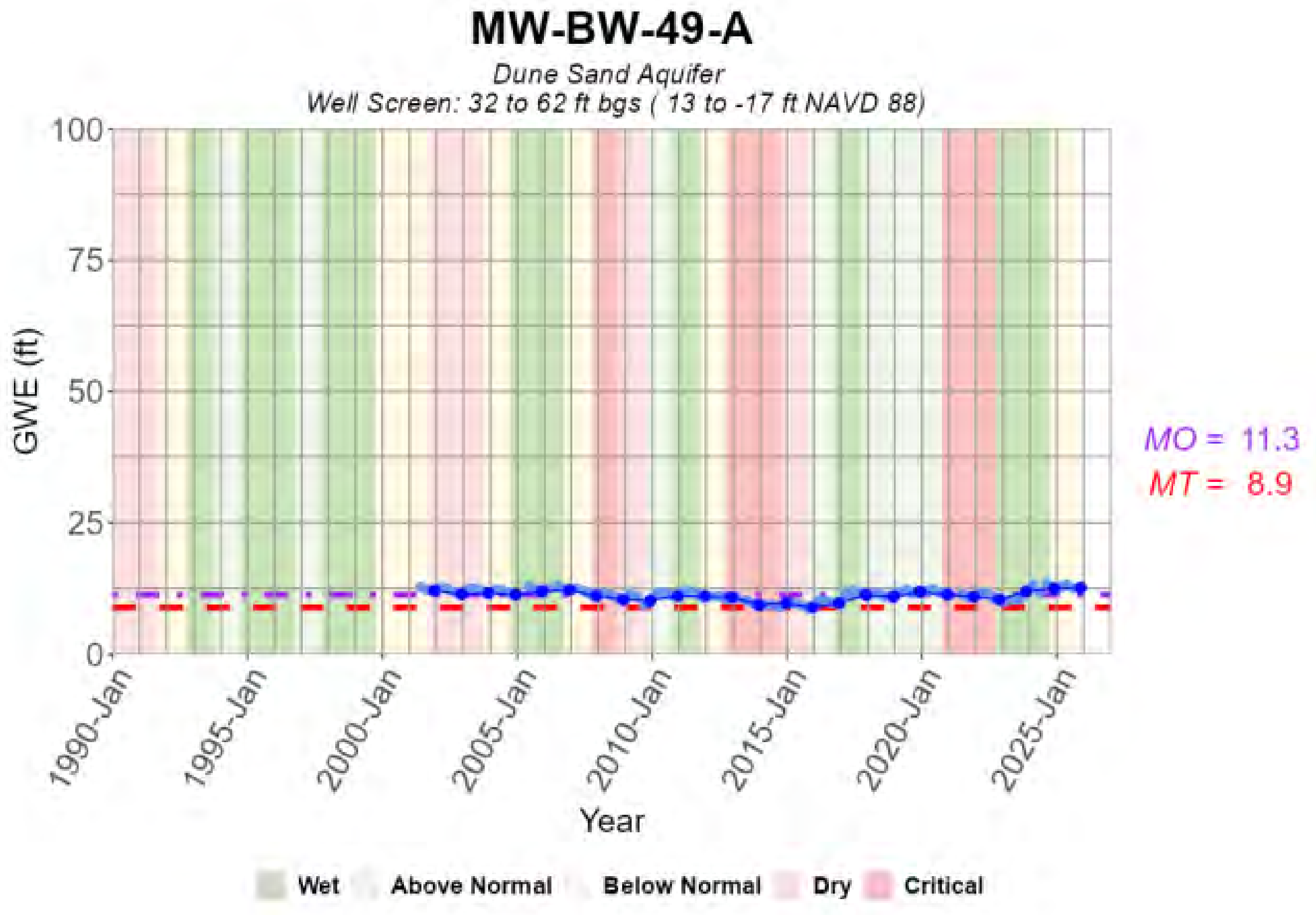
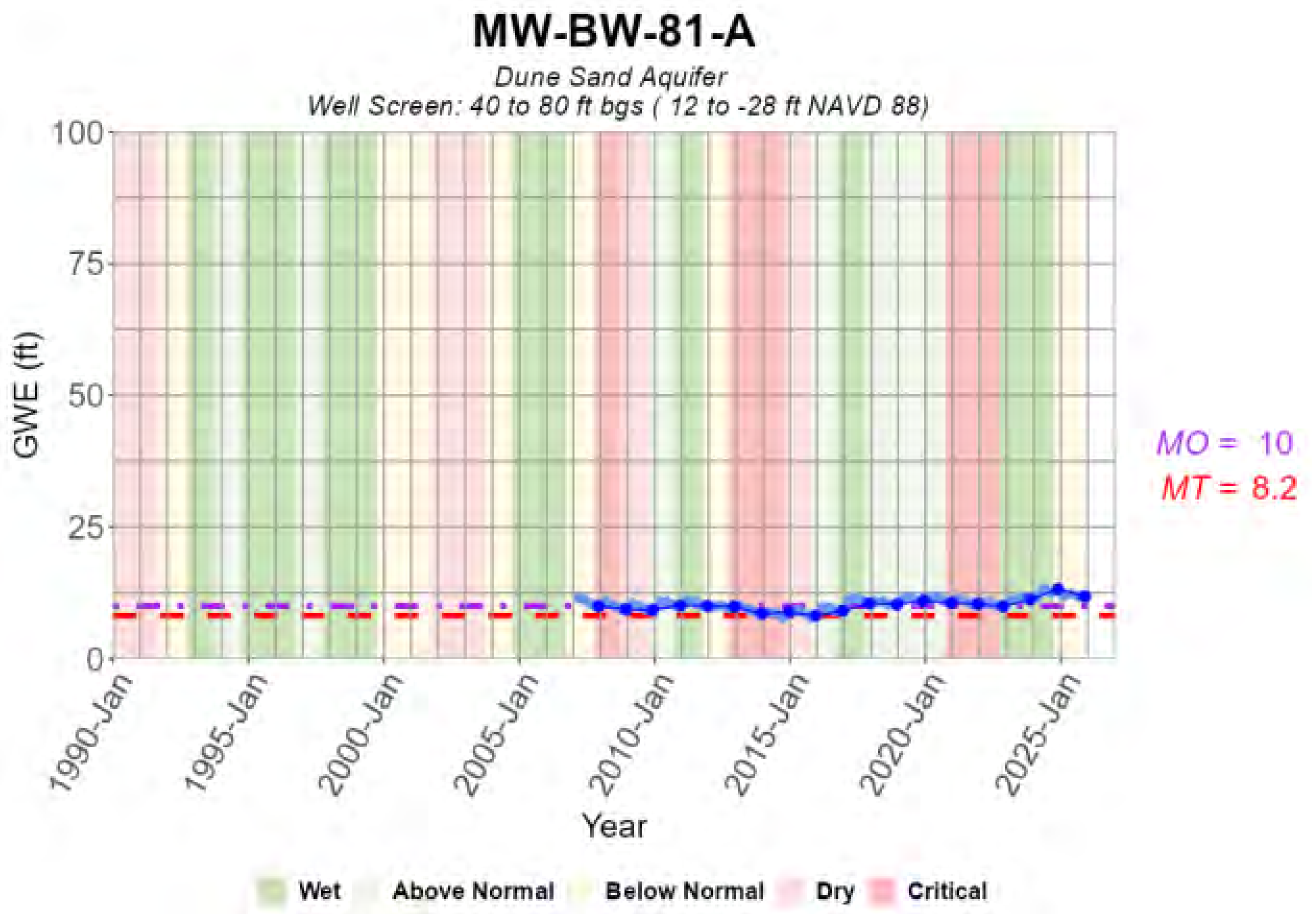
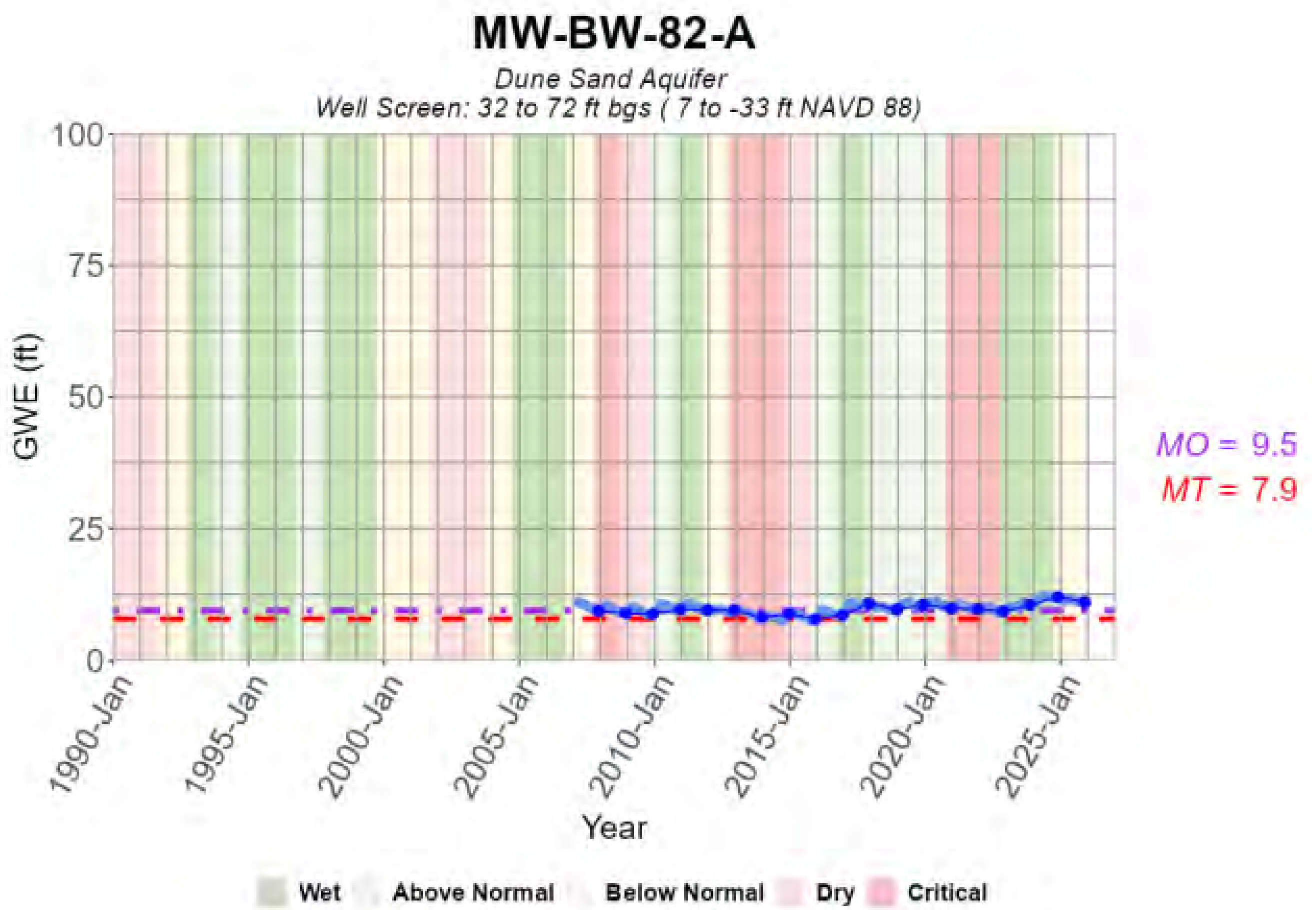
APPENDIX B

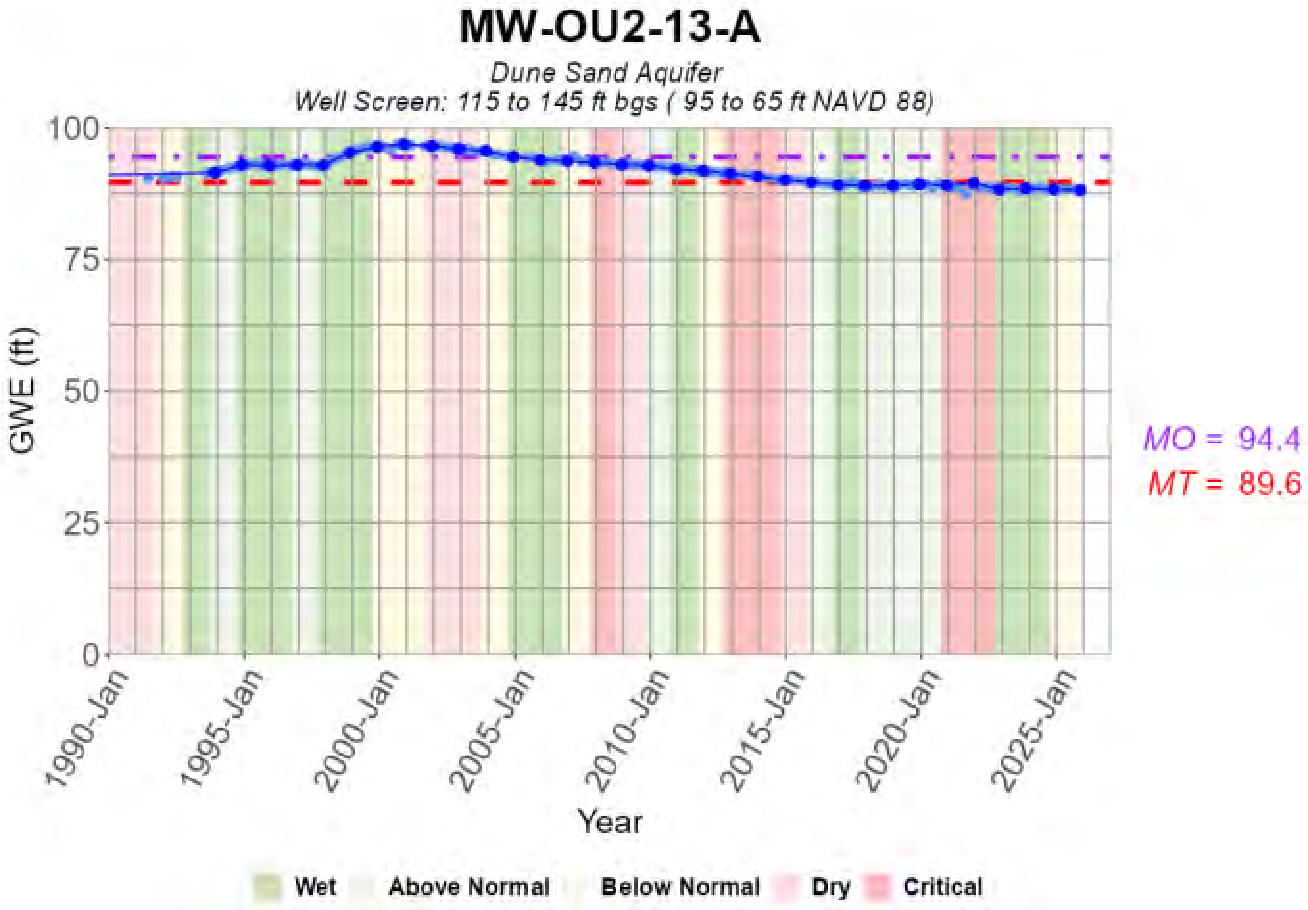
Long-term Groundwater Elevations in Groundwater Level RMS Wells


MW-BW-28-A
Dune Sand Aquifer
Well Screen: 83 to 113 ft bgs (58 to 28 ft NAVD 88)
GWE (ft)
Year
MO = 70.3
MT = 63.7
Wet
Above Normal
Below Normal
Dry
Critical

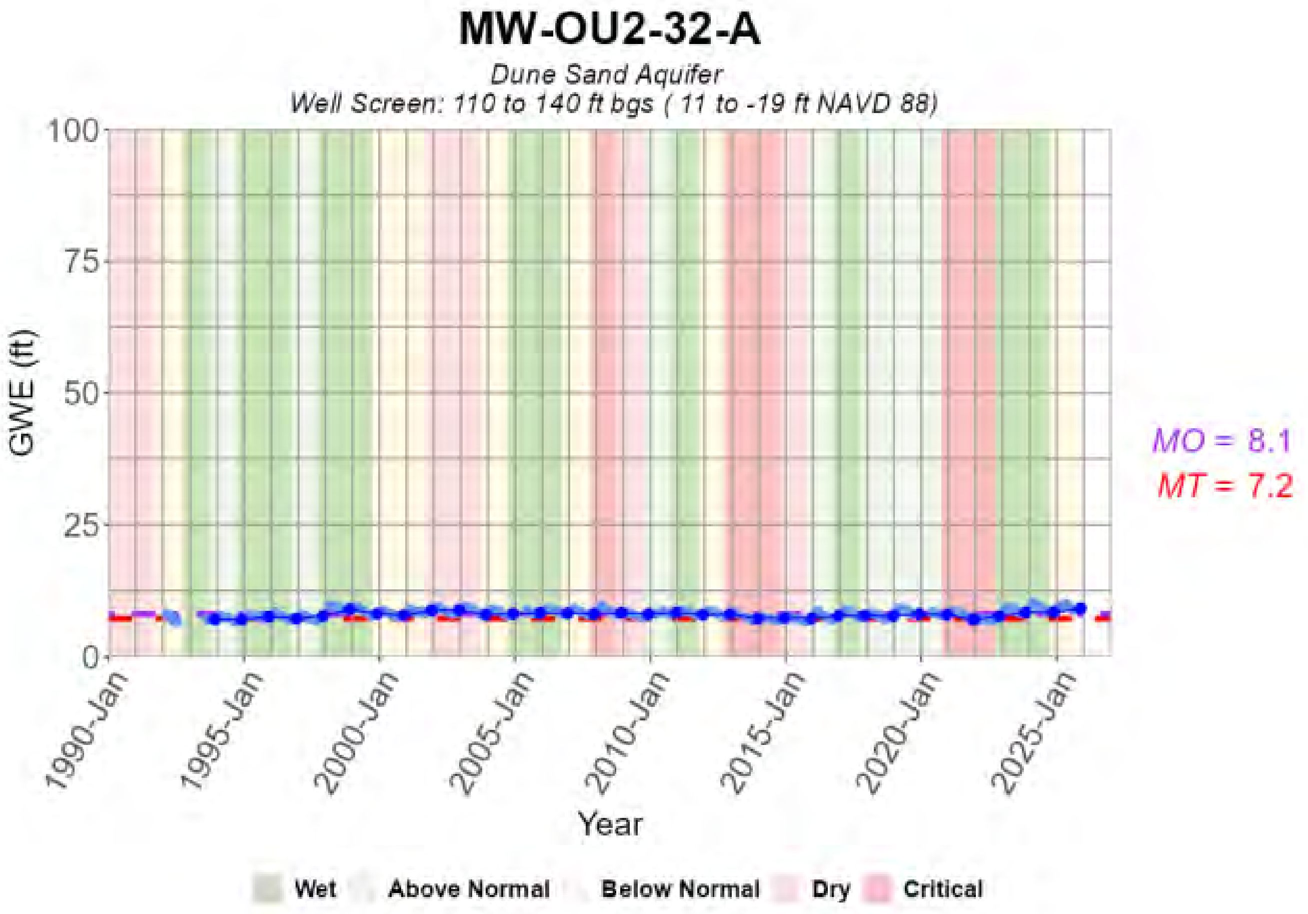

MW-BW-49-A
Dune Sand Aquifer
Well Screen: 32 to 62 ft bgs (13 to -17 ft NAVD 88)
GWE (ft)
Year
MO = 11.3
MT = 8.9
Wet
Above Normal
Below Normal
Dry
Critical


MW-BW-81-A
Dune Sand Aquifer
Well Screen: 40 to 80 ft bgs (12 to -28 ft NAVD 88)
100
75
50
25
0
GWE (ft)
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 10
MT = 8.2
Wet
Above Normal
Below Normal
Dry
Critical


MW-BW-82-A
Dune Sand Aquifer
Well Screen: 32 to 72 ft bgs (7 to -33 ft NAVD 88)
100
75
50
25
0
GWE (ft)
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 9.5
MT = 7.9
Wet
Above Normal
Below Normal
Dry
Critical

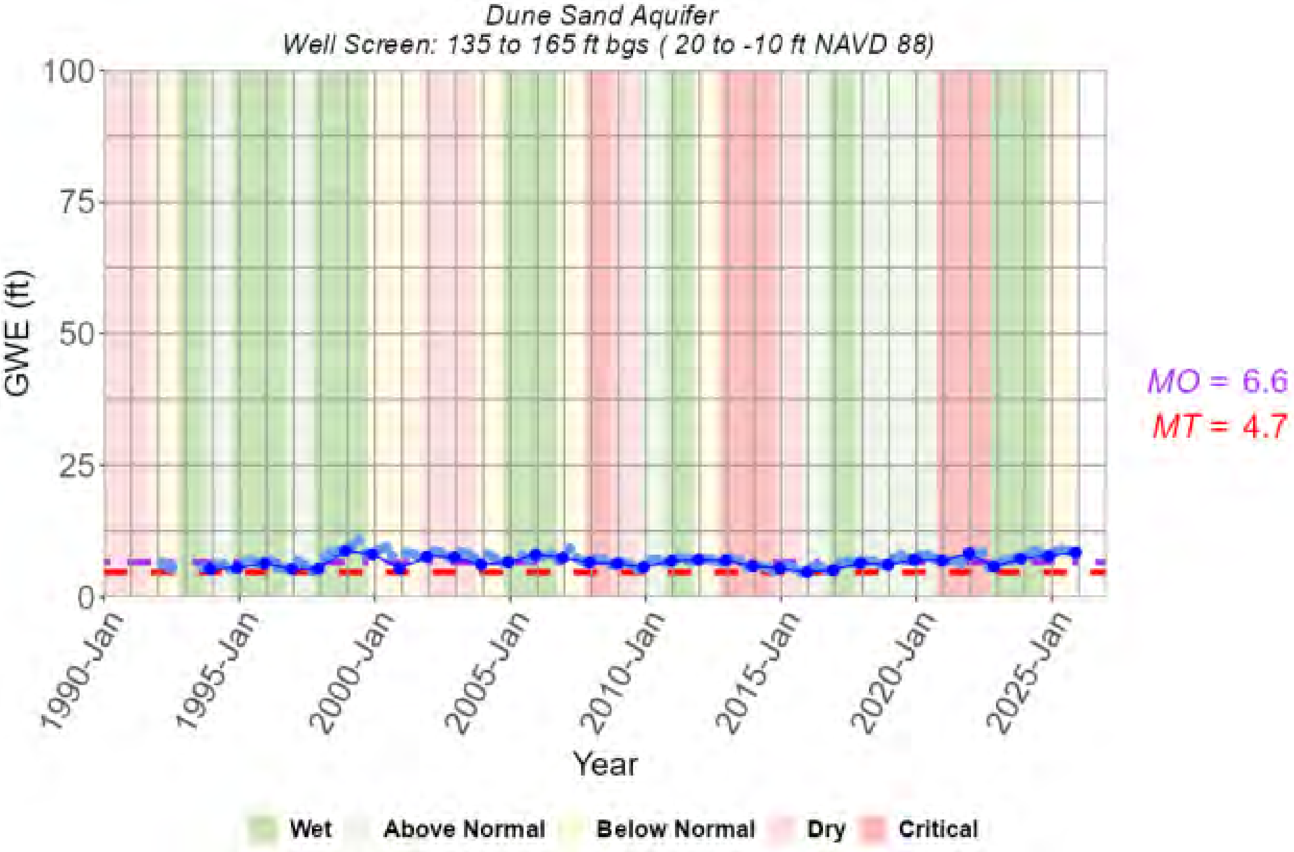


MW-OU2-13-A
Dune Sand Aquifer
Well Screen: 115 to 145 ft bgs (95 to 65 ft NAVD 88)
GWE (ft)
100
75
50
25
0
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 94.4
MT = 89.6
Wet
Above Normal
Below Normal
Dry
Critical

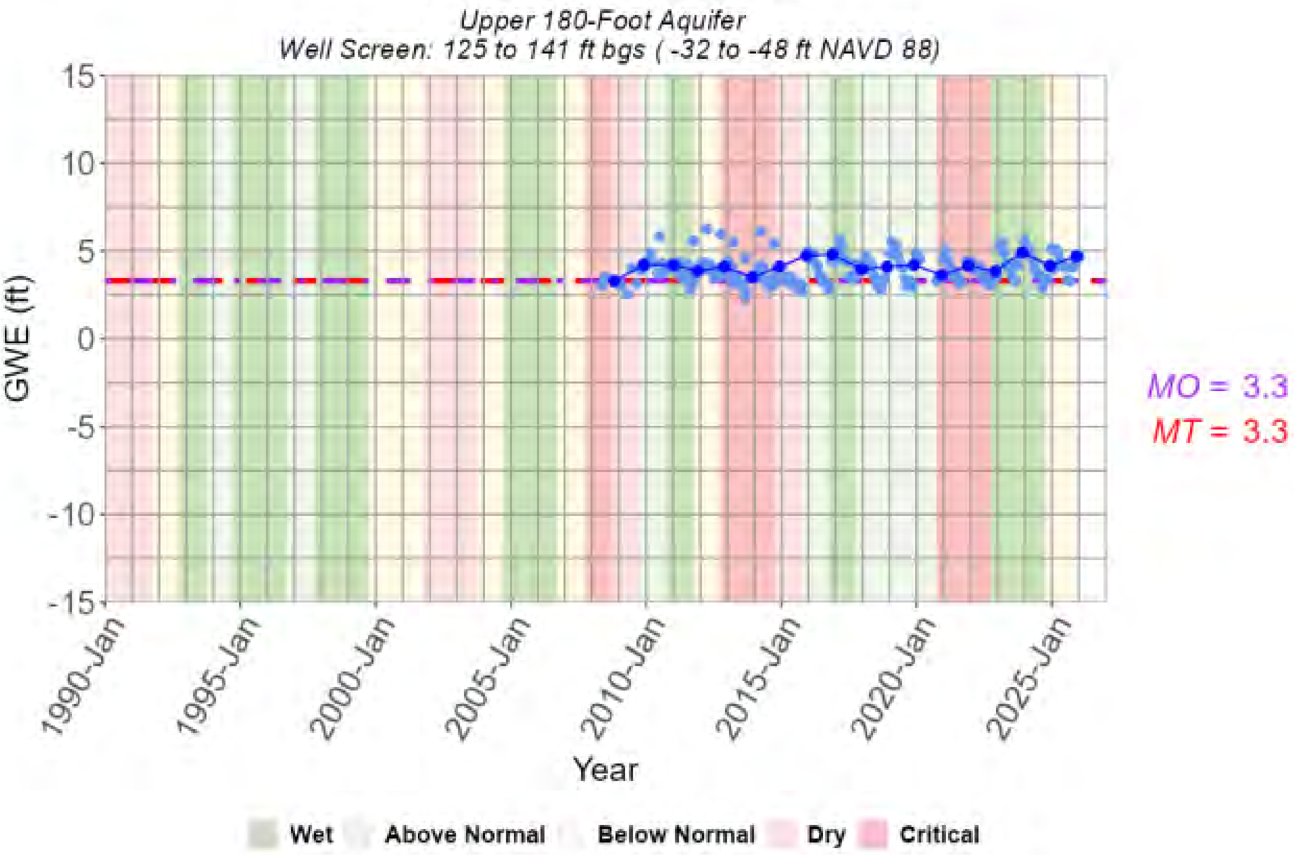


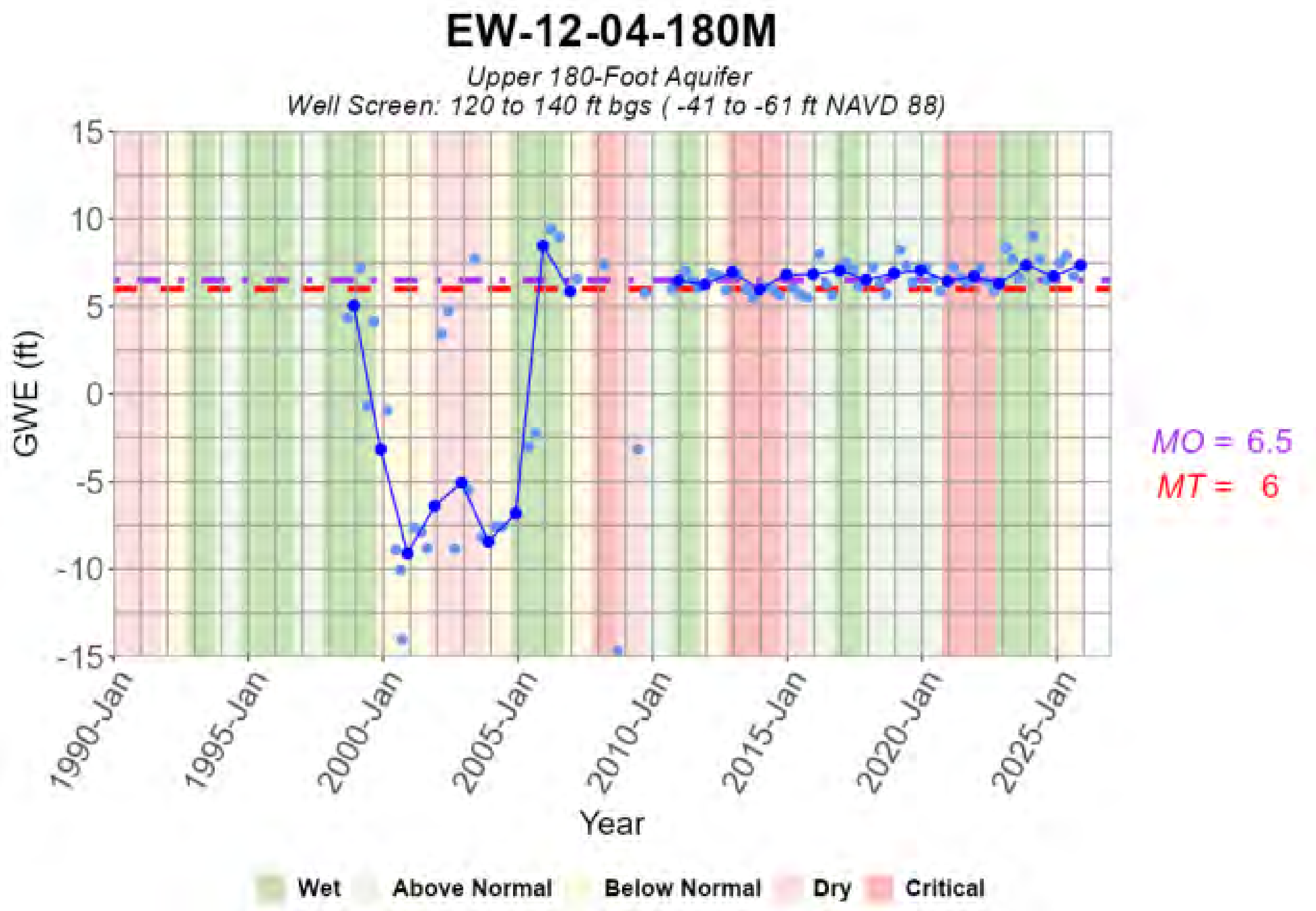
MW-OU2-32-A
Dune Sand Aquifer
Well Screen: 110 to 140 ft bgs (11 to -19 ft NAVD 88)
GWE (ft)
100
75
50
25
0
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 8.1
MT = 7.2
Wet
Above Normal
Below Normal
Dry
Critical

MW-OU2-34-A

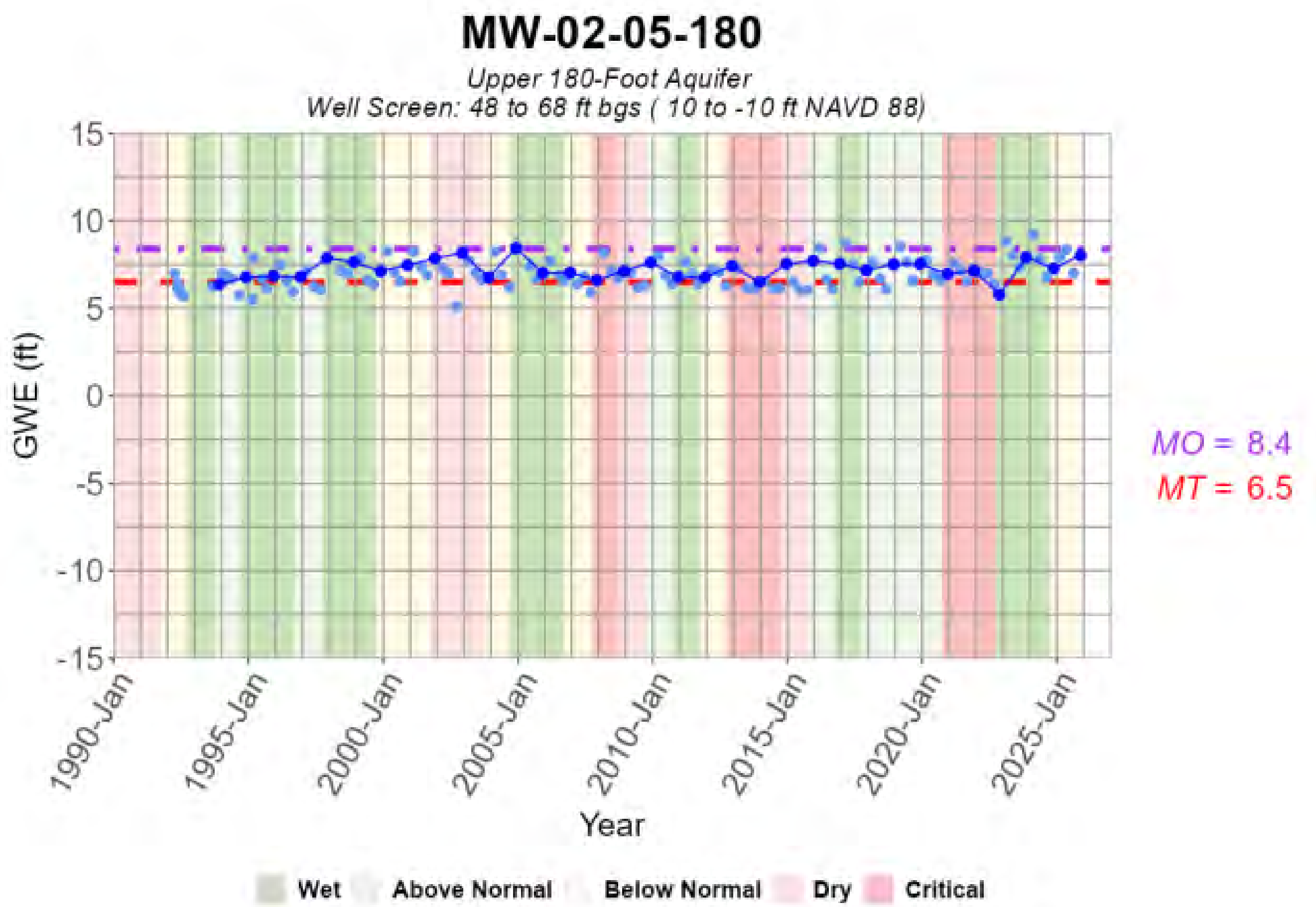


CDM MW-1 Beach

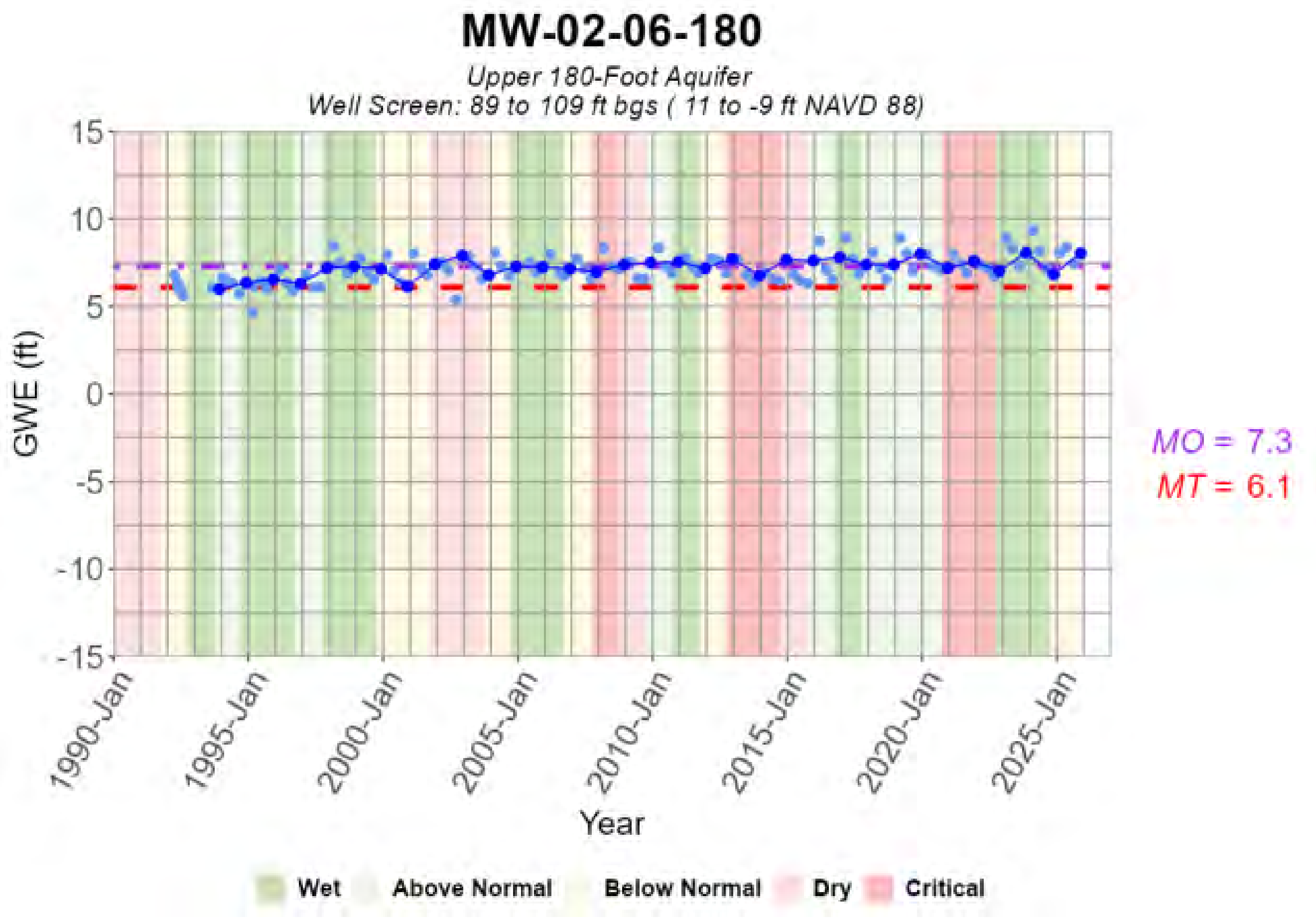


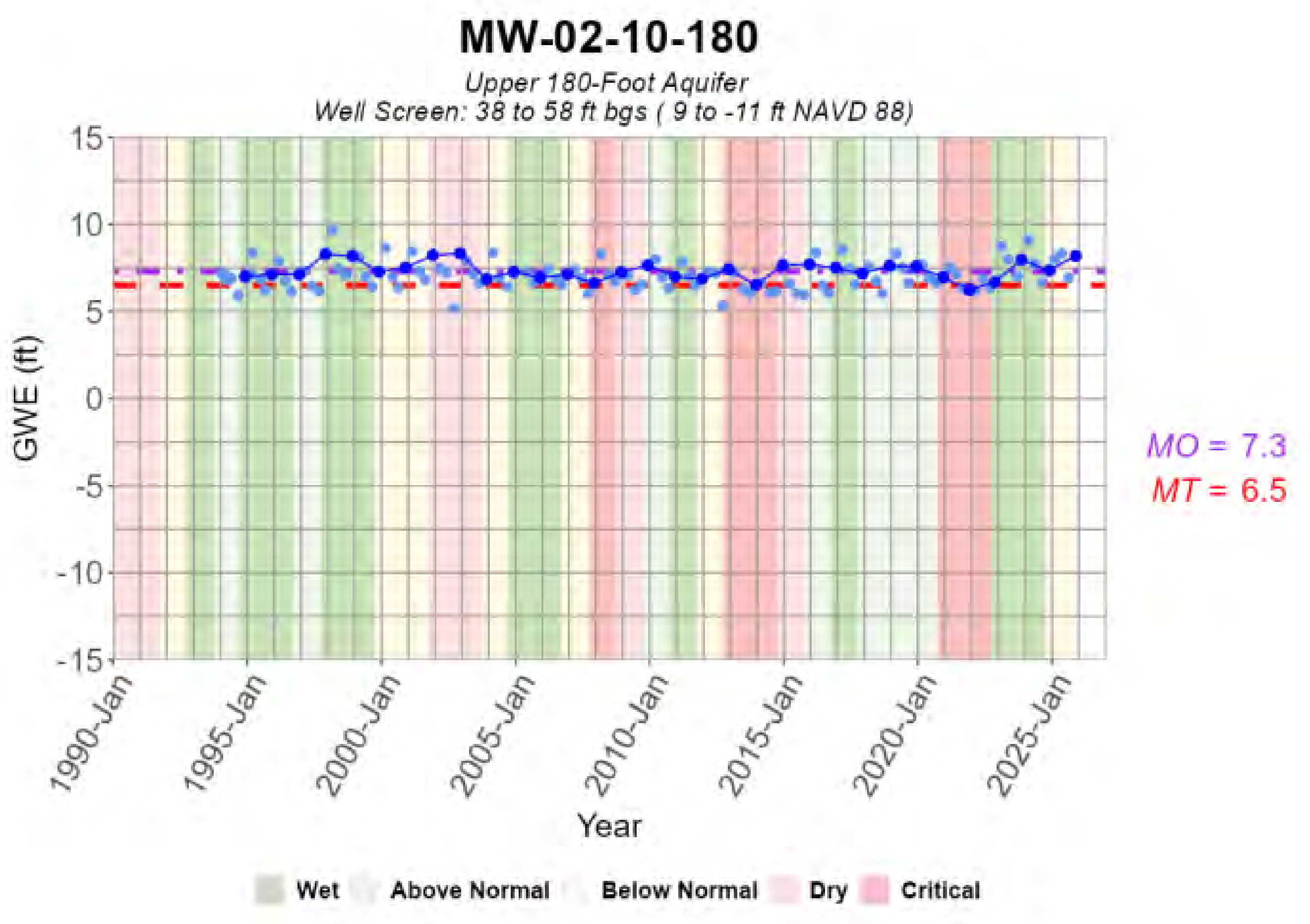


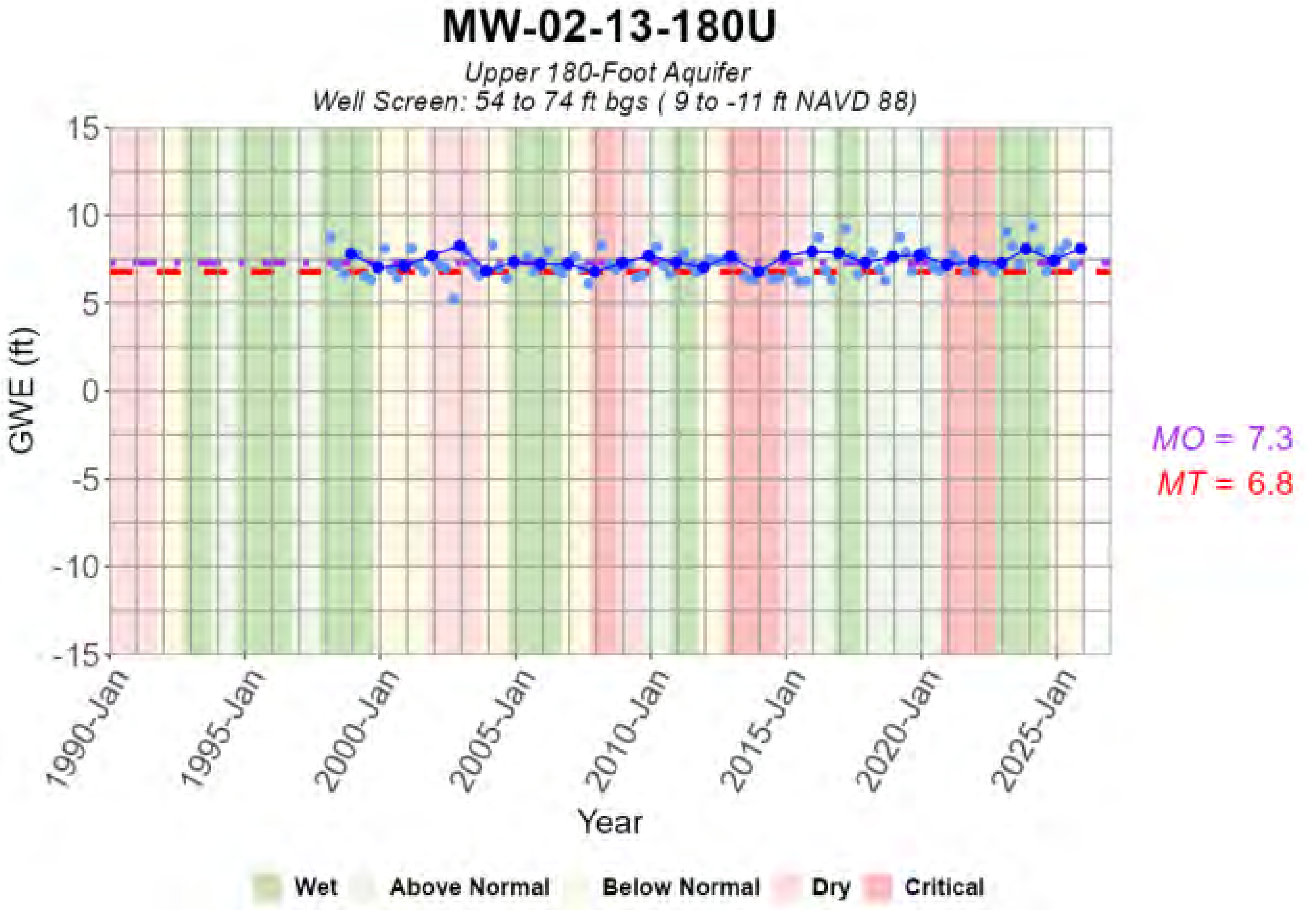
EW-12-04-180M
Upper 180-Foot Aquifer
Well Screen: 120 to 140 ft bgs (-41 to -61 ft NAVD 88)
GWE (ft)
15
10
5
0
-5
-10
-15
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 6.5
MT = 6
Wet
Above Normal
Below Normal
Dry
Critical

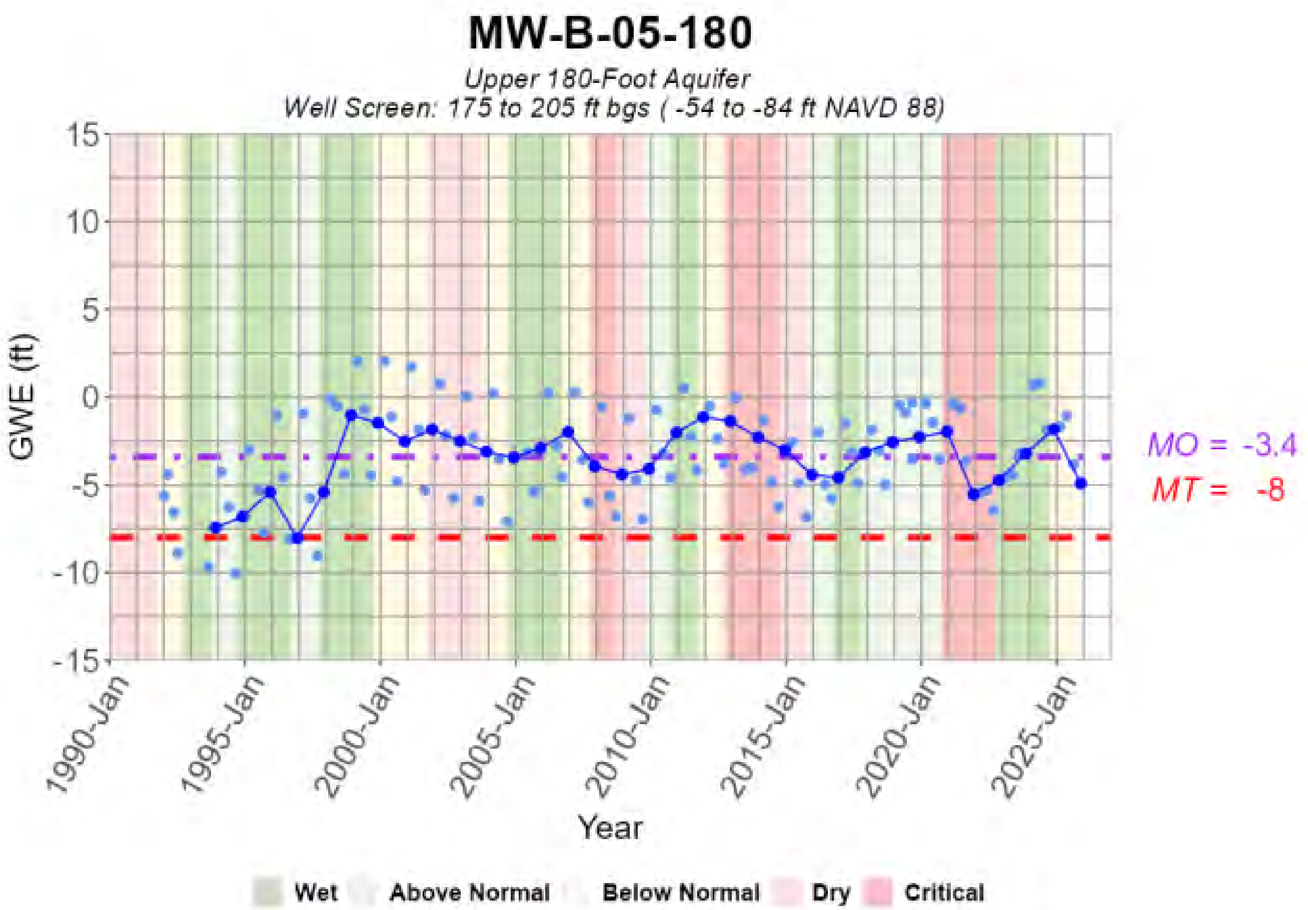


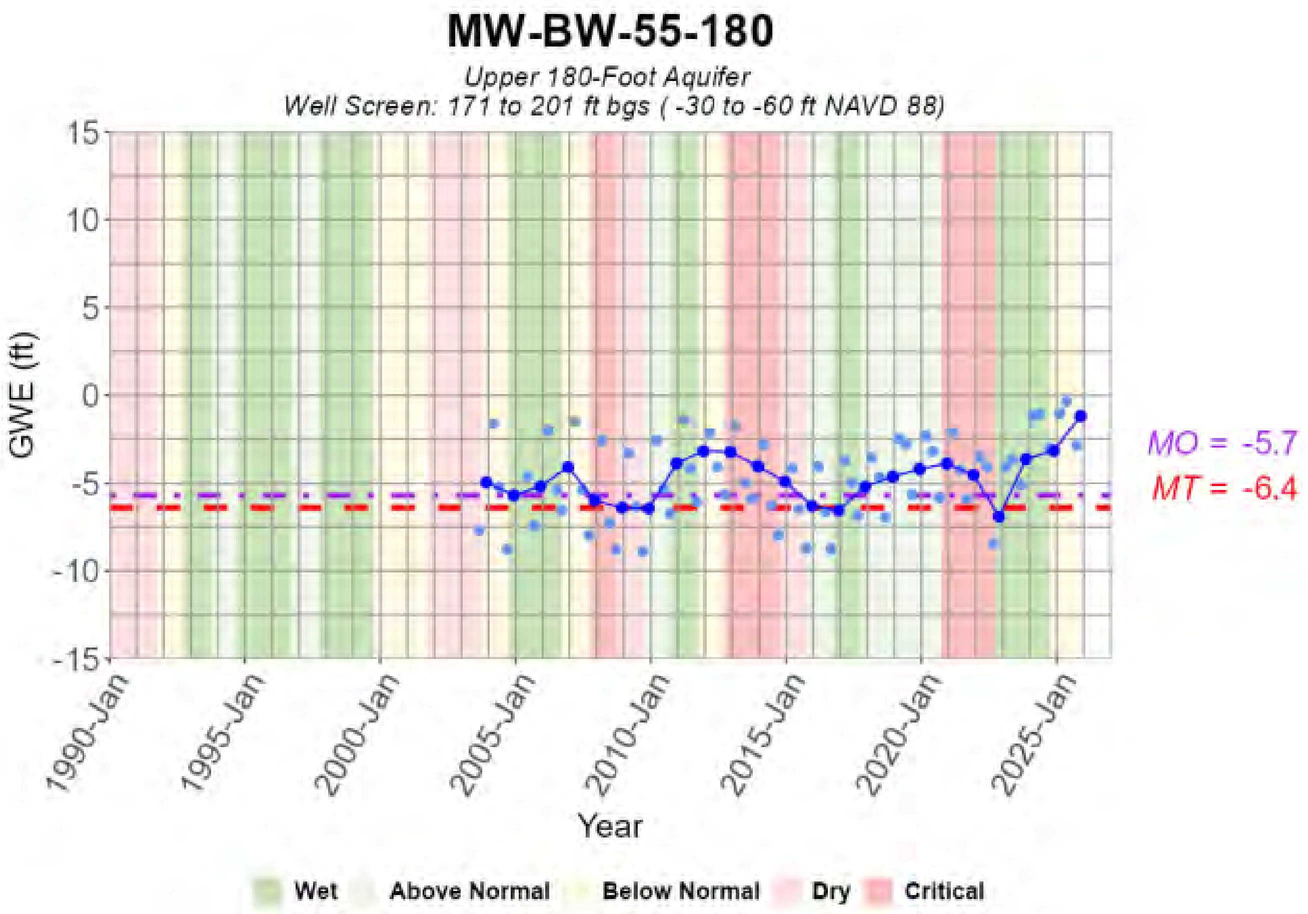
MW-02-05-180
Upper 180-Foot Aquifer
Well Screen: 48 to 68 ft bgs (10 to -10 ft NAVD 88)
GWE (ft)
15
10
5
0
-5
-10
-15
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 8.4
MT = 6.5
Wet
Above Normal
Below Normal
Dry
Critical

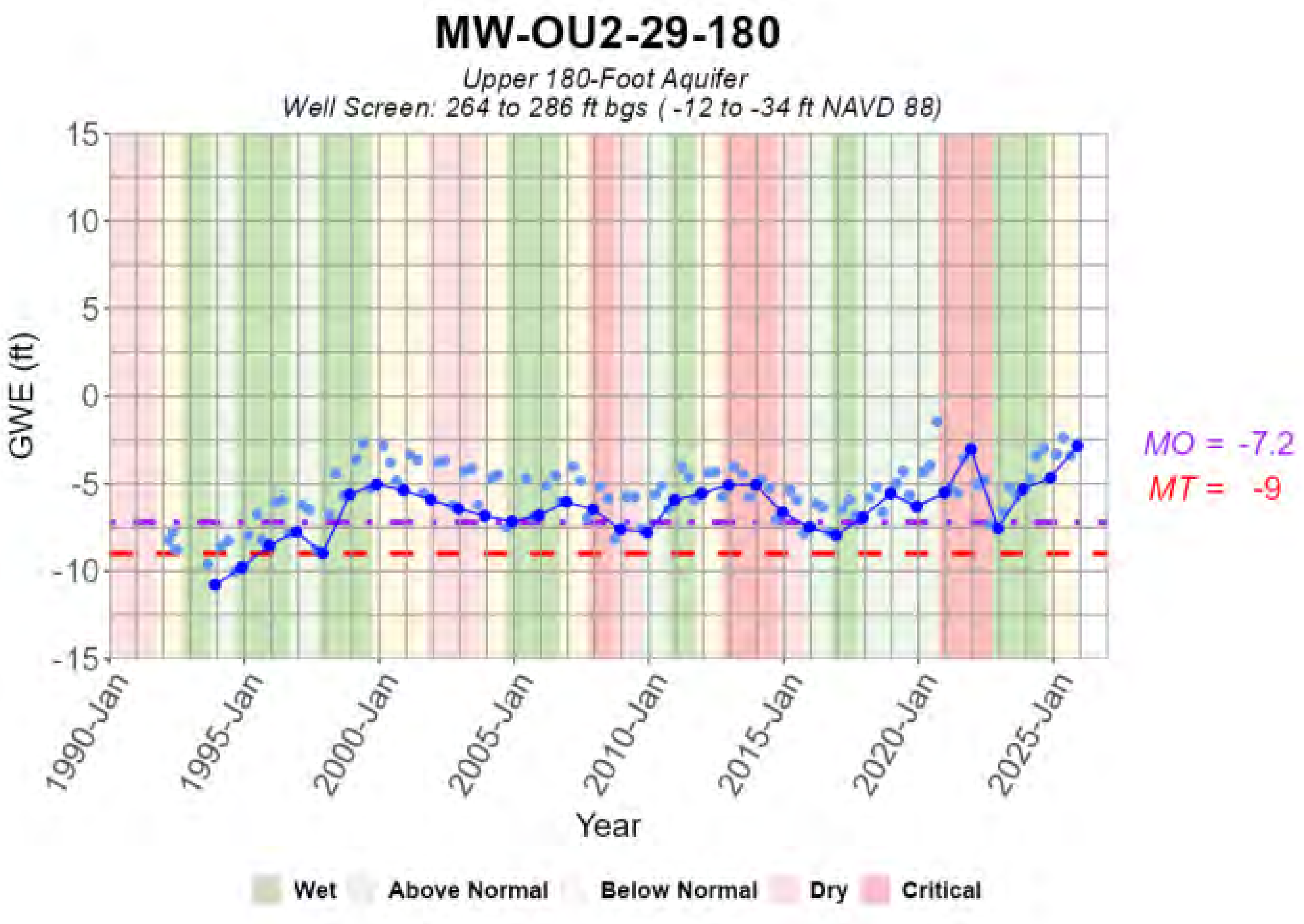

MW-02-06-180
Upper 180-Foot Aquifer
Well Screen: 89 to 109 ft bgs (11 to -9 ft NAVD 88)
GWE (ft)
Year
MO = 7.3
MT = 6.1
Wet
Above Normal
Below Normal
Dry
Critical

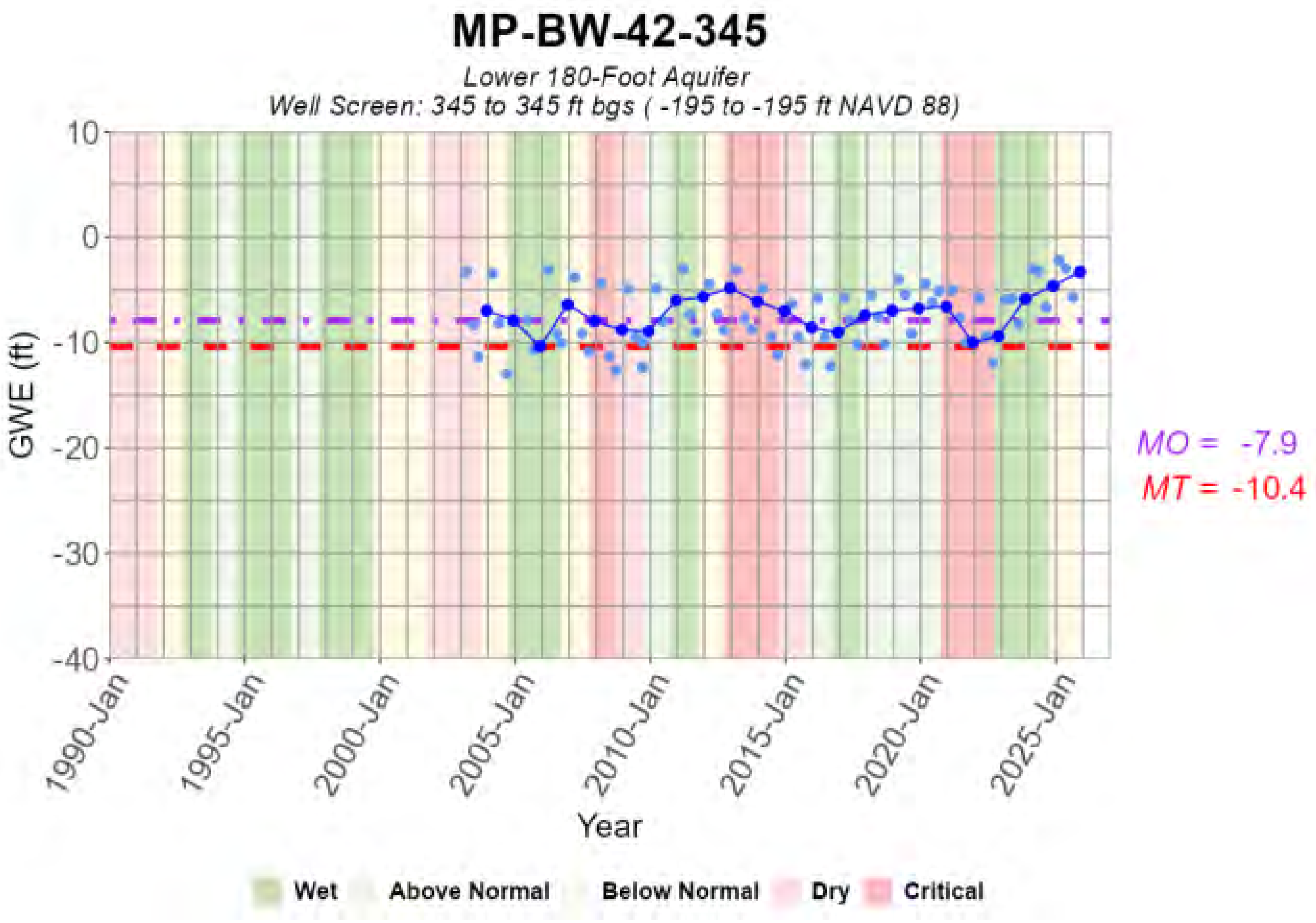

MW-02-10-180
Upper 180-Foot Aquifer
Well Screen: 38 to 58 ft bgs (9 to -11 ft NAVD 88)
GWE (ft)
Year
MO = 7.3
MT = 6.5
Wet
Above Normal
Below Normal
Dry
Critical


MW-02-13-180U
Upper 180-Foot Aquifer
Well Screen: 54 to 74 ft bgs (9 to -11 ft NAVD 88)
15
10
5
0
-5
-10
-15
GWE (ft)
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 7.3
MT = 6.8
Wet
Above Normal
Below Normal
Dry
Critical

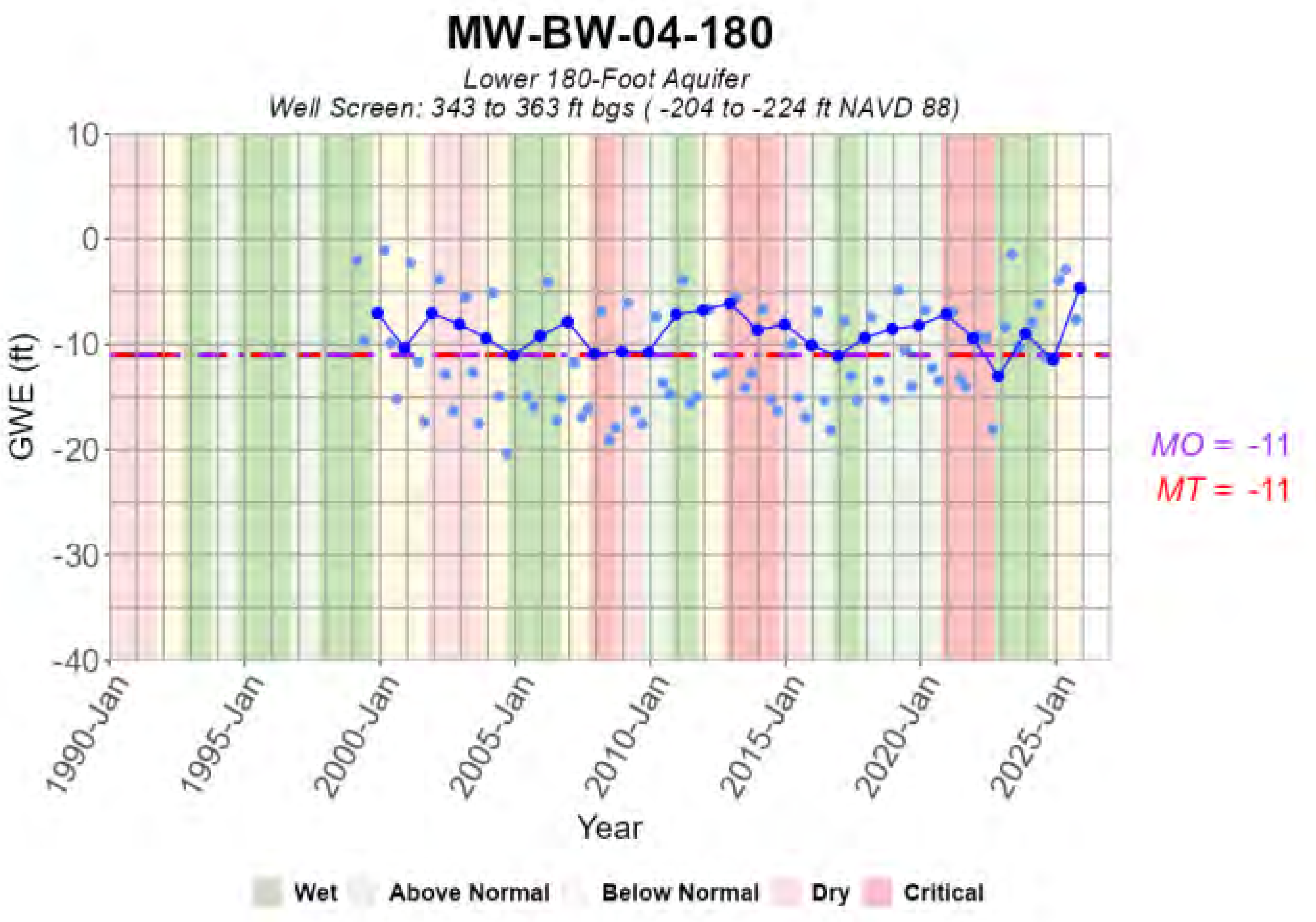

MW-B-05-180
Upper 180-Foot Aquifer
Well Screen: 175 to 205 ft bgs (-54 to -84 ft NAVD 88)
15
10
5
0
-5
-10
-15
GWE (ft)
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = -3.4
MT = -8
Wet
Above Normal
Below Normal
Dry
Critical


MW-BW-55-180
Upper 180-Foot Aquifer
Well Screen: 171 to 201 ft bgs (-30 to -60 ft NAVD 88)
GWE (ft)
15
10
5
0
-5
-10
-15
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = -5.7
MT = -6.4
Wet
Above Normal
Below Normal
Dry
Critical

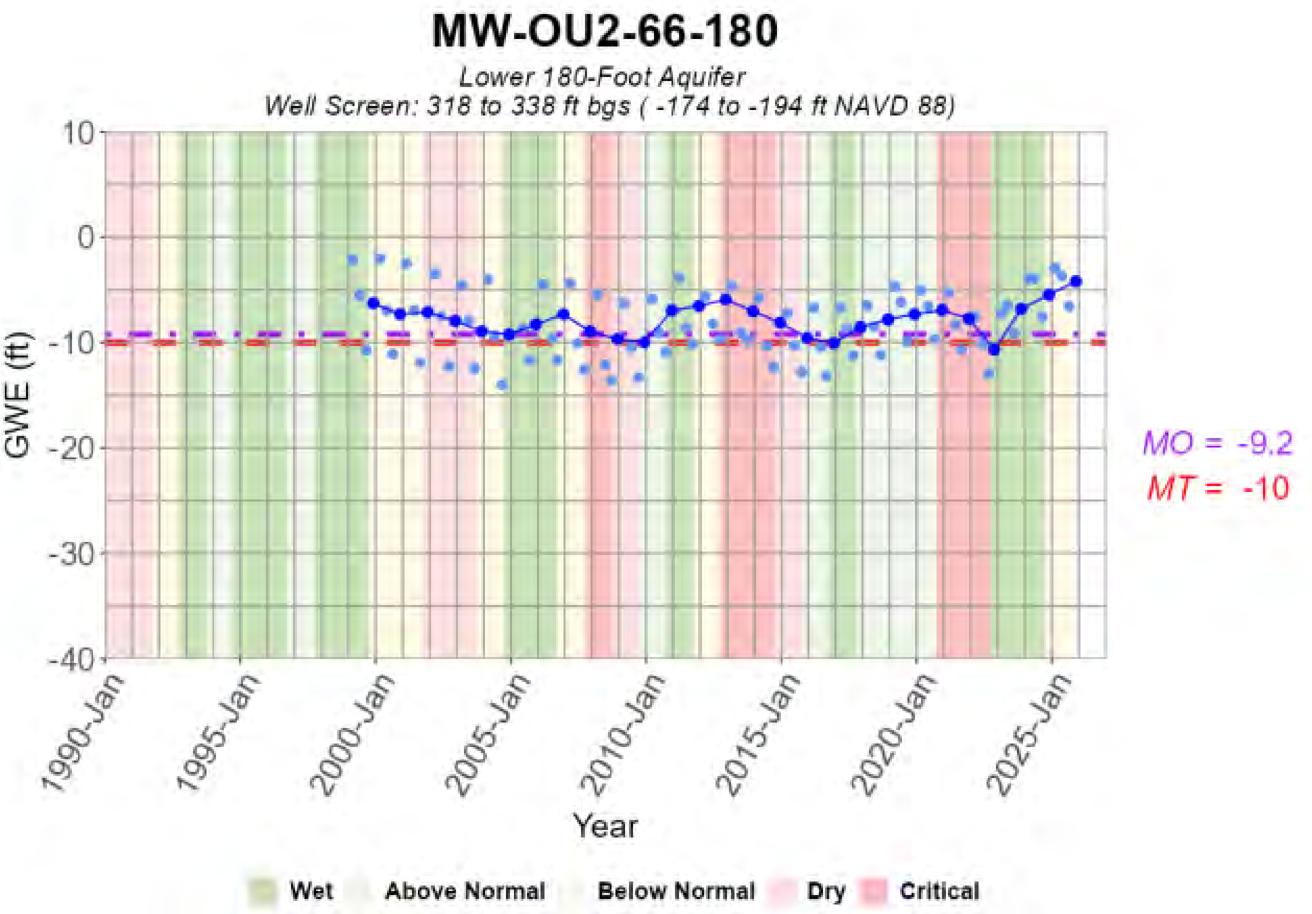

MW-OU2-29-180
Upper 180-Foot Aquifer
Well Screen: 264 to 286 ft bgs (-12 to -34 ft NAVD 88)
GWE (ft)
15
10
5
0
-5
-10
-15
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = -7.2
MT = -9
Wet
Above Normal
Below Normal
Dry
Critical

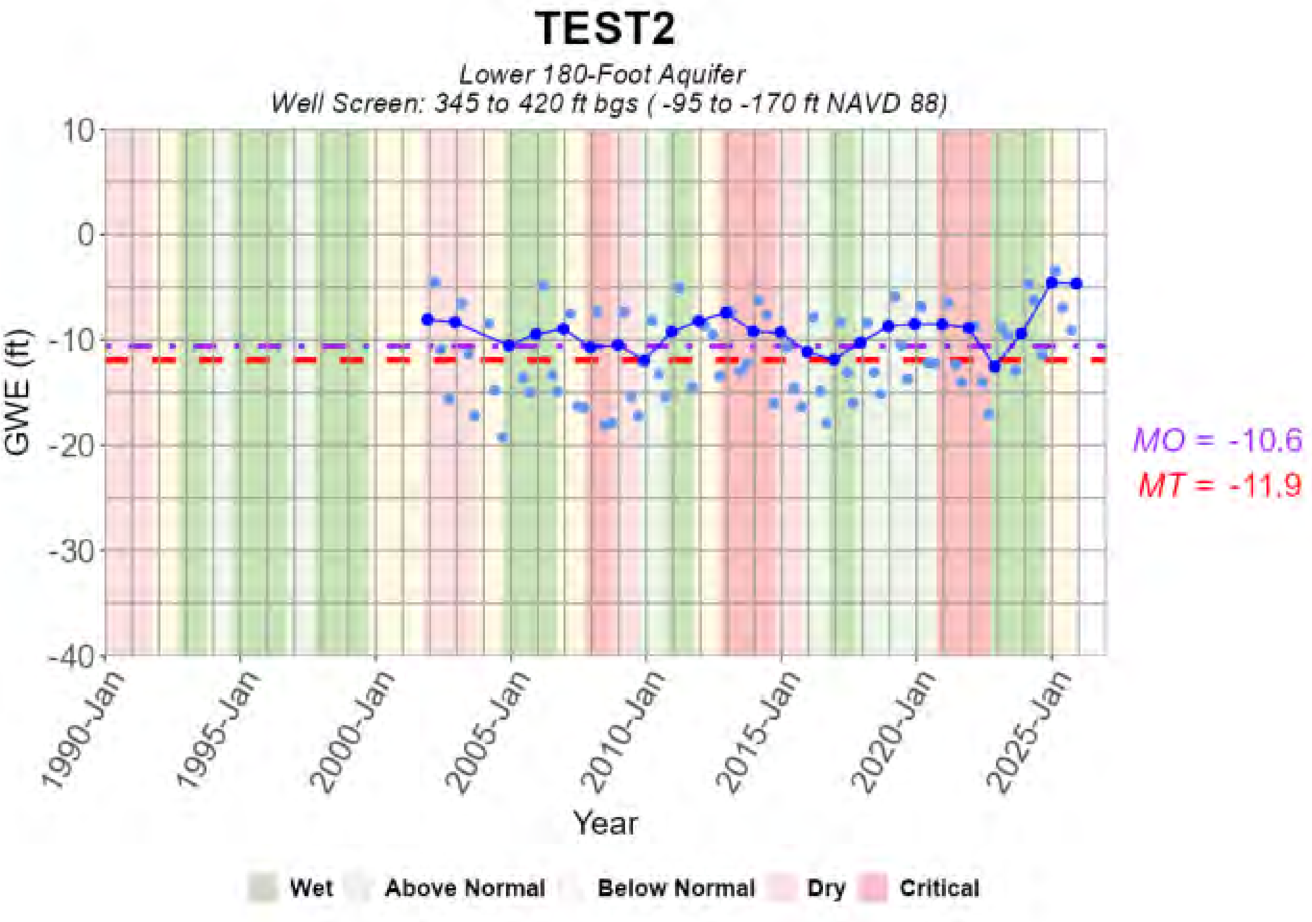


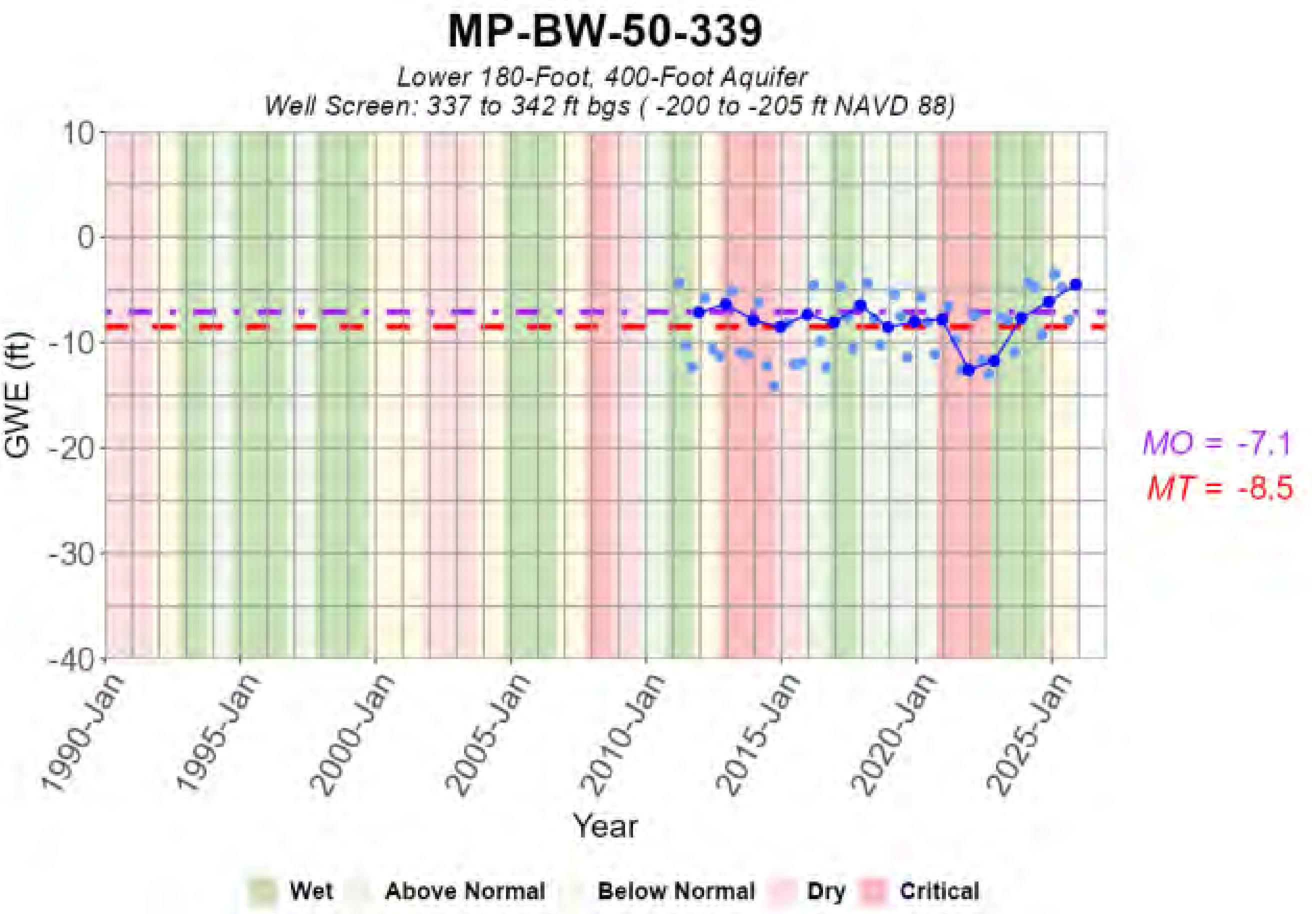
MP-BW-42-345
Lower 180-Foot Aquifer
Well Screen: 345 to 345 ft bgs (-195 to -195 ft NAVD 88)
GWE (ft)
Year
MO = -7.9
MT = -10.4
Wet
Above Normal
Below Normal
Dry
Critical

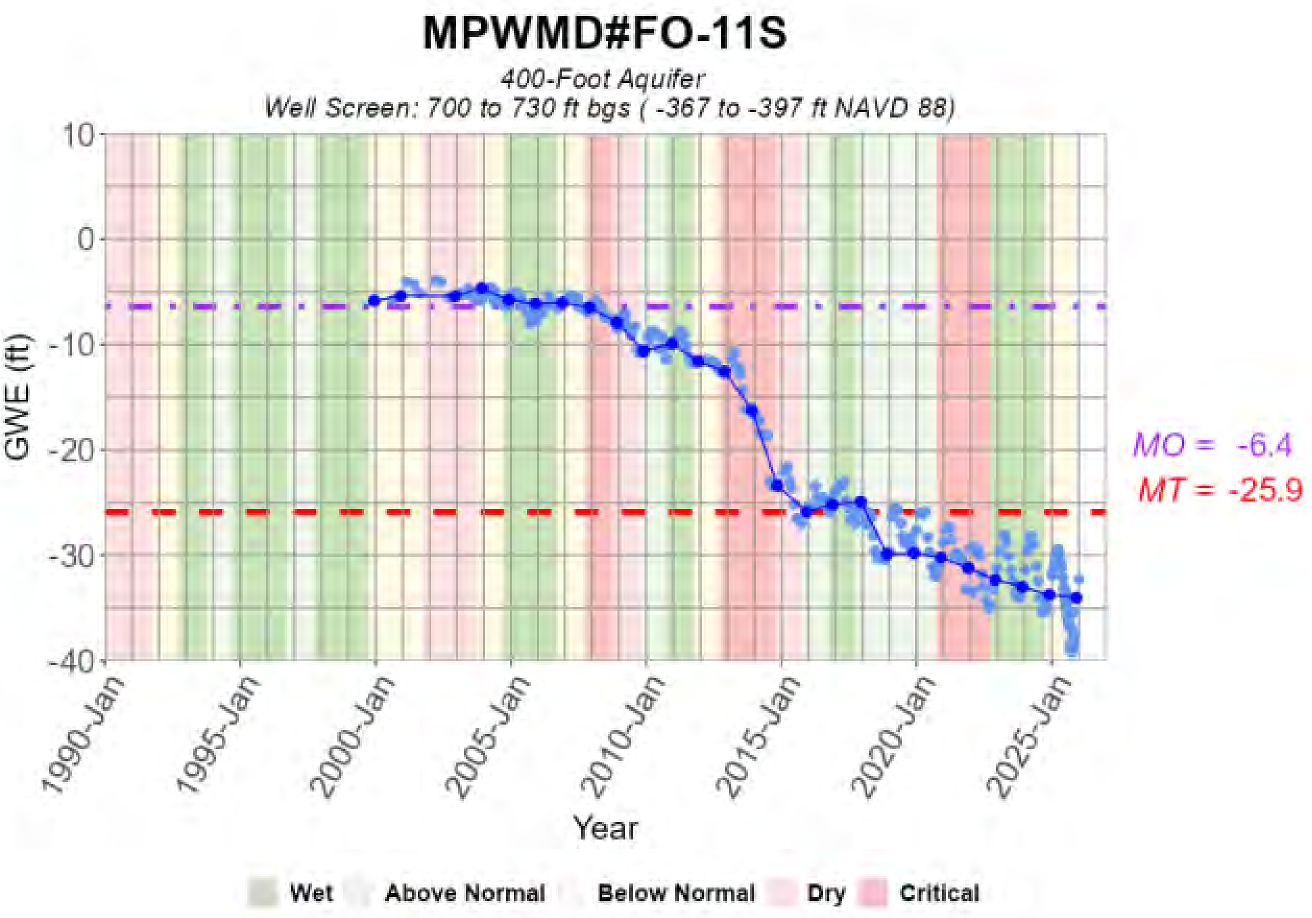


MW-BW-04-180
Lower 180-Foot Aquifer
Well Screen: 343 to 363 ft bgs (-204 to -224 ft NAVD 88)
GWE (ft)
Year
MO = -11
MT = -11
Wet
Above Normal
Below Normal
Dry
Critical


MW-OU2-66-180
Lower 180-Foot Aquifer
Well Screen: 318 to 338 ft bgs (-174 to -194 ft NAVD 88)
GWE (ft)
Year
MO = -9.2
MT = -10
Wet
Above Normal
Below Normal
Dry
Critical

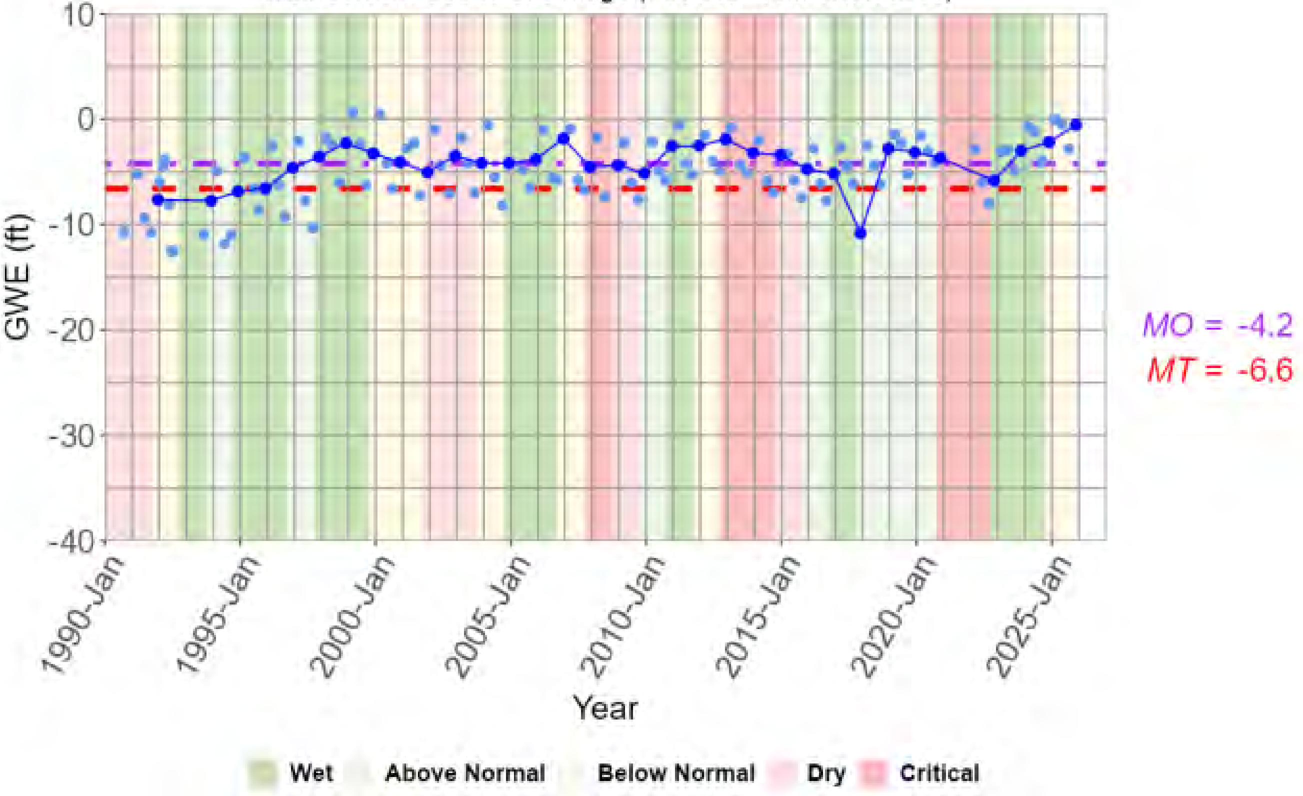

TEST2
Lower 180-Foot Aquifer
Well Screen: 345 to 420 ft bgs (-95 to -170 ft NAVD 88)
GWE (ft)
Year
MO = -10.6
MT = -11.9
Wet
Above Normal
Below Normal
Dry
Critical


MP-BW-50-339
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 337 to 342 ft bgs (-200 to -205 ft NAVD 88)
GWE (ft)
Year
MO = -7.1
MT = -8.5
Wet
Above Normal
Below Normal
Dry
Critical


MPWMD#FO-11S
400-Foot Aquifer
Well Screen: 700 to 730 ft bgs (-367 to -397 ft NAVD 88)
GWE (ft)
Year
MO = -6.4
MT = -25.9
Wet
Above Normal
Below Normal
Dry
Critical

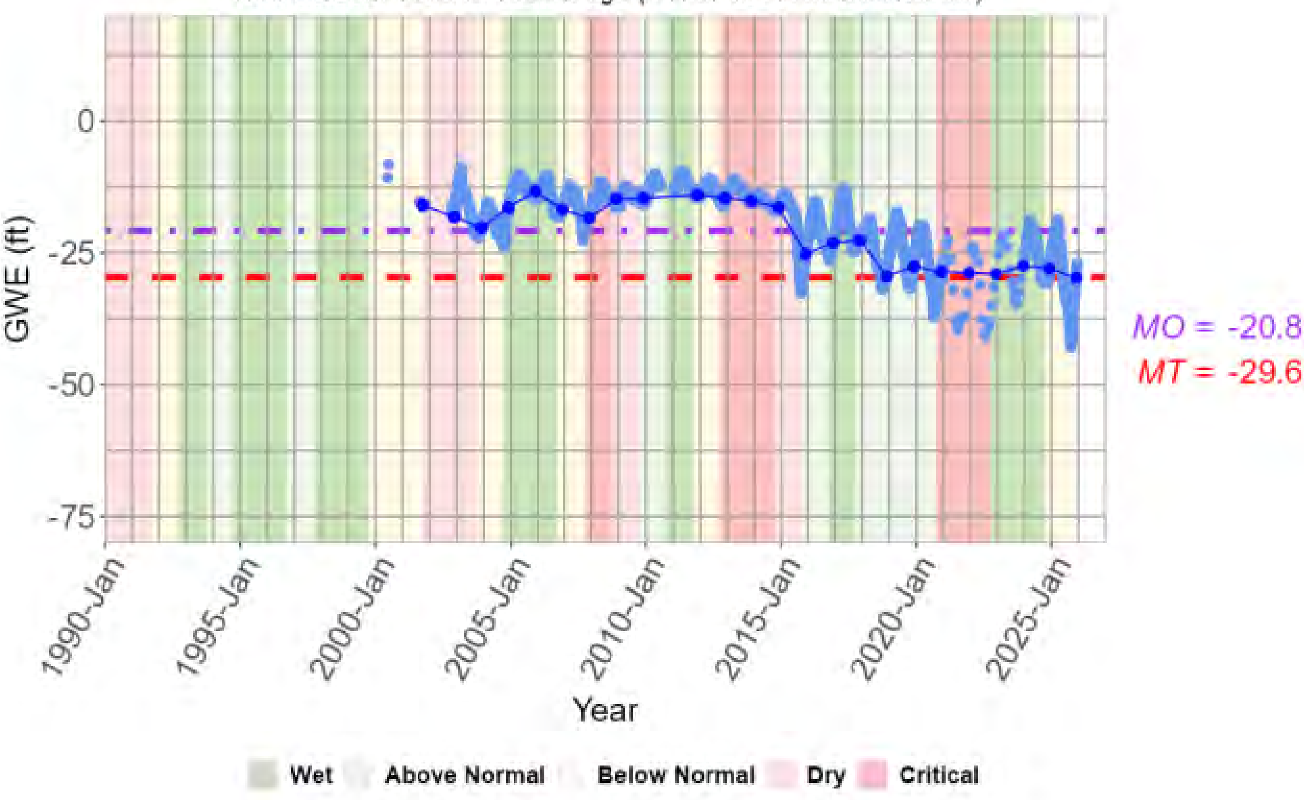
MW-OU2-07-400

400-Foot Aquifer
Well Screen: 382 to 579 ft bgs (-207 to -404 ft NAVD 88)



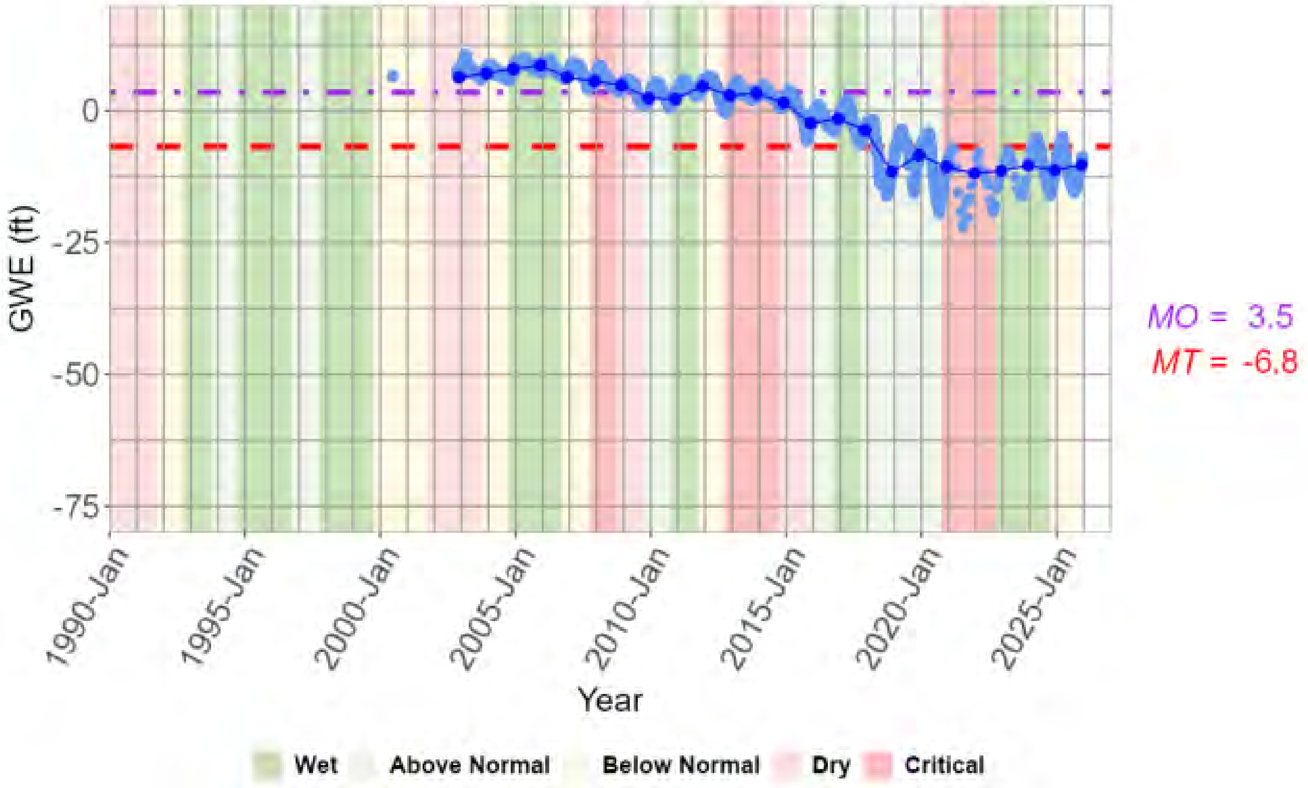
014S001E24L002M

Deep Aquifers
Well Screen: 1820 to 1860 ft bgs (-1757 to -1797 ft NAVD 88)



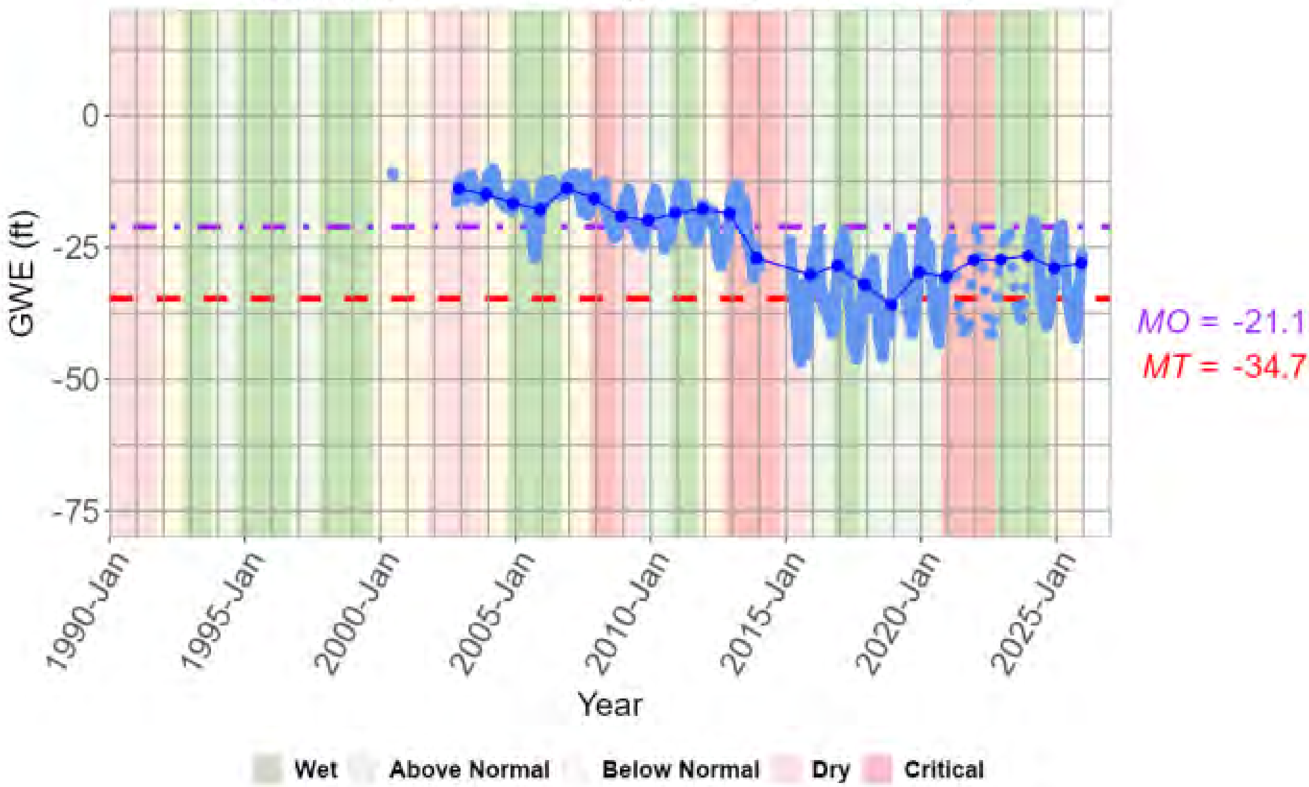
014S001E24L003M

Deep Aquifers
Well Screen: 1410 to 1430 ft bgs (-1347 to -1367 ft NAVD 88)



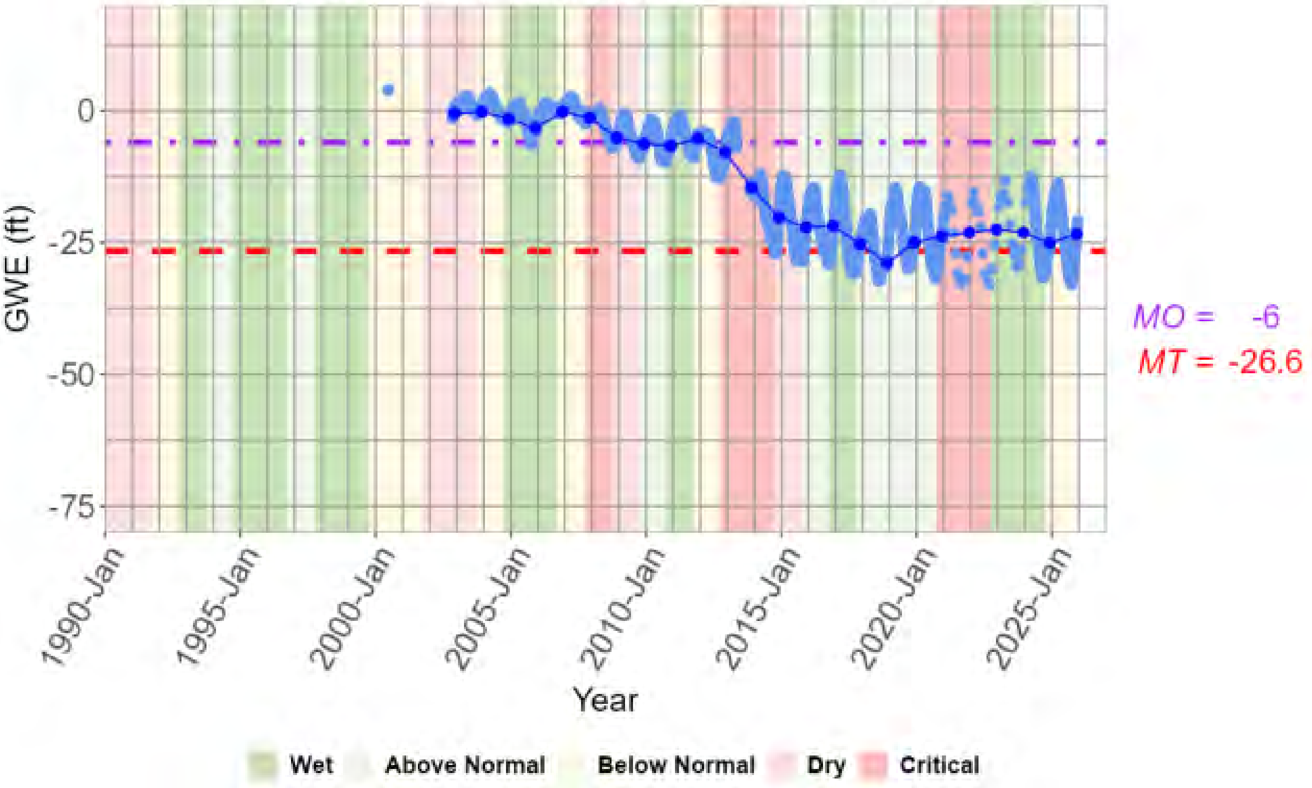
014S001E24L004M

Deep Aquifers
Well Screen: 1040 to 1060 ft bgs (-977 to -997 ft NAVD 88)



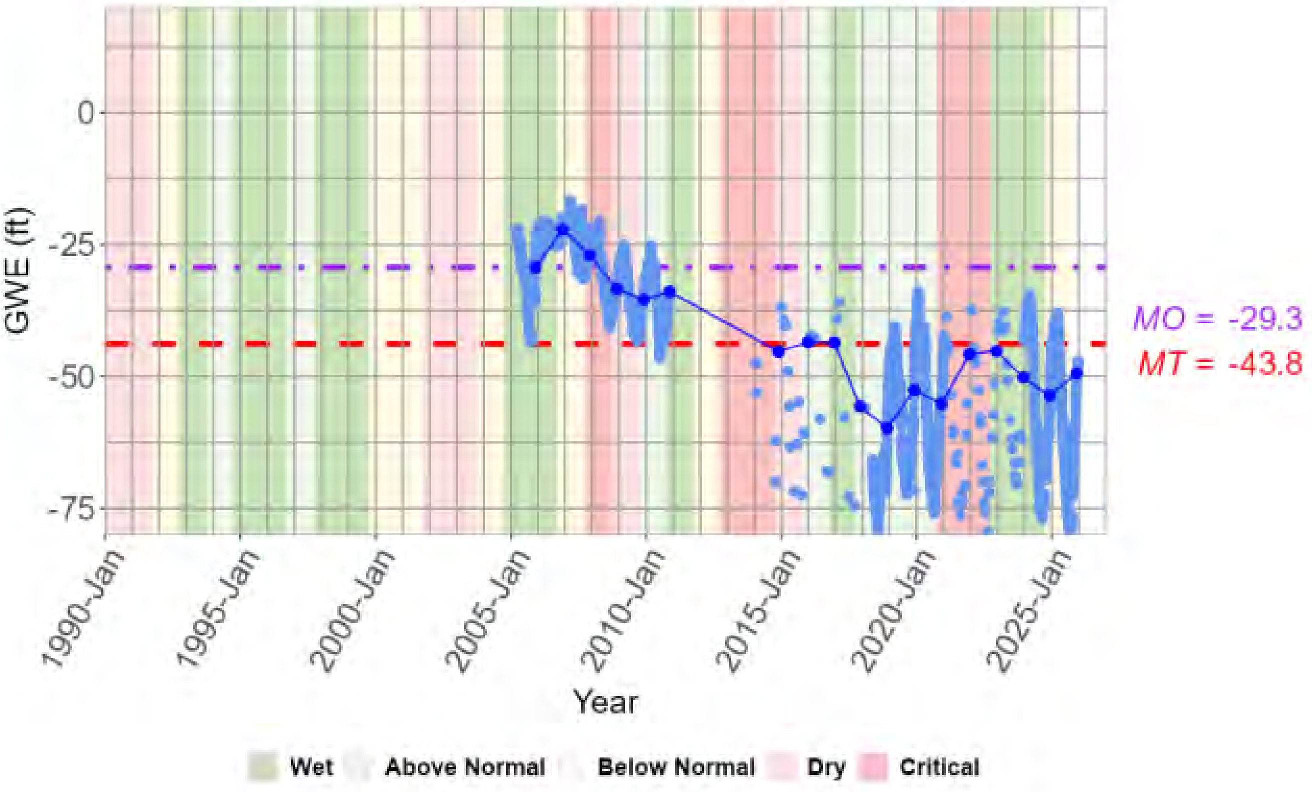
014S001E24L005M

Deep Aquifers
Well Screen: 930 to 950 ft bgs (-867 to -887 ft NAVD 88)



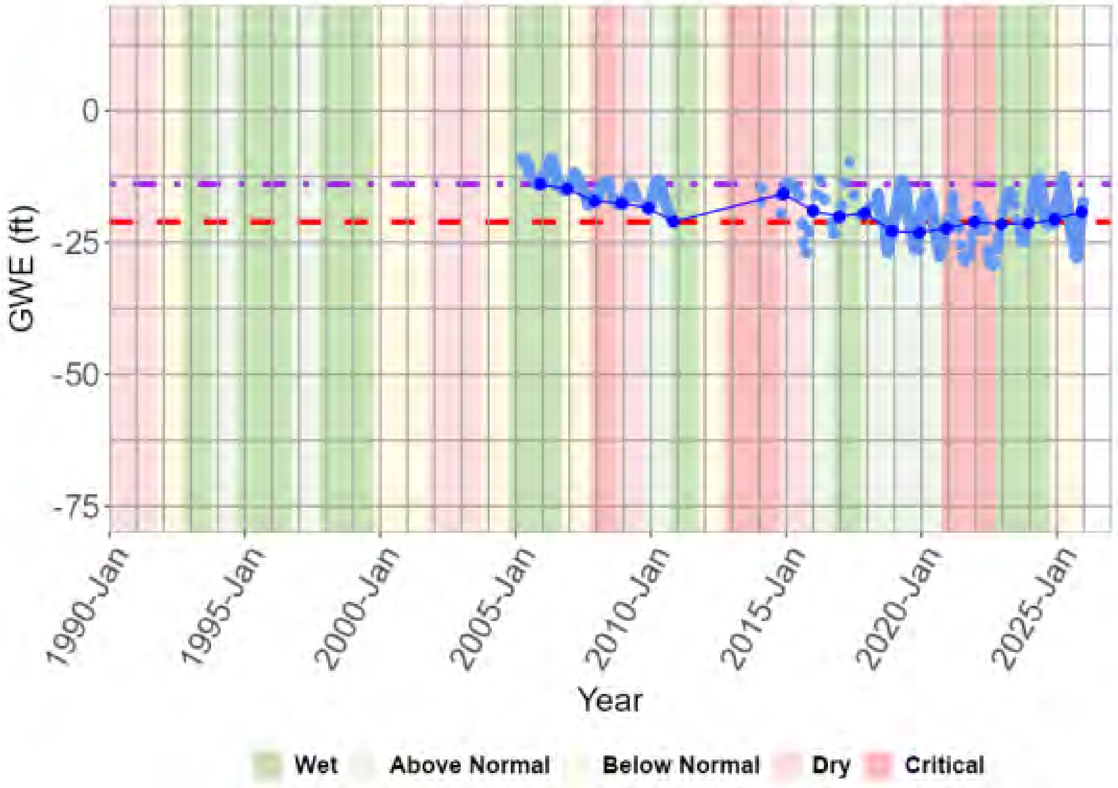
14S02E33E01

Deep Aquifers
Well Screen: 1045 to 1095 ft bgs (-906 to -956 ft NAVD 88)



14S02E33E02

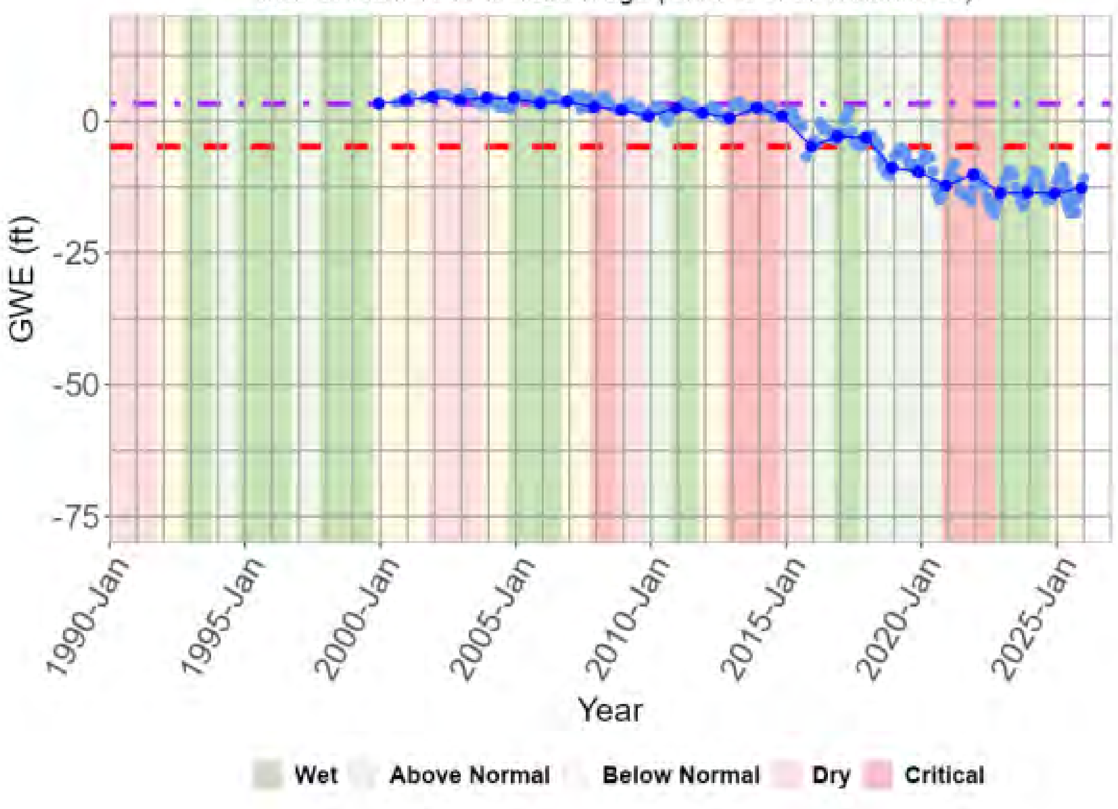
Deep Aquifers
Well Screen: 1680 to 1760 ft bgs (-1542 to -1622 ft NAVD 88)



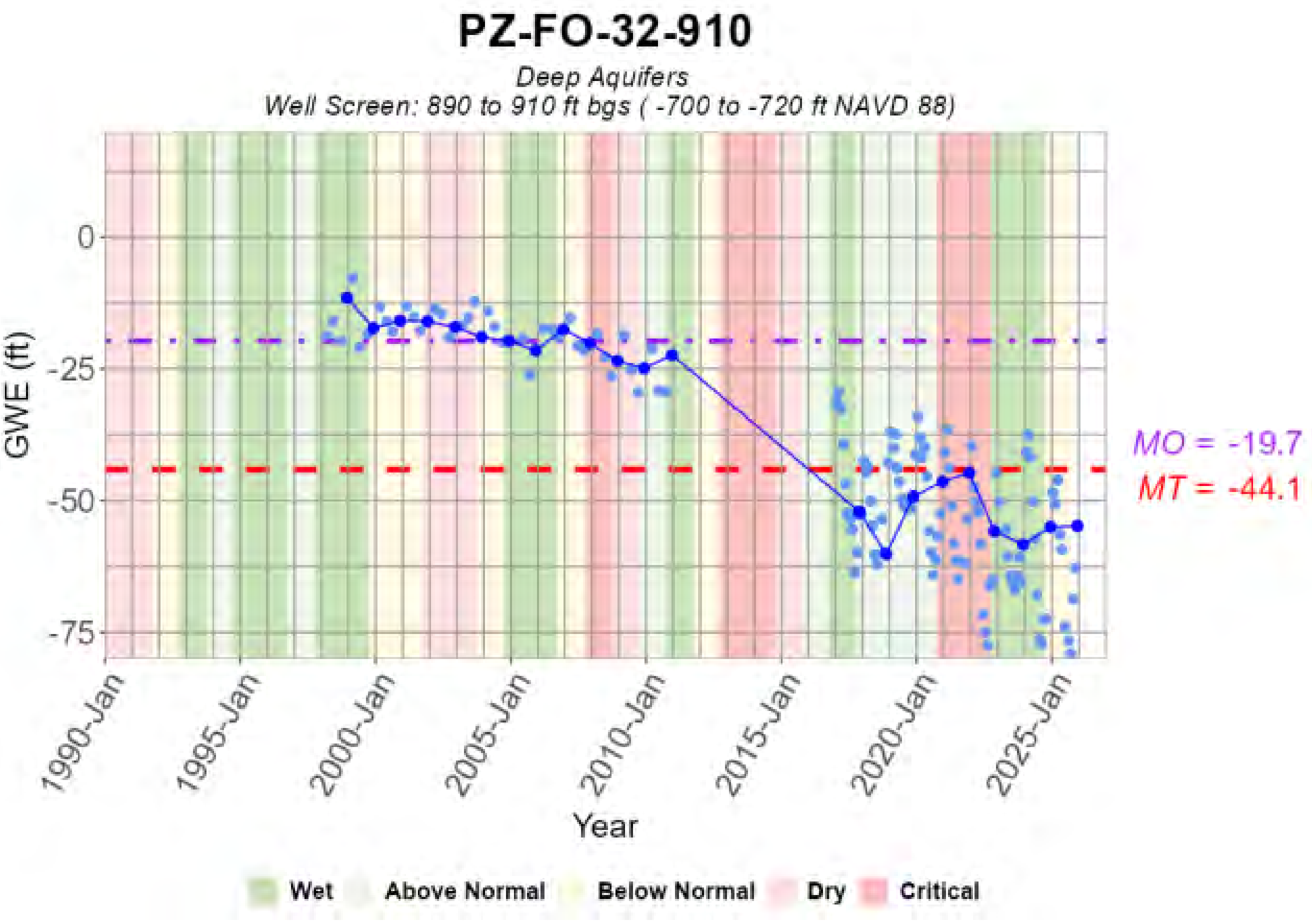
MO = -13.9
MT = -21.1

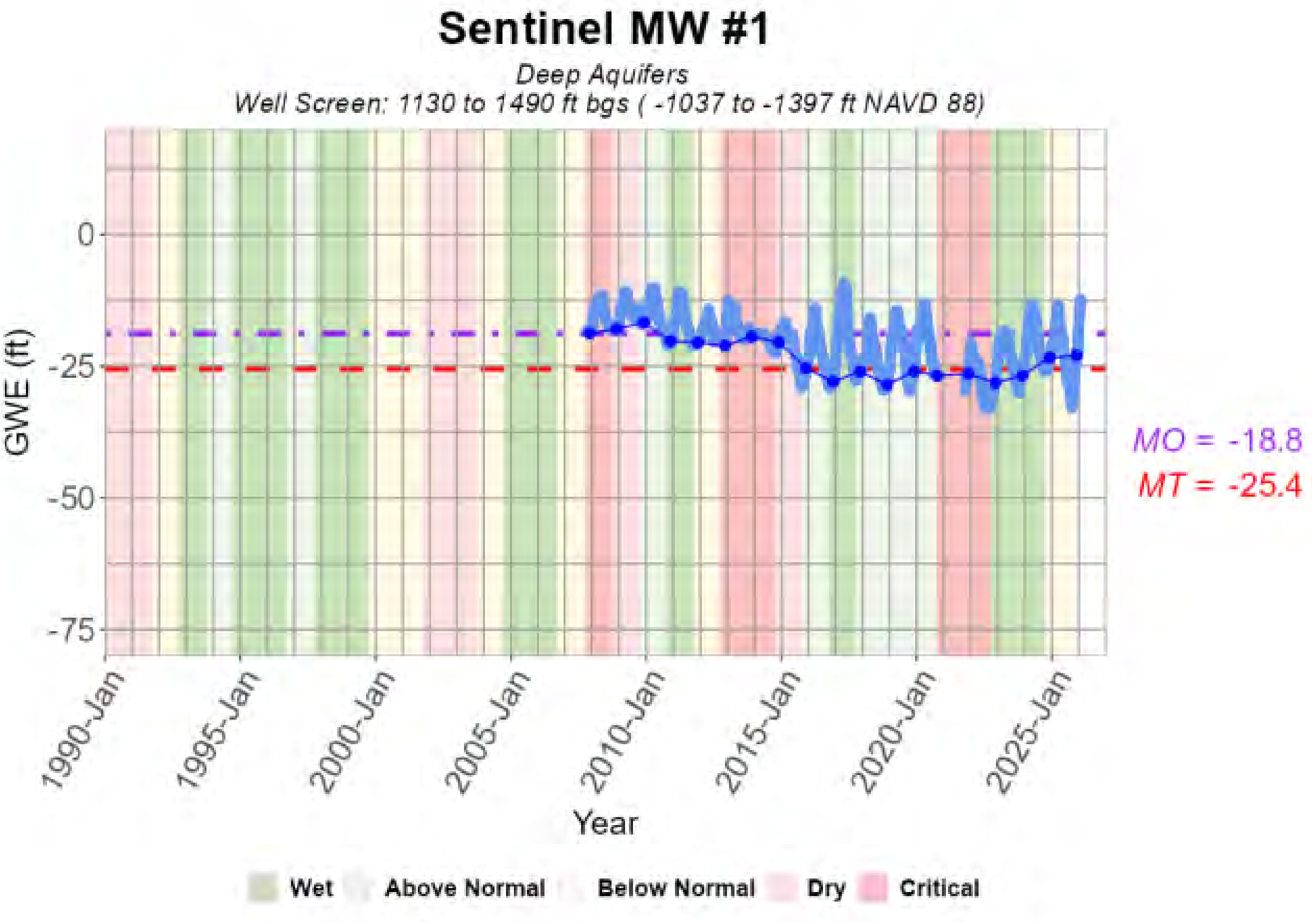
MPWMD#FO-11D

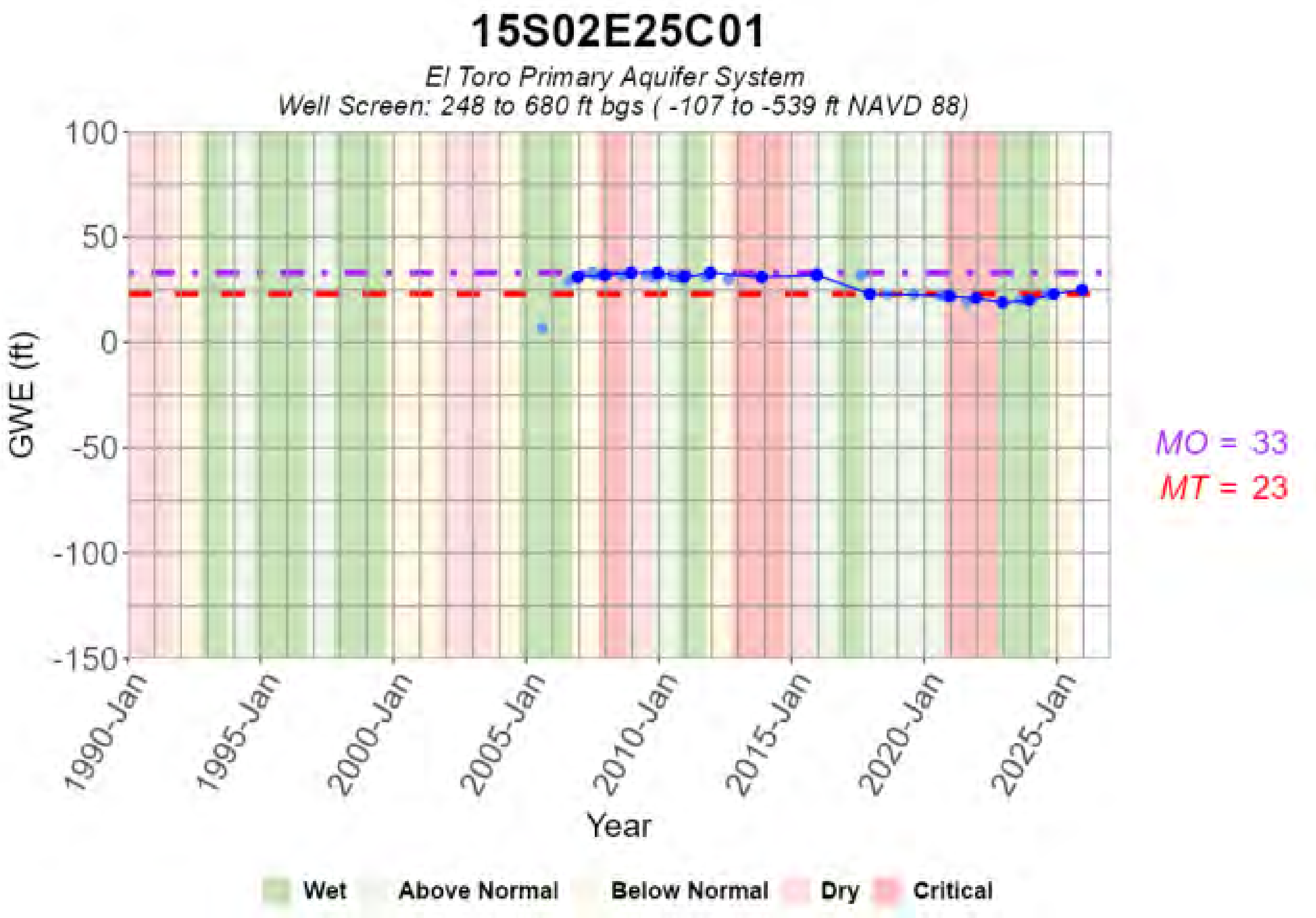
Deep Aquifers
Well Screen: 1090 to 1120 ft bgs (-757 to -787 ft NAVD 88)

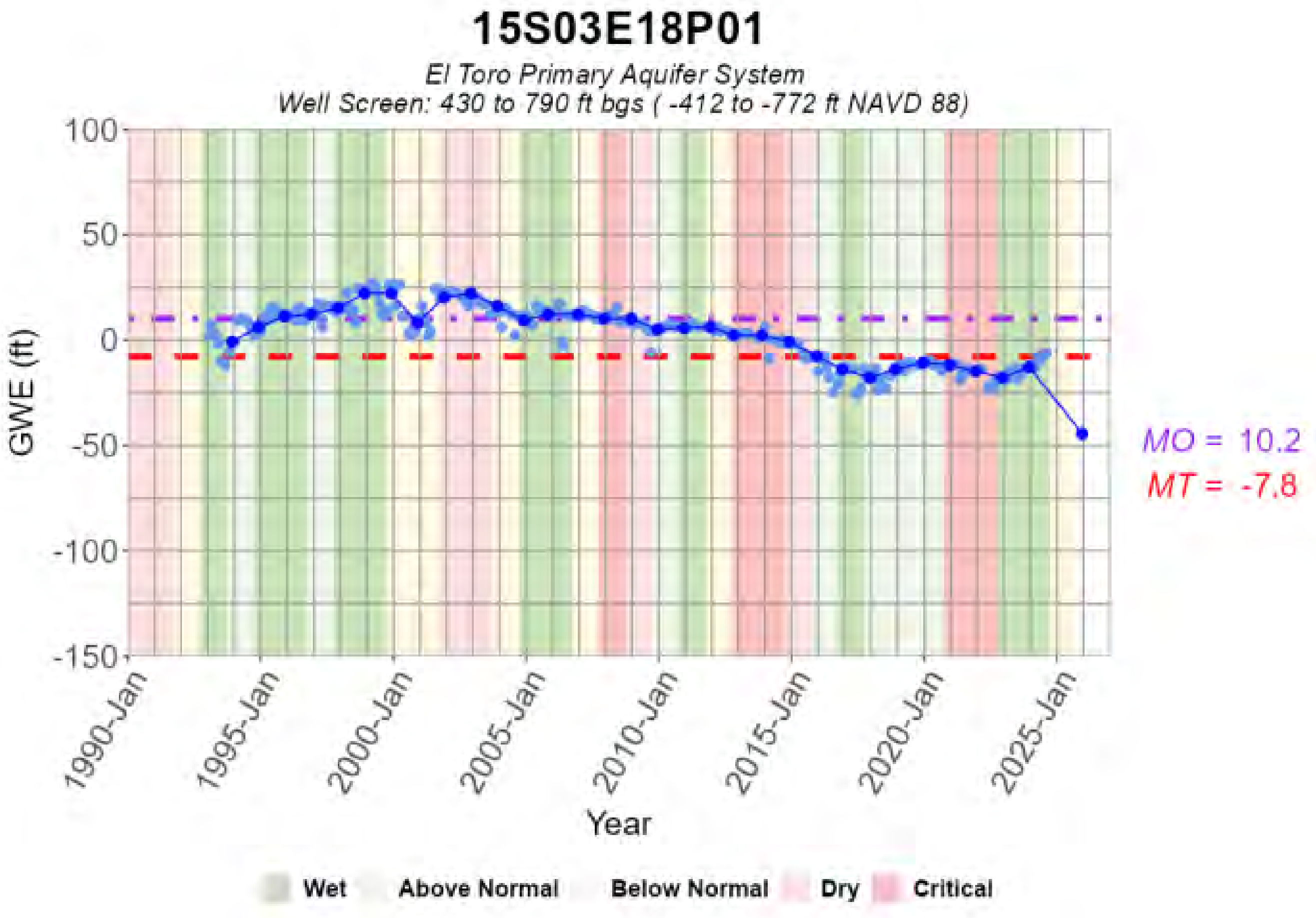


MO = 3.3
MT = -4.8


PZ-FO-32-910
Deep Aquifers
Well Screen: 890 to 910 ft bgs (-700 to -720 ft NAVD 88)
GWE (ft)
0
-25
-50
-75
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = -19.7
MT = -44.1
Wet
Above Normal
Below Normal
Dry
Critical

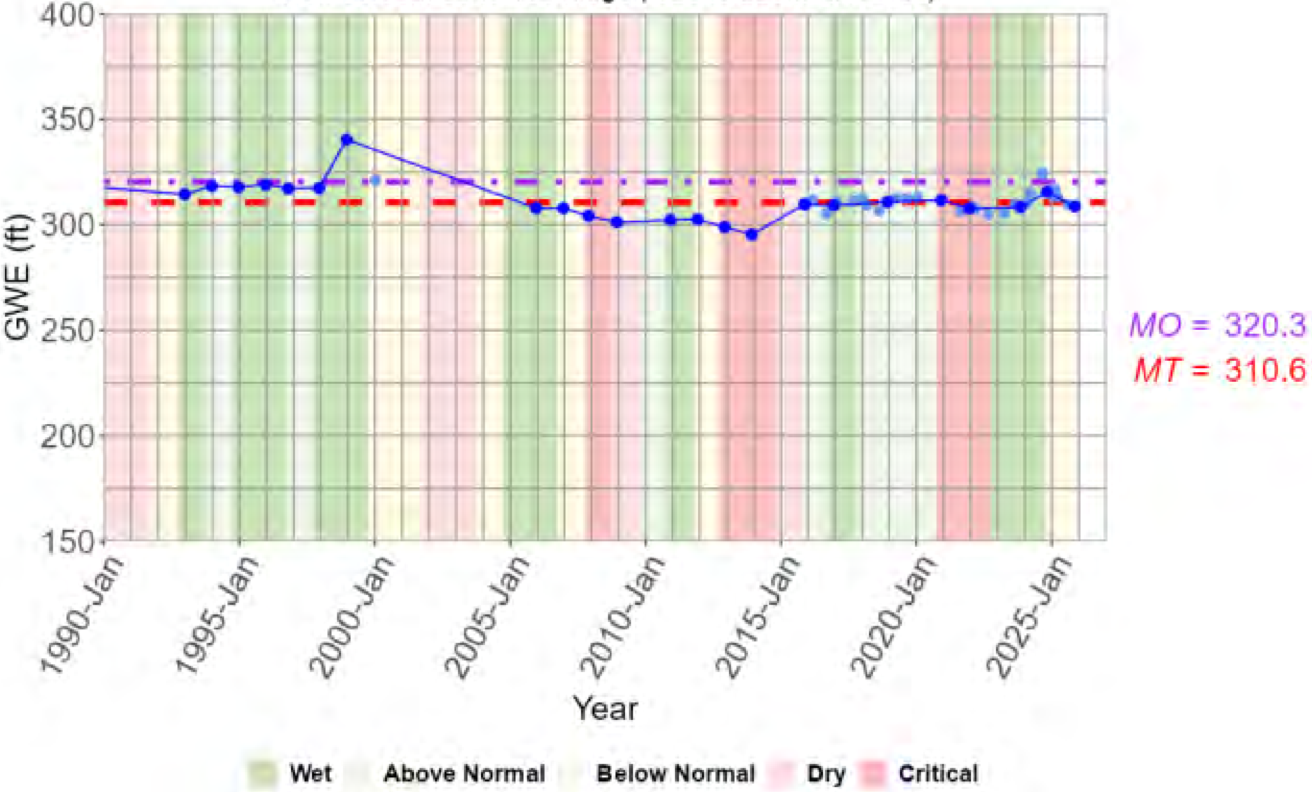

Sentinel MW #1
Deep Aquifers
Well Screen: 1130 to 1490 ft bgs (-1037 to -1397 ft NAVD 88)
GWE (ft)
0
-25
-50
-75
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = -18.8
MT = -25.4
Wet
Above Normal
Below Normal
Dry
Critical


15S02E25C01
El Toro Primary Aquifer System
Well Screen: 248 to 680 ft bgs (-107 to -539 ft NAVD 88)
100
50
0
-50
-100
-150
GWE (ft)
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 33
MT = 23
Wet
Above Normal
Below Normal
Dry
Critical


15S03E18P01
El Toro Primary Aquifer System
Well Screen: 430 to 790 ft bgs (-412 to -772 ft NAVD 88)
100
50
0
-50
-100
-150
GWE (ft)
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 10.2
MT = -7.8
Wet
Above Normal
Below Normal
Dry
Critical

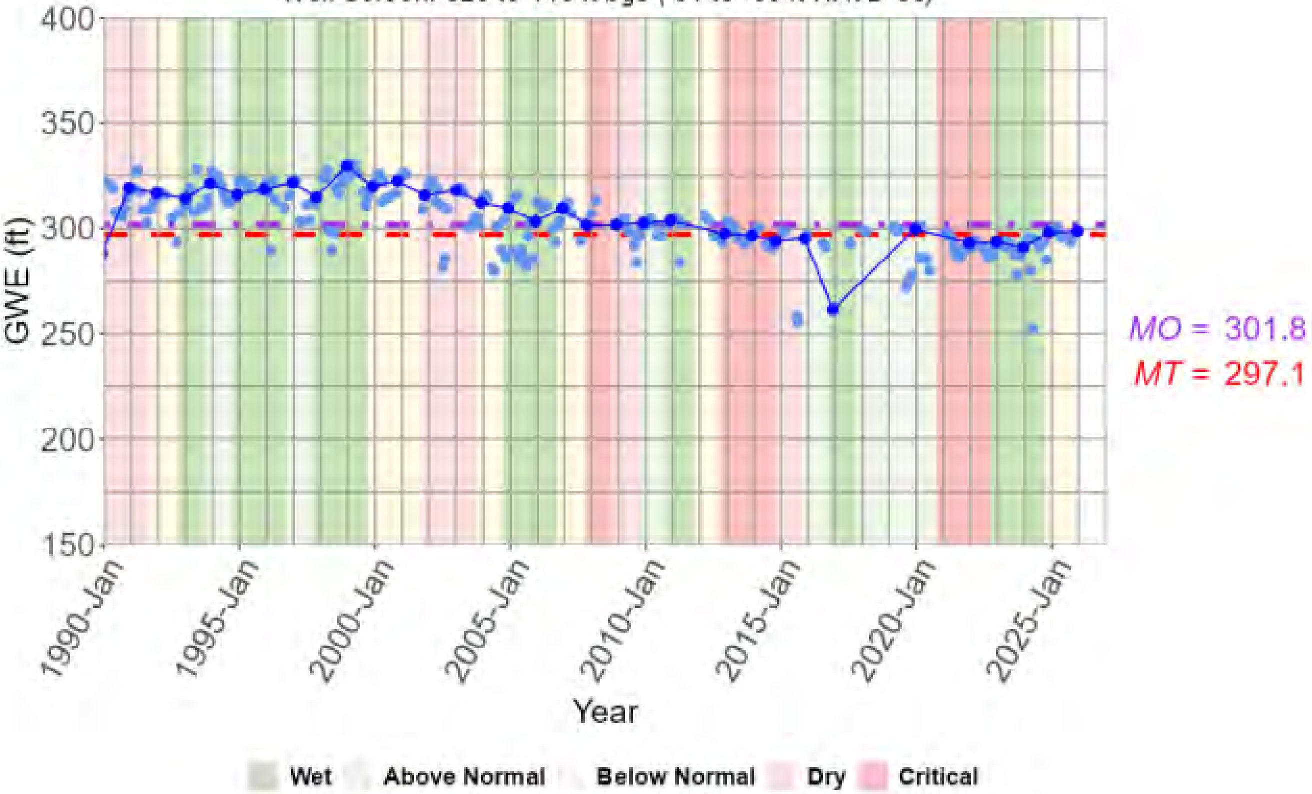
16S02E01M01

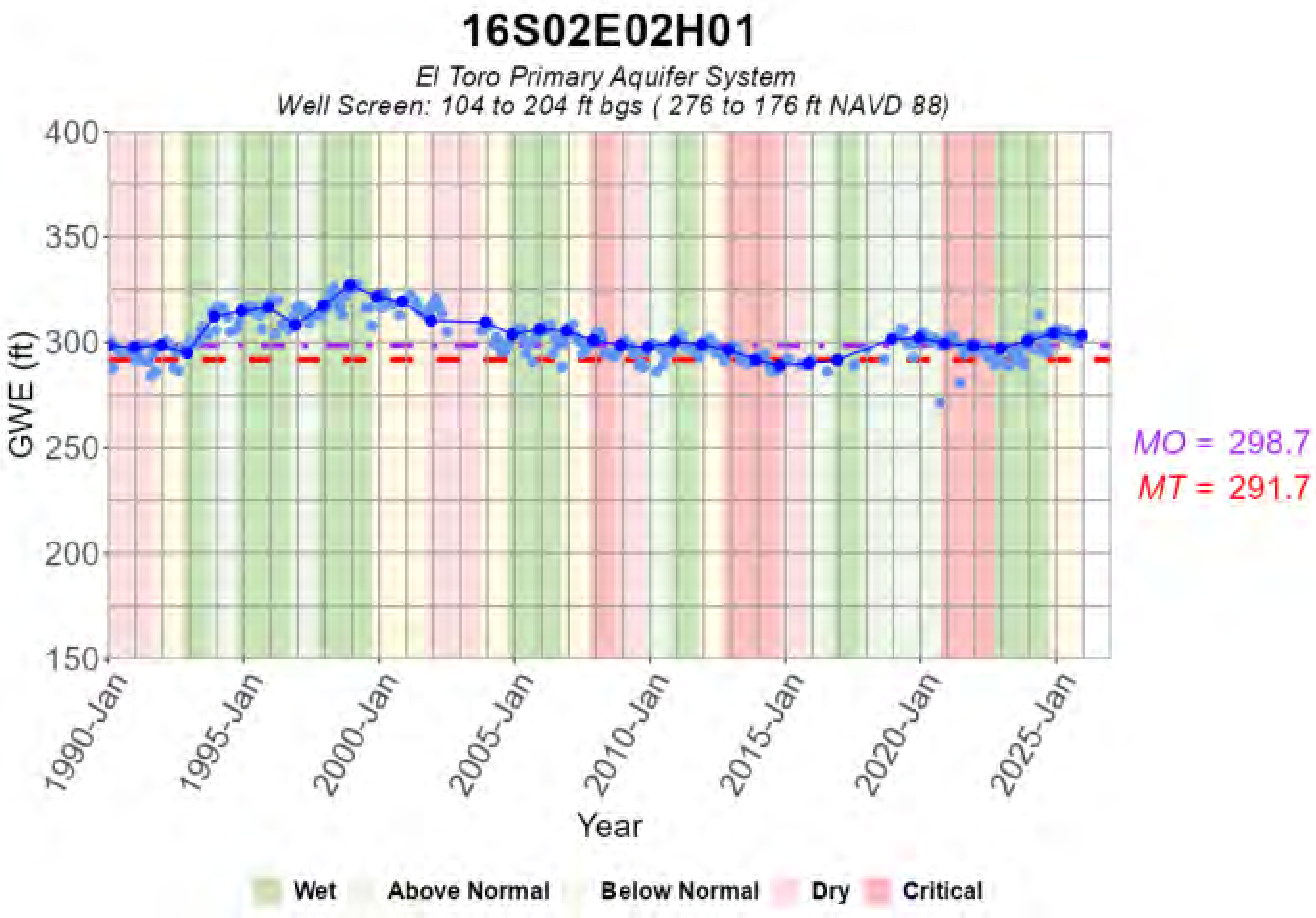
El Toro Primary Aquifer System
Well Screen: 80 to 180 ft bgs (326 to 226 ft NAVD 88)

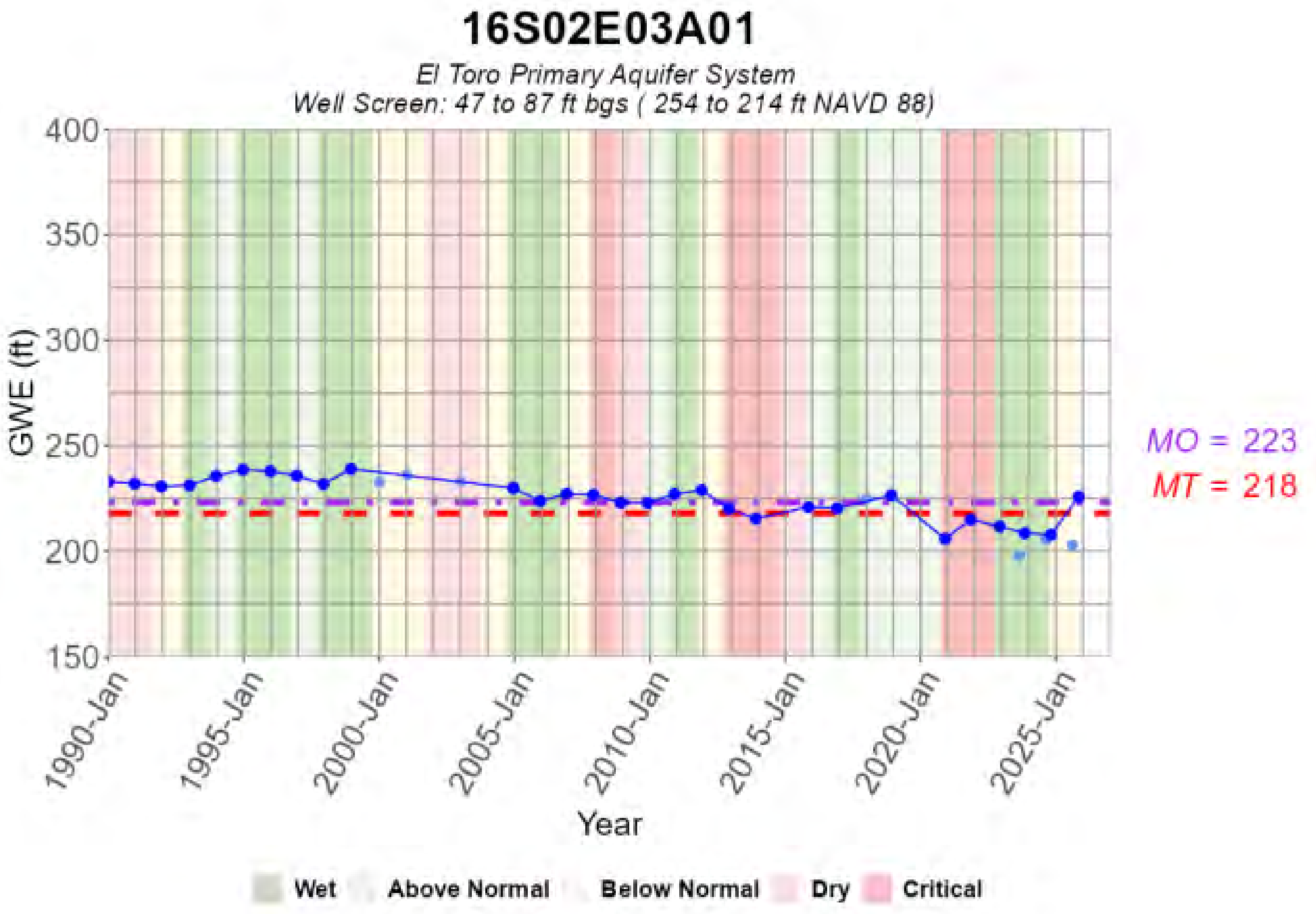


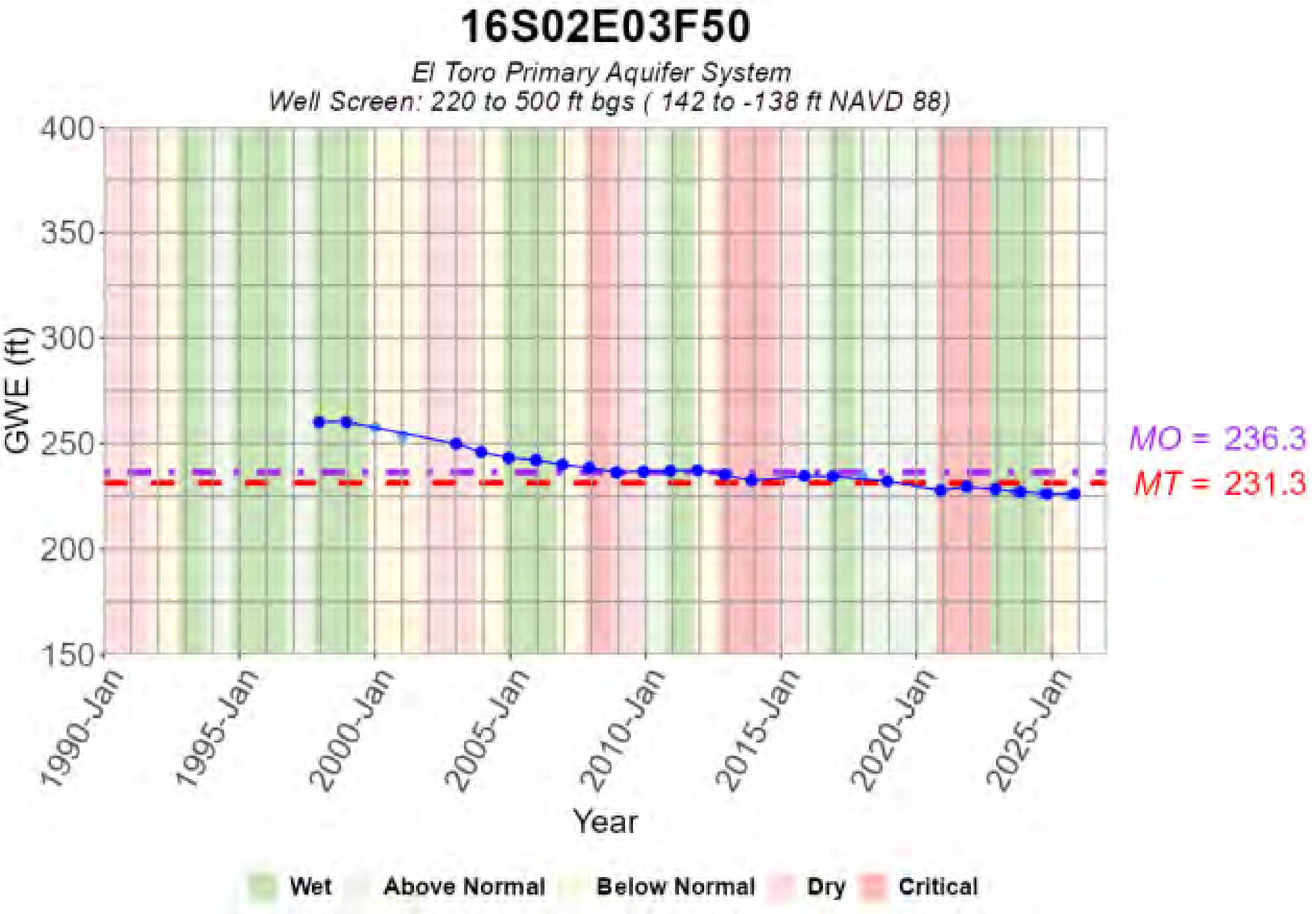
16S02E02G01

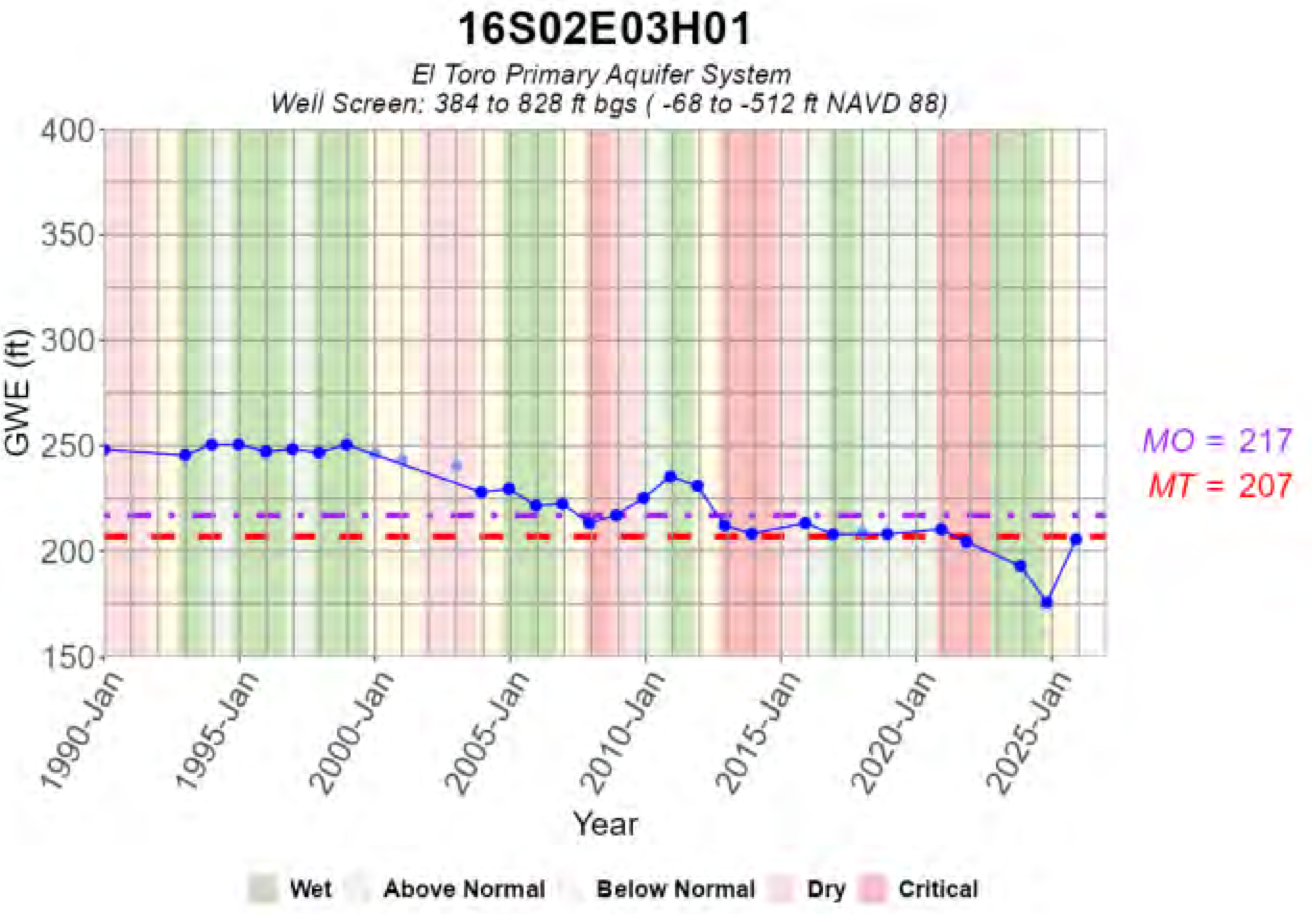
El Toro Primary Aquifer System
Well Screen: 320 to 440 ft bgs (51 to -69 ft NAVD 88)

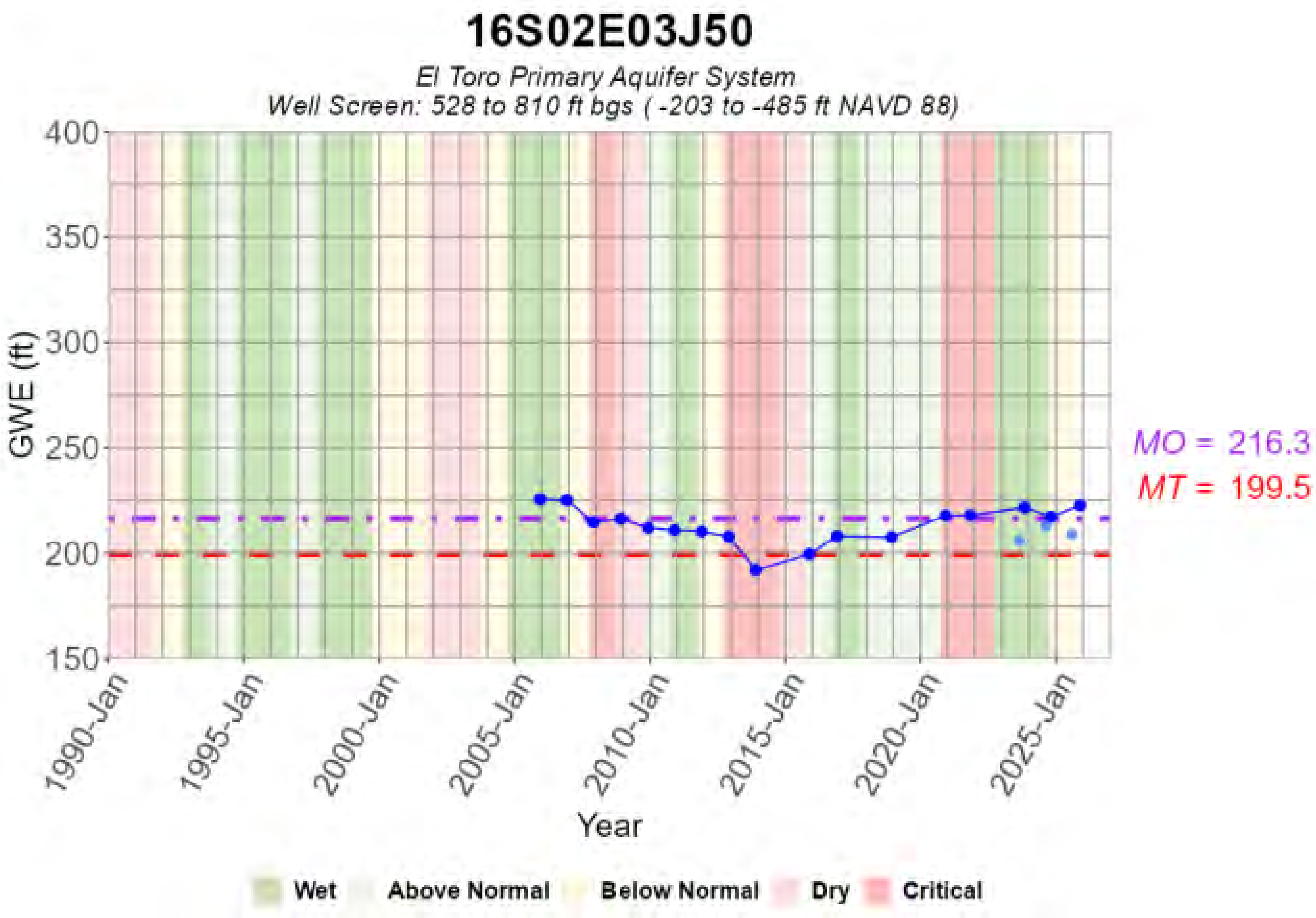


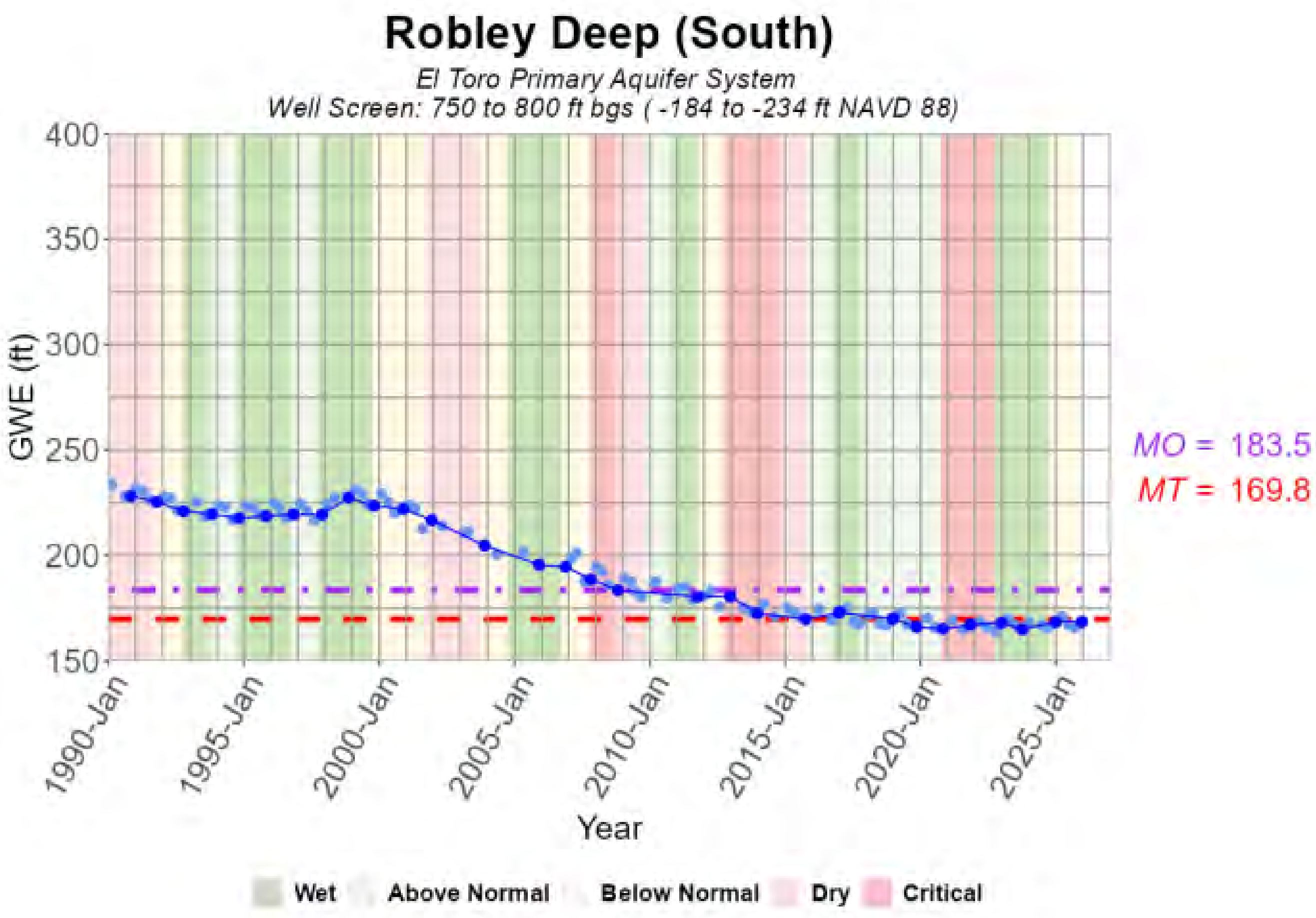

16S02E02H01
El Toro Primary Aquifer System
Well Screen: 104 to 204 ft bgs (276 to 176 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 298.7
MT = 291.7
Wet
Above Normal
Below Normal
Dry
Critical

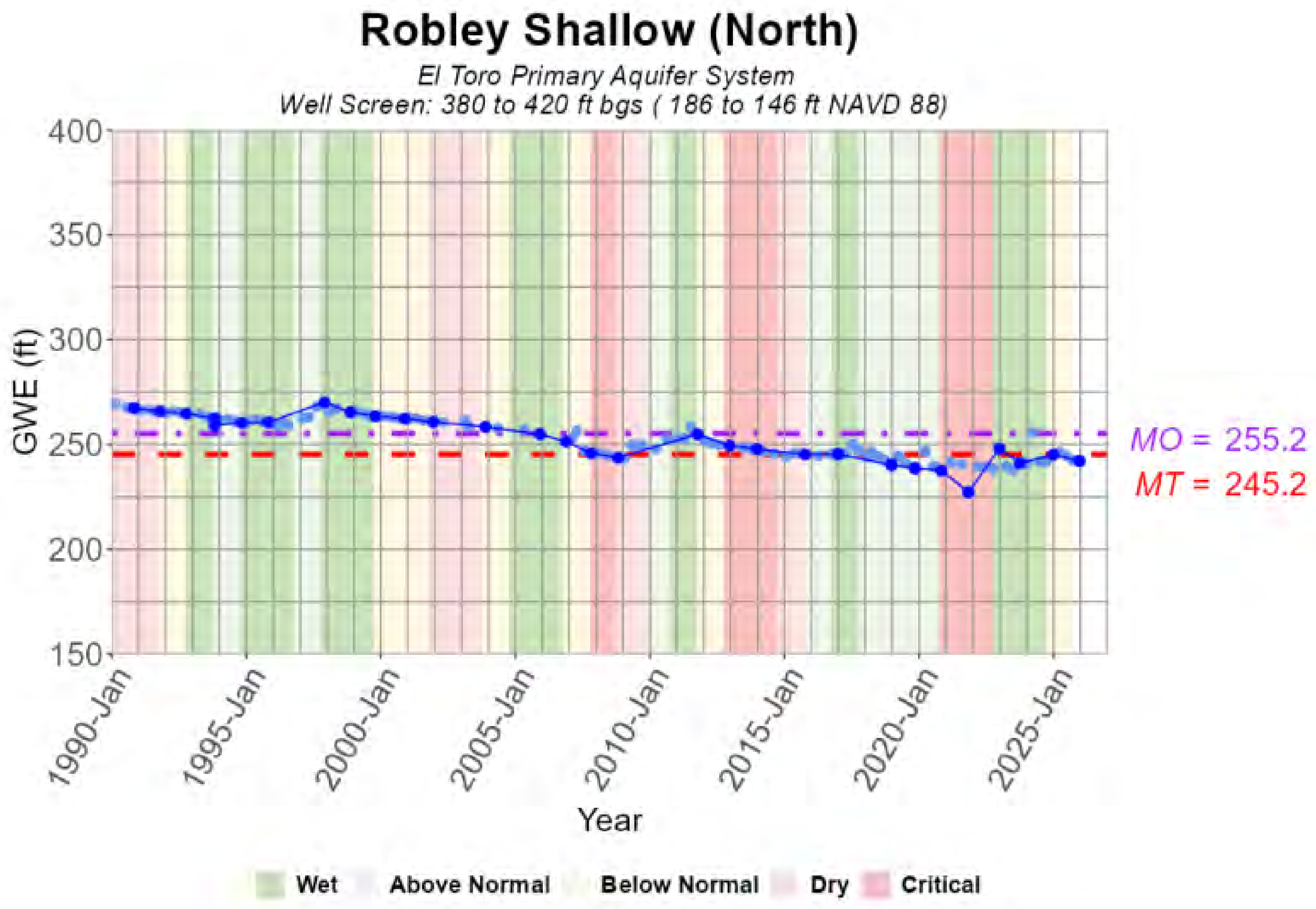

16S02E03A01
El Toro Primary Aquifer System
Well Screen: 47 to 87 ft bgs (254 to 214 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 223
MT = 218
Wet
Above Normal
Below Normal
Dry
Critical


16S02E03F50
El Toro Primary Aquifer System
Well Screen: 220 to 500 ft bgs (142 to -138 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
MO = 236.3
MT = 231.3
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
Wet
Above Normal
Below Normal
Dry
Critical


16S02E03H01
El Toro Primary Aquifer System
Well Screen: 384 to 828 ft bgs (-68 to -512 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
MO = 217
MT = 207
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
Wet
Above Normal
Below Normal
Dry
Critical


16S02E03J50
El Toro Primary Aquifer System
Well Screen: 528 to 810 ft bgs (-203 to -485 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 216.3
MT = 199.5
Wet
Above Normal
Below Normal
Dry
Critical


Robley Deep (South)
El Toro Primary Aquifer System
Well Screen: 750 to 800 ft bgs (-184 to -234 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 183.5
MT = 169.8
Wet
Above Normal
Below Normal
Dry
Critical



Robley Shallow (North)
El Toro Primary Aquifer System
Well Screen: 380 to 420 ft bgs (186 to 146 ft NAVD 88)
GWE (ft)
400
350
300
250
200
150
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
Year
MO = 255.2
MT = 245.2
Wet
Above Normal
Below Normal
Dry
Critical

APPENDIX C

Depth Discrete Specific Conductivity Profiles Obtained in WY2024 and WY2025 from Deep Aquifer Monitoring Wells

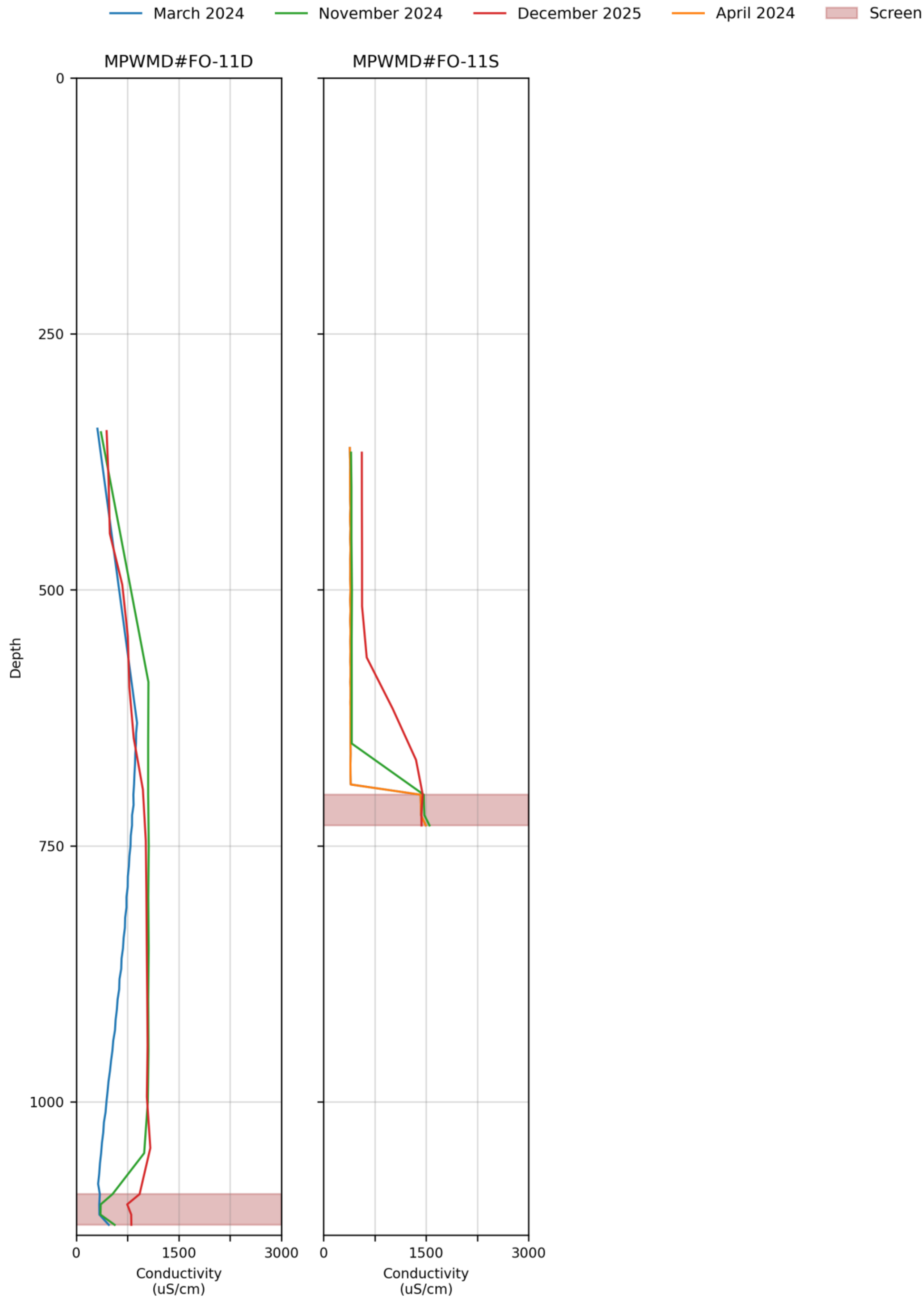


Figure C-1. Depth-Discrete Specific Conductivity Profile, MPWMD#FO-11

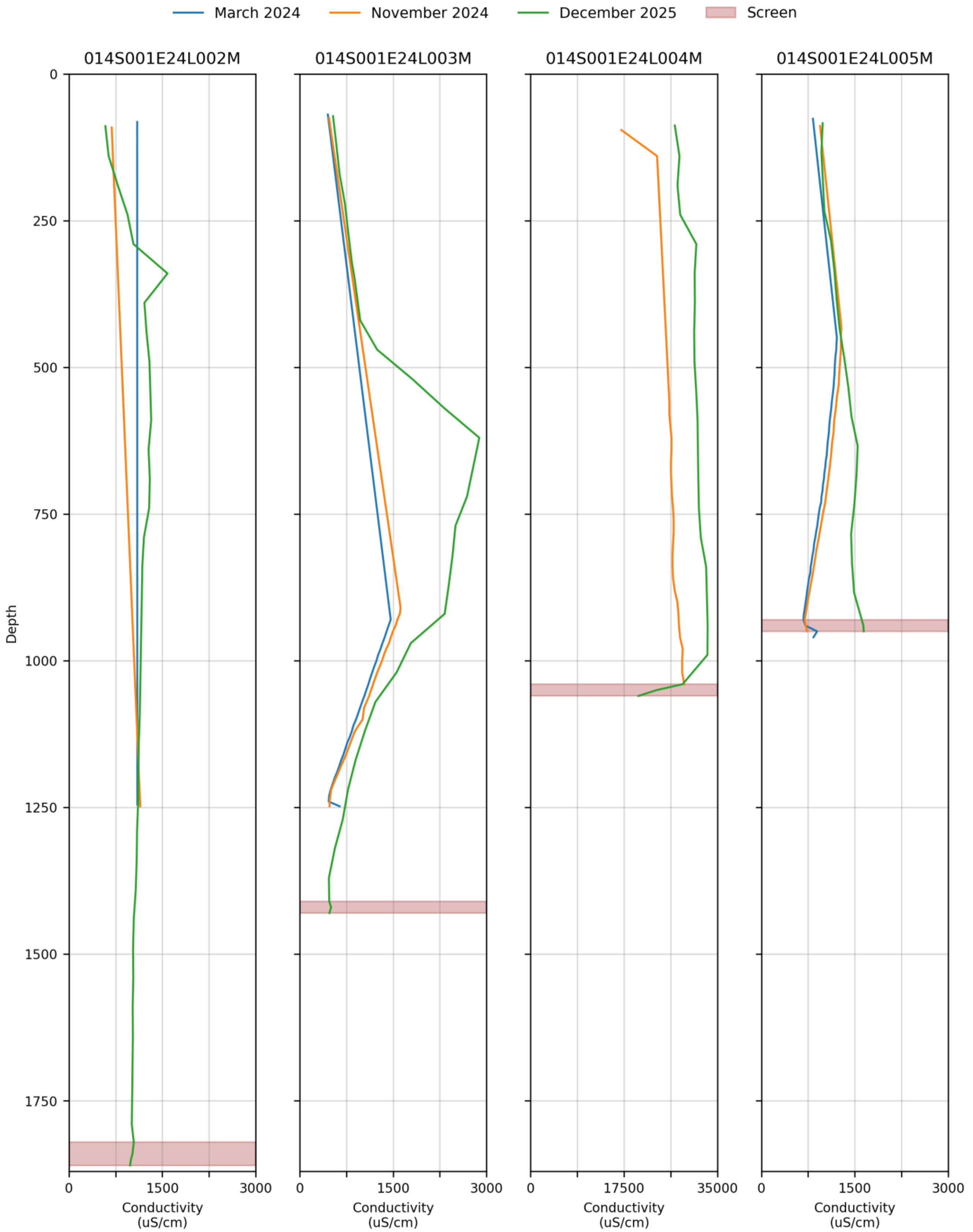


Figure C-2. Depth-Discrete Specific Conductivity Profile, 014S001E24L

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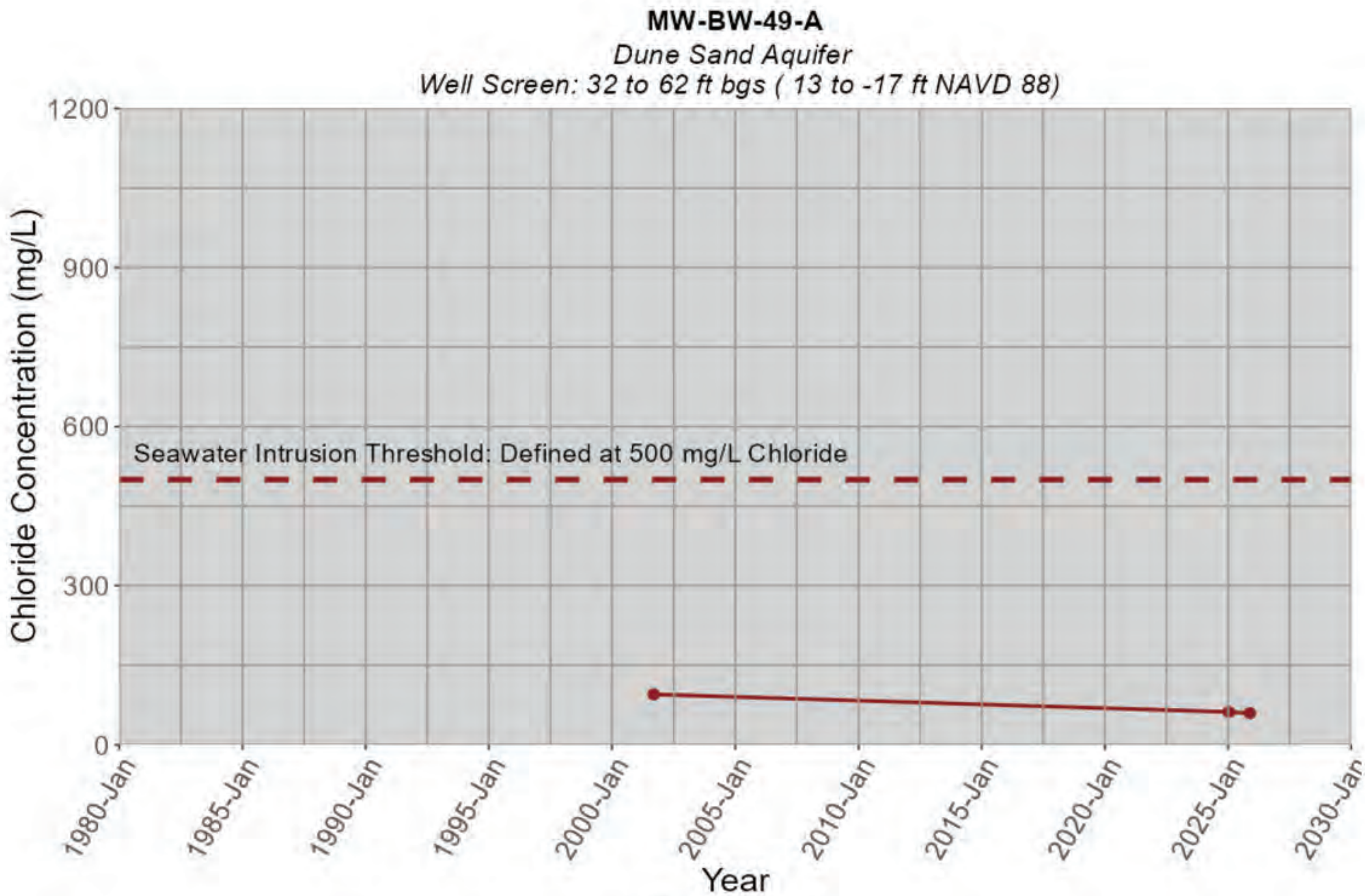
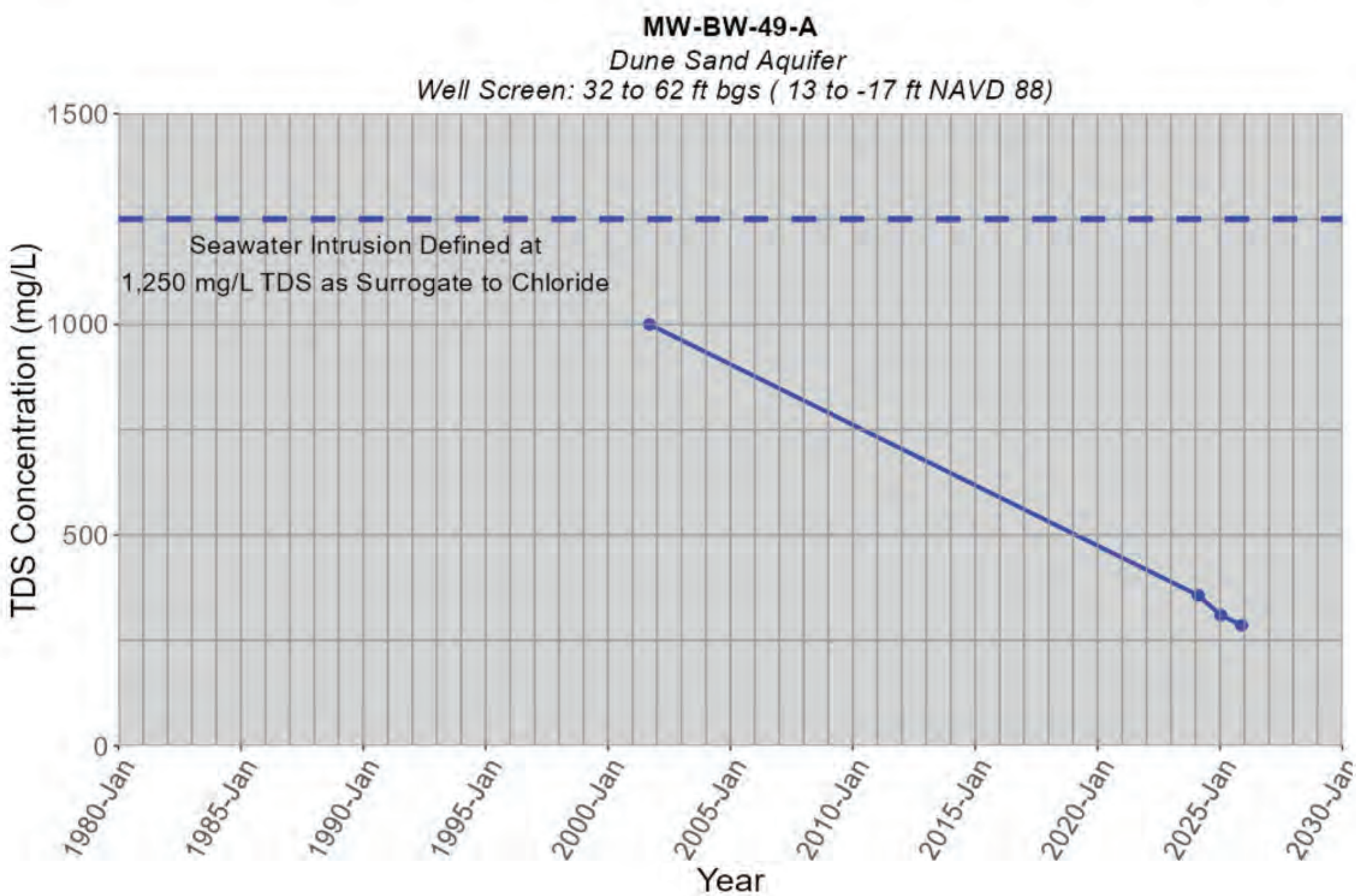
APPENDIX D

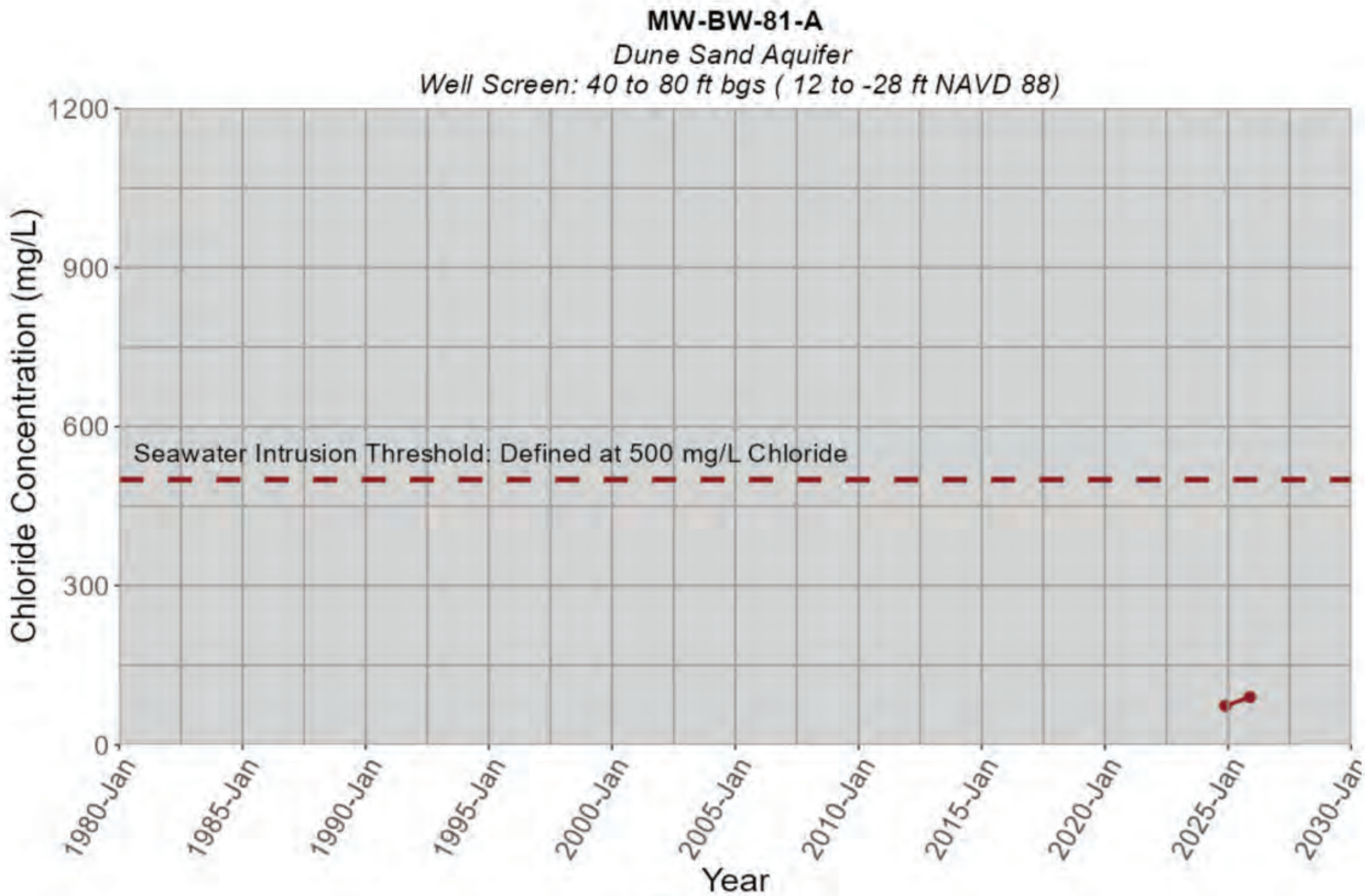
Long-term Chloride and TDS Concentrations in Seawater Intrusion RMS Wells

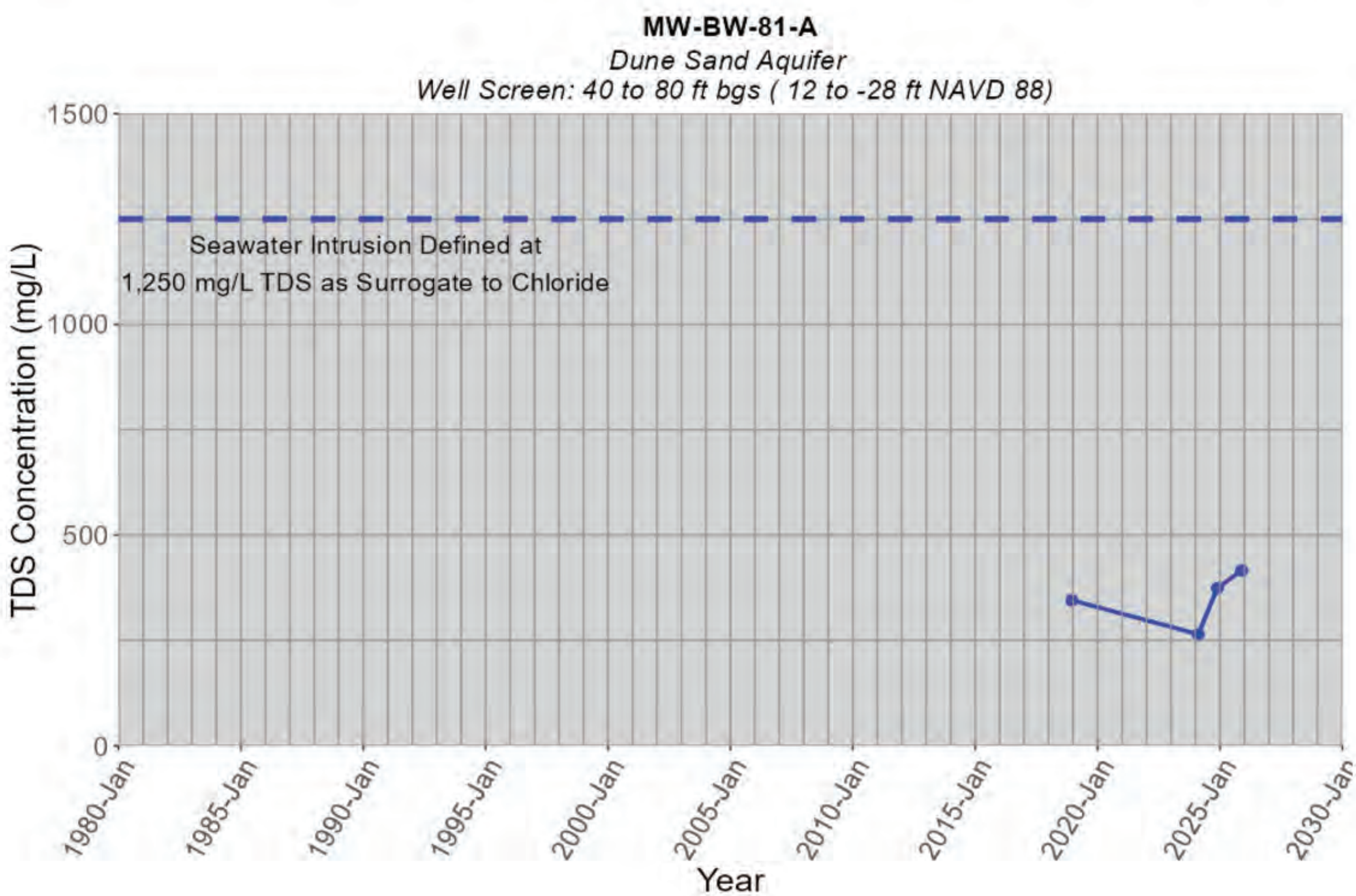
Page	Aquifer	Well
D-1	Dune Sand Aquifer	MW-BW-49-A
D-2	Dune Sand Aquifer	MW-BW-81-A
D-3	Dune Sand Aquifer	MW-BW-82-A
D-4	Dune Sand Aquifer	MW-OU2-32-A
D-5	Upper 180-Foot Aquifer	CDM MW-1 Beach
D-6	Upper 180-Foot Aquifer	EW-12-04-180M
D-7	Upper 180-Foot Aquifer	MW-02-05-180
D-8	Upper 180-Foot Aquifer	MW-02-06-180
D-9	Upper 180-Foot Aquifer	MW-02-10-180
D-10	Upper 180-Foot Aquifer	MW-02-13-180U
D-11	Upper 180-Foot Aquifer	MW-B-05-180
D-12	Upper 180-Foot Aquifer	MW-BW-55-180
D-13	Lower 180-Foot Aquifer	MP-BW-42-295
D-14	Lower 180-Foot Aquifer	MP-BW-42-314
D-15	Lower 180-Foot Aquifer	MP-BW-42-345
D-16	Lower 180-Foot Aquifer	MP-BW-42-400
D-17	Lower 180-Foot Aquifer	MW-BW-04-180
D-18	Lower 180-Foot Aquifer	MW-OU2-66-180
D-19	Lower 180-Foot Aquifer	TEST2
D-20	Lower 180-Foot, 400-Foot Aquifer	MCWD-29
D-21	Lower 180-Foot, 400-Foot Aquifer	MCWD-31
D-22	Lower 180-Foot, 400-Foot Aquifer	MP-BW-50-289
D-23	Lower 180-Foot, 400-Foot Aquifer	MP-BW-50-309
D-24	Lower 180-Foot, 400-Foot Aquifer	MP-BW-50-339
D-25	Lower 180-Foot, 400-Foot Aquifer	MP-BW-50-359
D-26	Lower 180-Foot, 400-Foot Aquifer	MP-BW-50-384
D-27	Lower 180-Foot, 400-Foot Aquifer	MCWD-30
D-28	400-Foot Aquifer	MW-OU2-07-400
D-29	Upper Deep Aquifer	MPWMD#FO-10S*
D-30	Upper Deep Aquifer	014S001E24L004M
D-31	Upper Deep Aquifer	014S001E24L005M
D-32	Upper Deep Aquifer	14S02E33E01
D-33	Upper Deep Aquifer	MPWMD#FO-11S
D-34	Lower Deep Aquifer	014S001E24L002M
D-35	Lower Deep Aquifer	014S001E24L003M
D-36	Lower Deep Aquifer	14S02E33E02
D-37	Lower Deep Aquifer	MPWMD#FO-11D
D-38	Lower Deep Aquifer	Sentinel MW #1
D-39	Deep Aquifers	MCWD-10
D-40	Deep Aquifers	MCWD-11

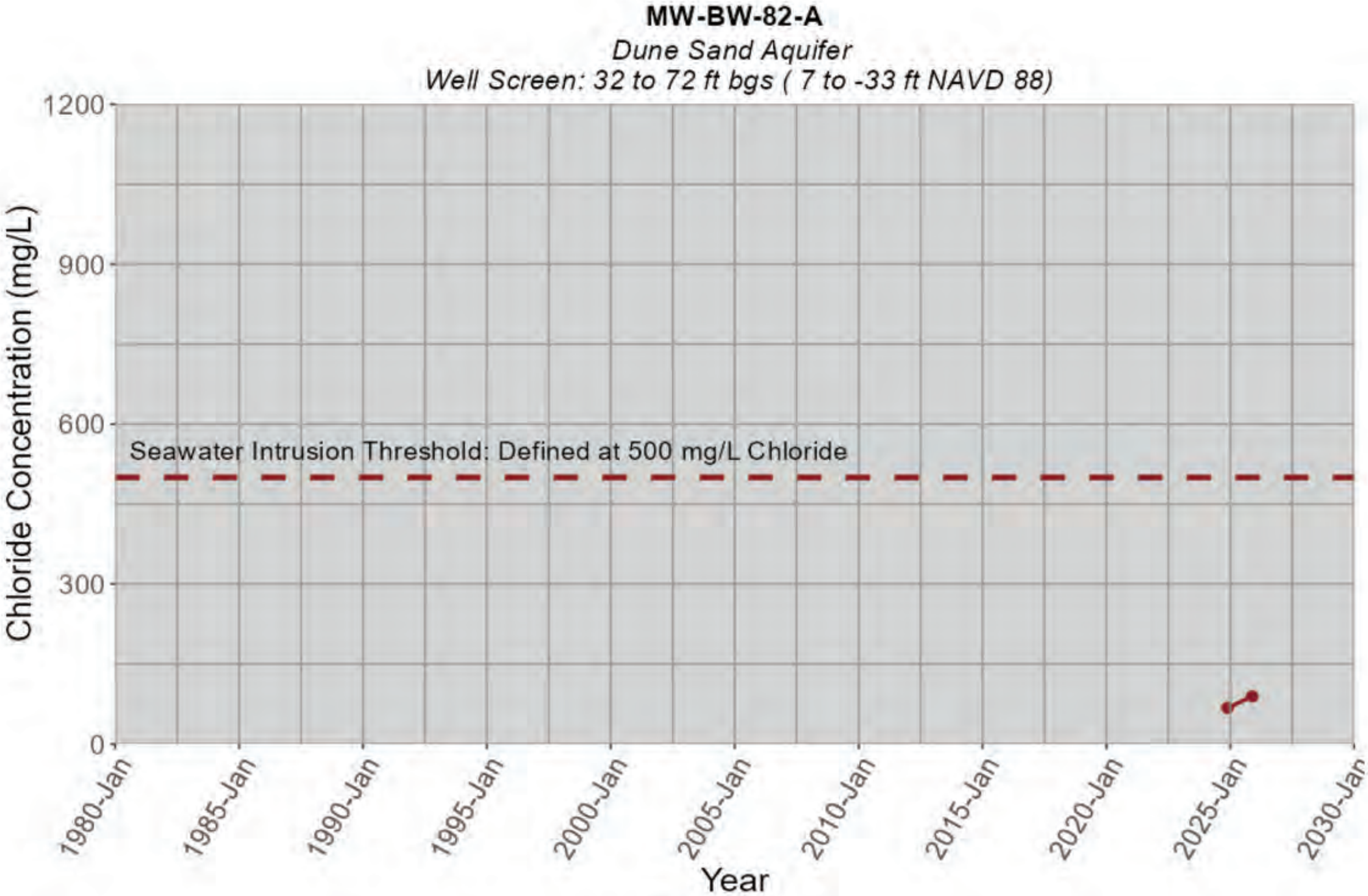
Note: MPWMD#FO-10S was removed from the RMS Monitoring Network.

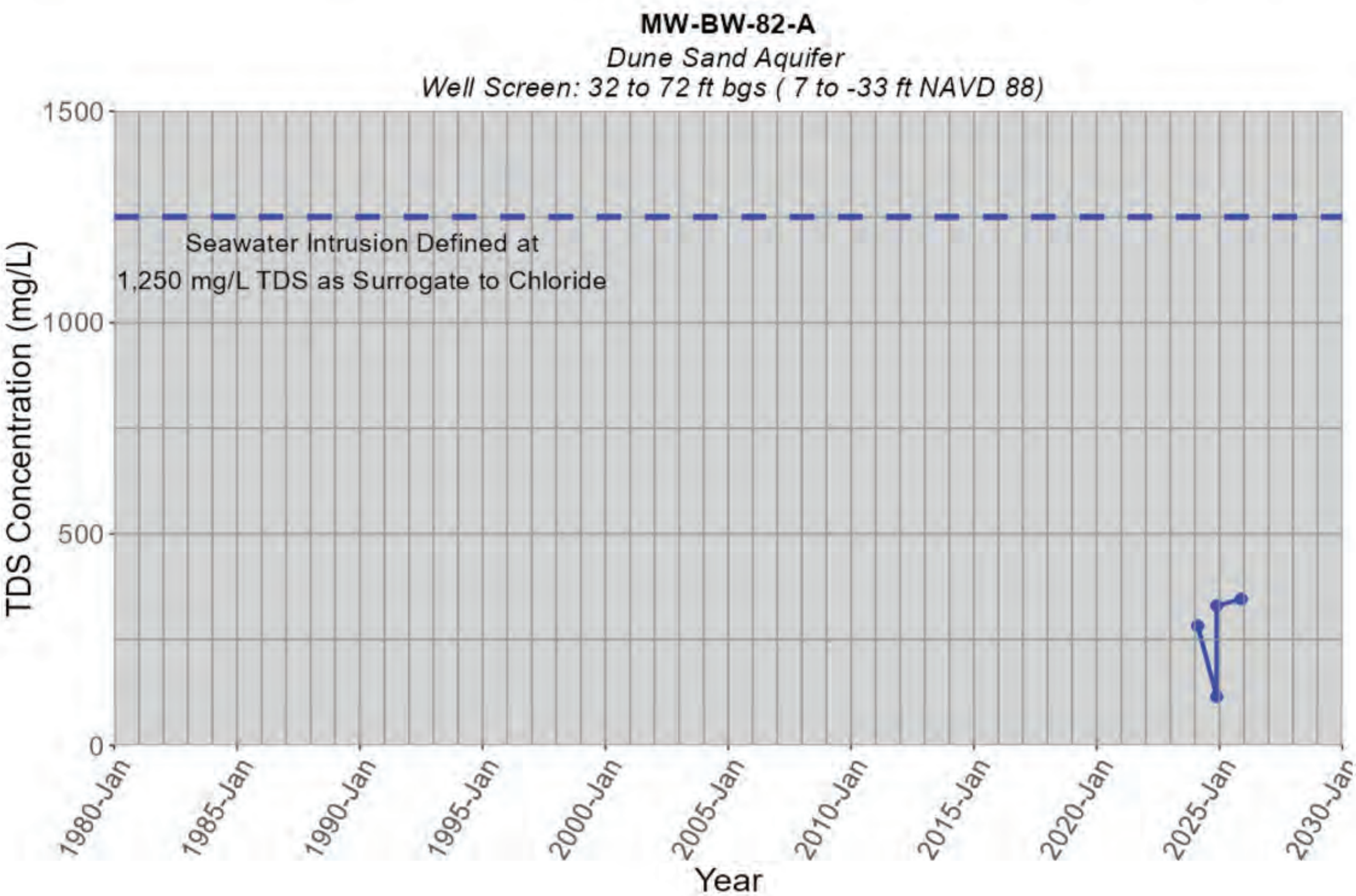

MW-BW-49-A
Dune Sand Aquifer
Well Screen: 32 to 62 ft bgs (13 to -17 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1200
900
600
300
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

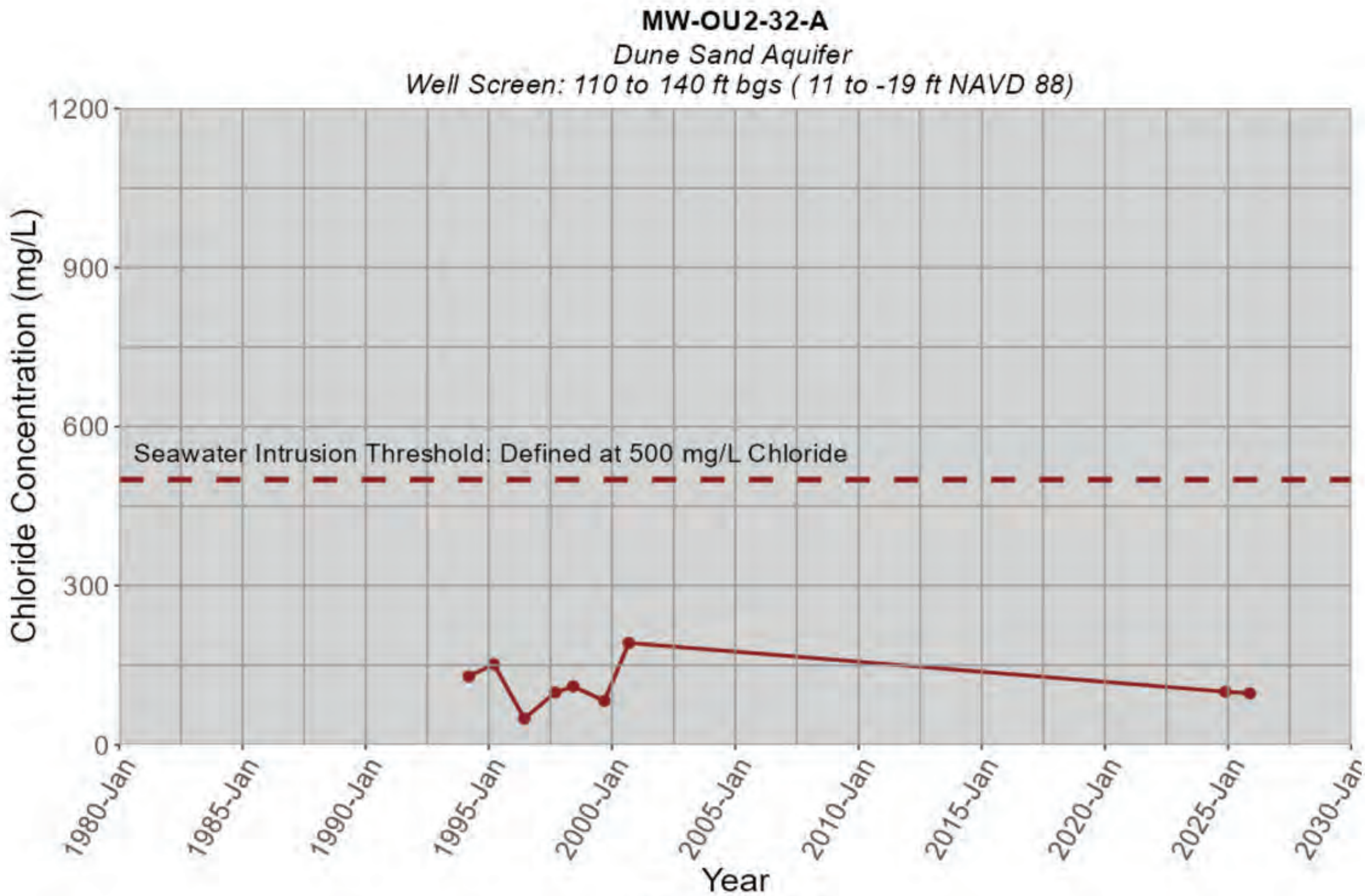

MW-BW-49-A
Dune Sand Aquifer
Well Screen: 32 to 62 ft bgs (13 to -17 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1500
1000
500
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MW-BW-81-A
Dune Sand Aquifer
Well Screen: 40 to 80 ft bgs (12 to -28 ft NAVD 88)
1200
900
600
300
0
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

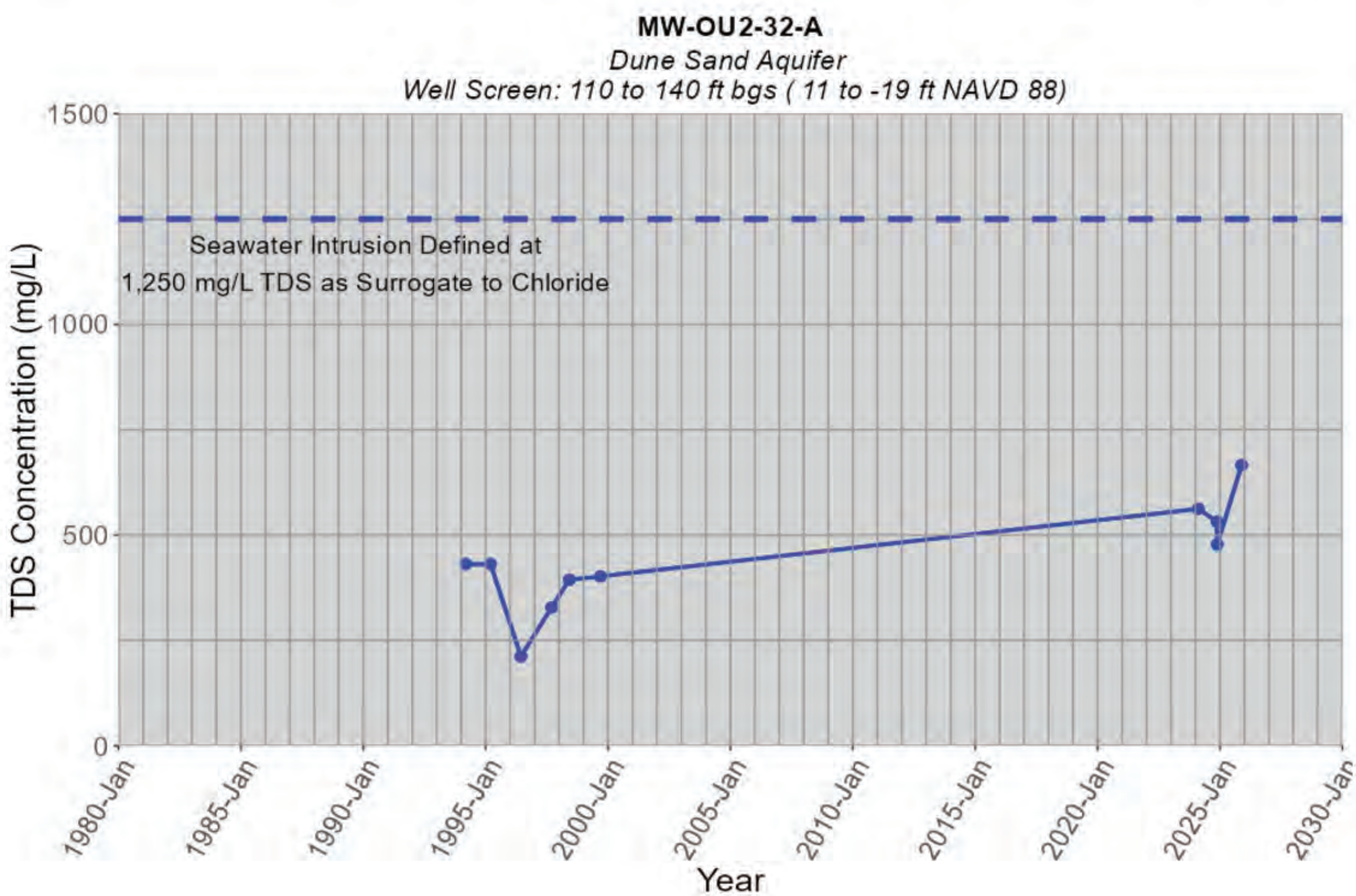

MW-BW-81-A
Dune Sand Aquifer
Well Screen: 40 to 80 ft bgs (12 to -28 ft NAVD 88)
1500
1000
500
0
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MW-BW-82-A
Dune Sand Aquifer
Well Screen: 32 to 72 ft bgs (7 to -33 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MW-BW-82-A
Dune Sand Aquifer
Well Screen: 32 to 72 ft bgs (7 to -33 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

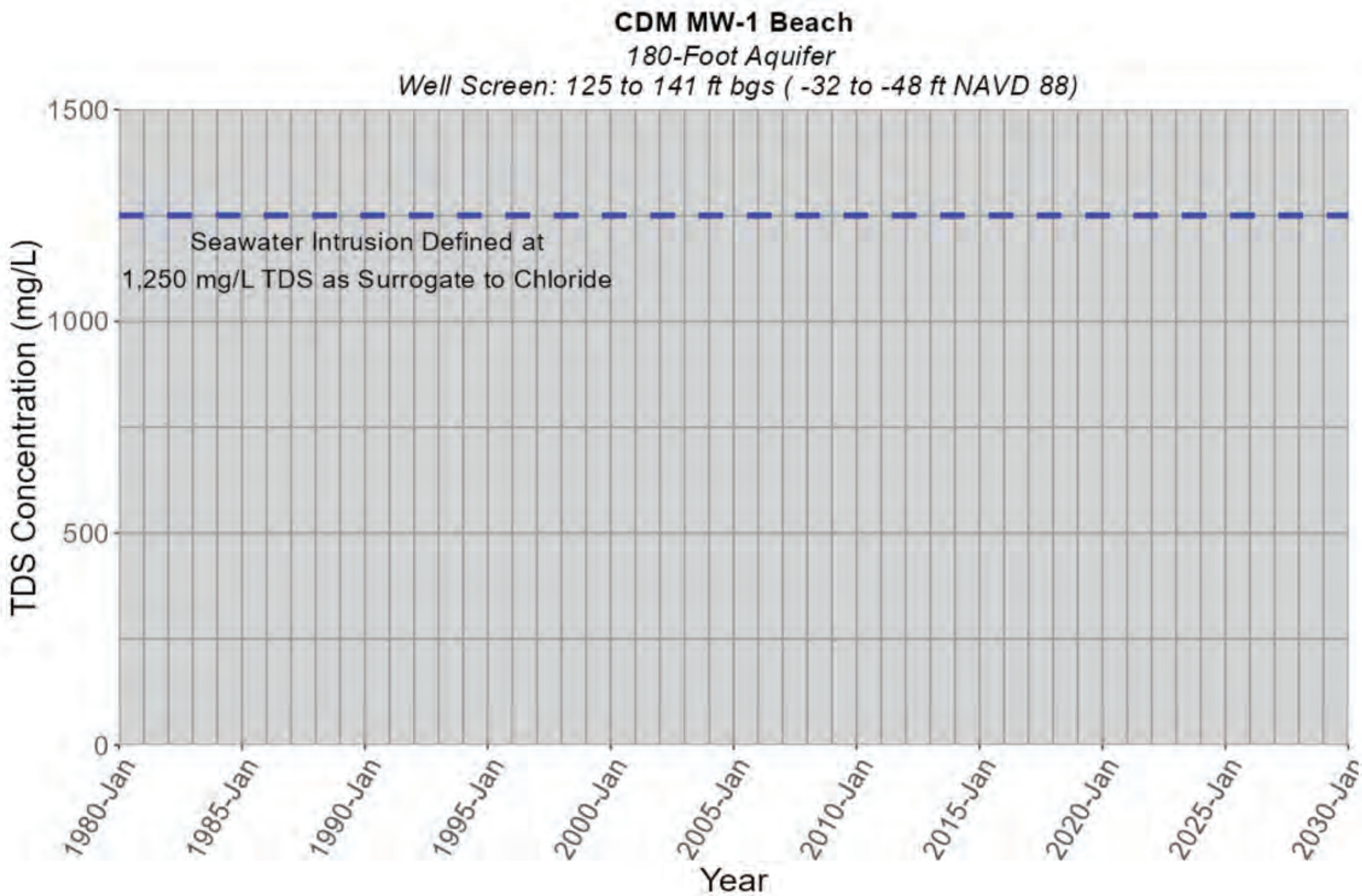


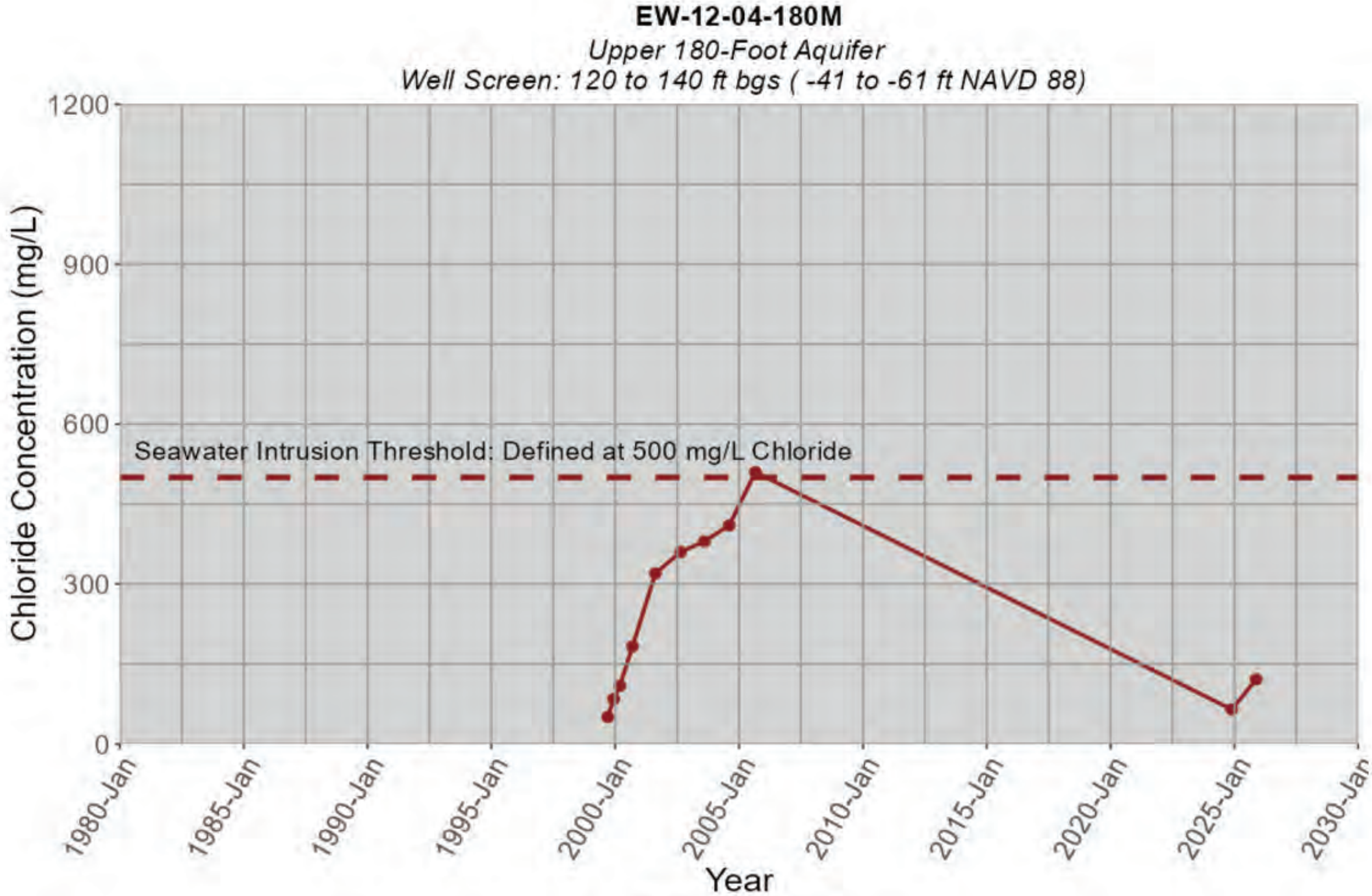
MW-OU2-32-A
Dune Sand Aquifer
Well Screen: 110 to 140 ft bgs (11 to -19 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

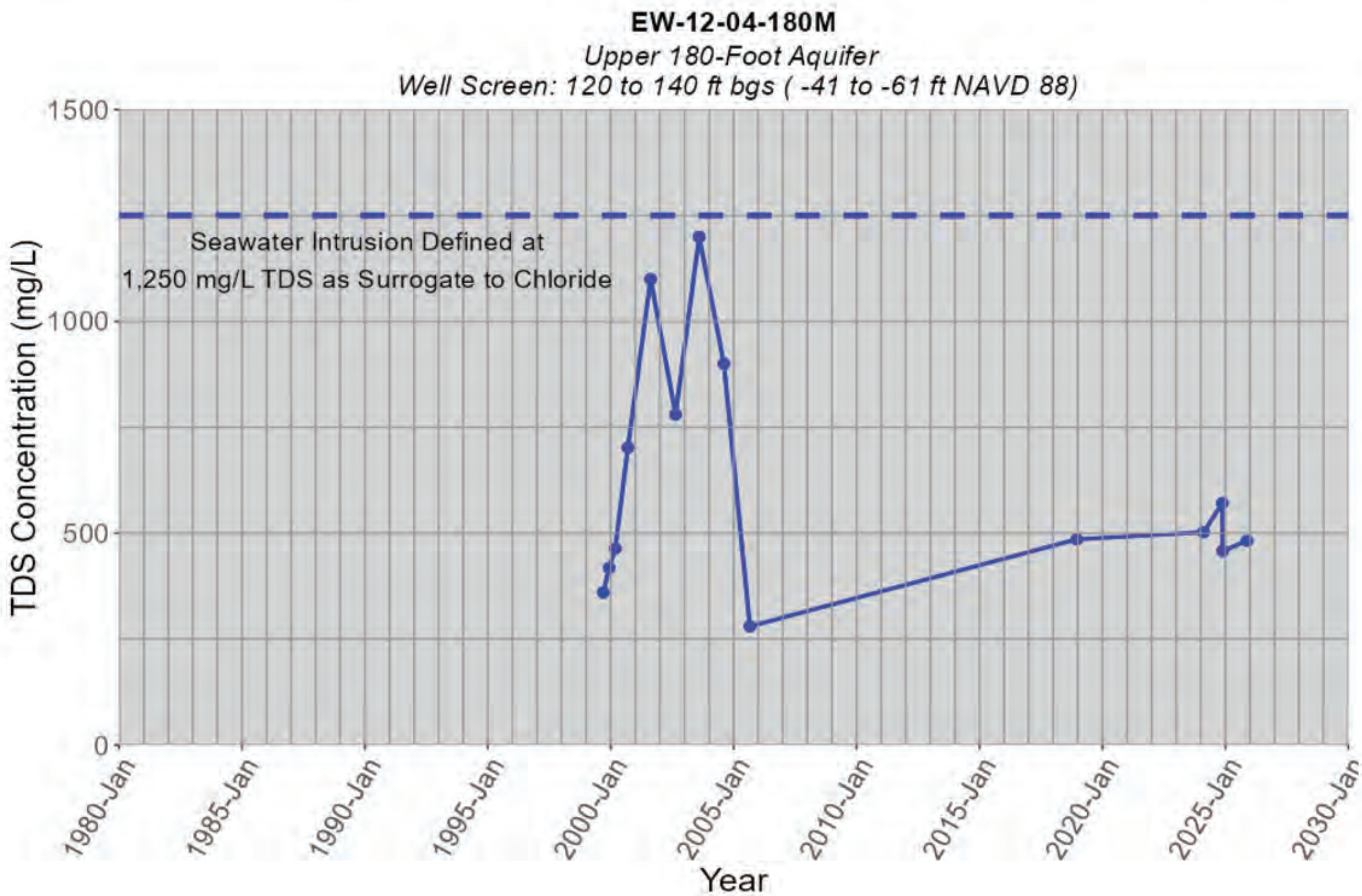


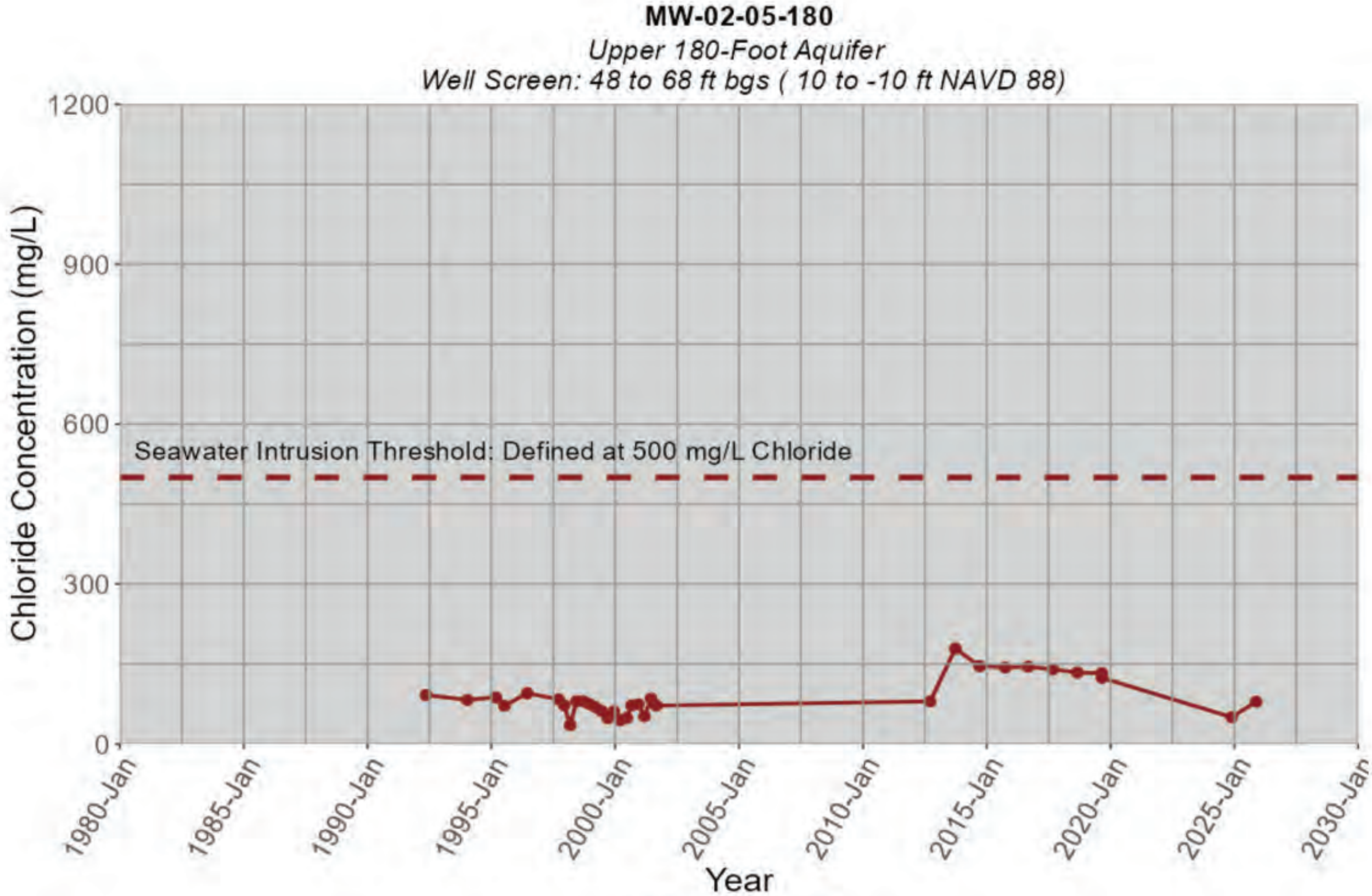
MW-OU2-32-A
Dune Sand Aquifer
Well Screen: 110 to 140 ft bgs (11 to -19 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

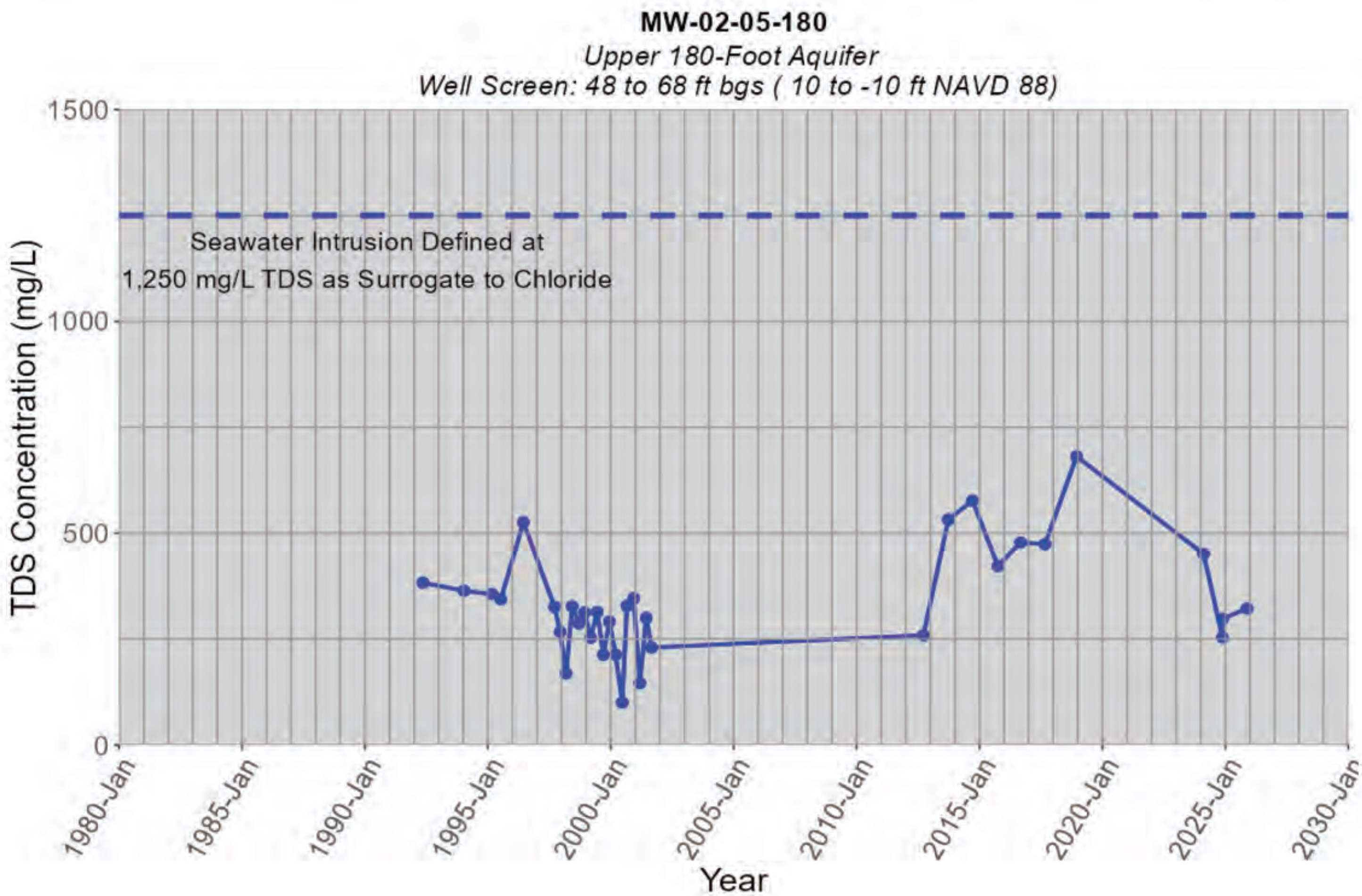
Chloride data for CDM MW-1 Beach is not available.

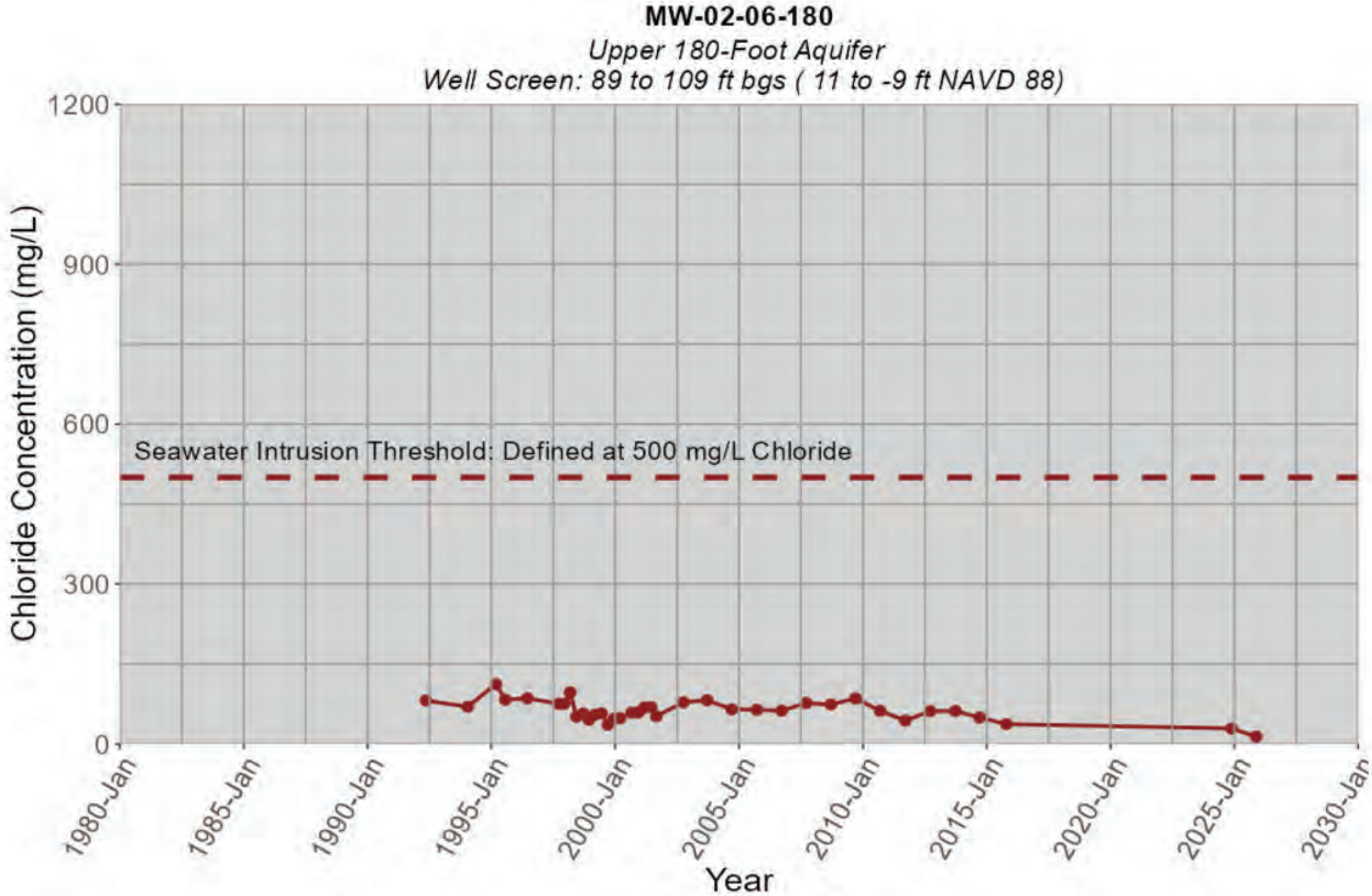


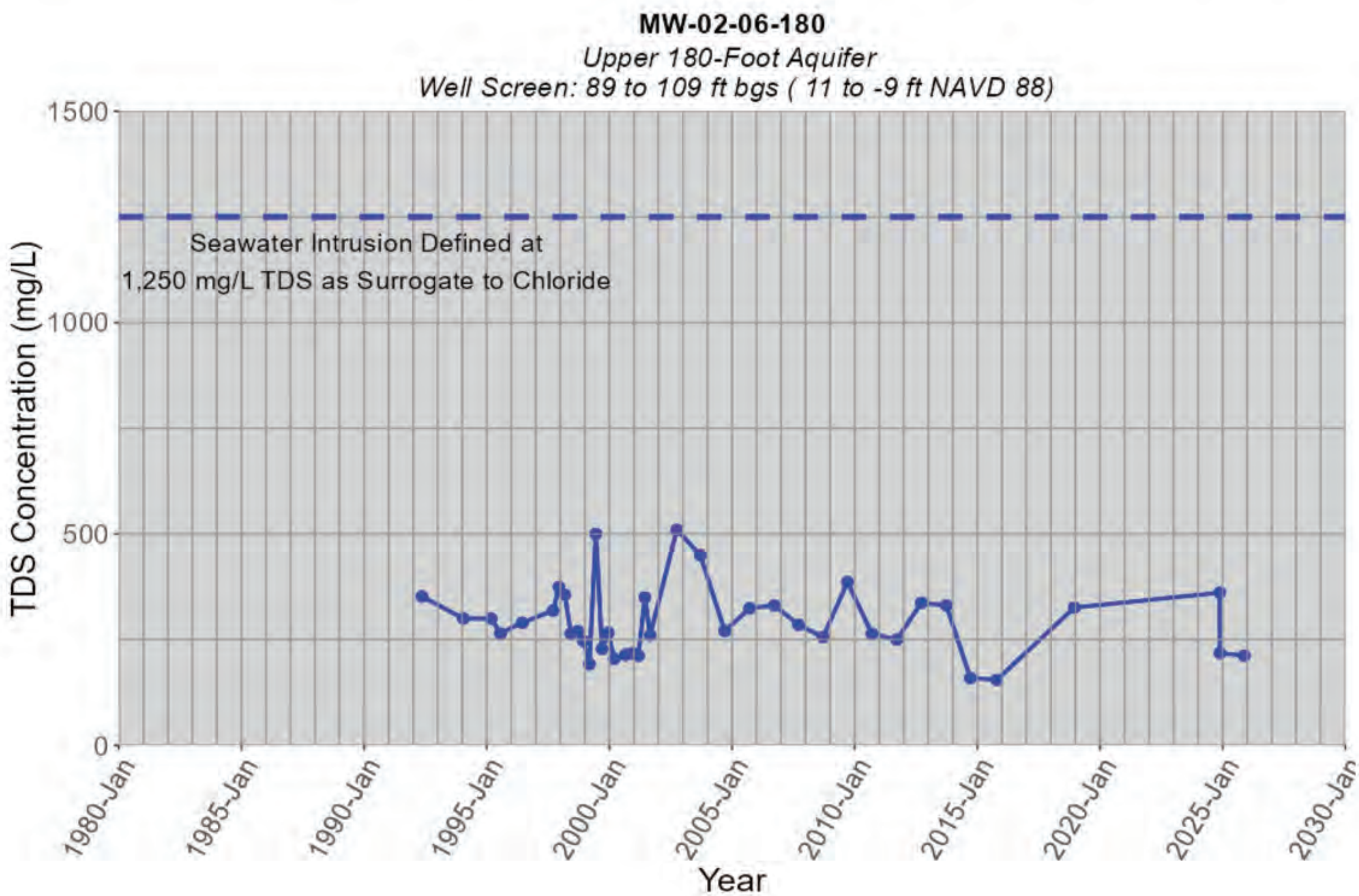

EW-12-04-180M
Upper 180-Foot Aquifer
Well Screen: 120 to 140 ft bgs (-41 to -61 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1200
900
600
300
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

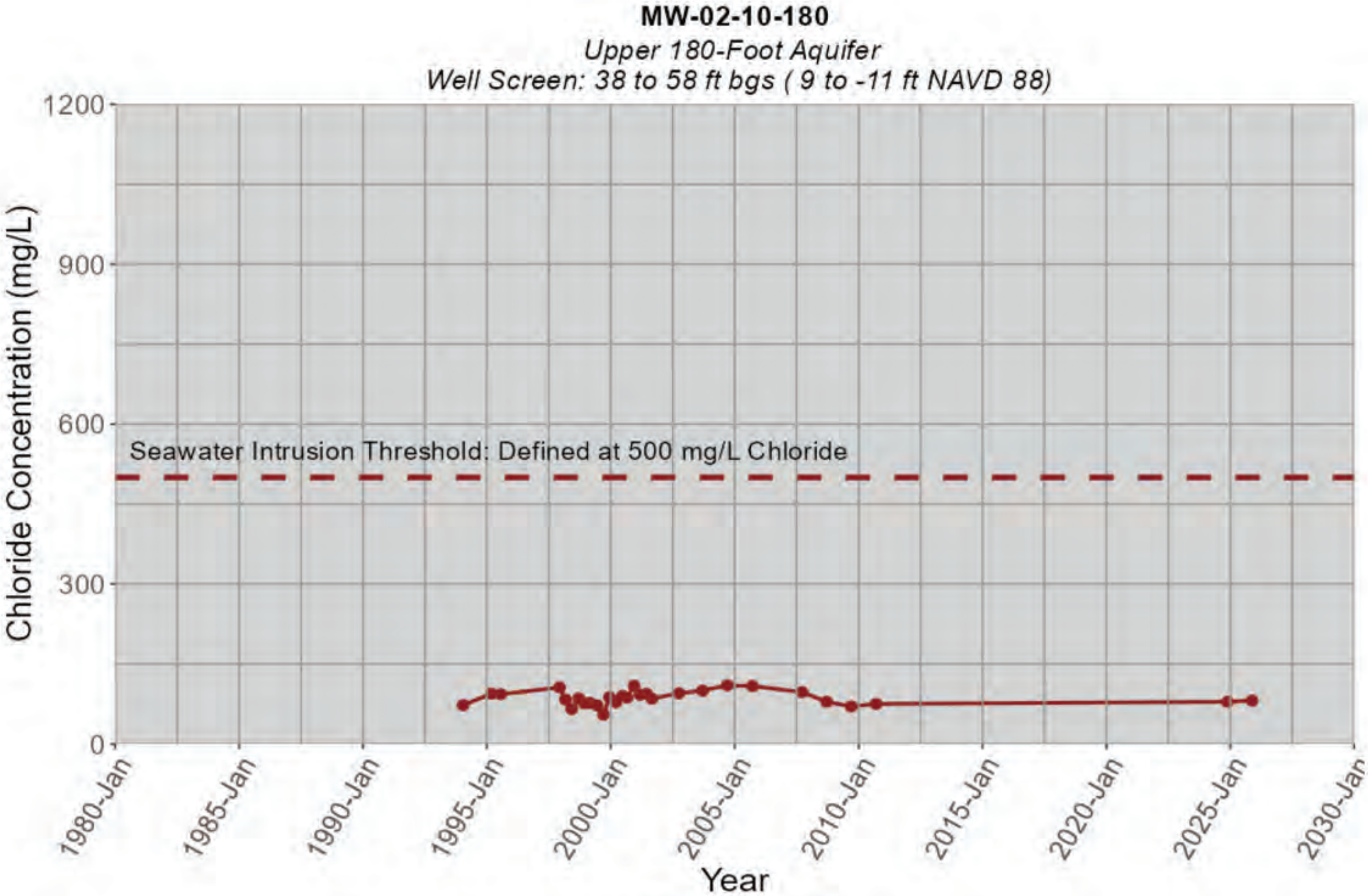

EW-12-04-180M
Upper 180-Foot Aquifer
Well Screen: 120 to 140 ft bgs (-41 to -61 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1500
1000
500
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

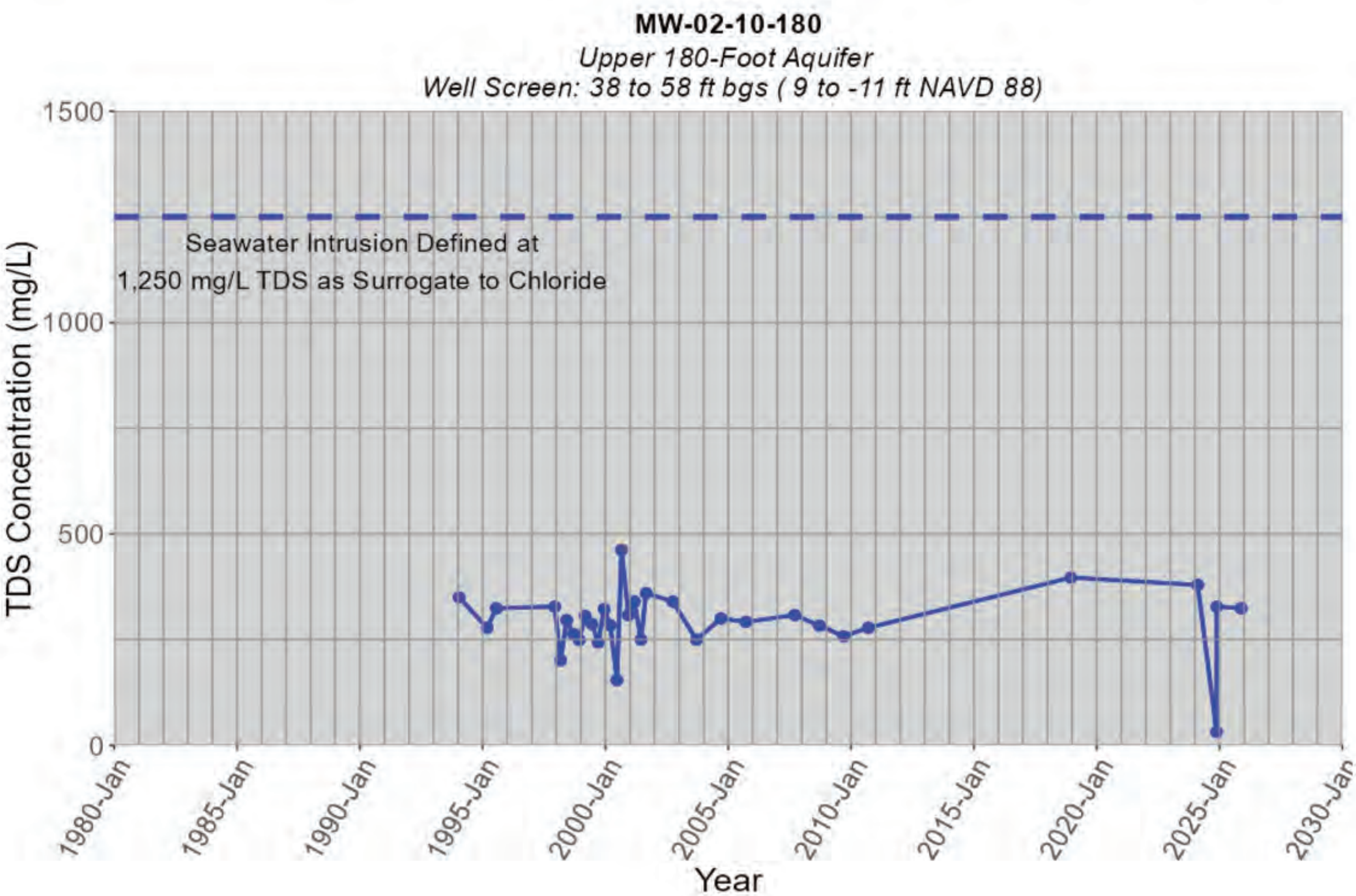

MW-02-05-180
Upper 180-Foot Aquifer
Well Screen: 48 to 68 ft bgs (10 to -10 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
0
300
600
900
1200
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

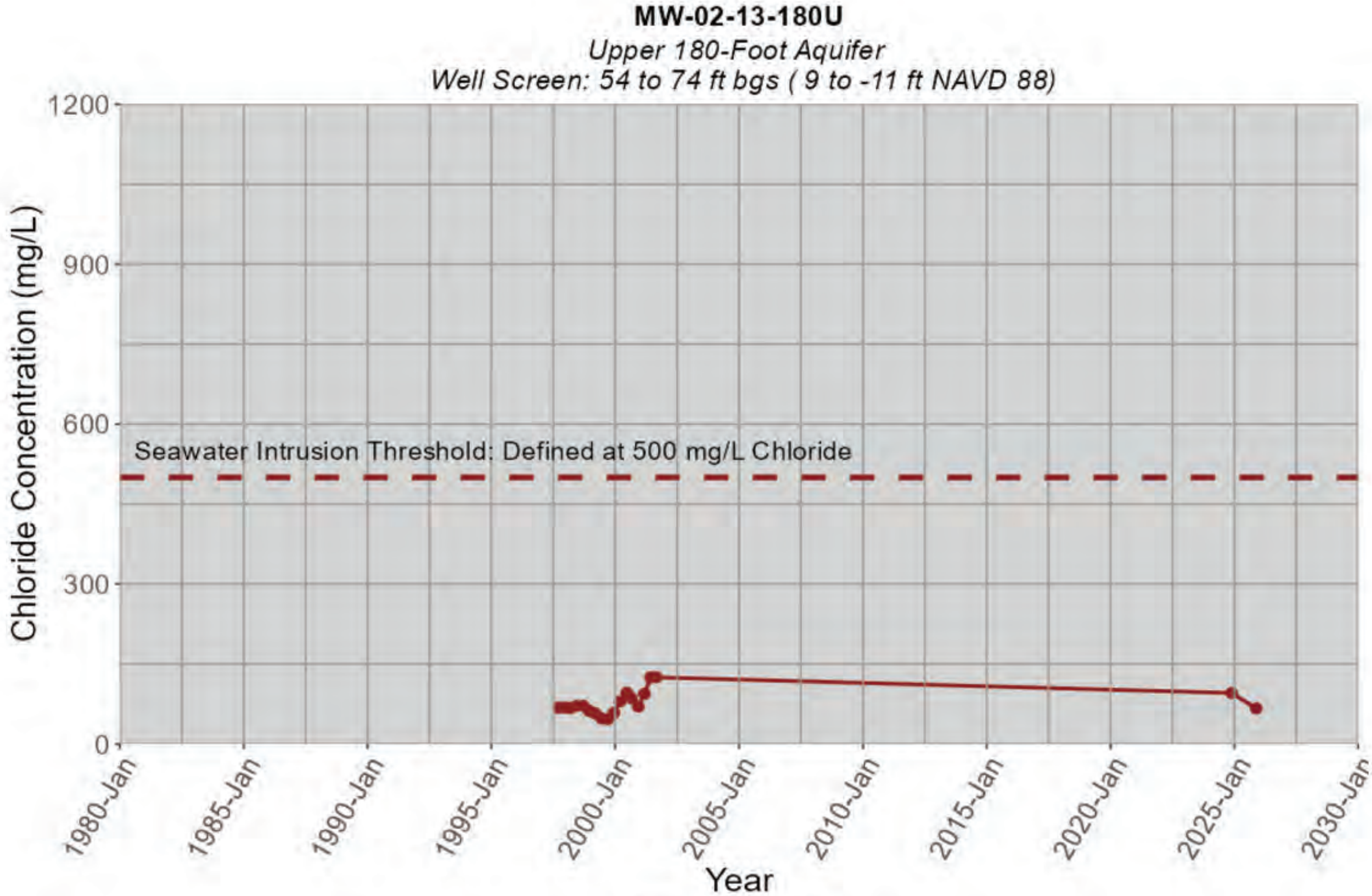

MW-02-05-180
Upper 180-Foot Aquifer
Well Screen: 48 to 68 ft bgs (10 to -10 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
0
500
1000
1500
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

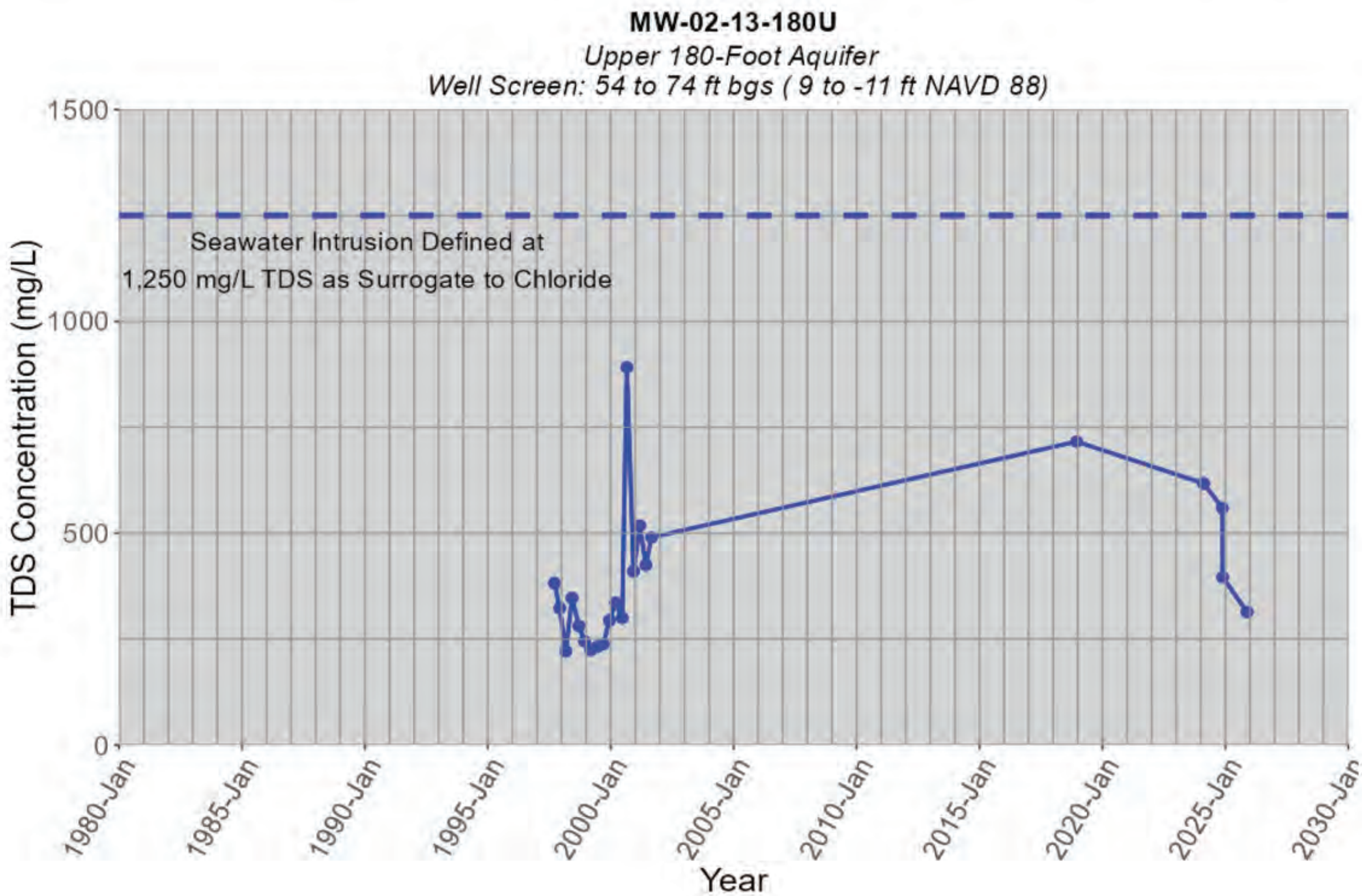

MW-02-06-180
Upper 180-Foot Aquifer
Well Screen: 89 to 109 ft bgs (11 to -9 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

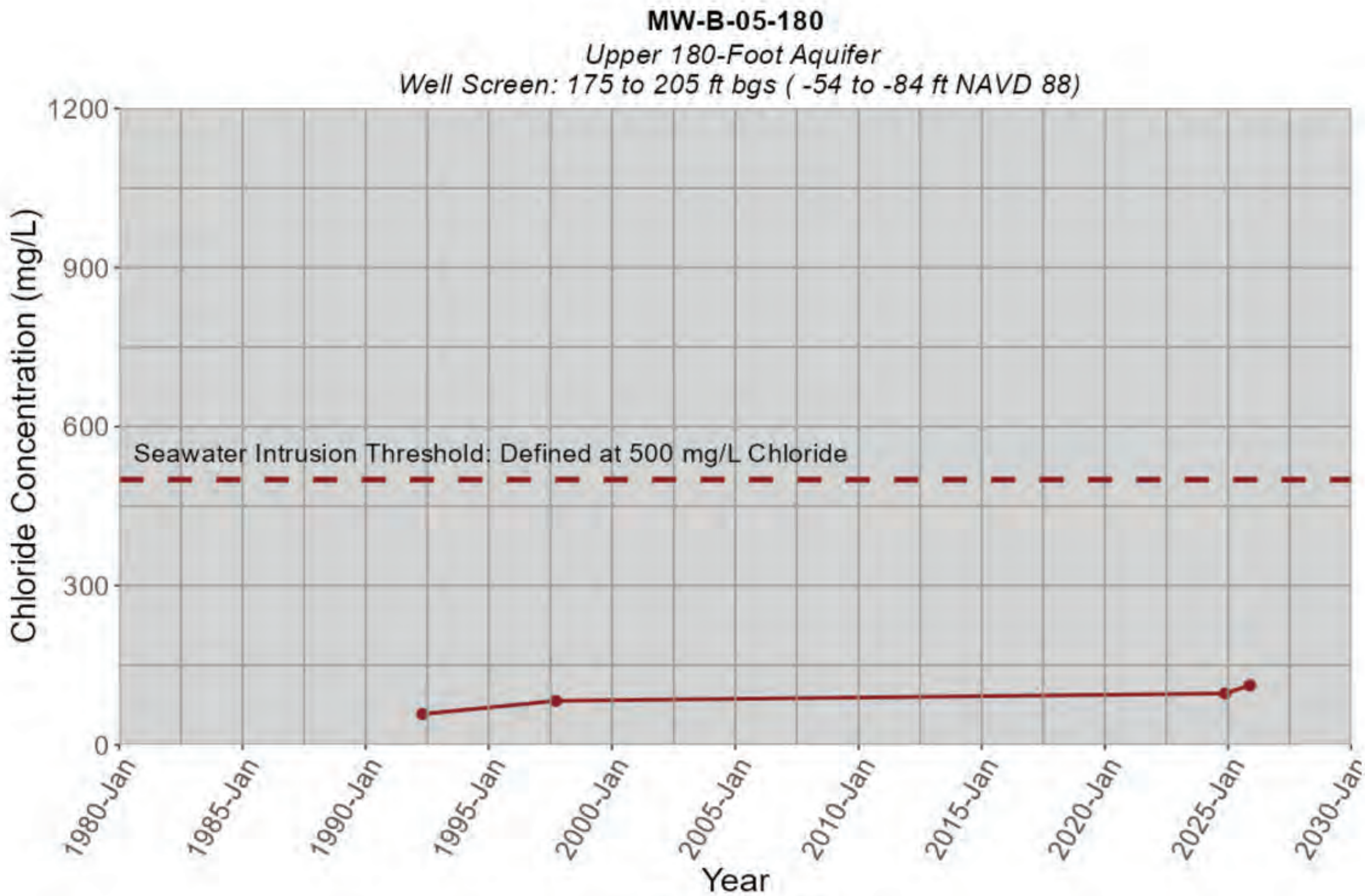

MW-02-06-180
Upper 180-Foot Aquifer
Well Screen: 89 to 109 ft bgs (11 to -9 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

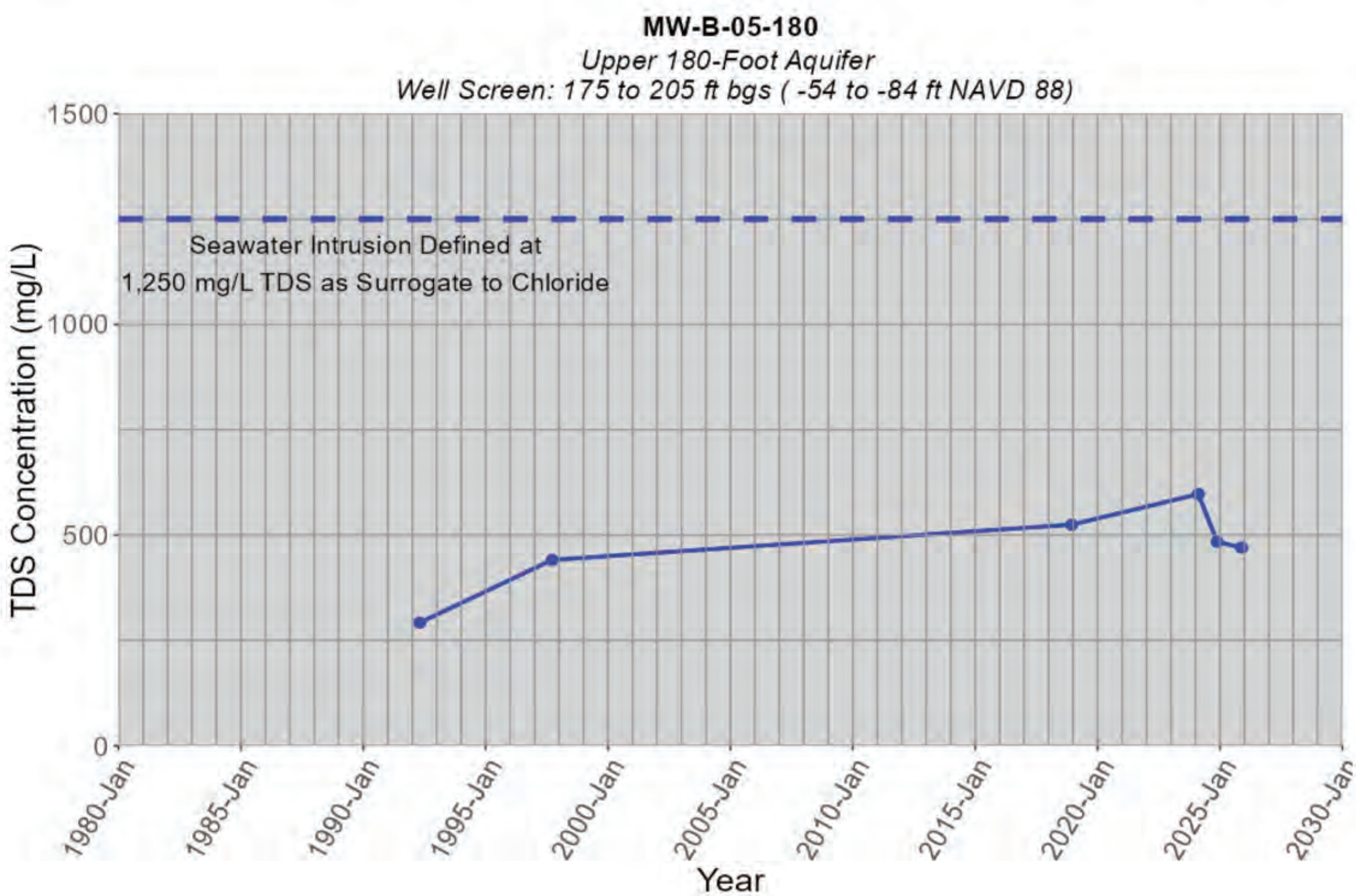

MW-02-10-180
Upper 180-Foot Aquifer
Well Screen: 38 to 58 ft bgs (9 to -11 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
0
300
600
900
1200
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

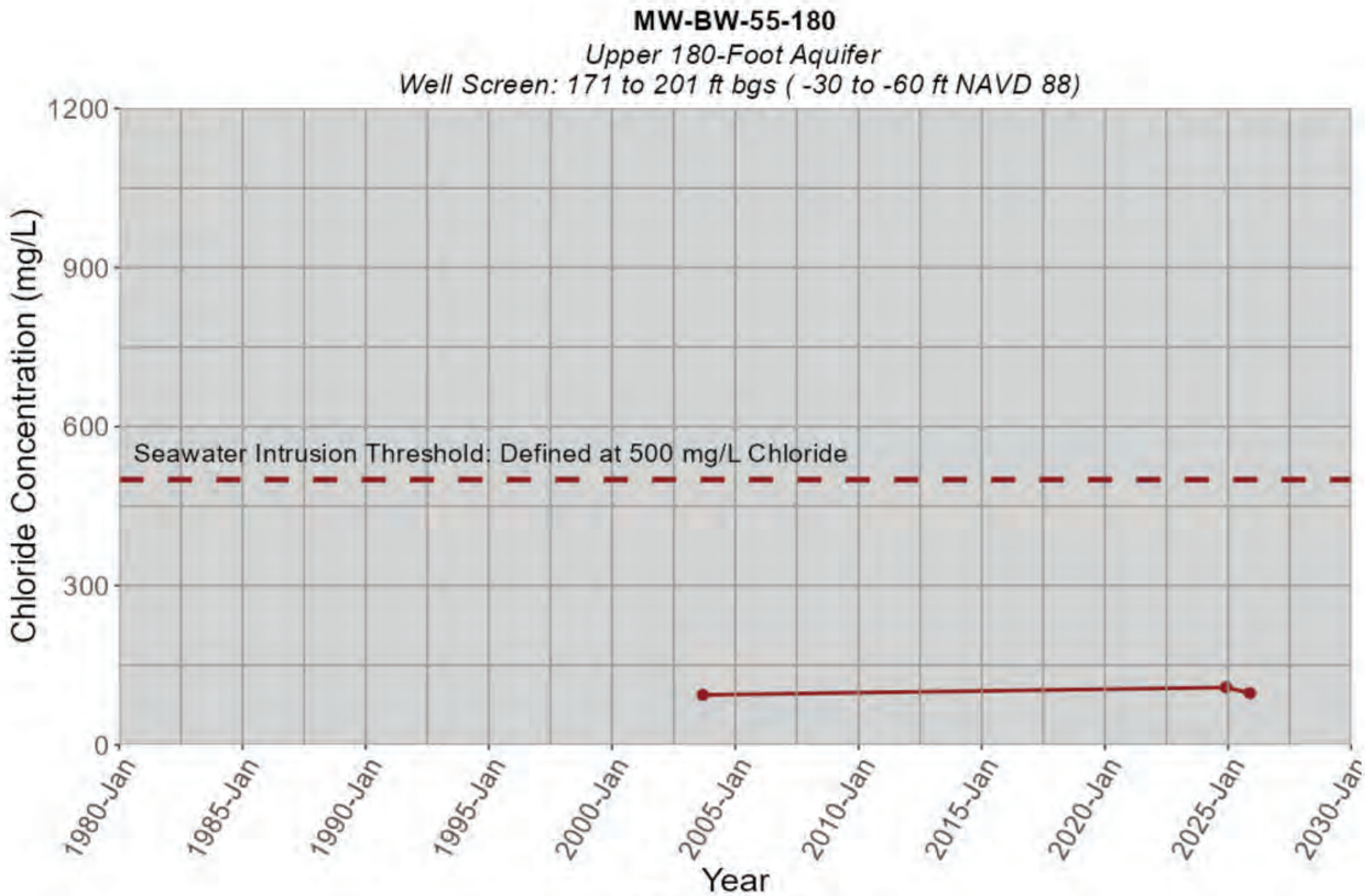

MW-02-10-180
Upper 180-Foot Aquifer
Well Screen: 38 to 58 ft bgs (9 to -11 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
0
500
1000
1500
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

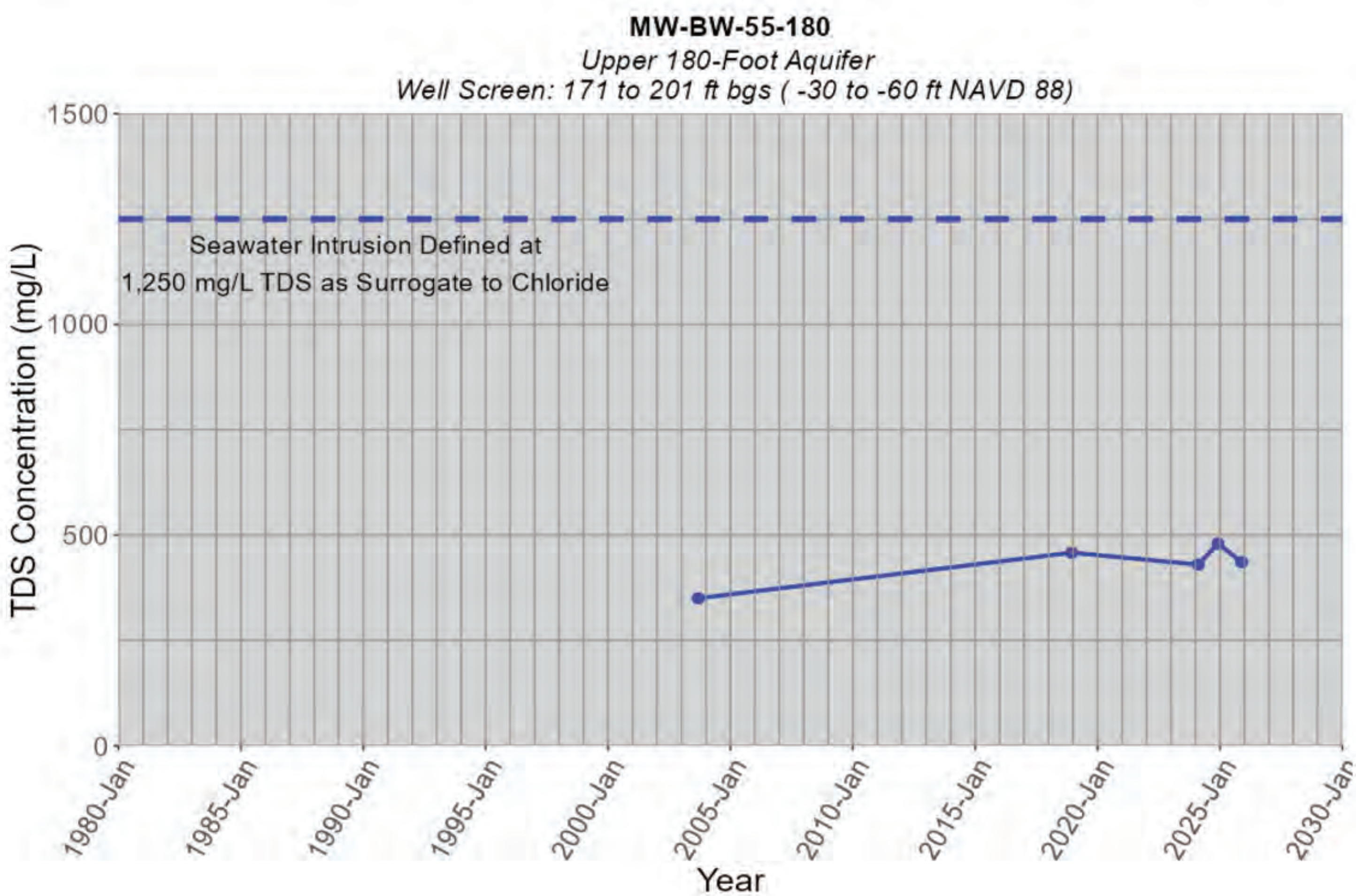

MW-02-13-180U
Upper 180-Foot Aquifer
Well Screen: 54 to 74 ft bgs (9 to -11 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

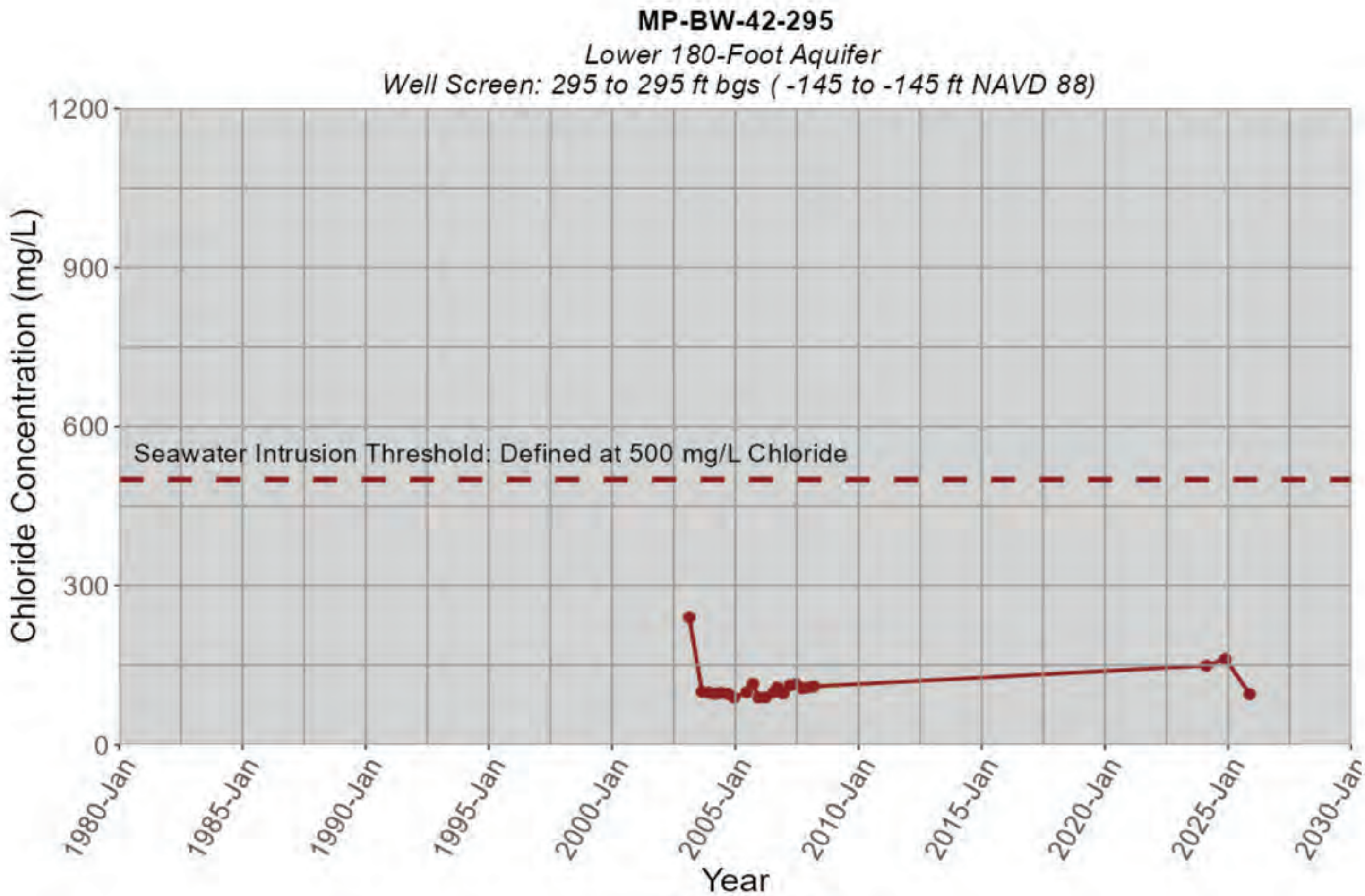

MW-02-13-180U
Upper 180-Foot Aquifer
Well Screen: 54 to 74 ft bgs (9 to -11 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

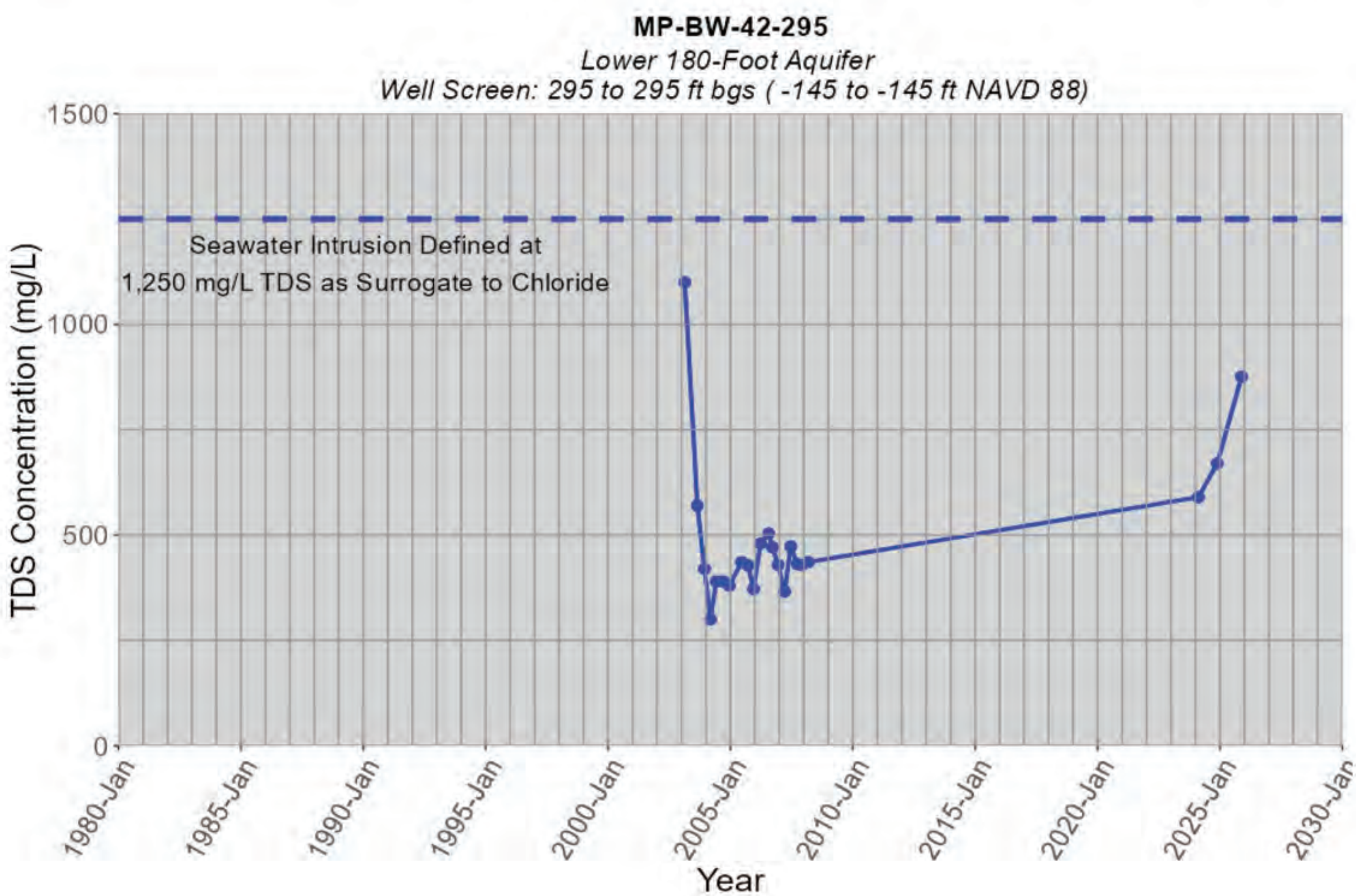

MW-B-05-180
Upper 180-Foot Aquifer
Well Screen: 175 to 205 ft bgs (-54 to -84 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

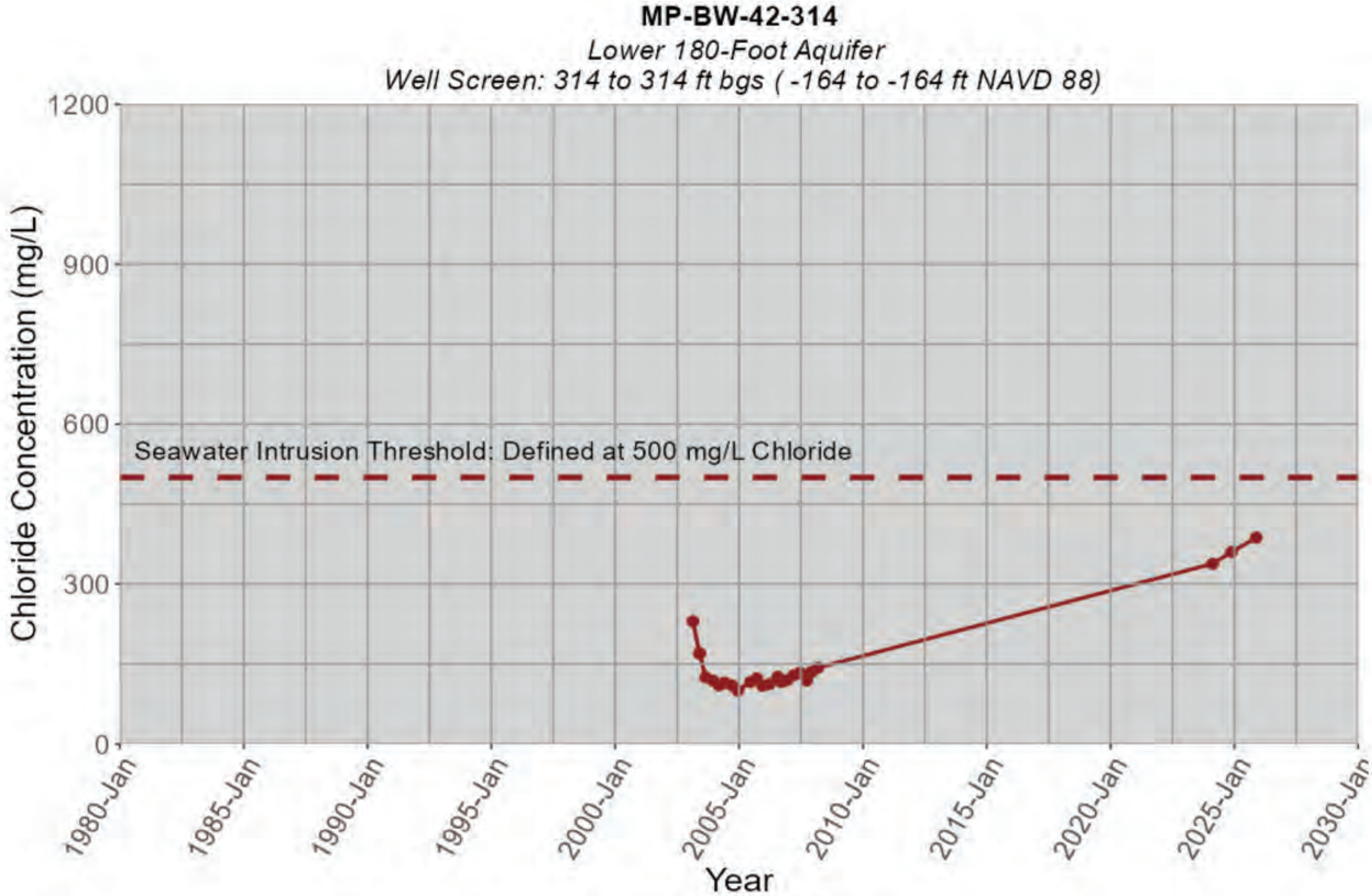

MW-B-05-180
Upper 180-Foot Aquifer
Well Screen: 175 to 205 ft bgs (-54 to -84 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

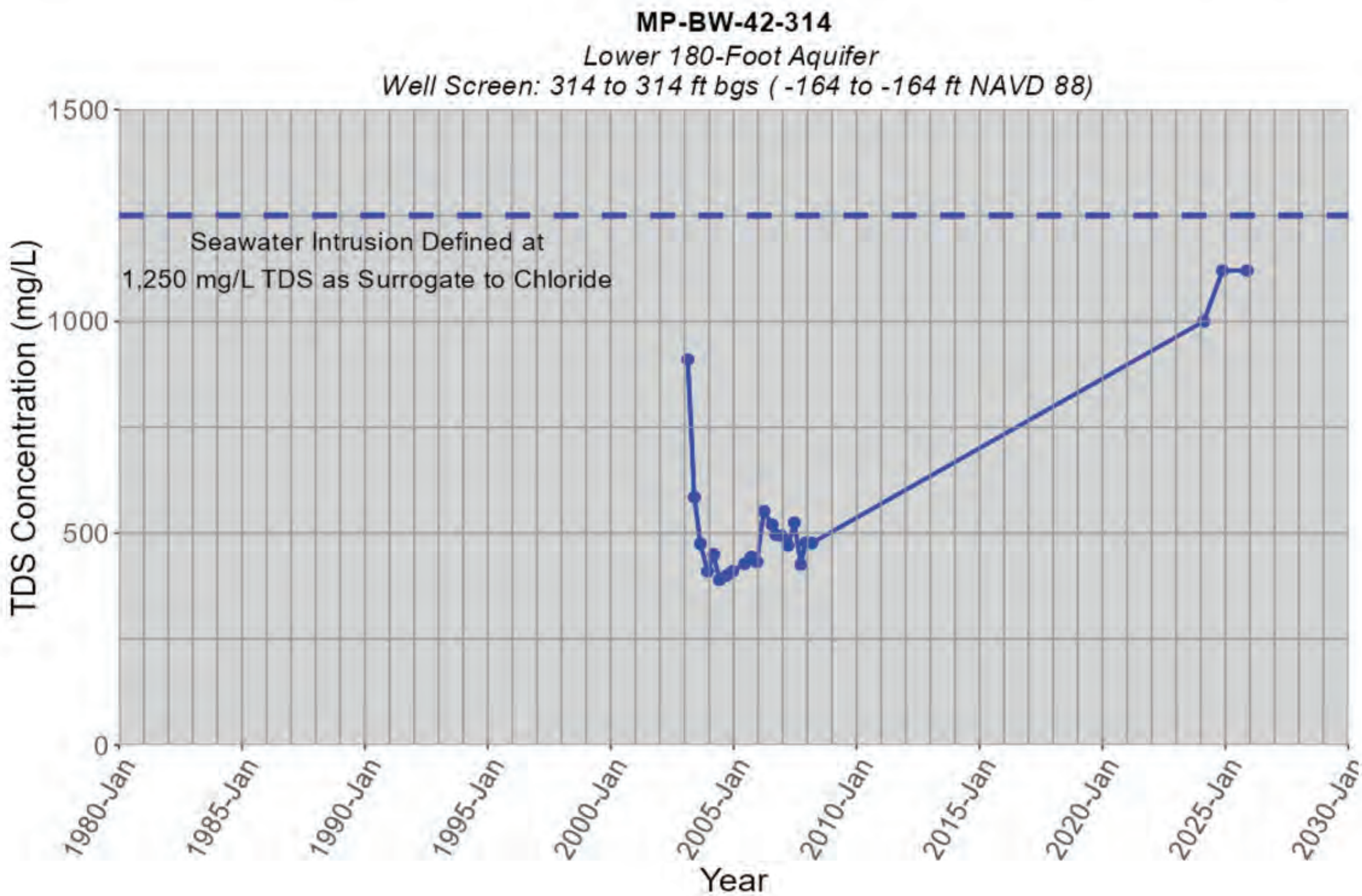

MW-BW-55-180
Upper 180-Foot Aquifer
Well Screen: 171 to 201 ft bgs (-30 to -60 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1200
900
600
300
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

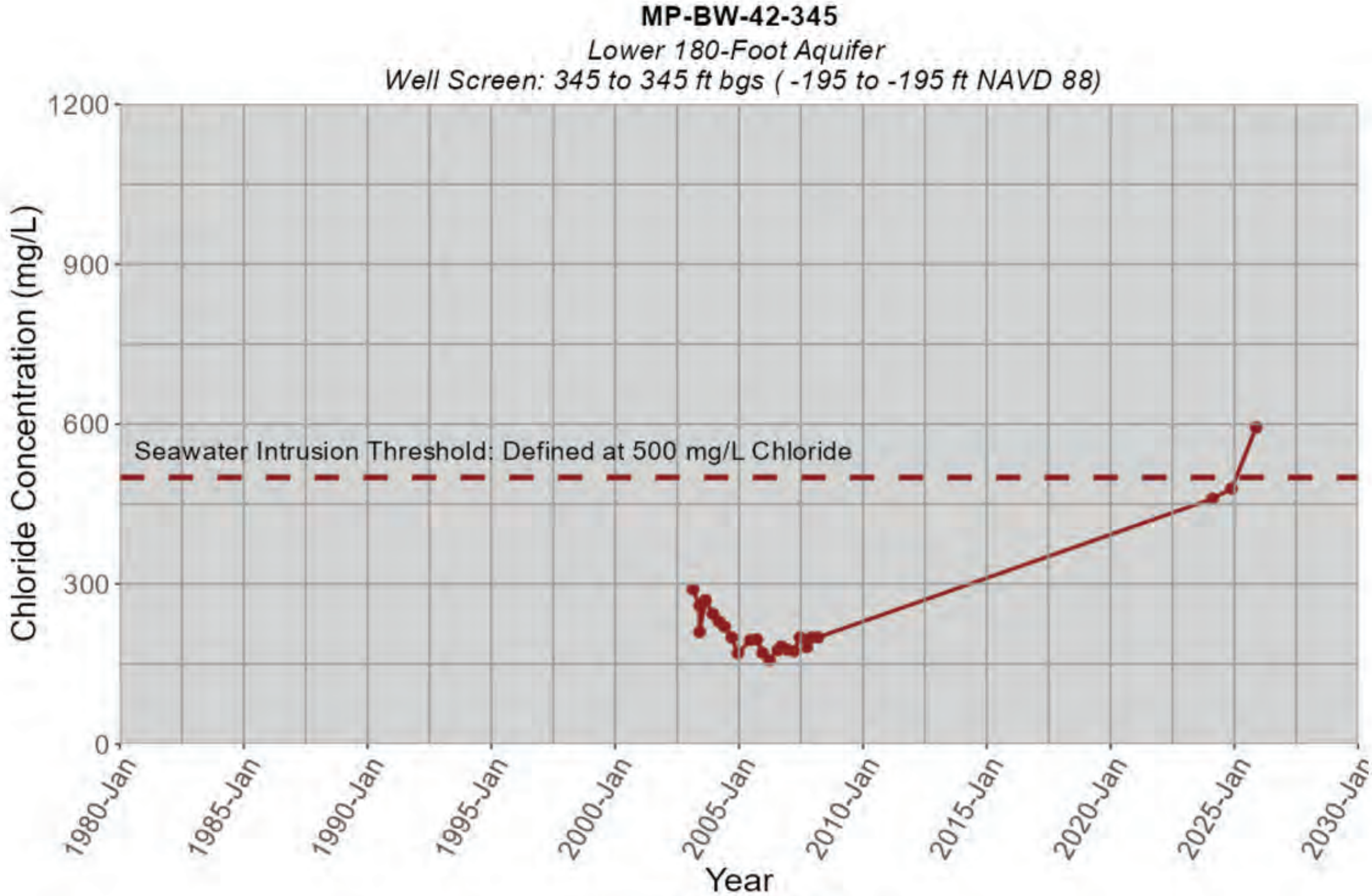

MW-BW-55-180
Upper 180-Foot Aquifer
Well Screen: 171 to 201 ft bgs (-30 to -60 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1500
1000
500
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

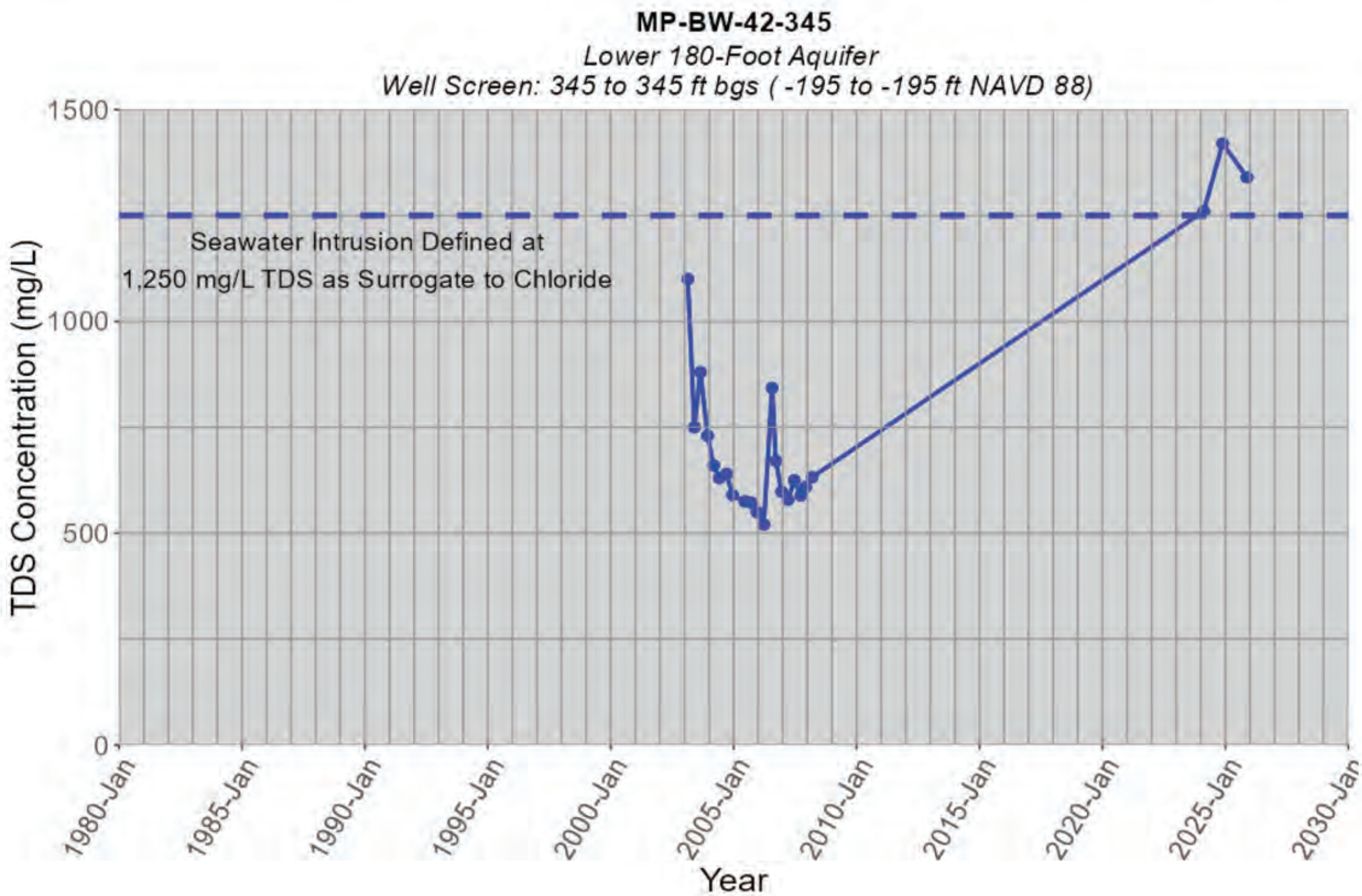

MP-BW-42-295
Lower 180-Foot Aquifer
Well Screen: 295 to 295 ft bgs (-145 to -145 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1200
900
600
300
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

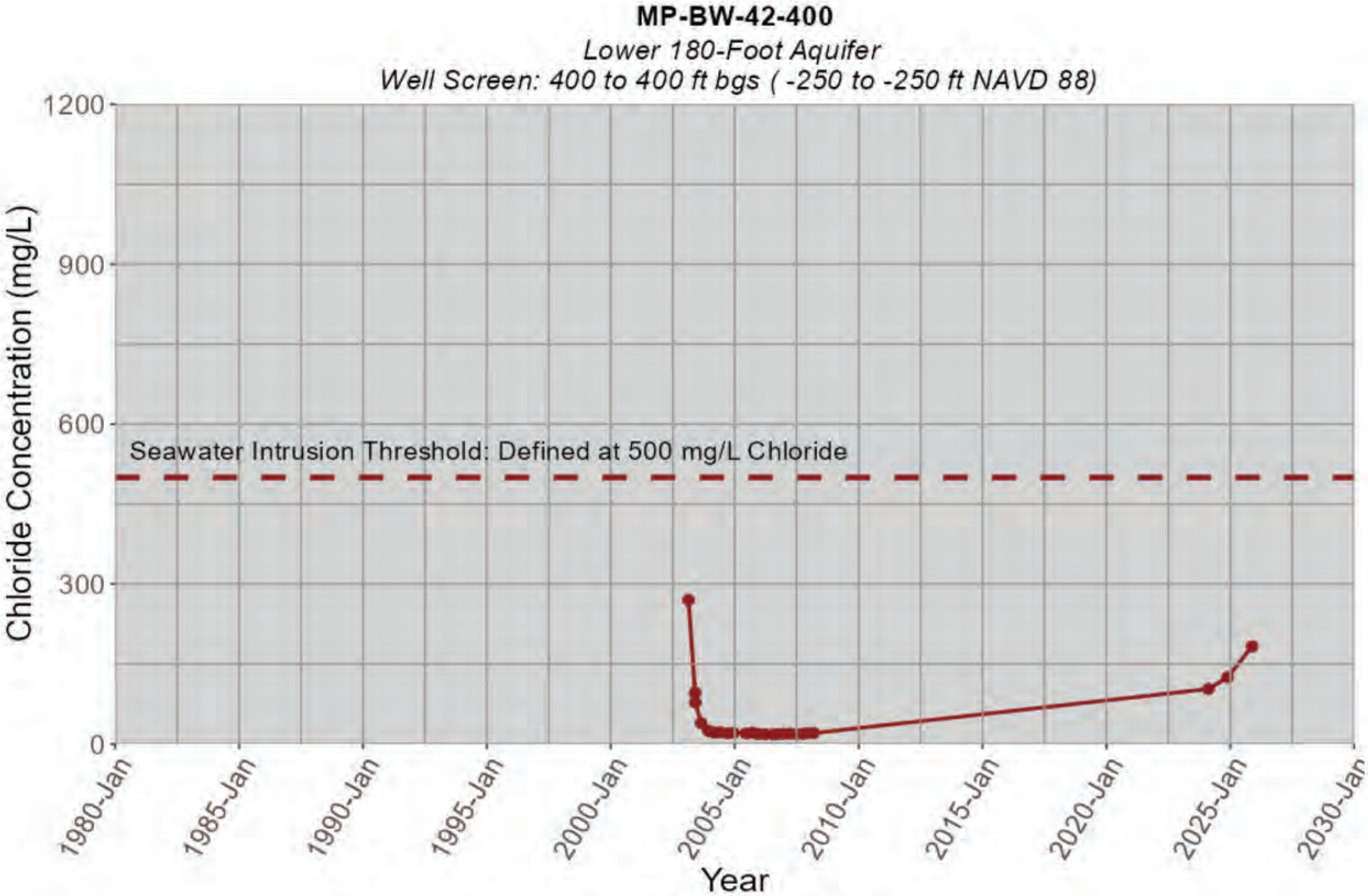

MP-BW-42-295
Lower 180-Foot Aquifer
Well Screen: 295 to 295 ft bgs (-145 to -145 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1500
1000
500
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

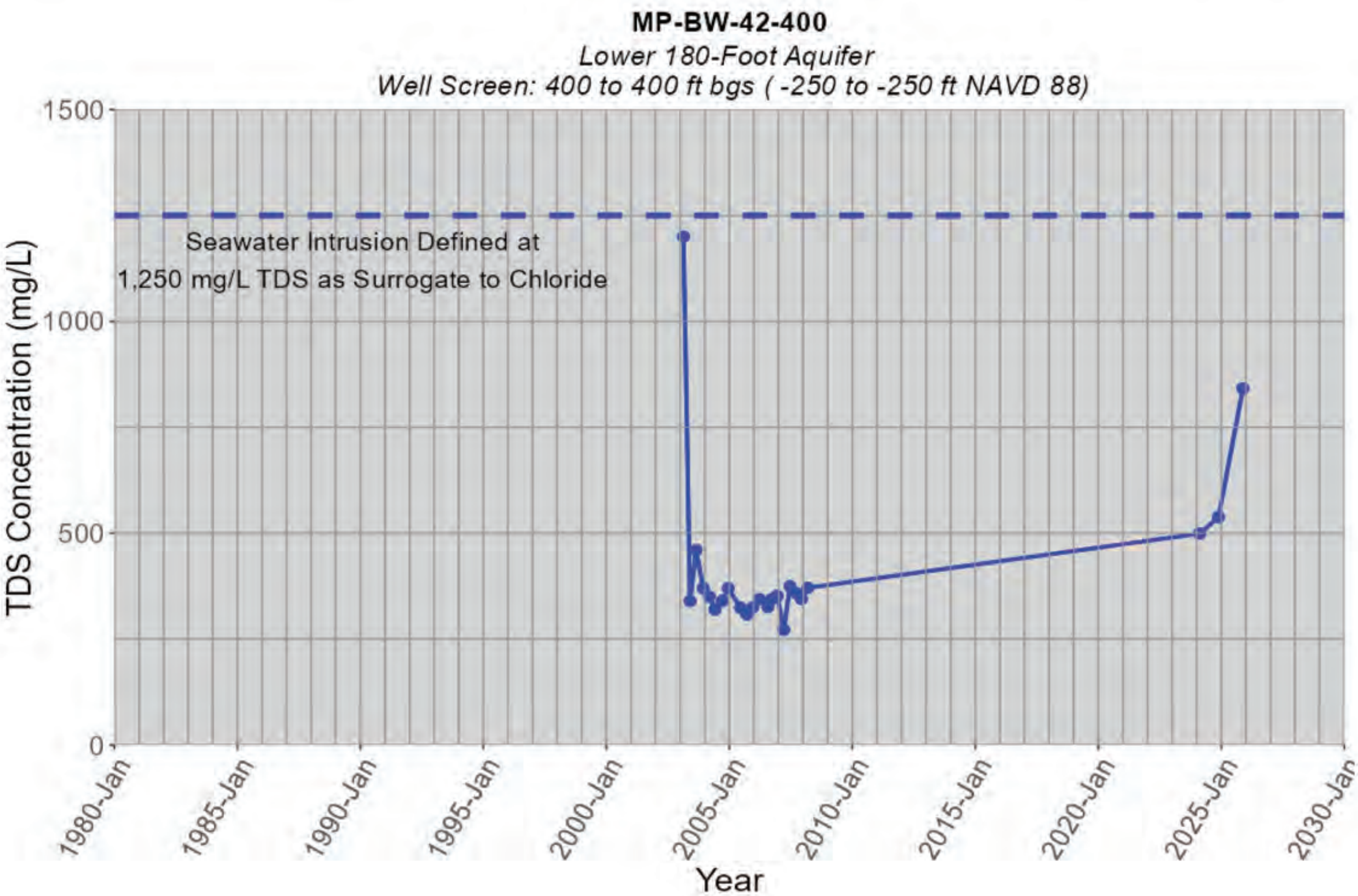

MP-BW-42-314
Lower 180-Foot Aquifer
Well Screen: 314 to 314 ft bgs (-164 to -164 ft NAVD 88)
Chloride Concentration (mg/L)
0
300
600
900
1200
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

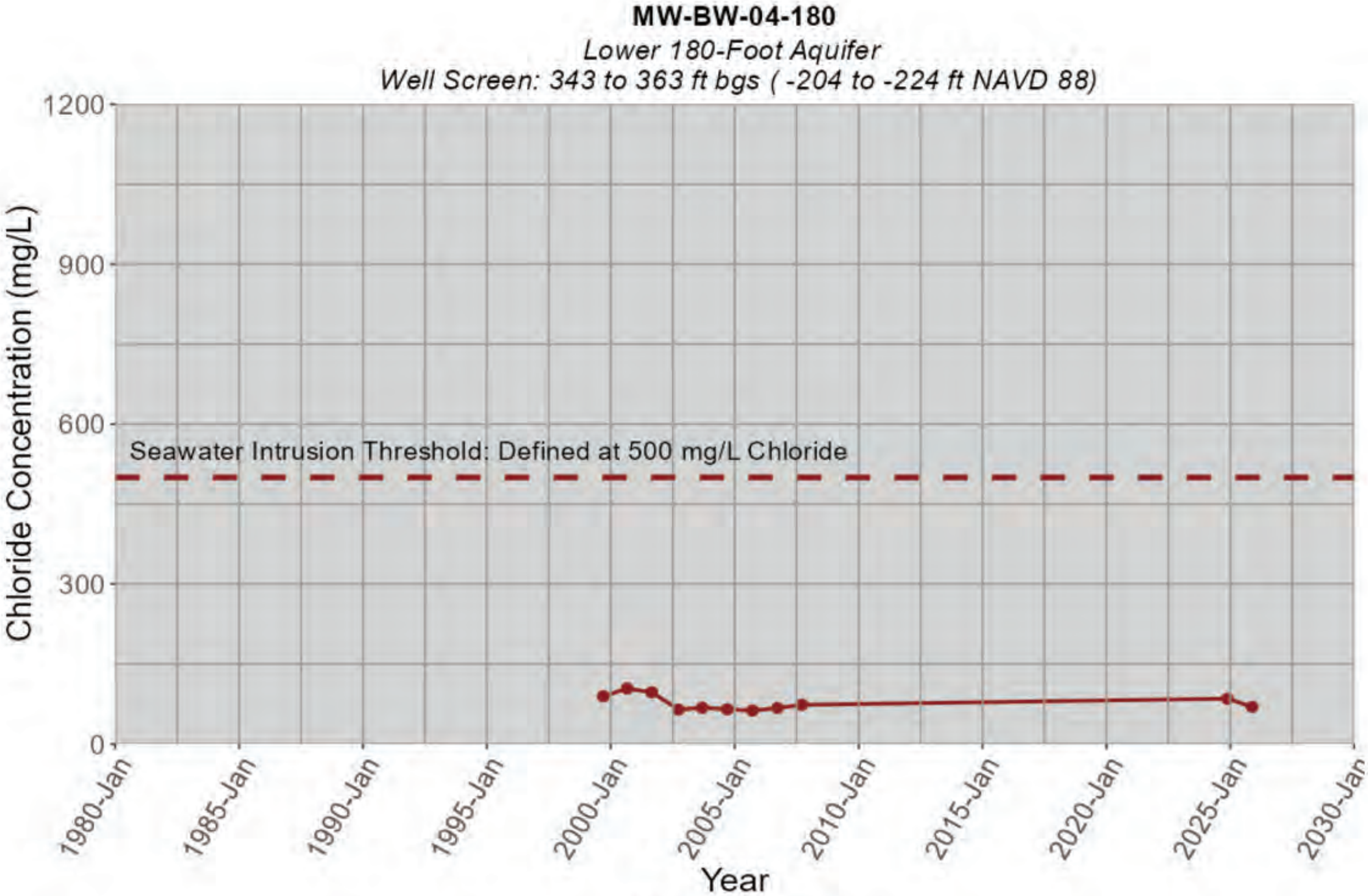

MP-BW-42-314
Lower 180-Foot Aquifer
Well Screen: 314 to 314 ft bgs (-164 to -164 ft NAVD 88)
TDS Concentration (mg/L)
0
500
1000
1500
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

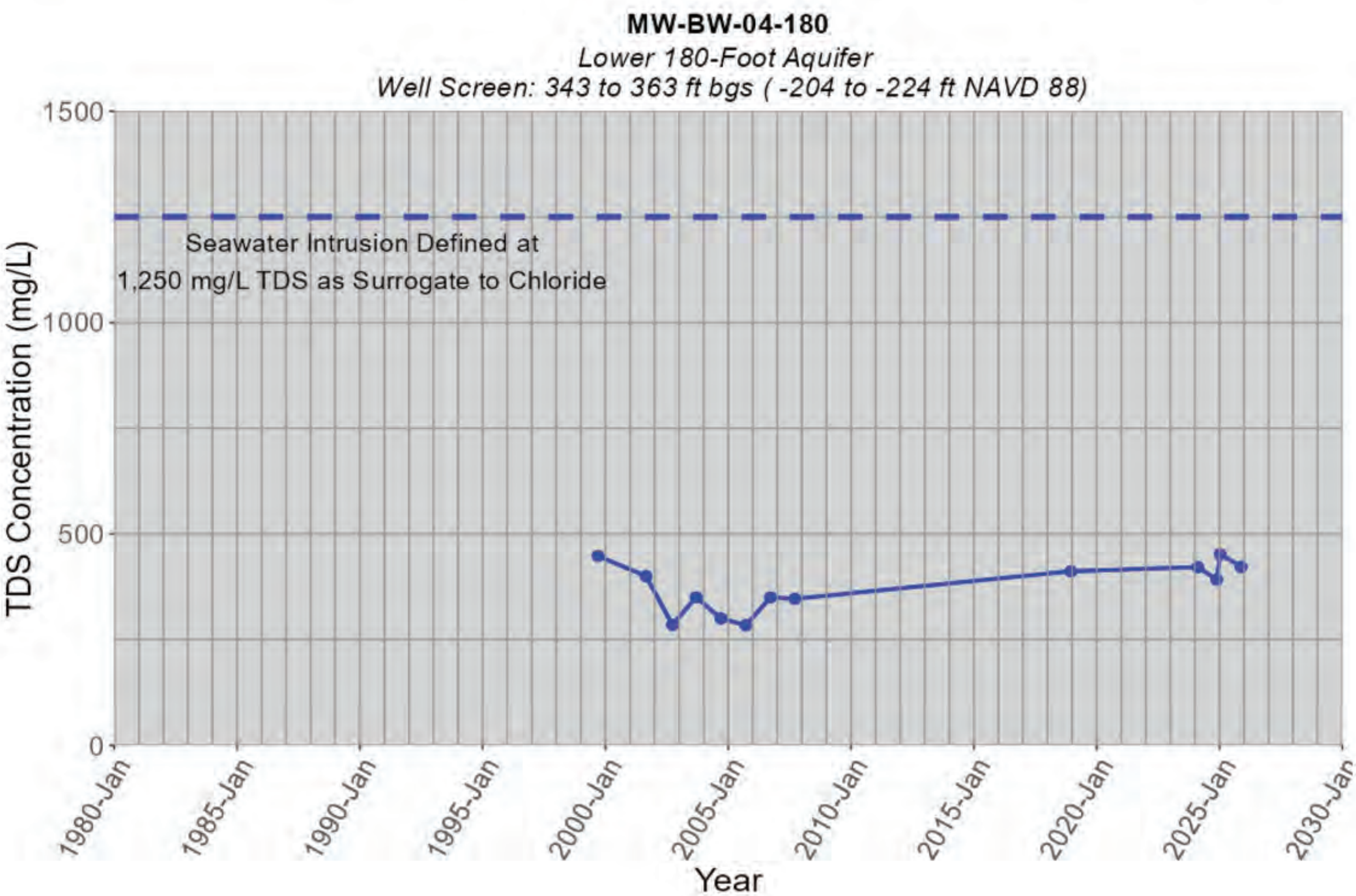

MP-BW-42-345
Lower 180-Foot Aquifer
Well Screen: 345 to 345 ft bgs (-195 to -195 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

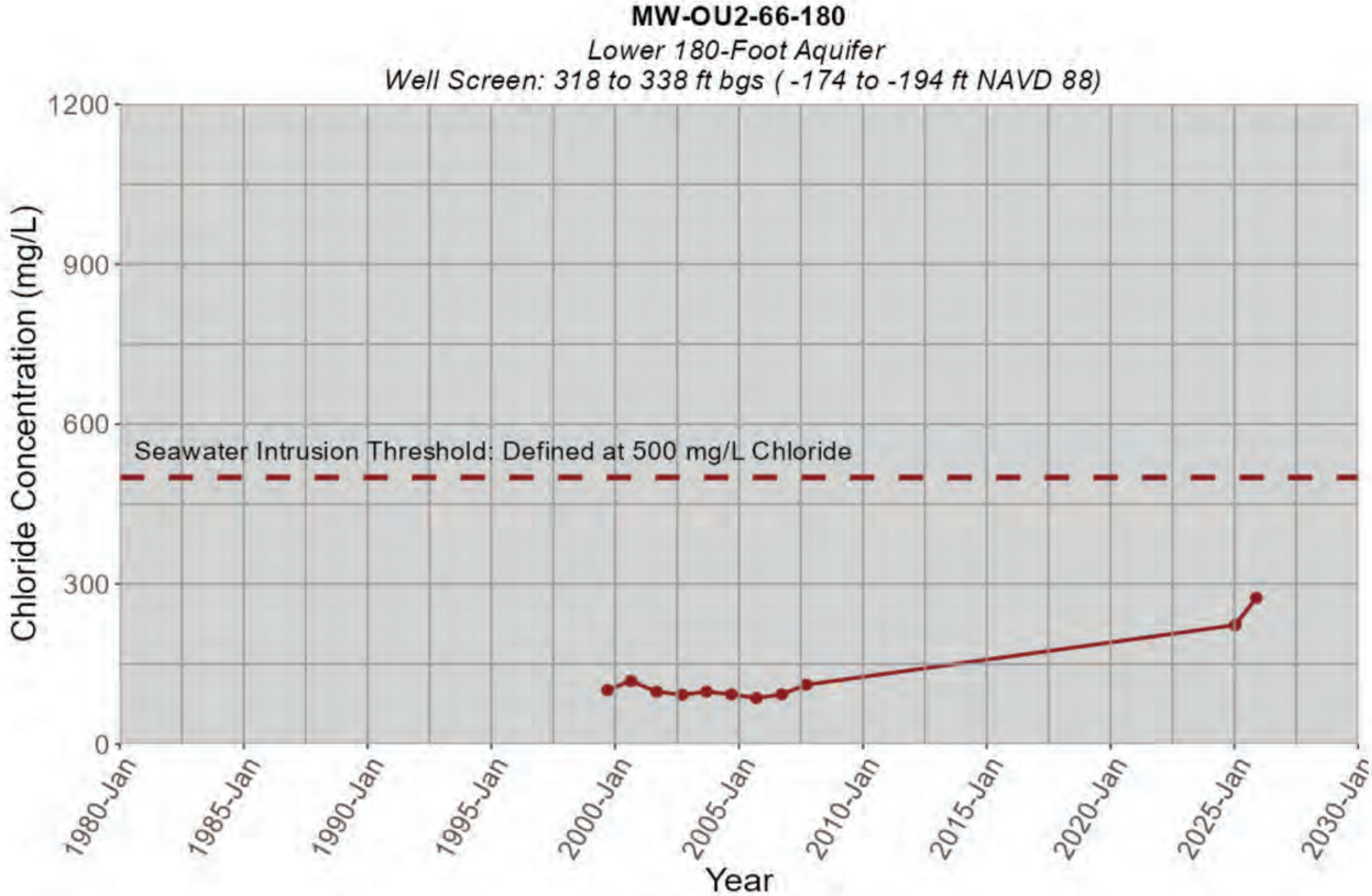

MP-BW-42-345
Lower 180-Foot Aquifer
Well Screen: 345 to 345 ft bgs (-195 to -195 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

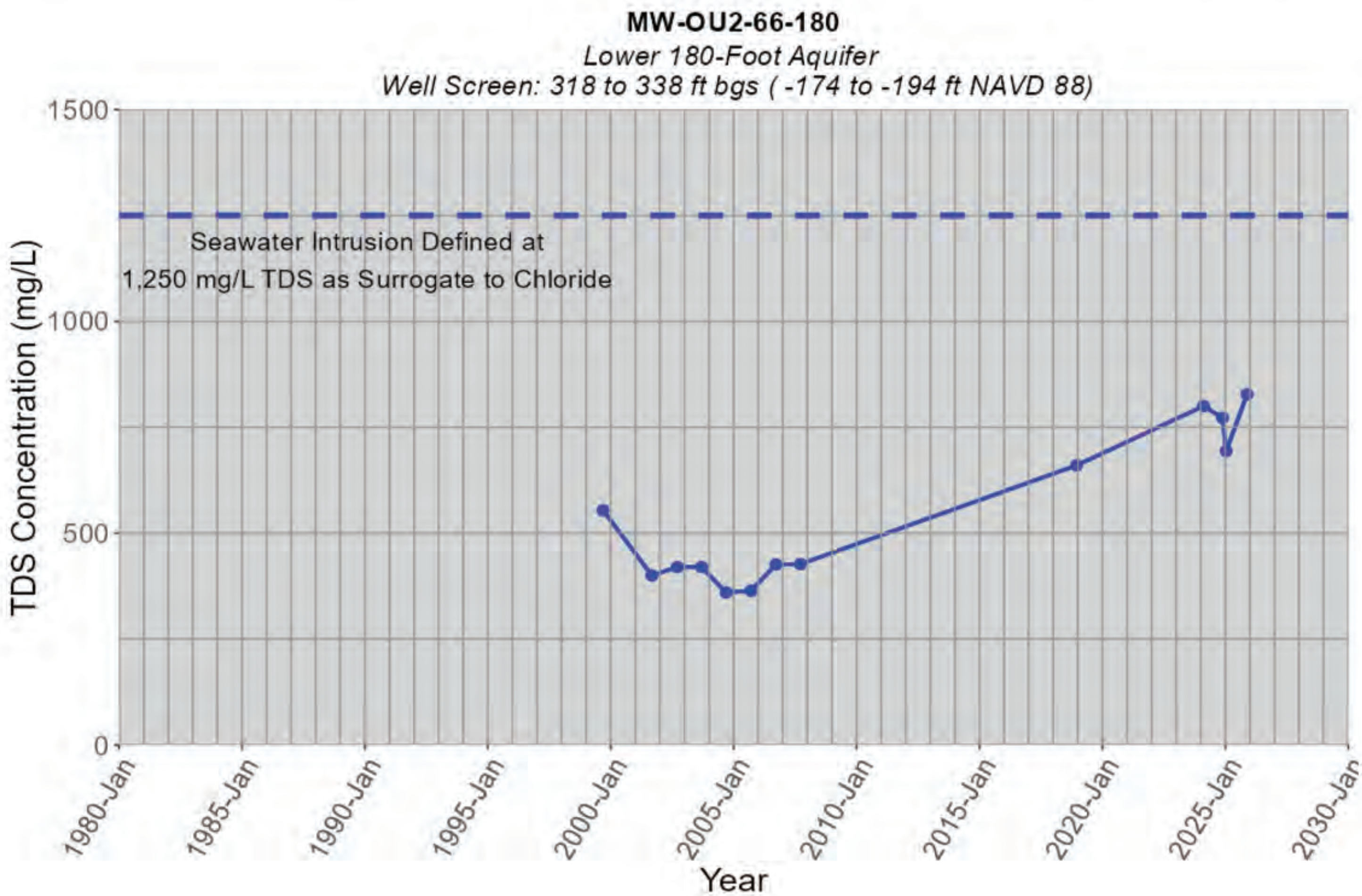

MP-BW-42-400
Lower 180-Foot Aquifer
Well Screen: 400 to 400 ft bgs (-250 to -250 ft NAVD 88)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
Chloride Concentration (mg/L)
0
300
600
900
1200
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MP-BW-42-400
Lower 180-Foot Aquifer
Well Screen: 400 to 400 ft bgs (-250 to -250 ft NAVD 88)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
TDS Concentration (mg/L)
0
500
1000
1500
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

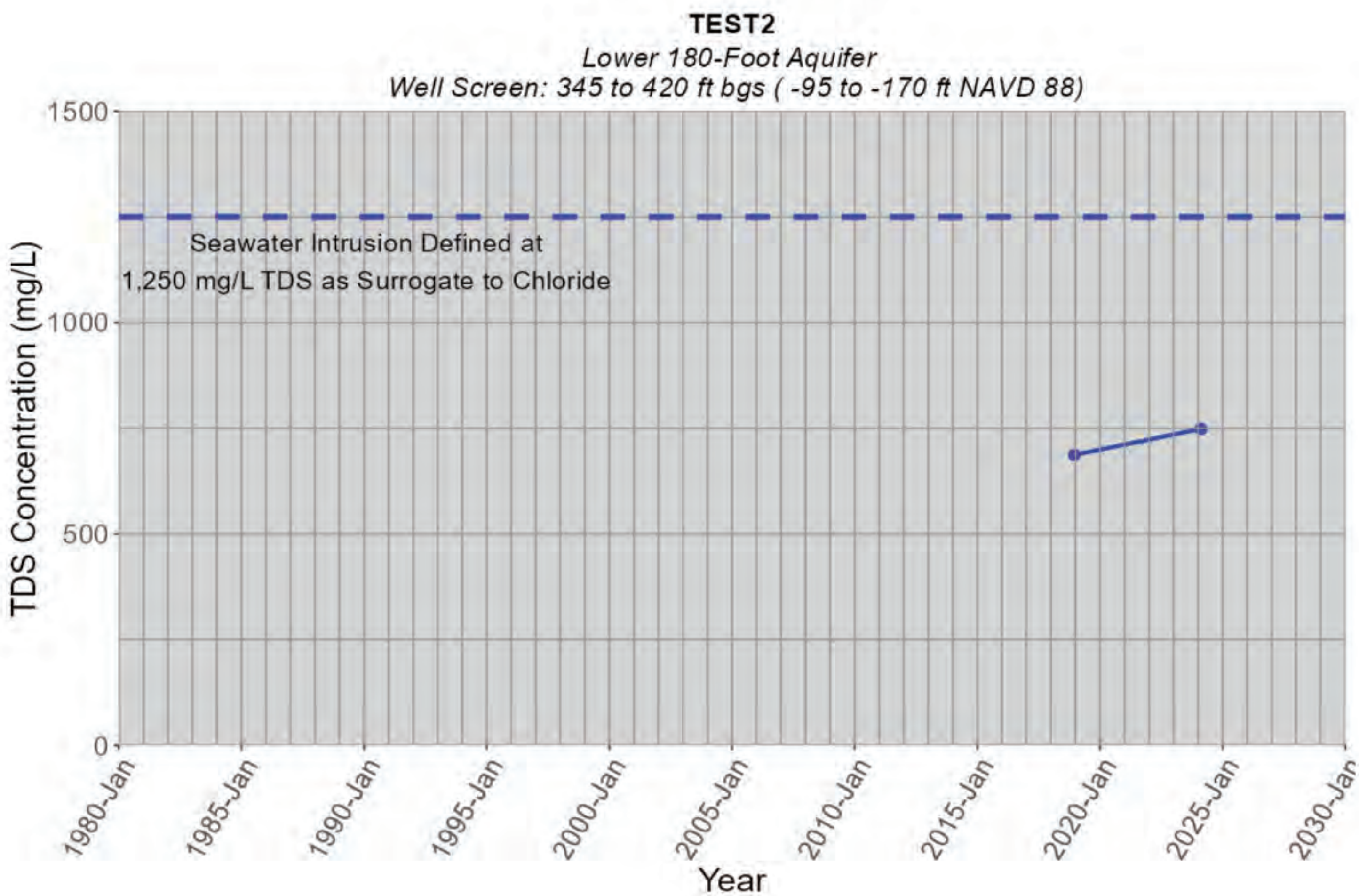

MW-BW-04-180
Lower 180-Foot Aquifer
Well Screen: 343 to 363 ft bgs (-204 to -224 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1200
900
600
300
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

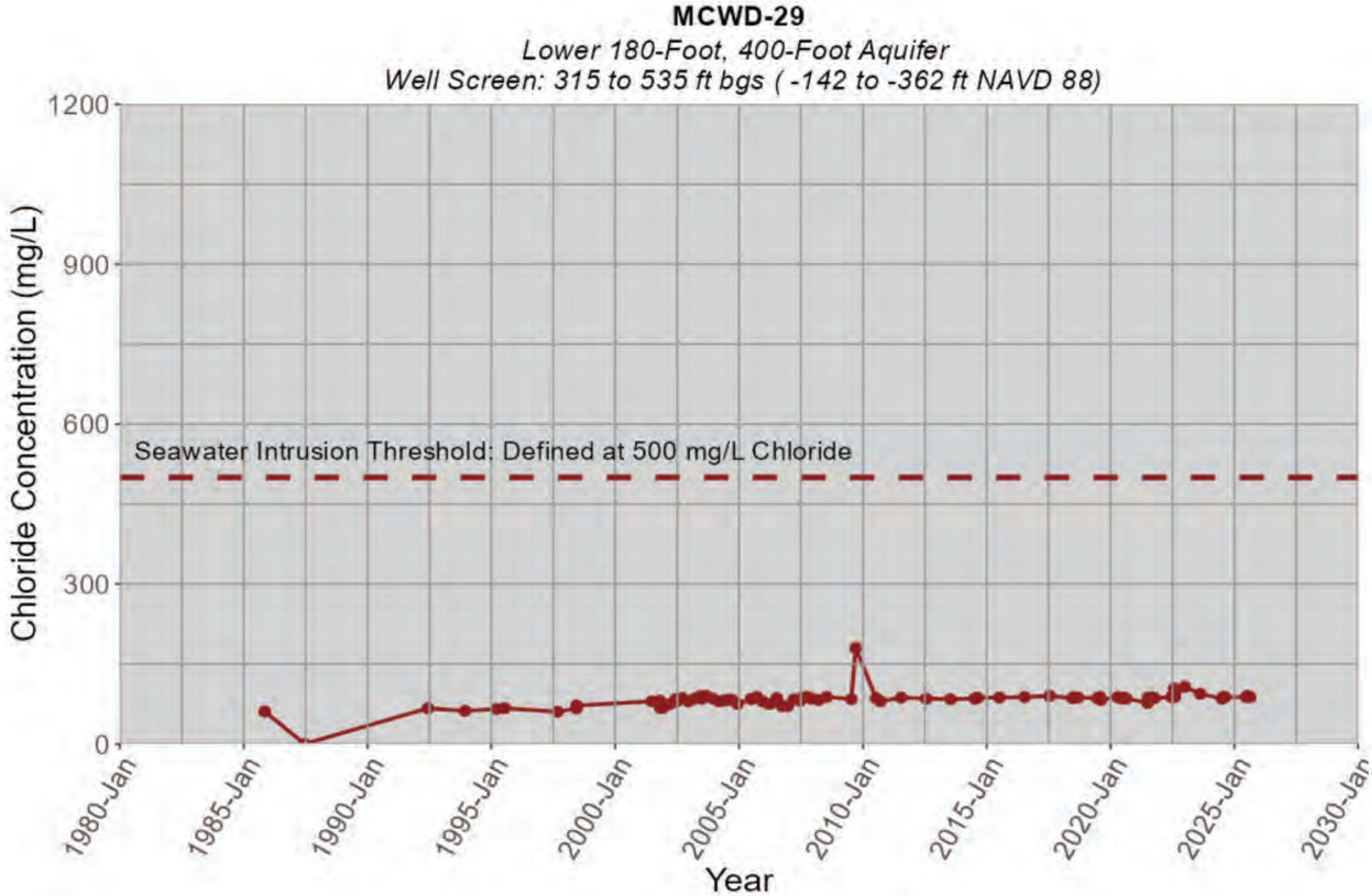

MW-BW-04-180
Lower 180-Foot Aquifer
Well Screen: 343 to 363 ft bgs (-204 to -224 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1500
1000
500
0
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

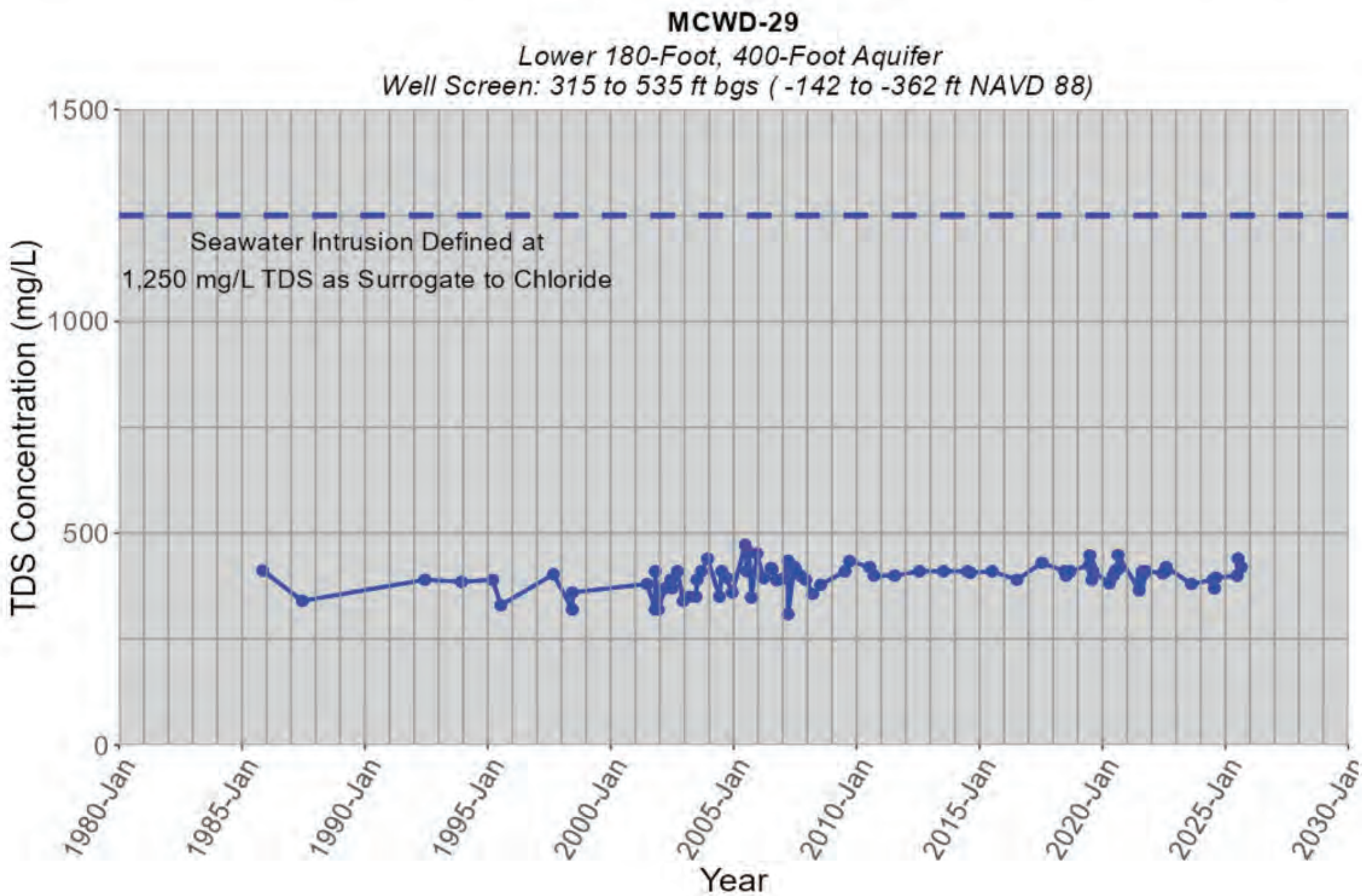

MW-OU2-66-180
Lower 180-Foot Aquifer
Well Screen: 318 to 338 ft bgs (-174 to -194 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

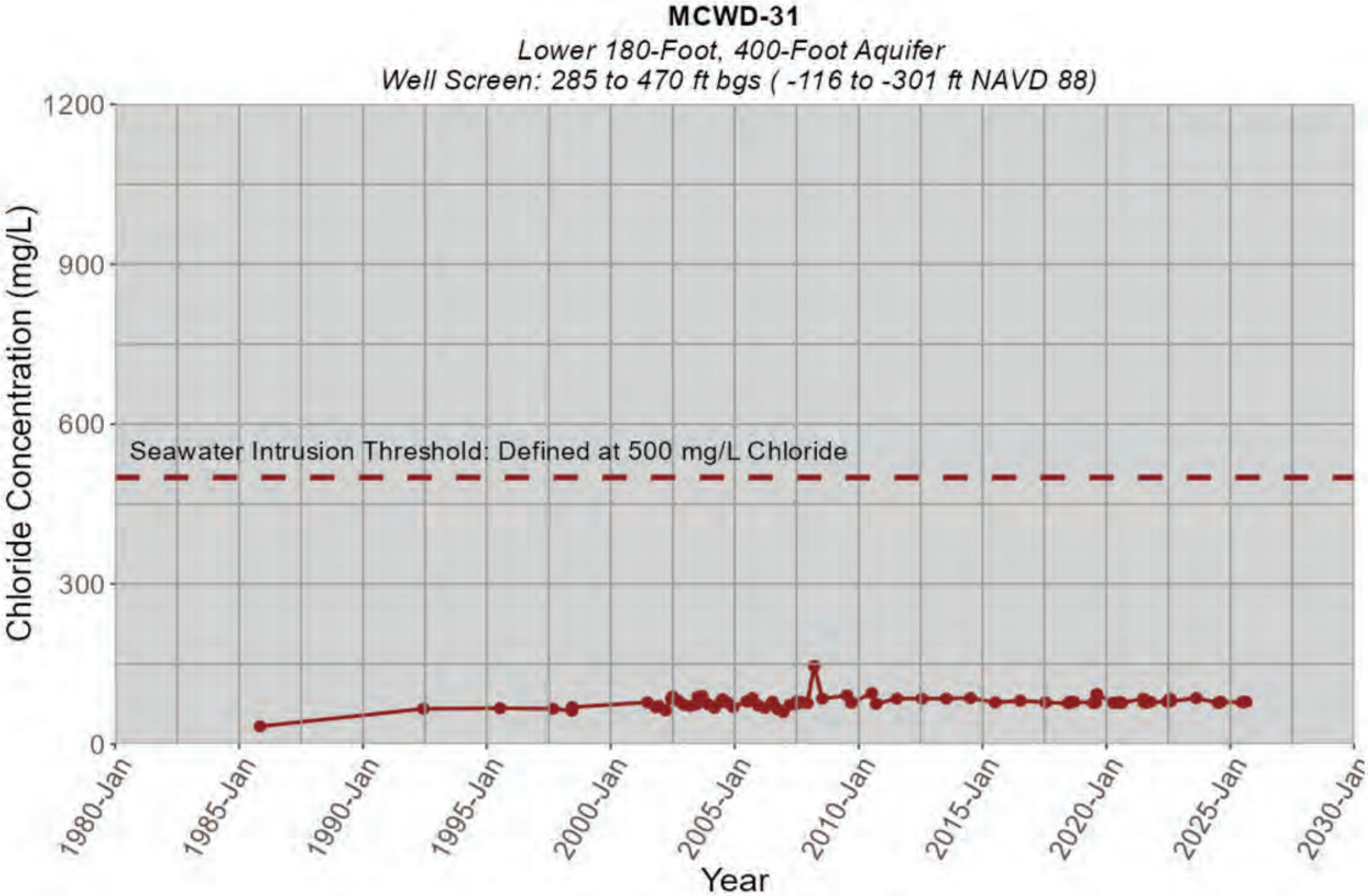

MW-OU2-66-180
Lower 180-Foot Aquifer
Well Screen: 318 to 338 ft bgs (-174 to -194 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

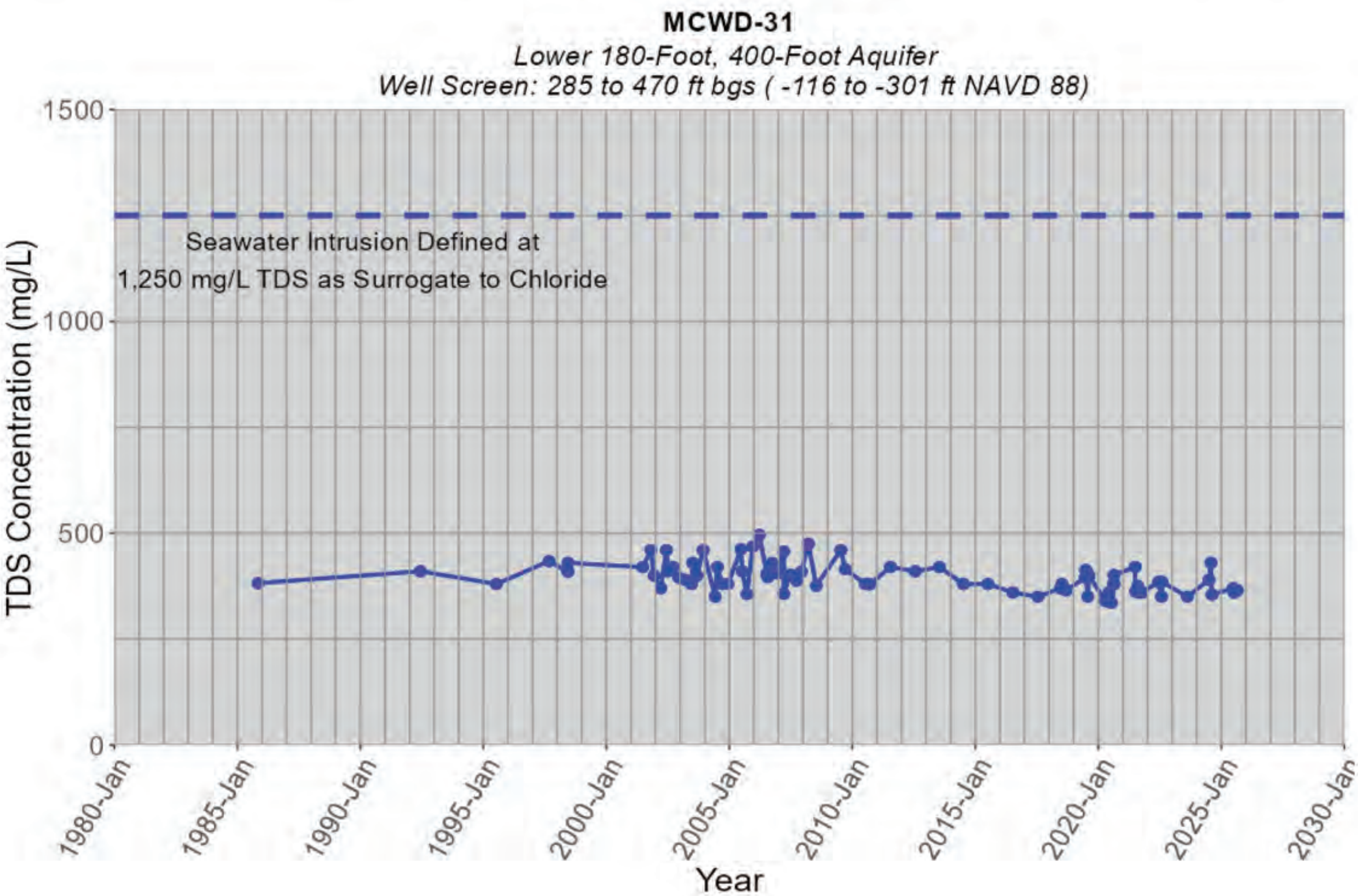
Chloride data for TEST2 is not available.

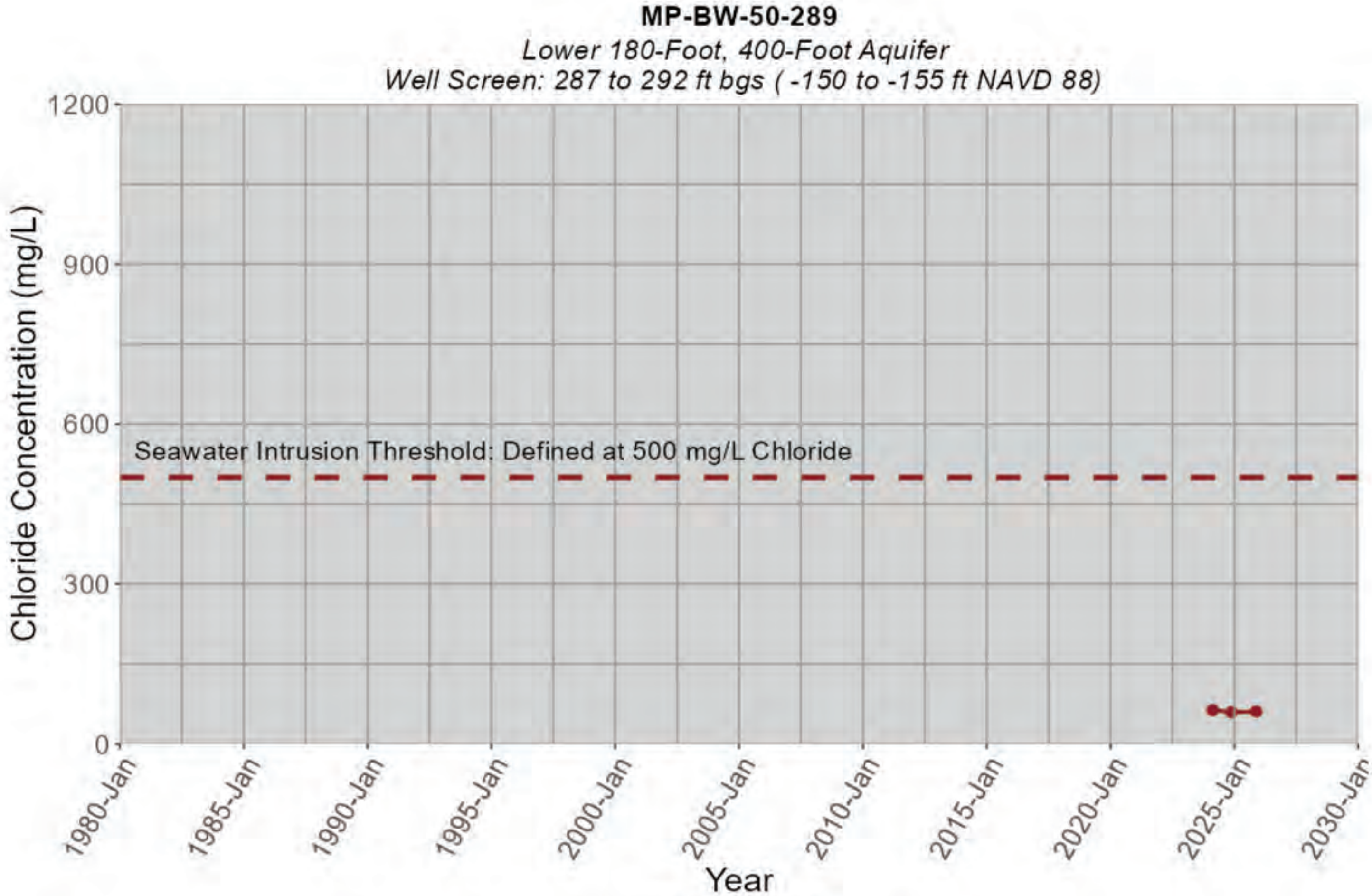


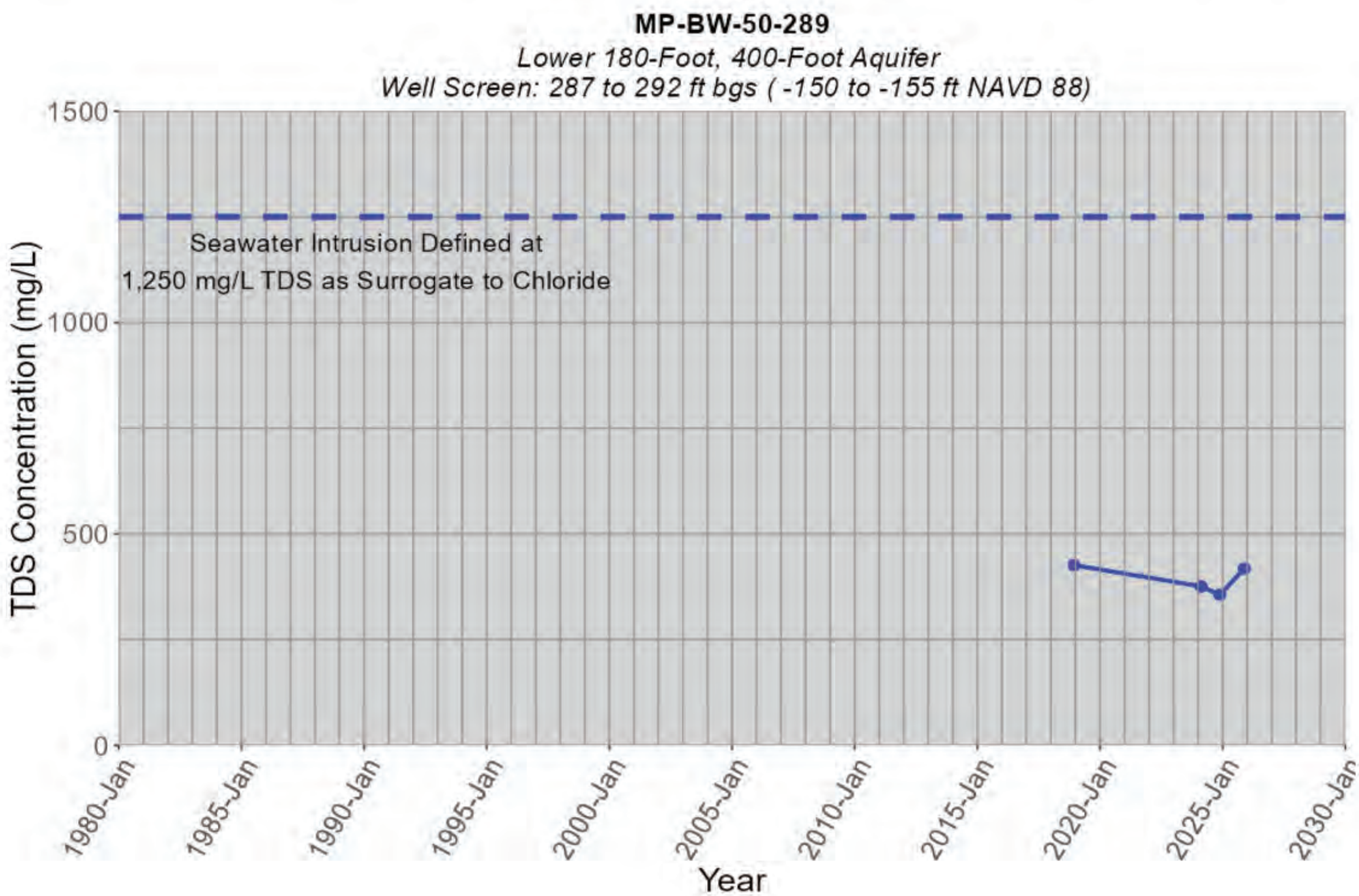

MCWD-29
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 315 to 535 ft bgs (-142 to -362 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

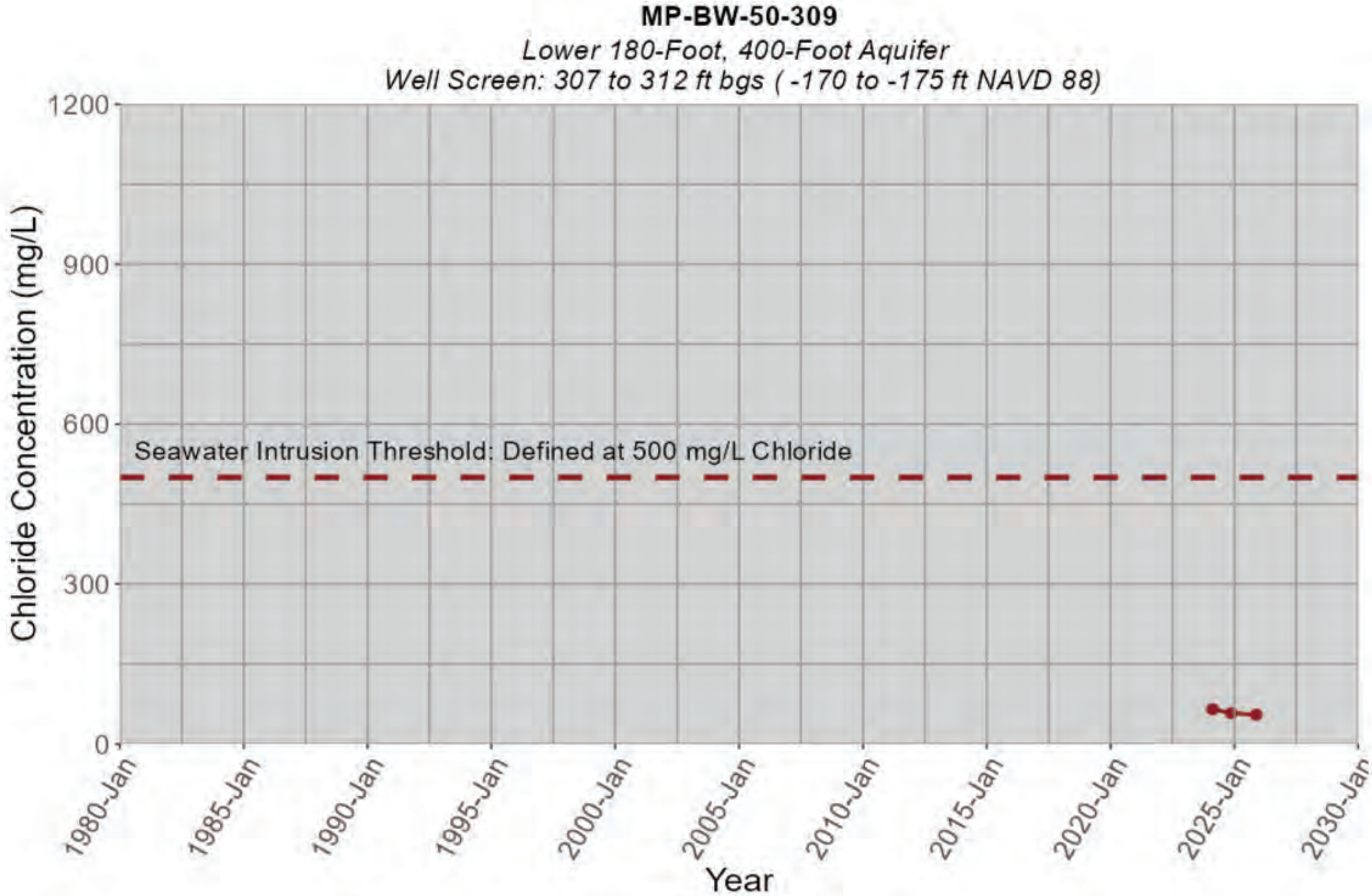

MCWD-29
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 315 to 535 ft bgs (-142 to -362 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

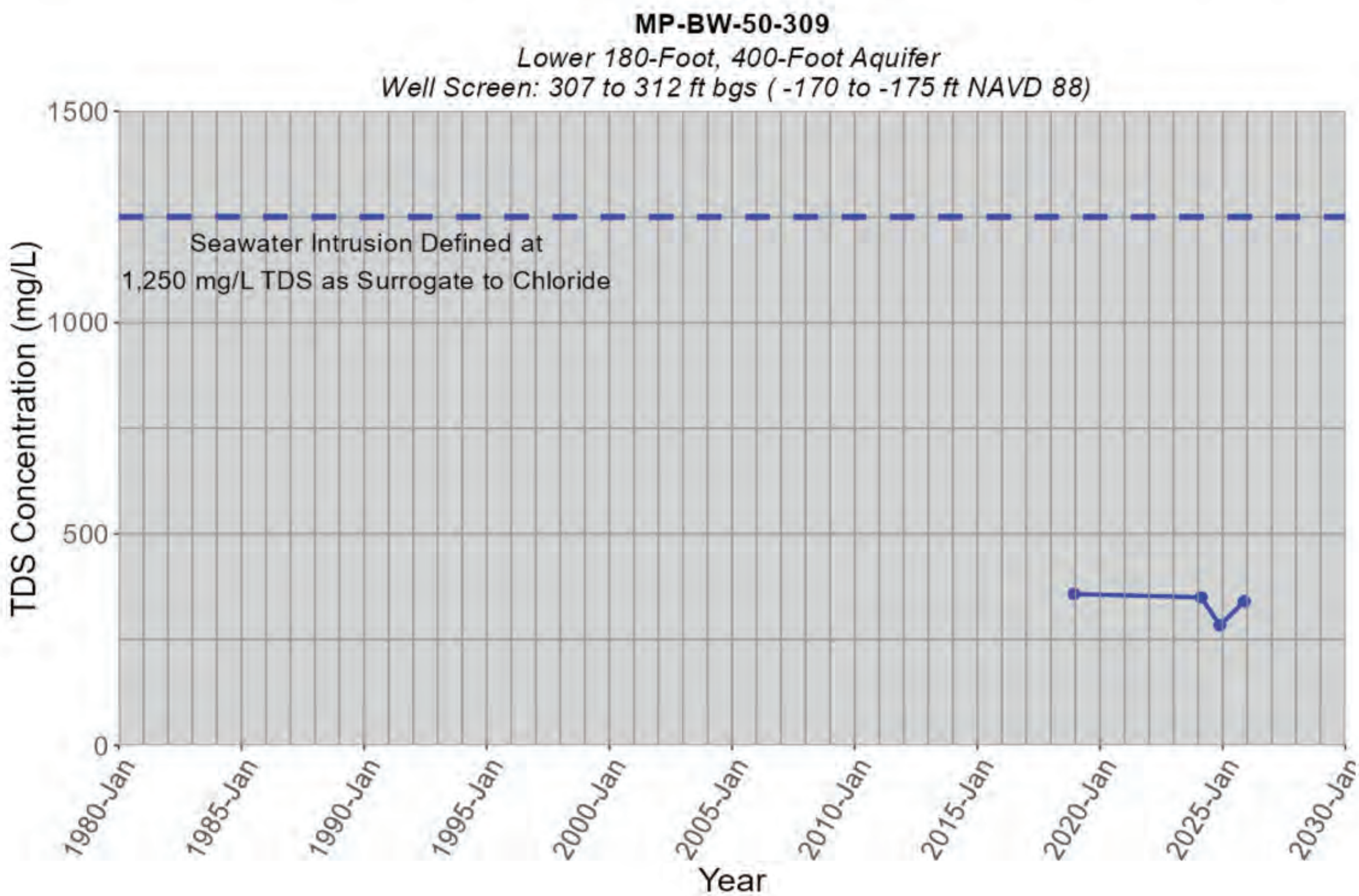

MCWD-31
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 285 to 470 ft bgs (-116 to -301 ft NAVD 88)
Chloride Concentration (mg/L)
0
300
600
900
1200
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

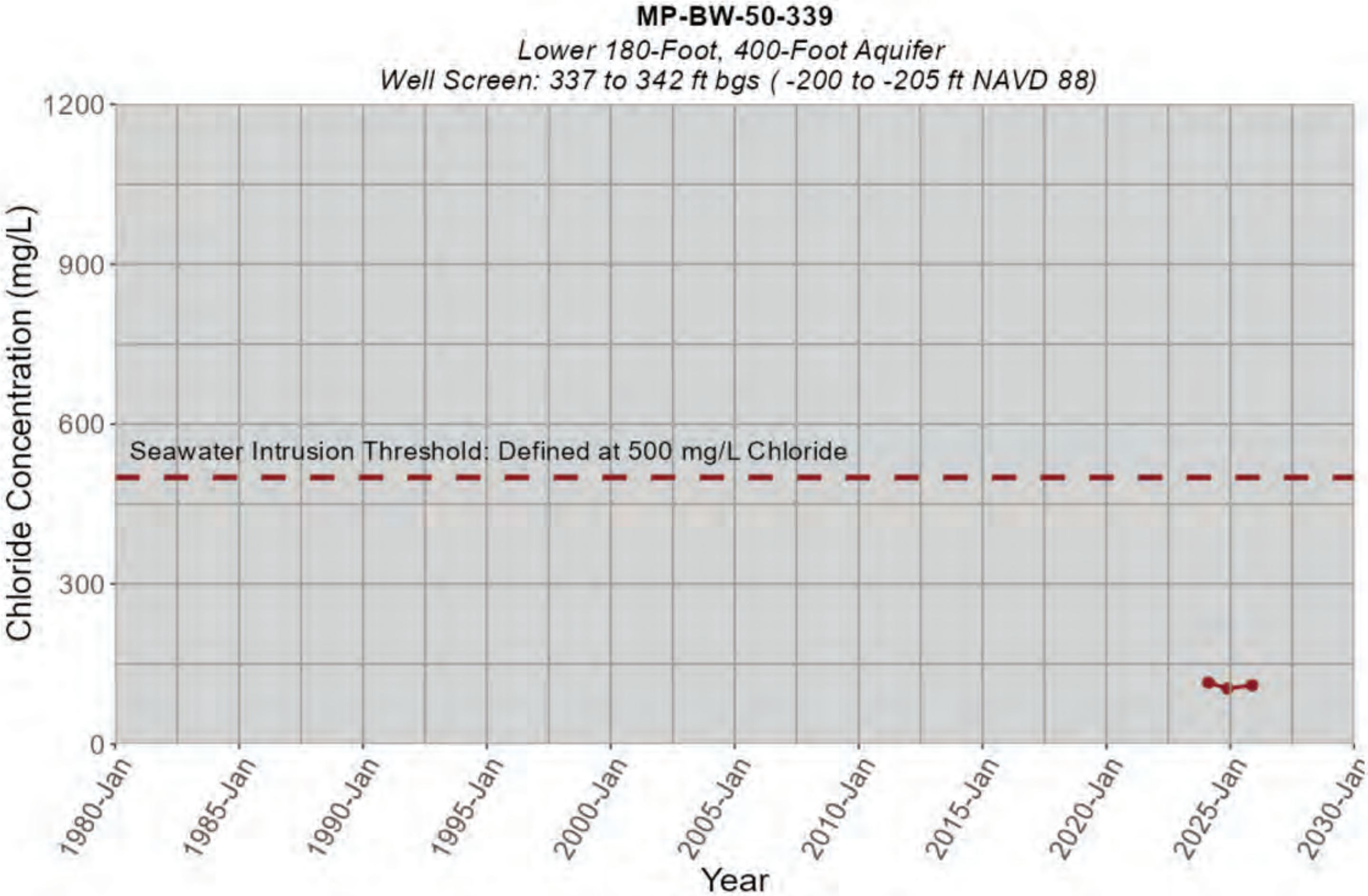

MCWD-31
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 285 to 470 ft bgs (-116 to -301 ft NAVD 88)
TDS Concentration (mg/L)
0
500
1000
1500
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

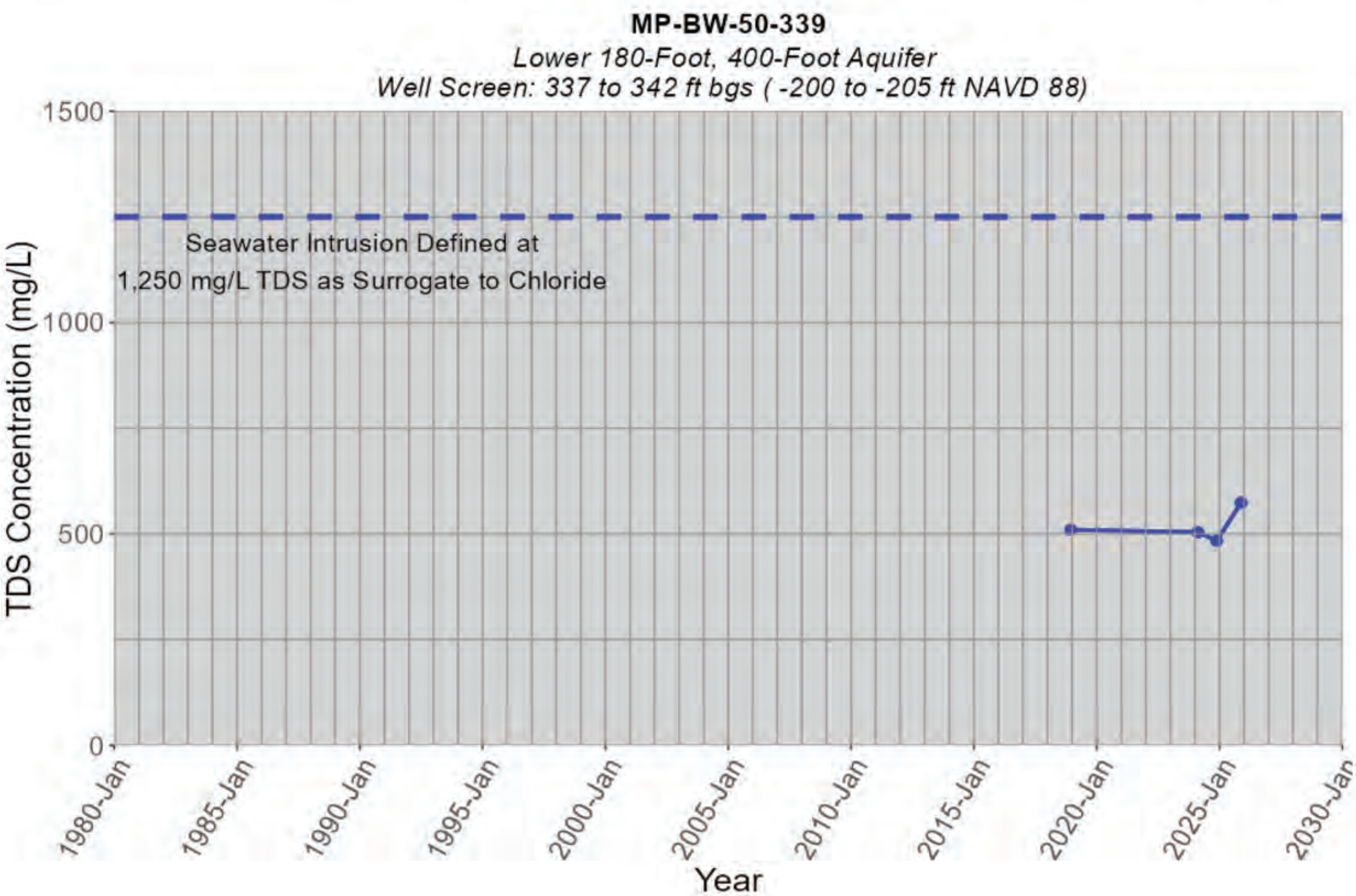

MP-BW-50-289
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 287 to 292 ft bgs (-150 to -155 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

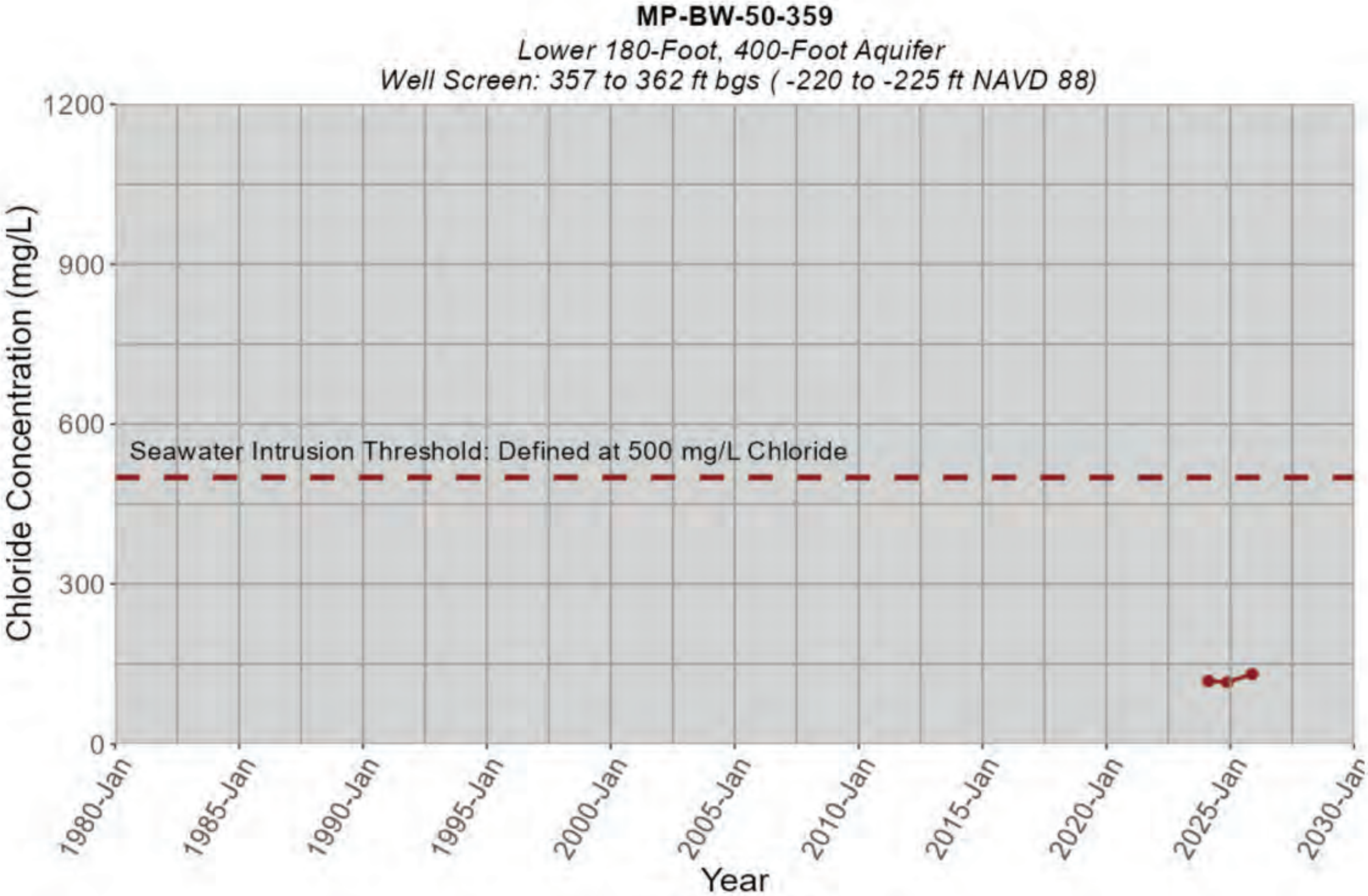

MP-BW-50-289
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 287 to 292 ft bgs (-150 to -155 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

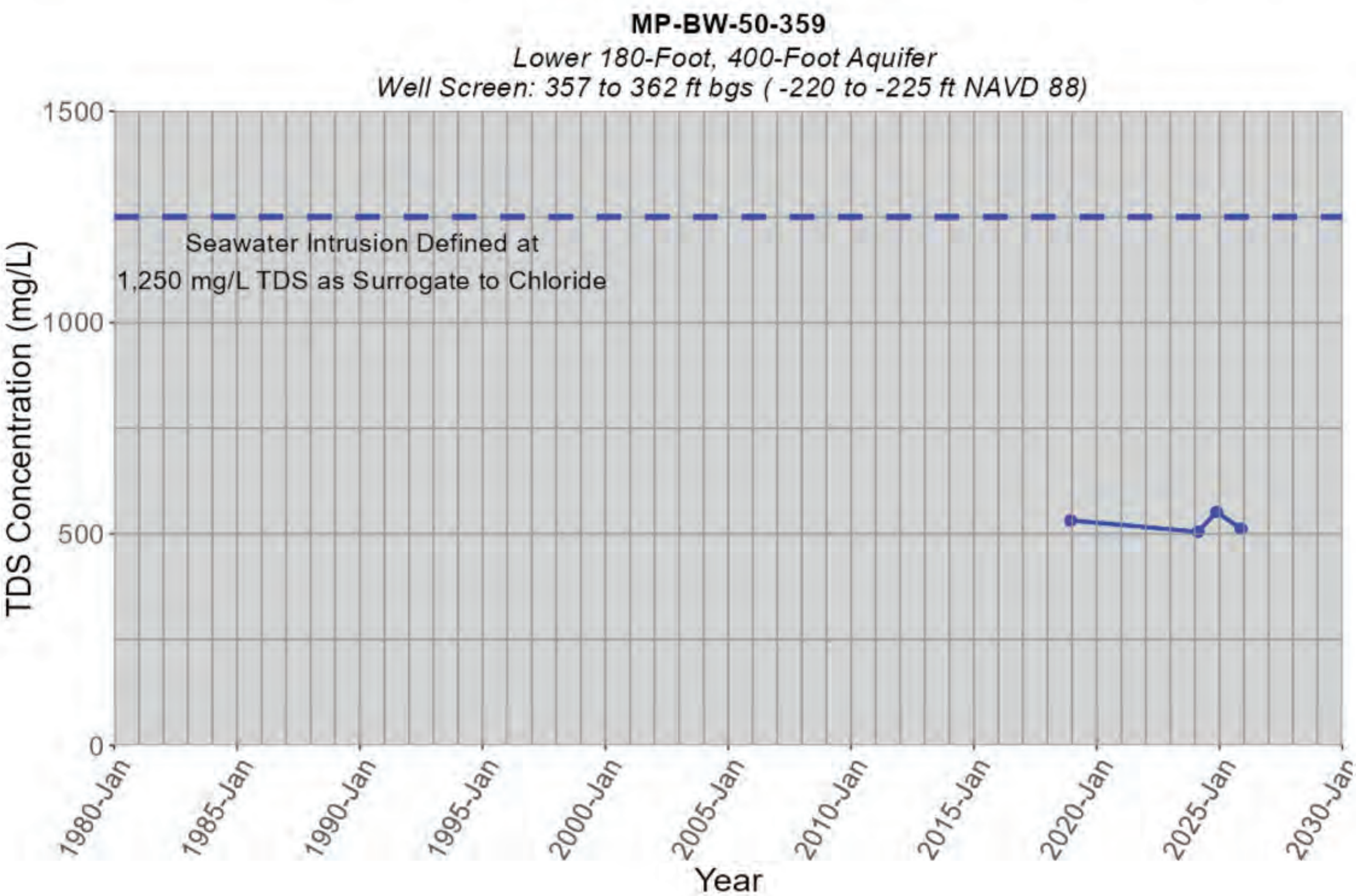

MP-BW-50-309
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 307 to 312 ft bgs (-170 to -175 ft NAVD 88)
Chloride Concentration (mg/L)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
0
300
600
900
1200
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

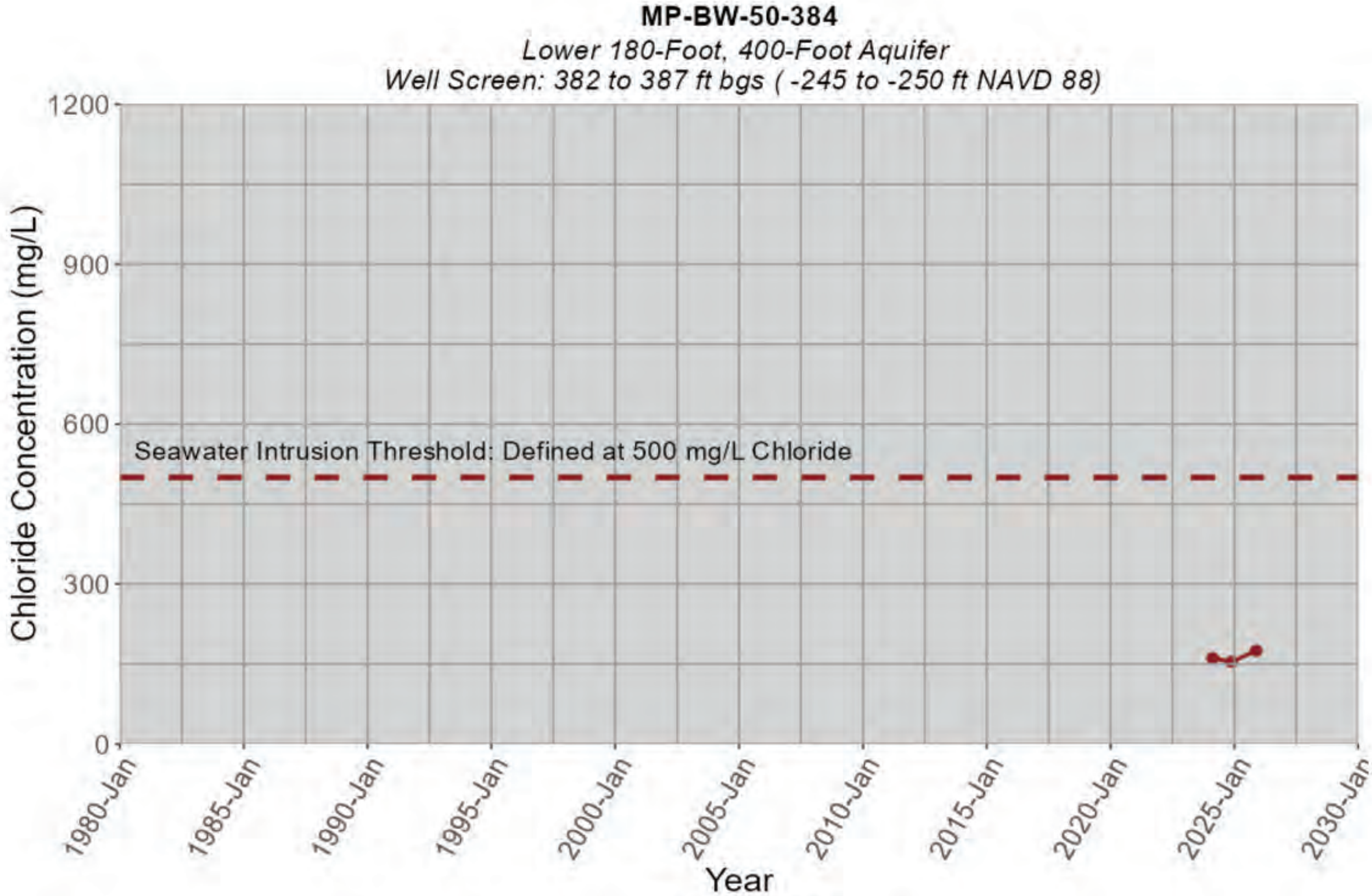

MP-BW-50-309
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 307 to 312 ft bgs (-170 to -175 ft NAVD 88)
TDS Concentration (mg/L)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
0
500
1000
1500
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

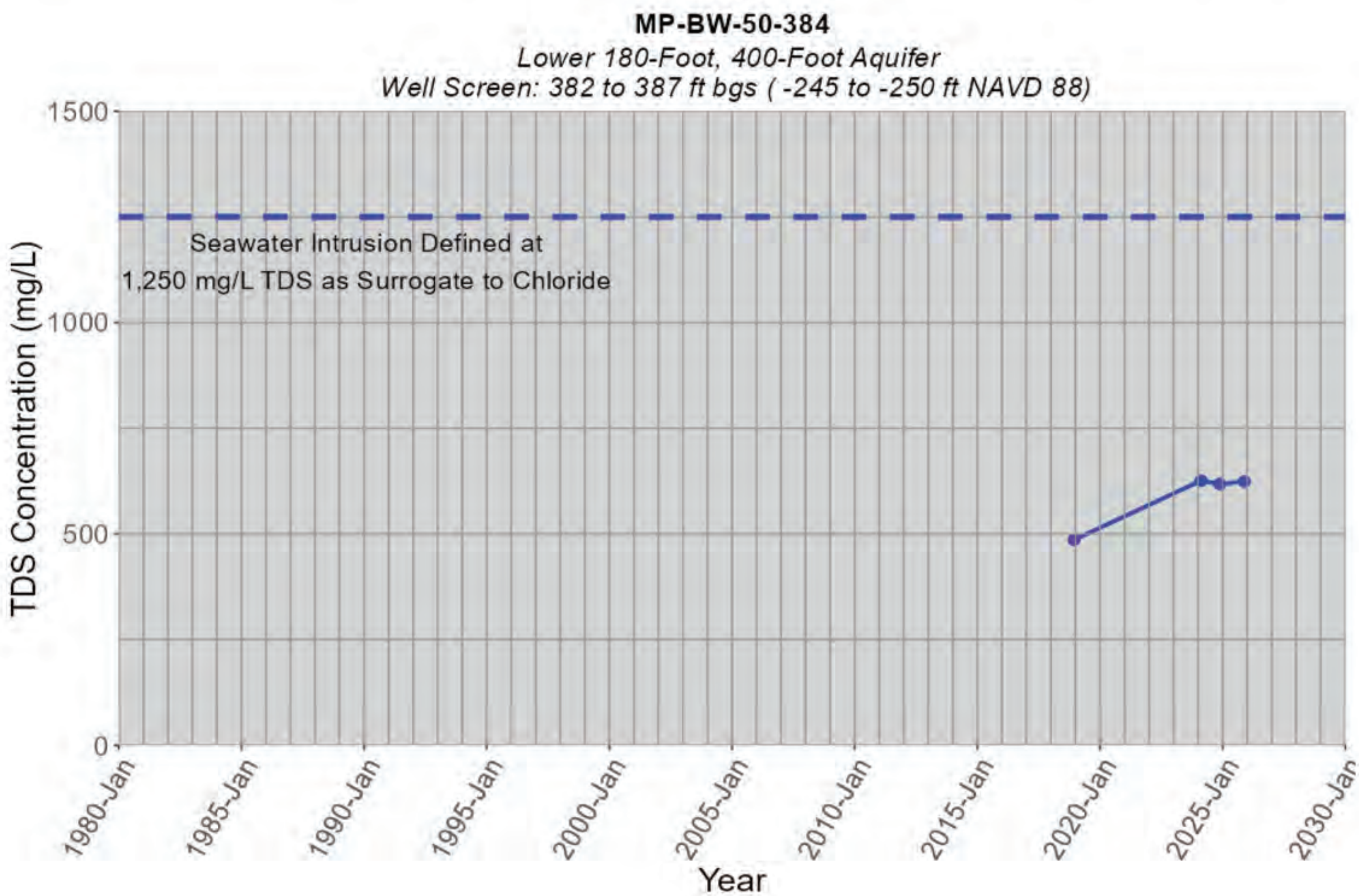

MP-BW-50-339
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 337 to 342 ft bgs (-200 to -205 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

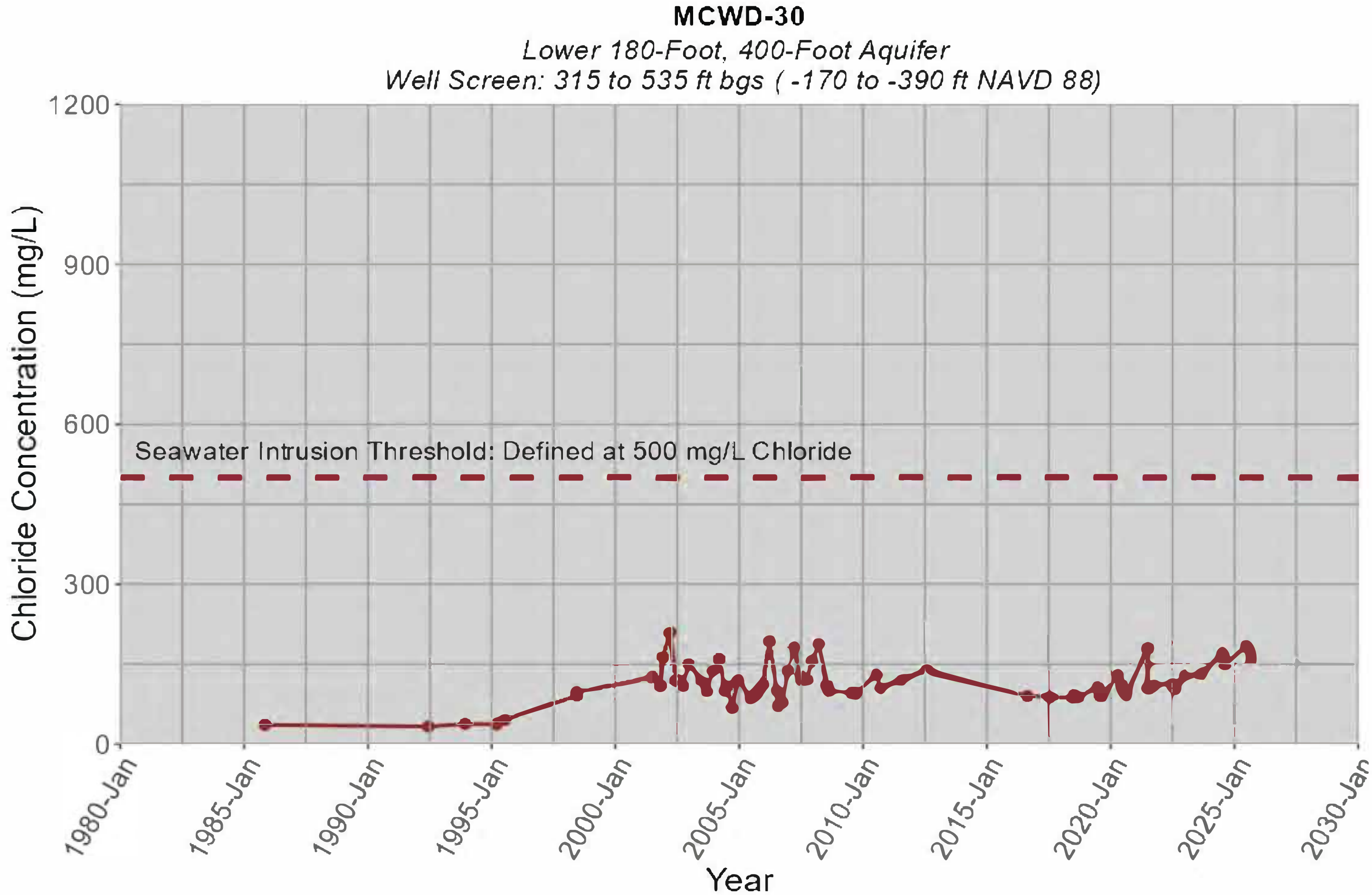

MP-BW-50-339
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 337 to 342 ft bgs (-200 to -205 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

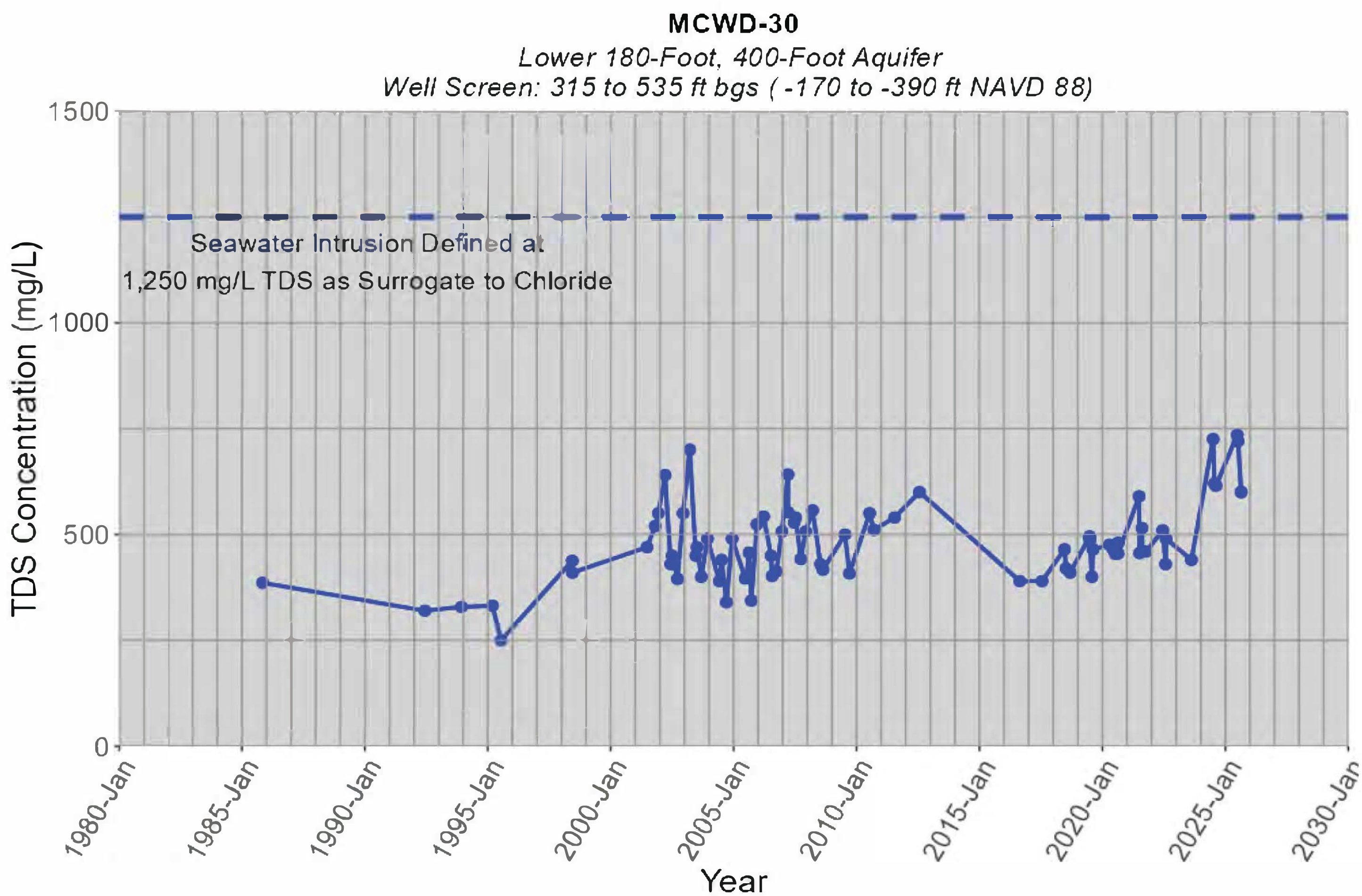

MP-BW-50-359
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 357 to 362 ft bgs (-220 to -225 ft NAVD 88)
Chloride Concentration (mg/L)
0
300
600
900
1200
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

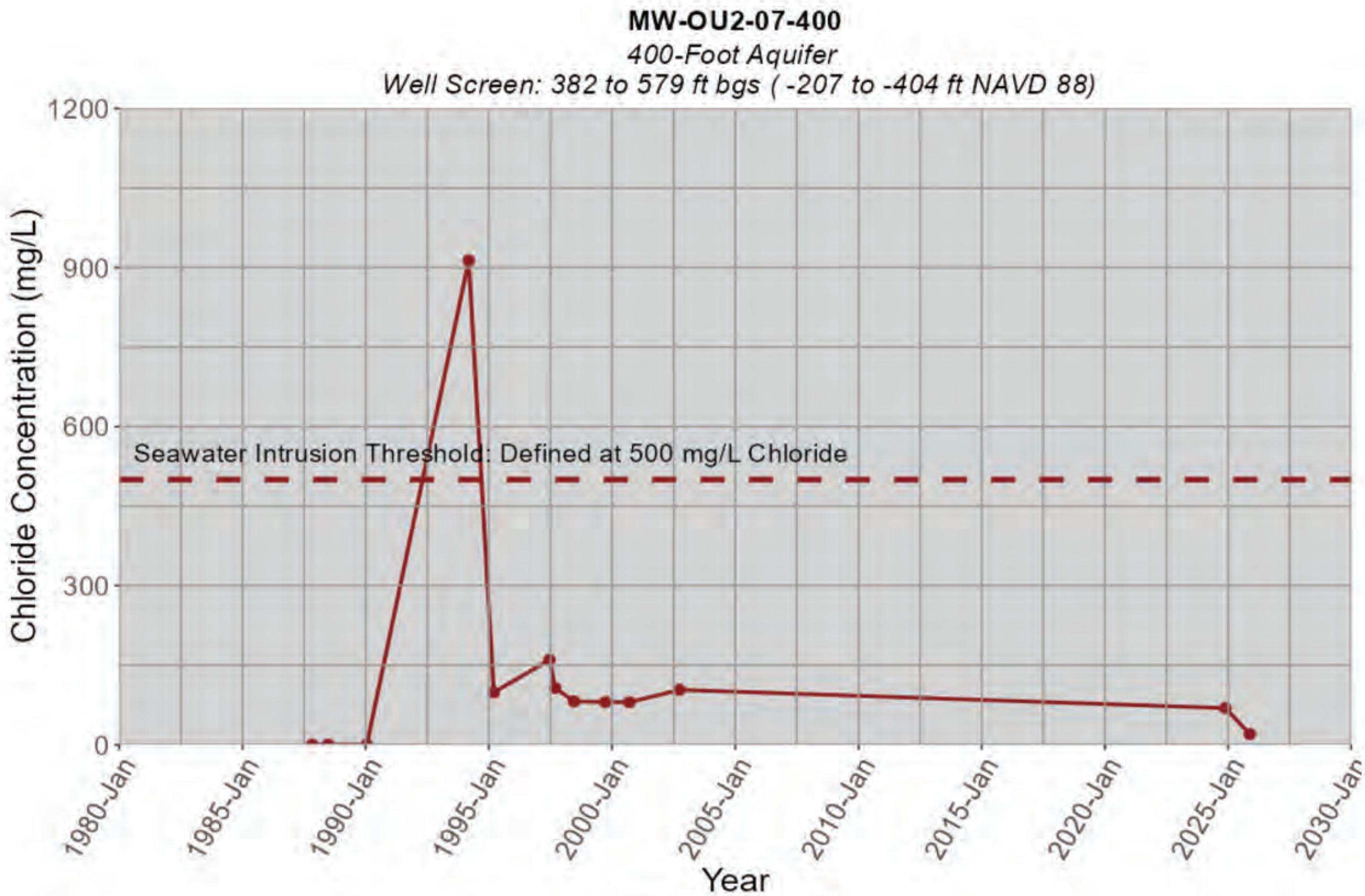

MP-BW-50-359
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 357 to 362 ft bgs (-220 to -225 ft NAVD 88)
TDS Concentration (mg/L)
0
500
1000
1500
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

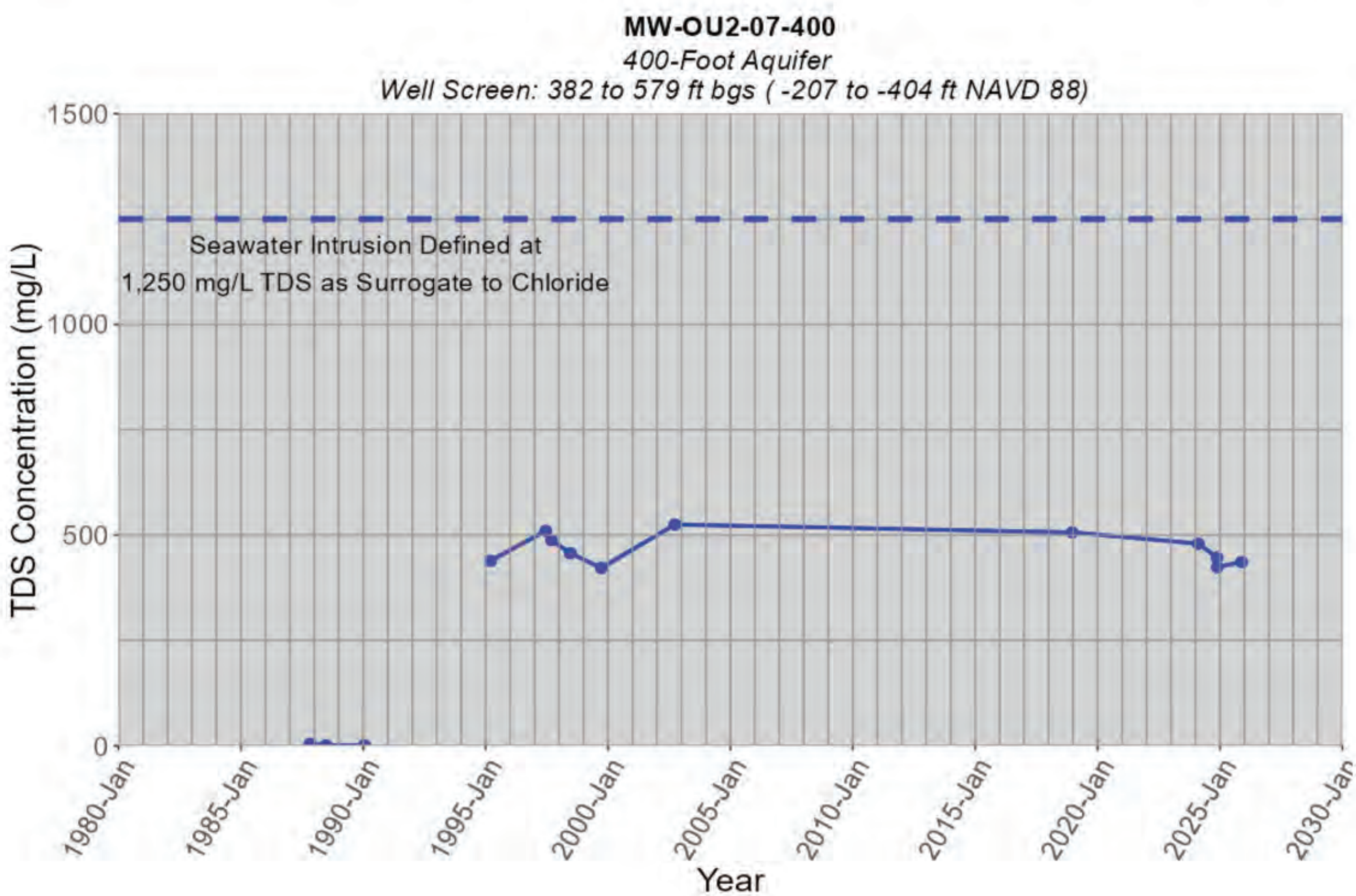

MP-BW-50-384
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 382 to 387 ft bgs (-245 to -250 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

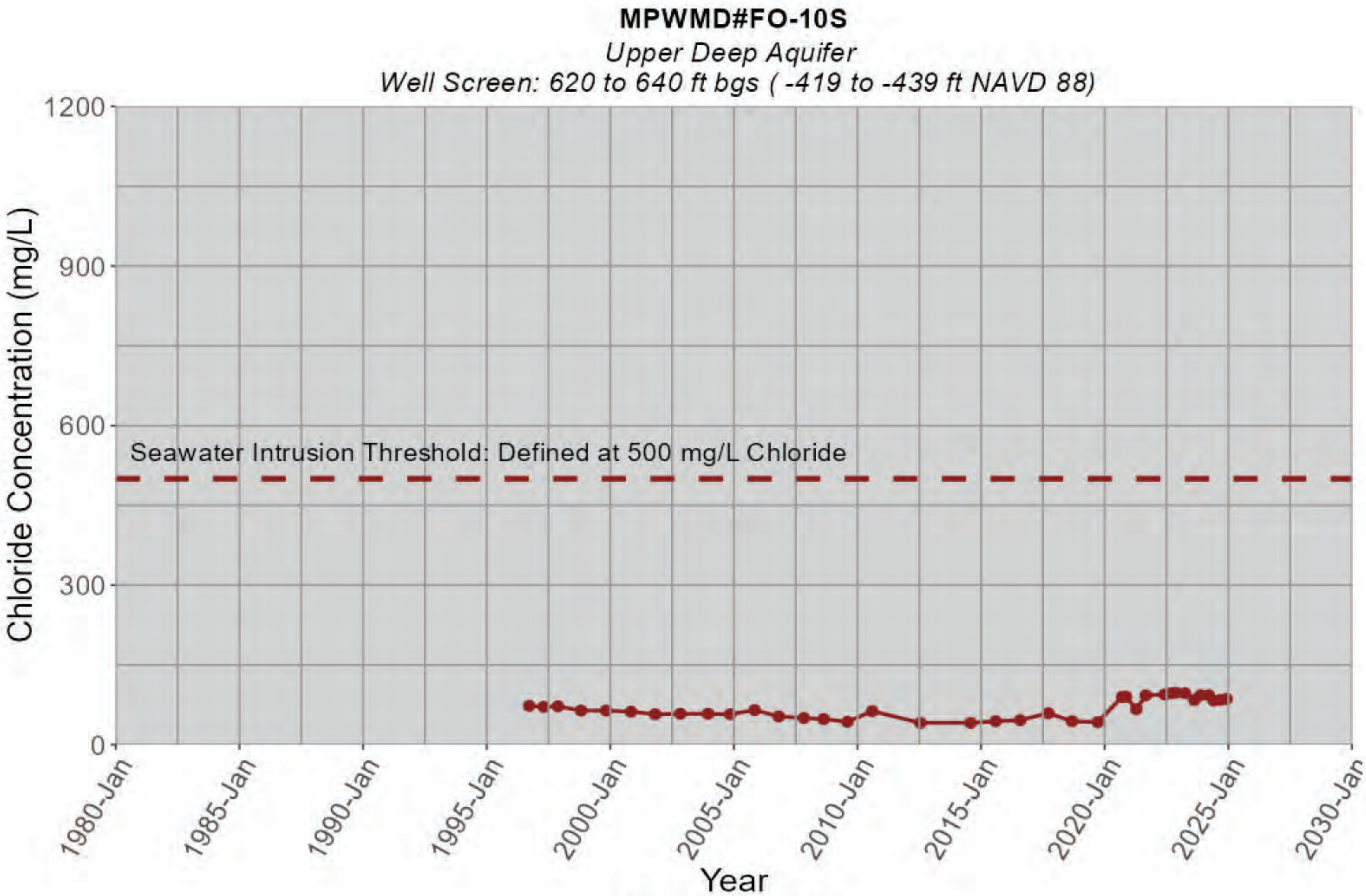

MP-BW-50-384
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 382 to 387 ft bgs (-245 to -250 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

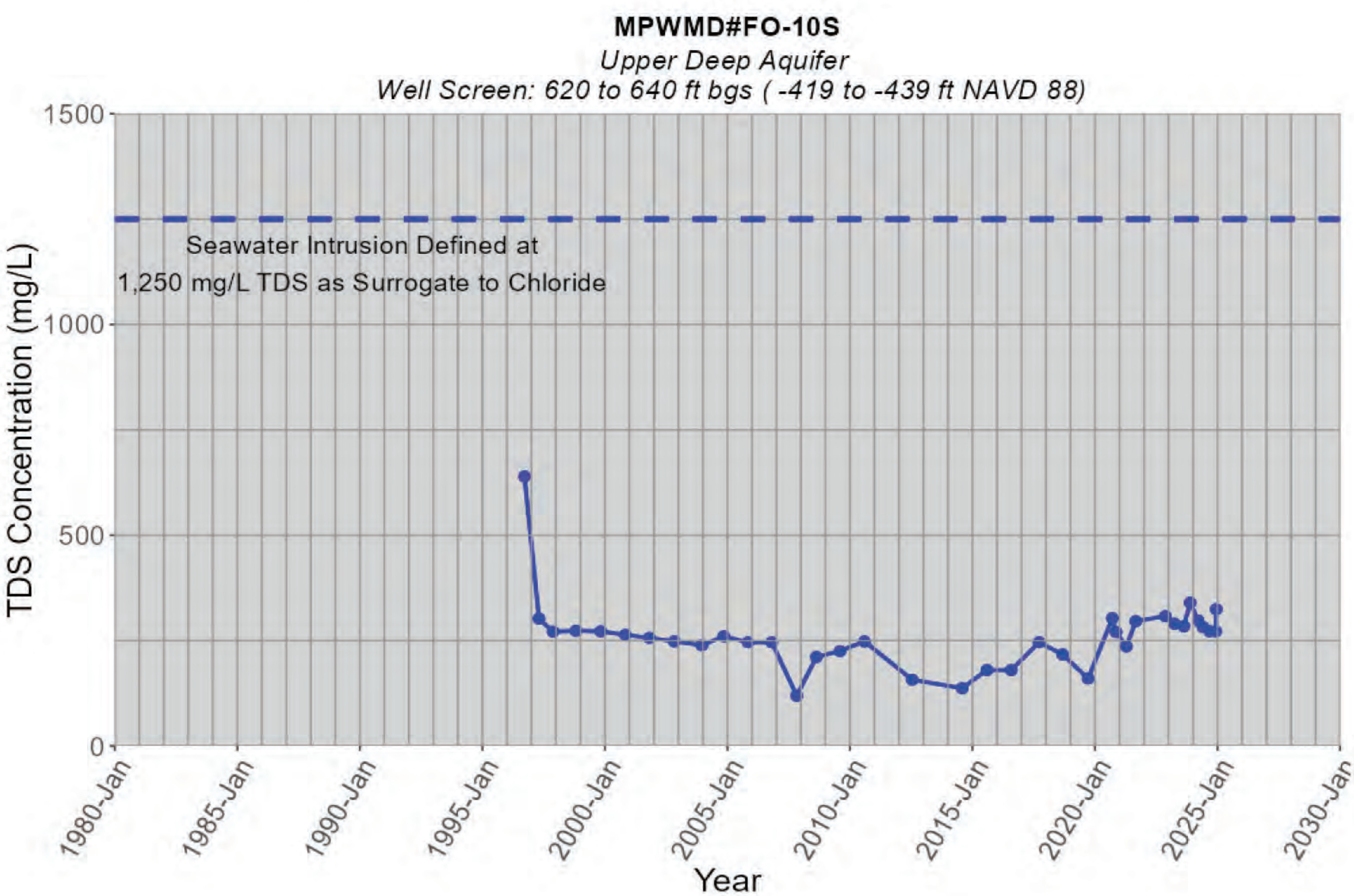

MCWD-30
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 315 to 535 ft bgs (-170 to -390 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

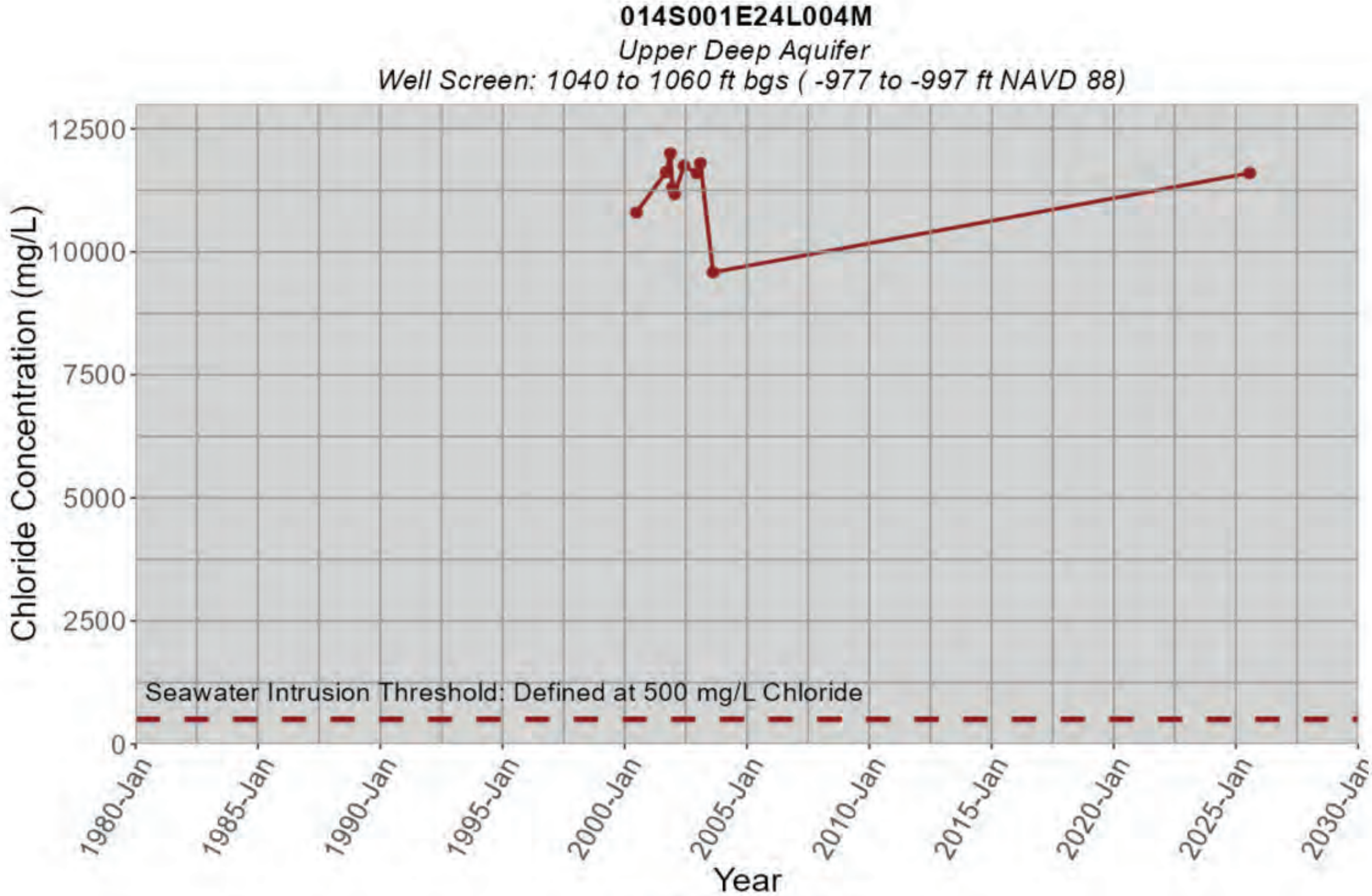

MCWD-30
Lower 180-Foot, 400-Foot Aquifer
Well Screen: 315 to 535 ft bgs (-170 to -390 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

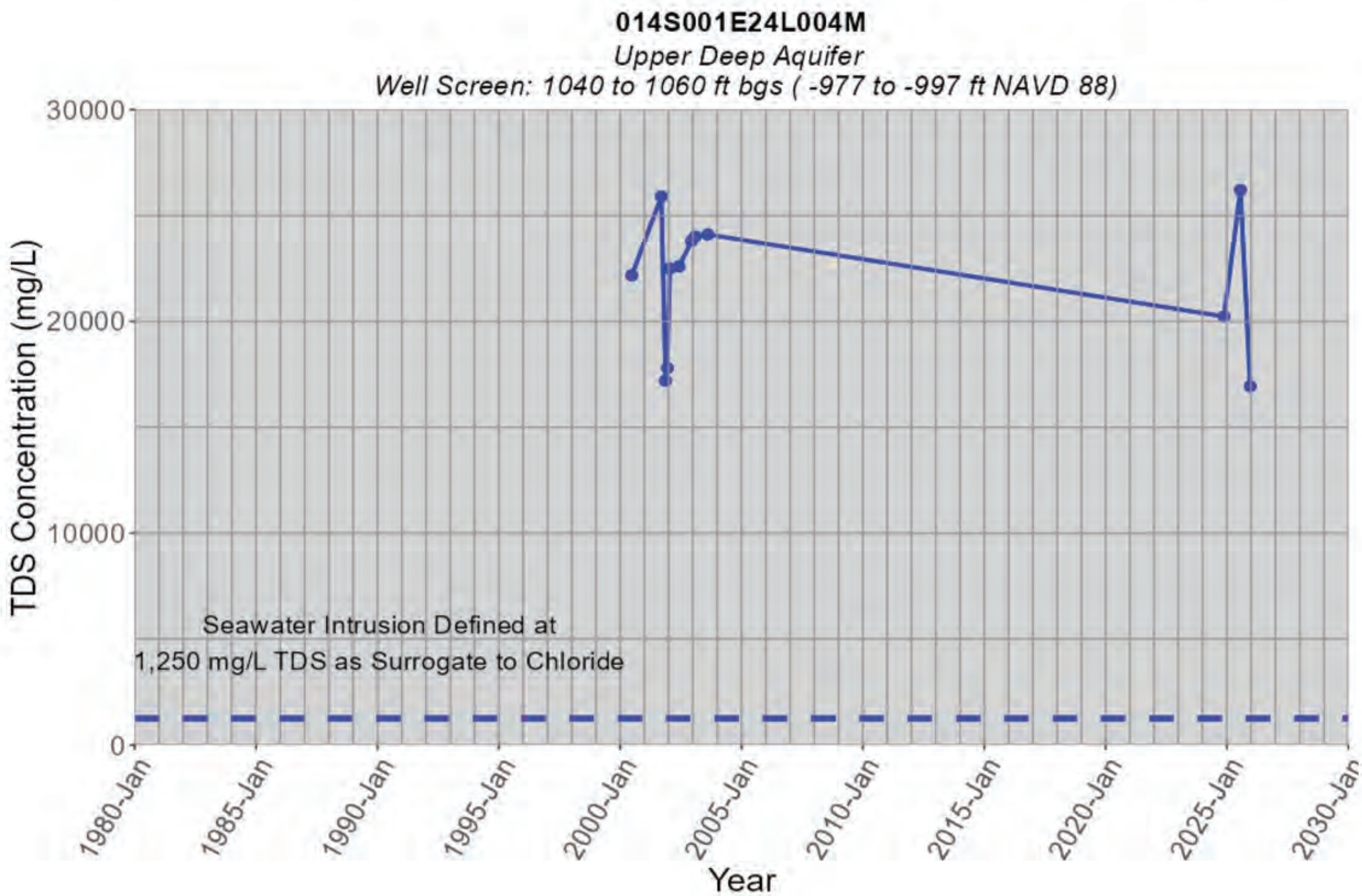

MW-OU2-07-400
400-Foot Aquifer
Well Screen: 382 to 579 ft bgs (-207 to -404 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

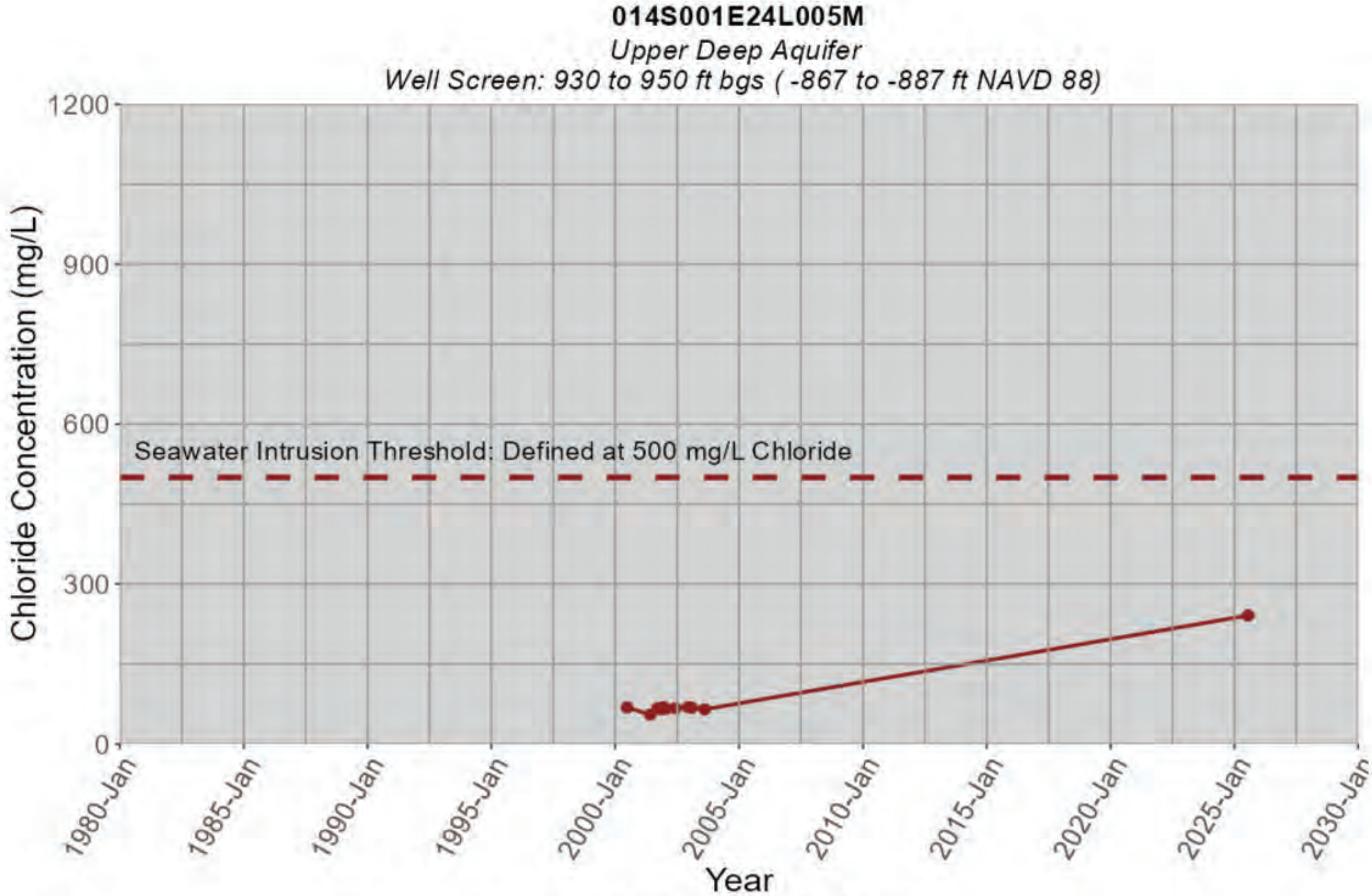

MW-OU2-07-400
400-Foot Aquifer
Well Screen: 382 to 579 ft bgs (-207 to -404 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

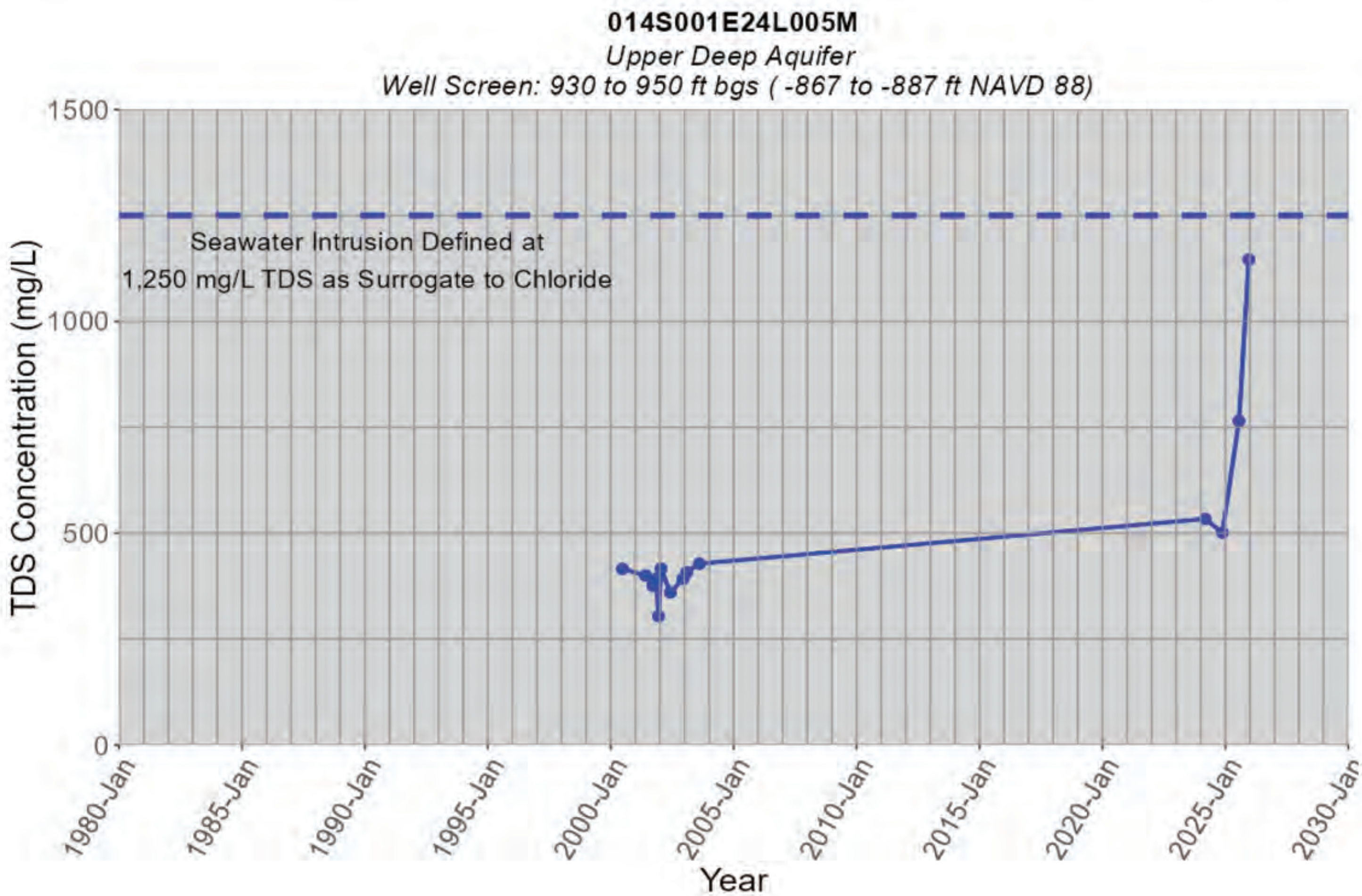

MPWMD#FO-10S
Upper Deep Aquifer
Well Screen: 620 to 640 ft bgs (-419 to -439 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

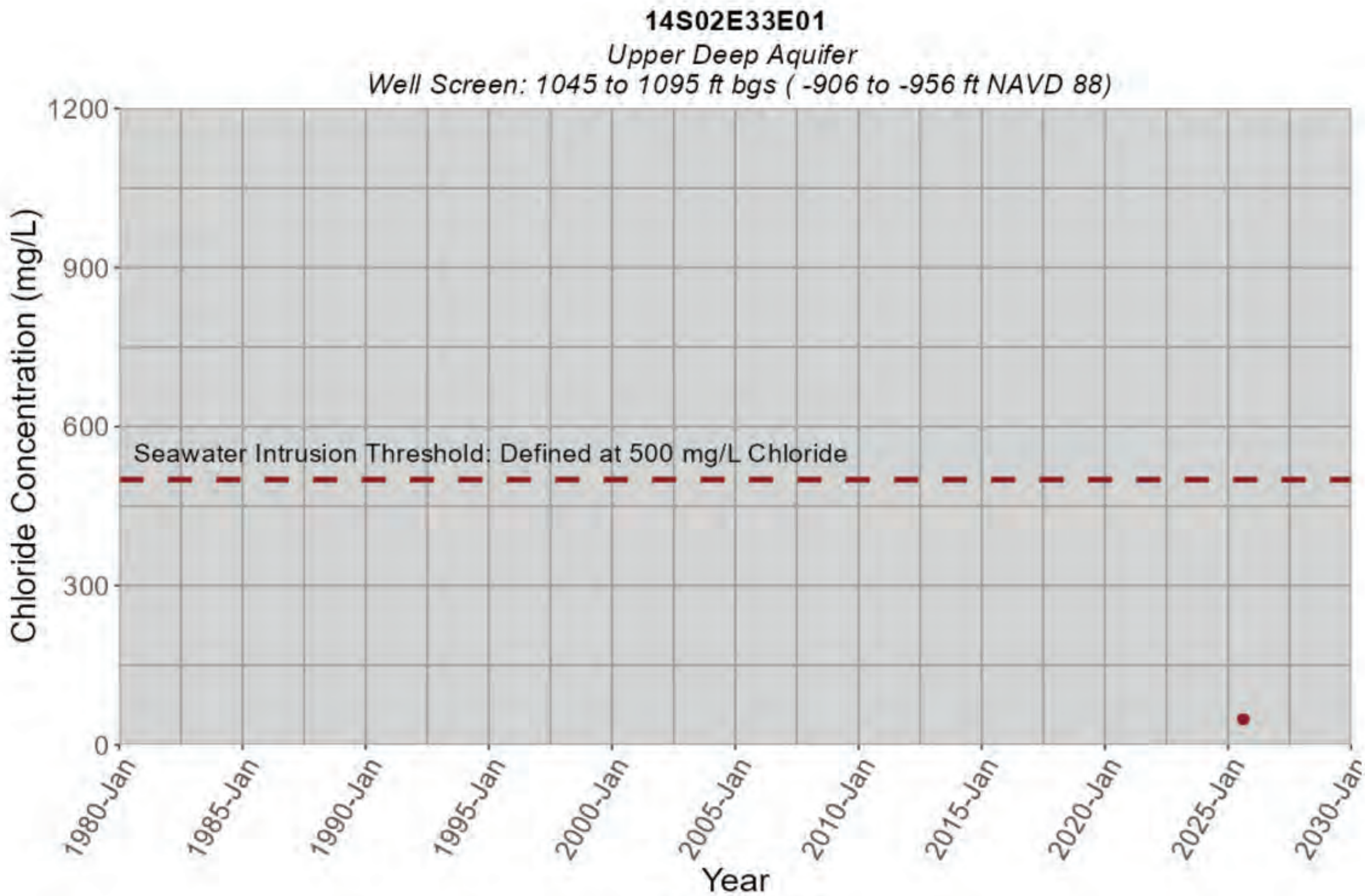

MPWMD#FO-10S
Upper Deep Aquifer
Well Screen: 620 to 640 ft bgs (-419 to -439 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

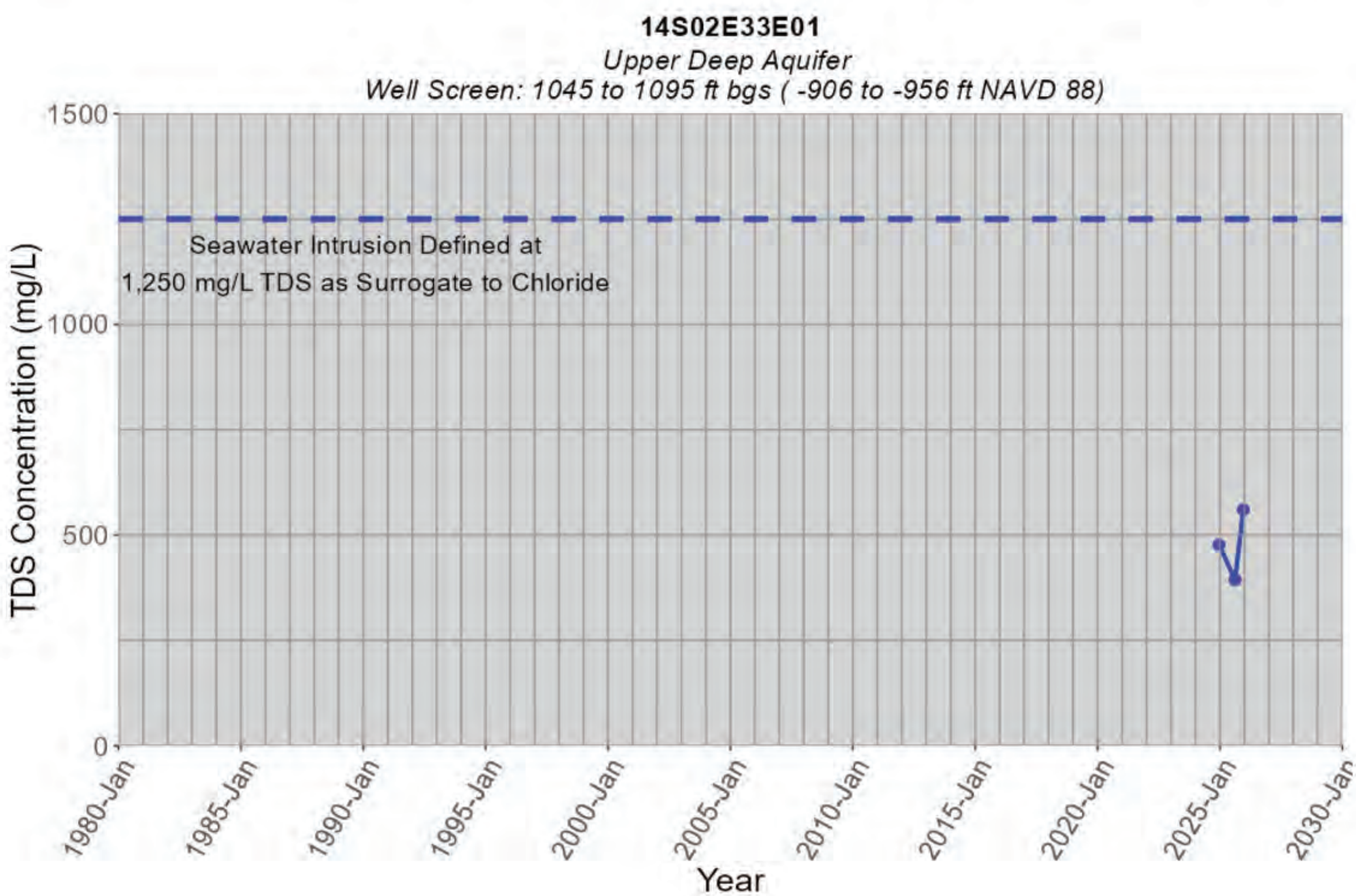

014S001E24L004M
Upper Deep Aquifer
Well Screen: 1040 to 1060 ft bgs (-977 to -997 ft NAVD 88)
Chloride Concentration (mg/L)
12500
10000
7500
5000
2500
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

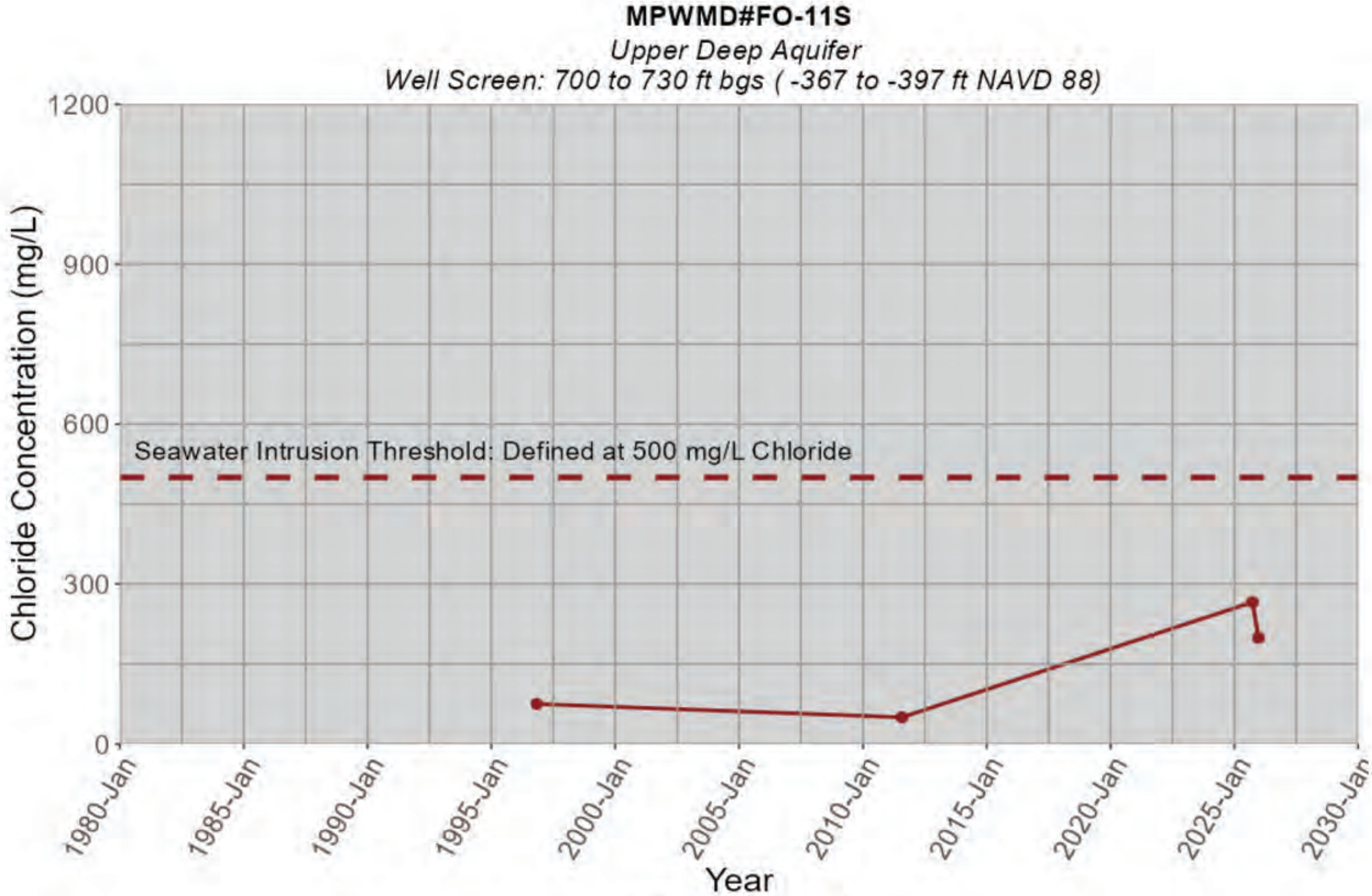

014S001E24L004M
Upper Deep Aquifer
Well Screen: 1040 to 1060 ft bgs (-977 to -997 ft NAVD 88)
TDS Concentration (mg/L)
30000
20000
10000
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

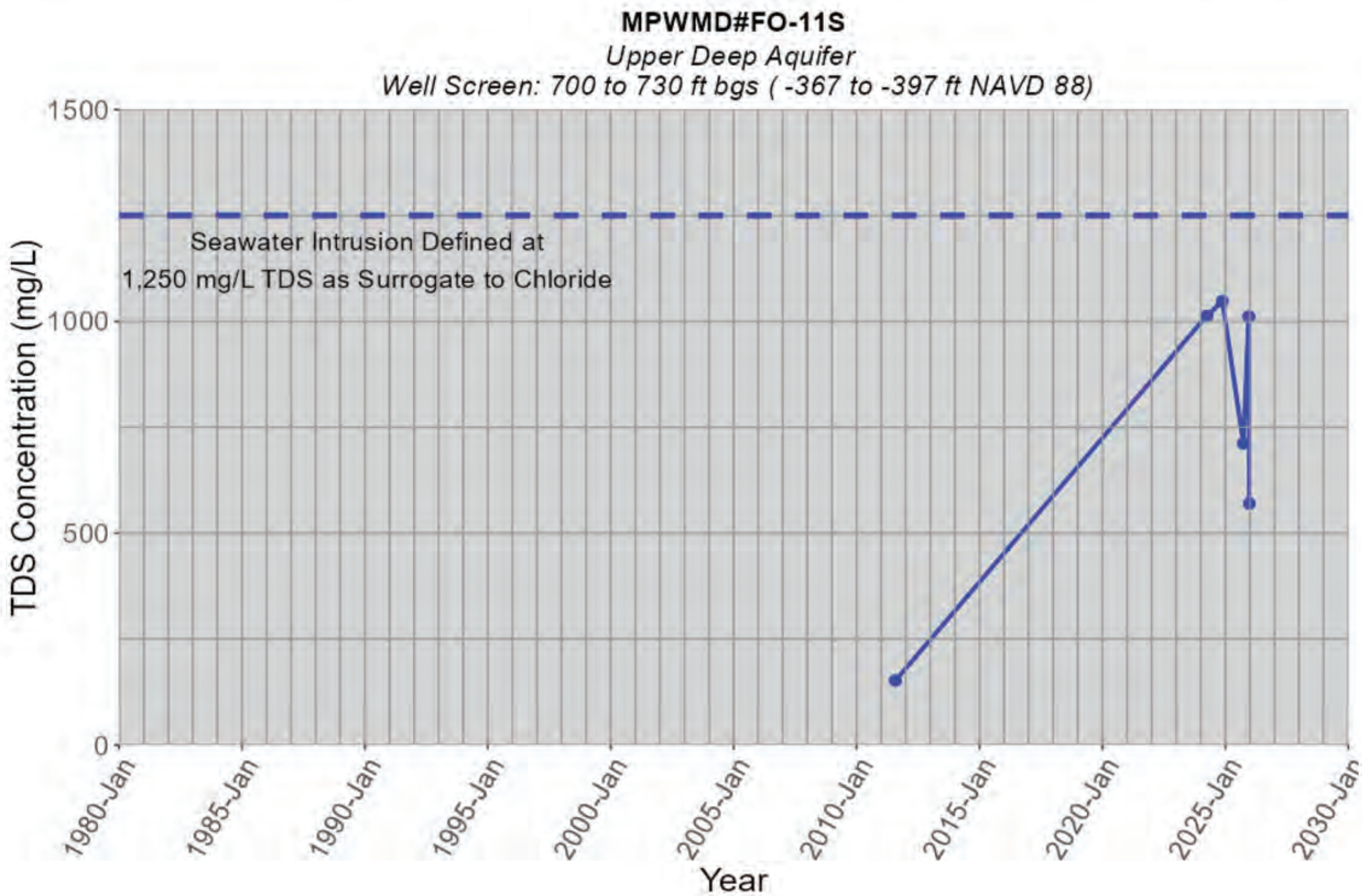

014S001E24L005M
Upper Deep Aquifer
Well Screen: 930 to 950 ft bgs (-867 to -887 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

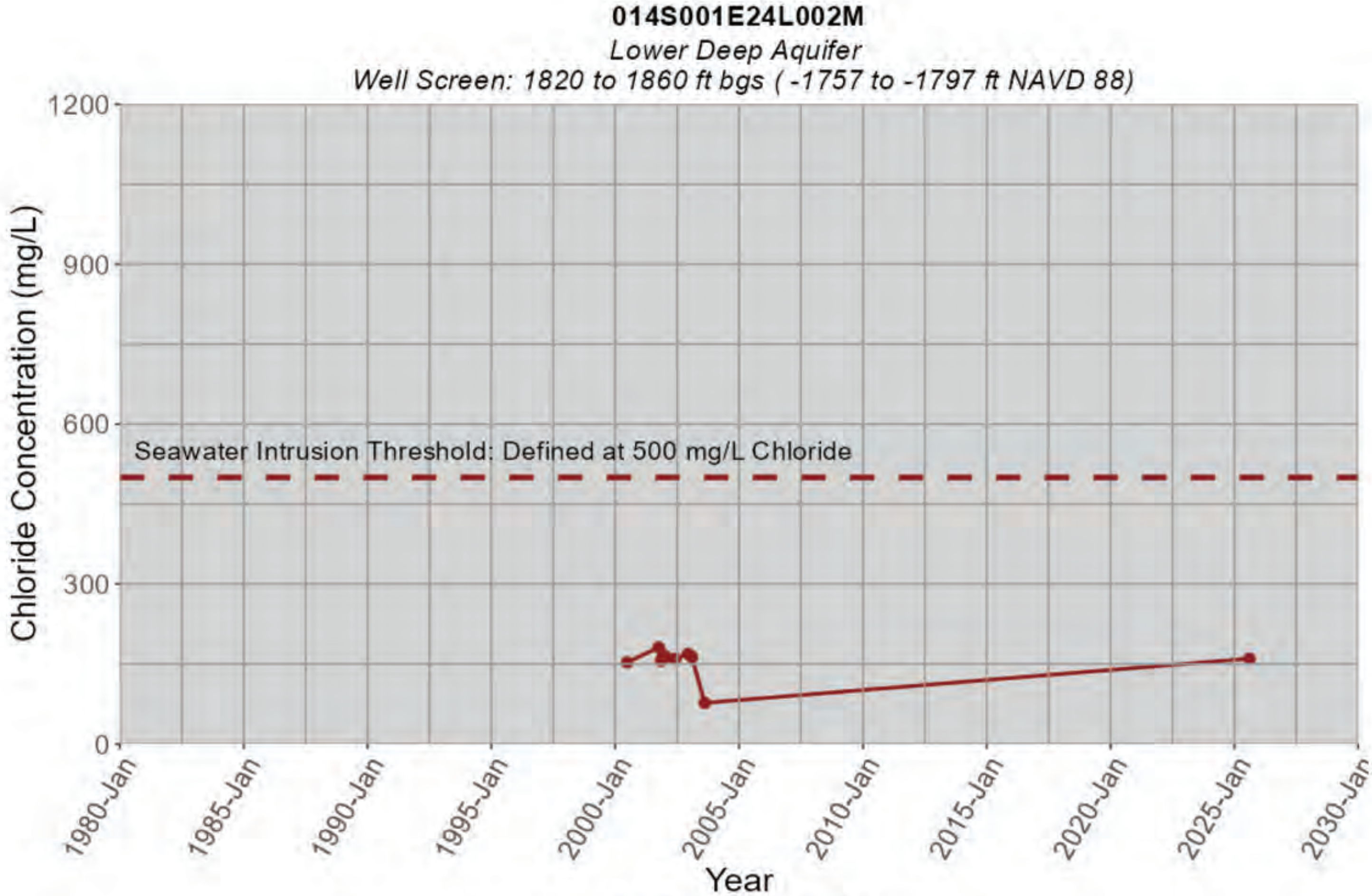

014S001E24L005M
Upper Deep Aquifer
Well Screen: 930 to 950 ft bgs (-867 to -887 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

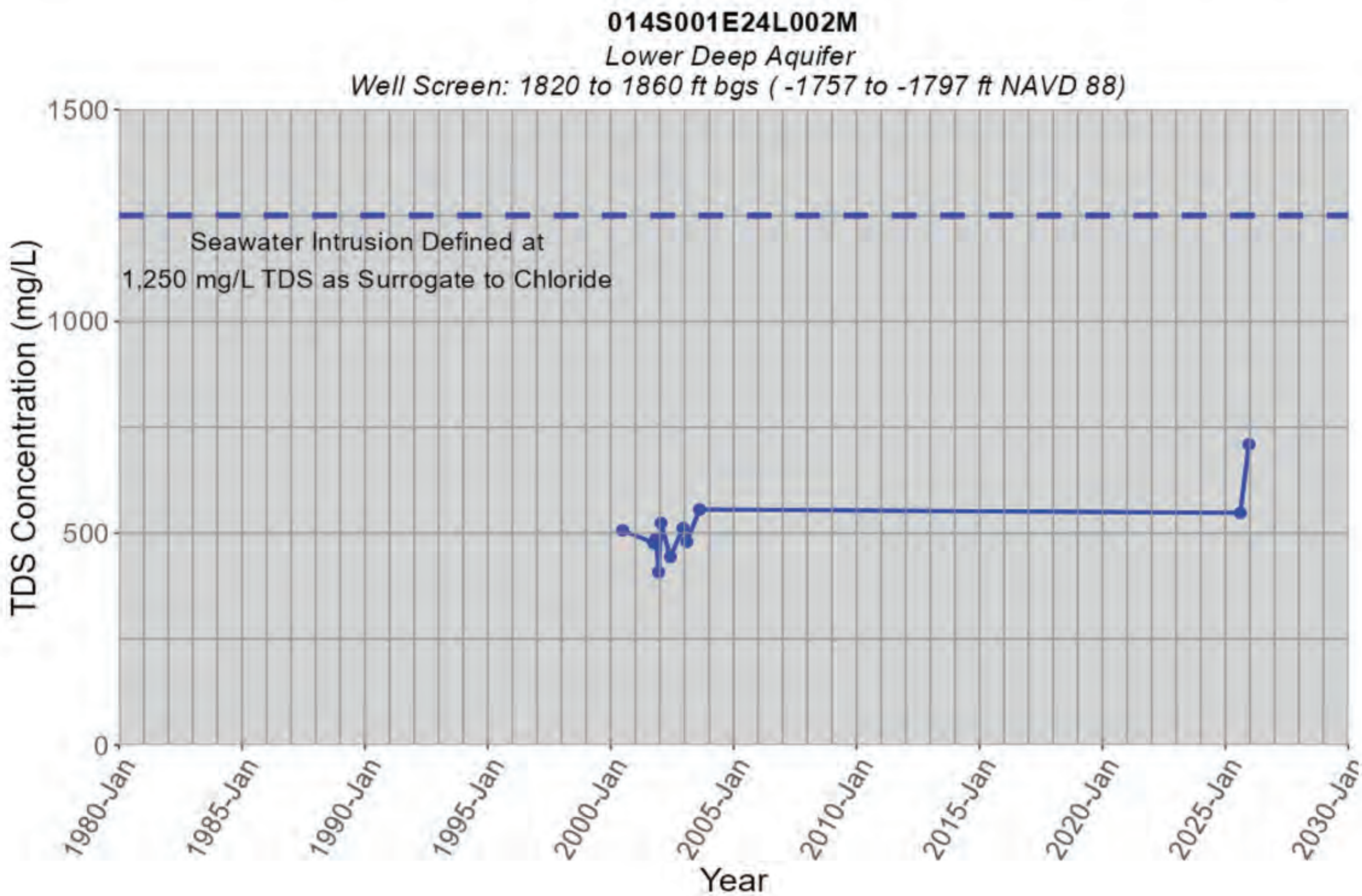

14S02E33E01
Upper Deep Aquifer
Well Screen: 1045 to 1095 ft bgs (-906 to -956 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

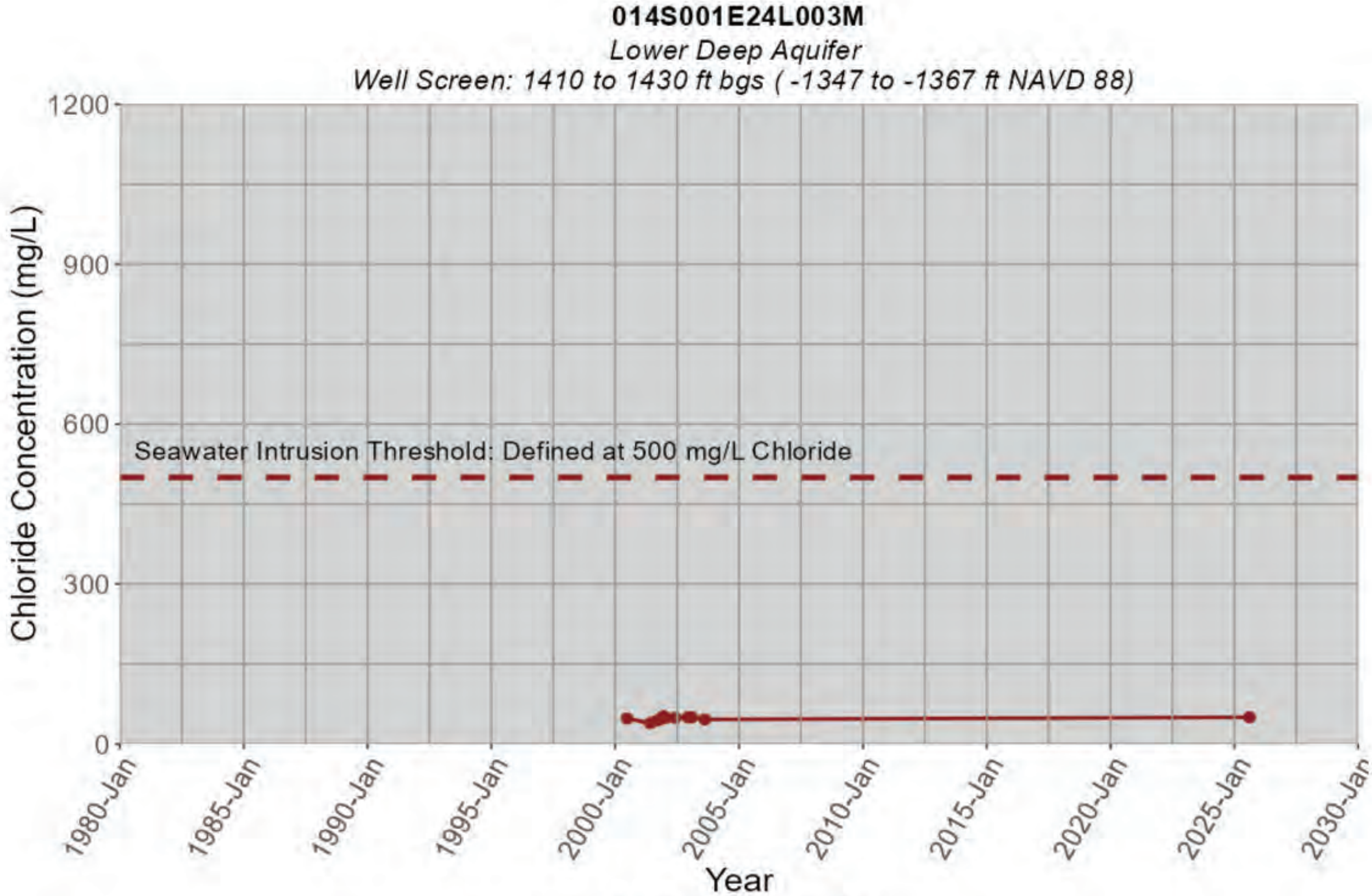

14S02E33E01
Upper Deep Aquifer
Well Screen: 1045 to 1095 ft bgs (-906 to -956 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

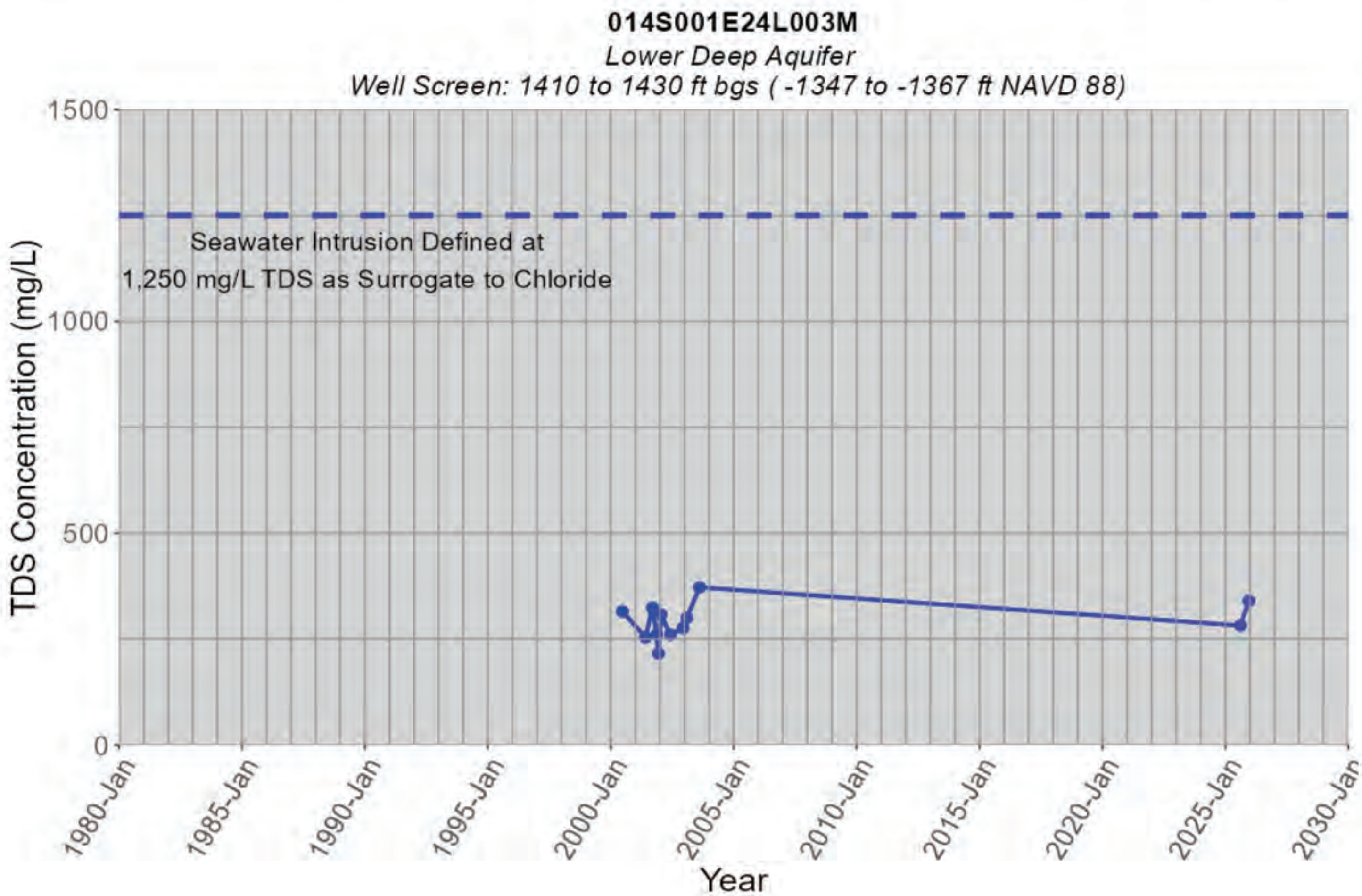

MPWMD#FO-11S
Upper Deep Aquifer
Well Screen: 700 to 730 ft bgs (-367 to -397 ft NAVD 88)
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
Chloride Concentration (mg/L)
0
300
600
900
1200
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

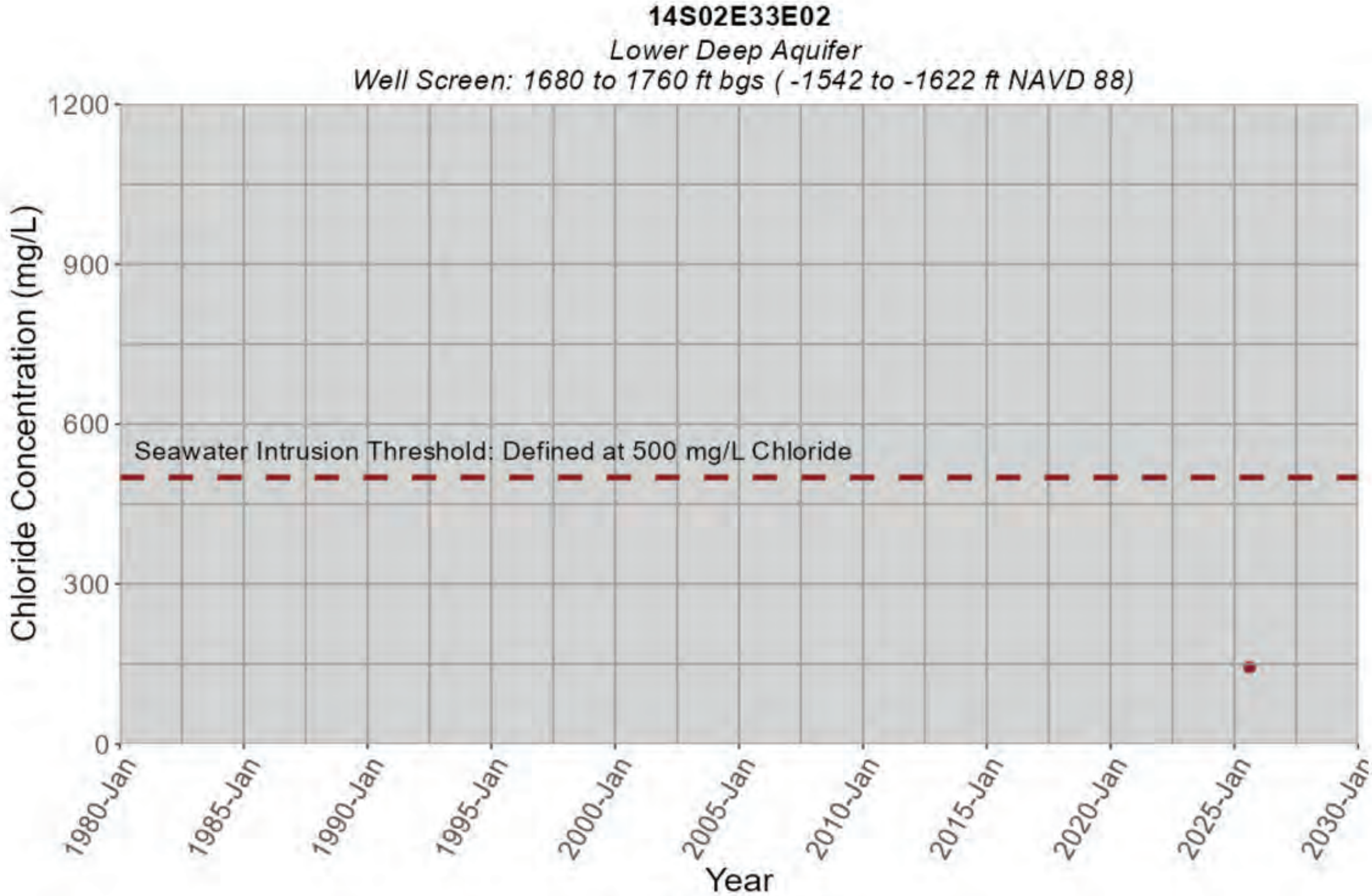

MPWMD#FO-11S
Upper Deep Aquifer
Well Screen: 700 to 730 ft bgs (-367 to -397 ft NAVD 88)
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
TDS Concentration (mg/L)
0
500
1000
1500
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

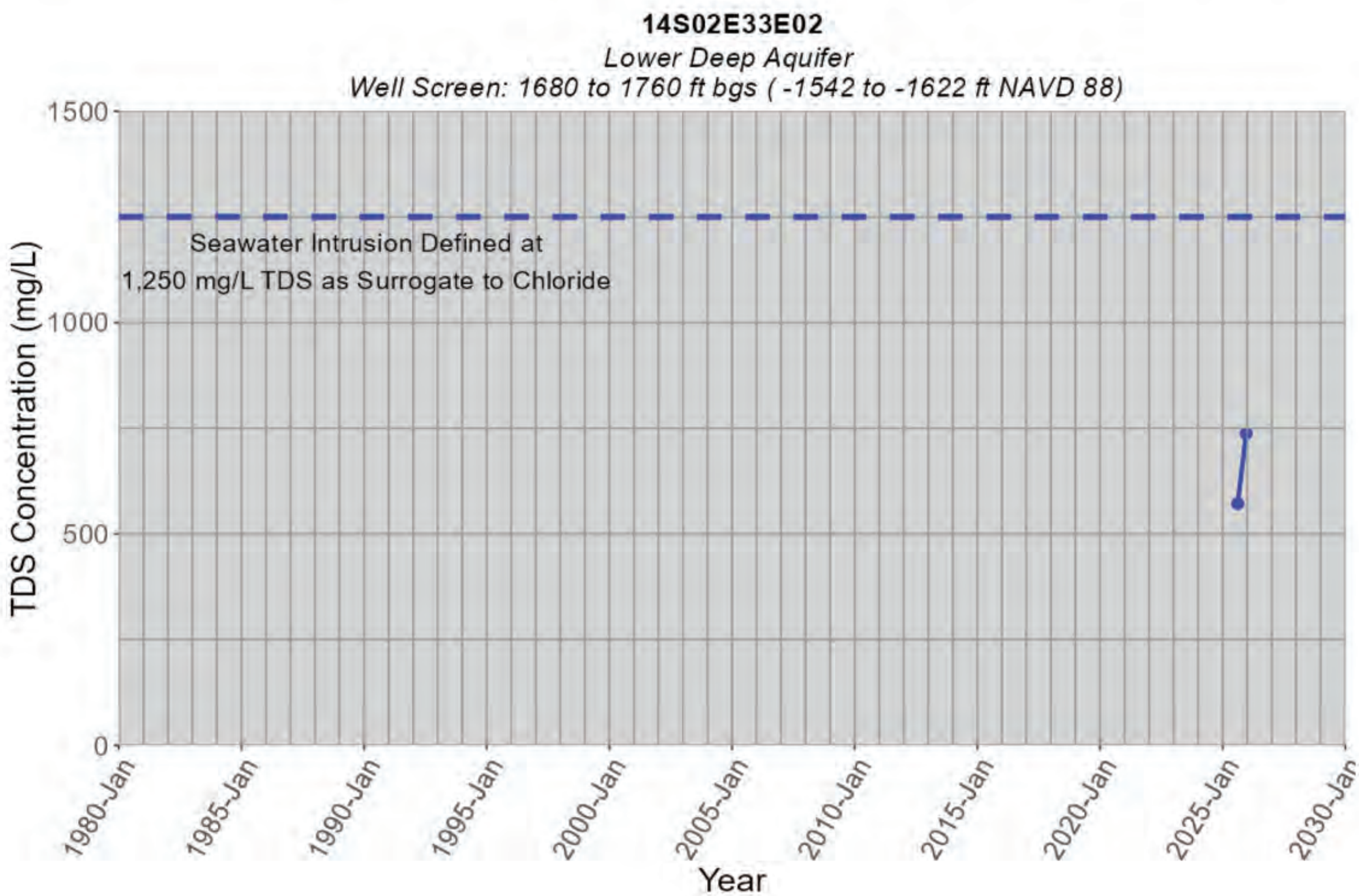

014S001E24L002M
Lower Deep Aquifer
Well Screen: 1820 to 1860 ft bgs (-1757 to -1797 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

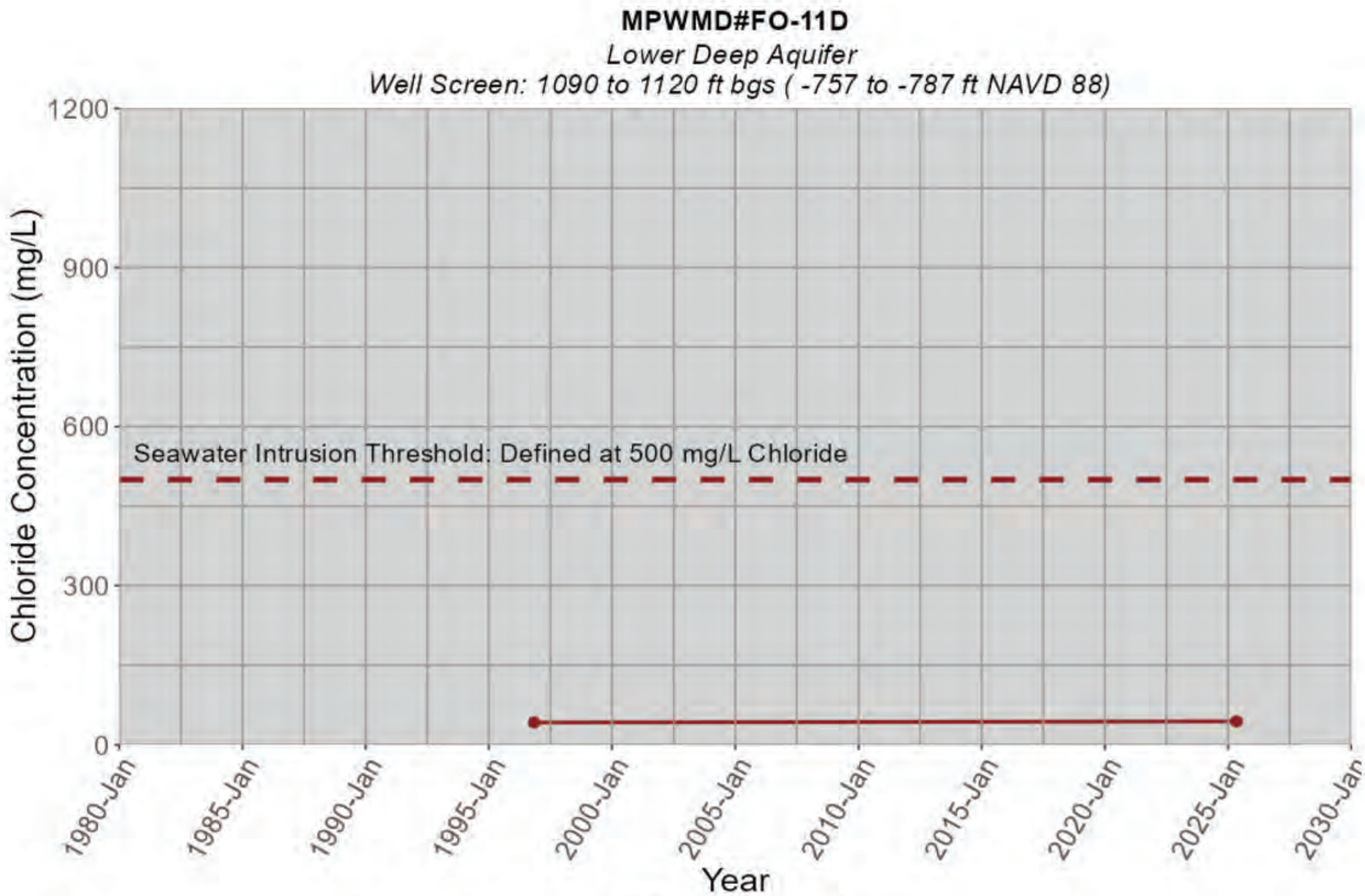

014S001E24L002M
Lower Deep Aquifer
Well Screen: 1820 to 1860 ft bgs (-1757 to -1797 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

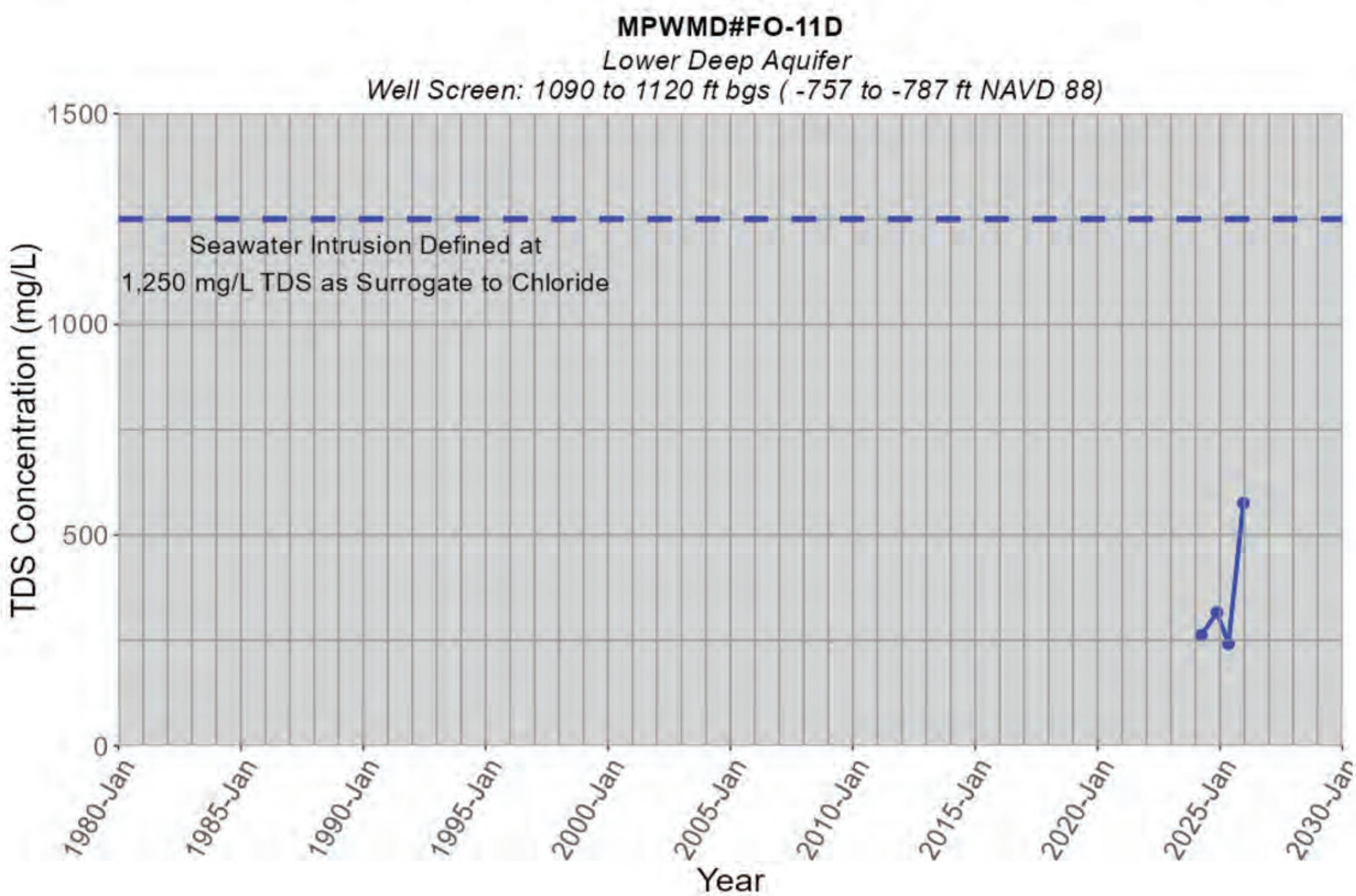

014S001E24L003M
Lower Deep Aquifer
Well Screen: 1410 to 1430 ft bgs (-1347 to -1367 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


014S001E24L003M
Lower Deep Aquifer
Well Screen: 1410 to 1430 ft bgs (-1347 to -1367 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

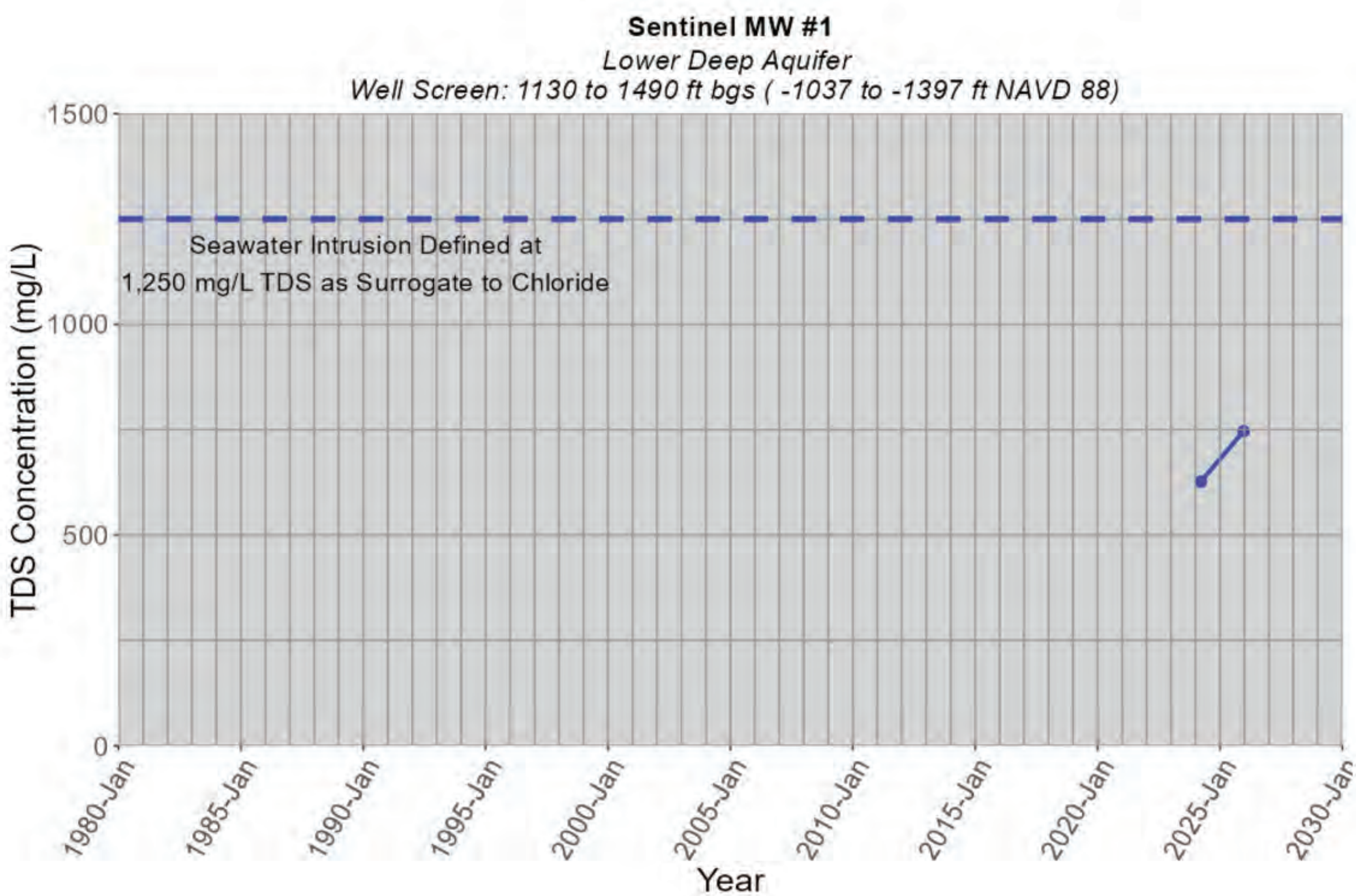

14S02E33E02
Lower Deep Aquifer
Well Screen: 1680 to 1760 ft bgs (-1542 to -1622 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

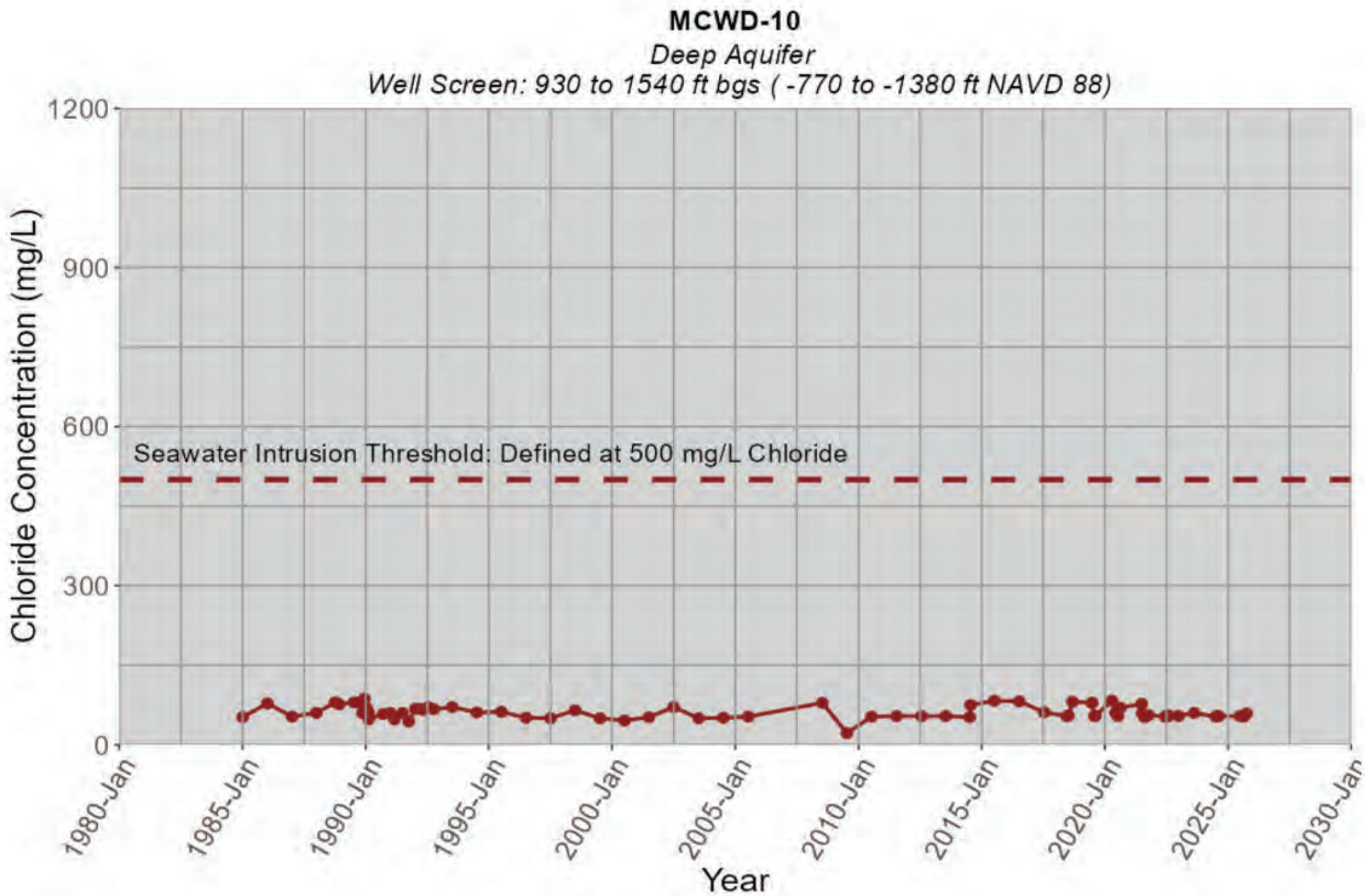

14S02E33E02
Lower Deep Aquifer
Well Screen: 1680 to 1760 ft bgs (-1542 to -1622 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

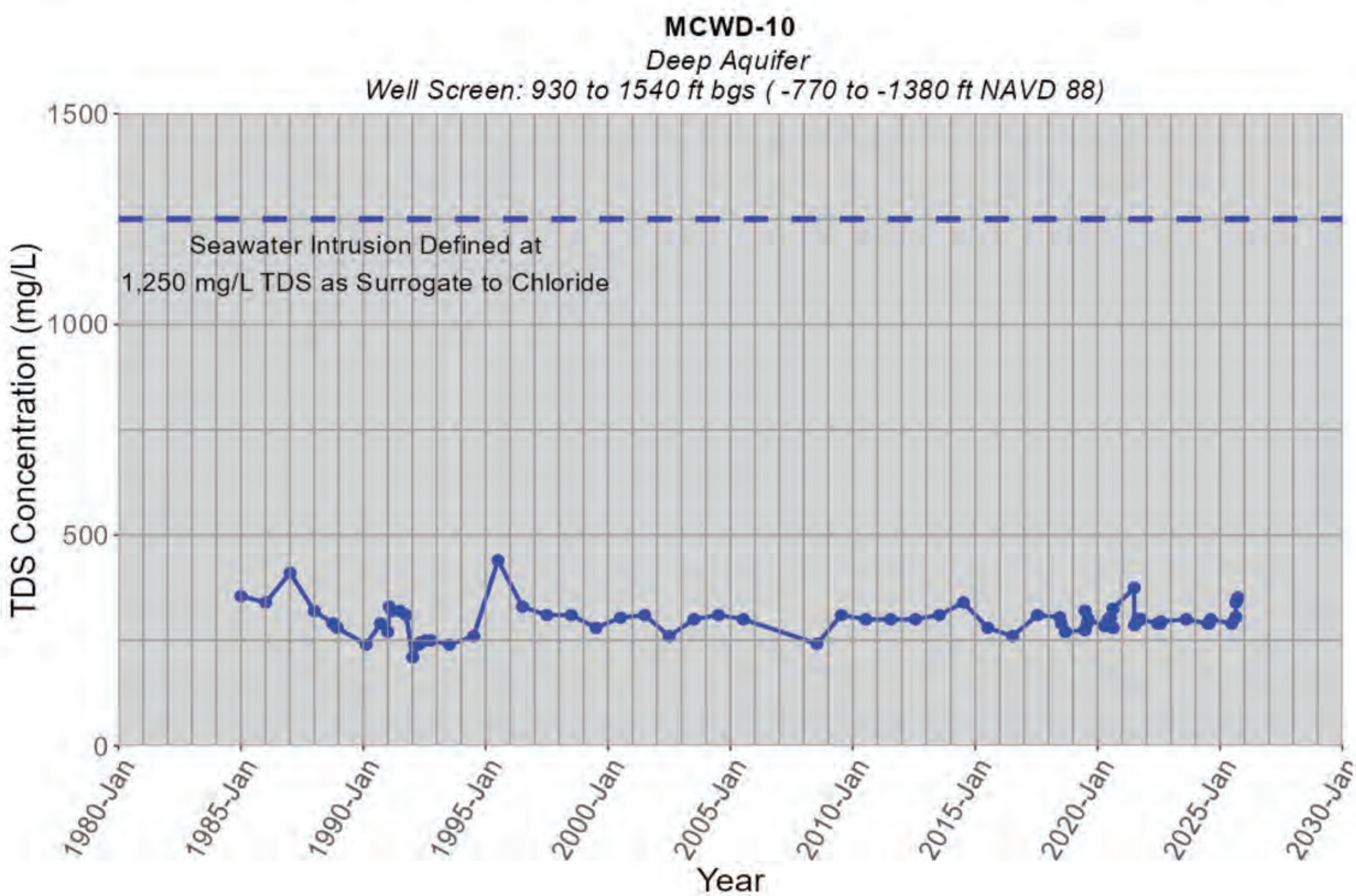

MPWMD#FO-11D
Lower Deep Aquifer
Well Screen: 1090 to 1120 ft bgs (-757 to -787 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

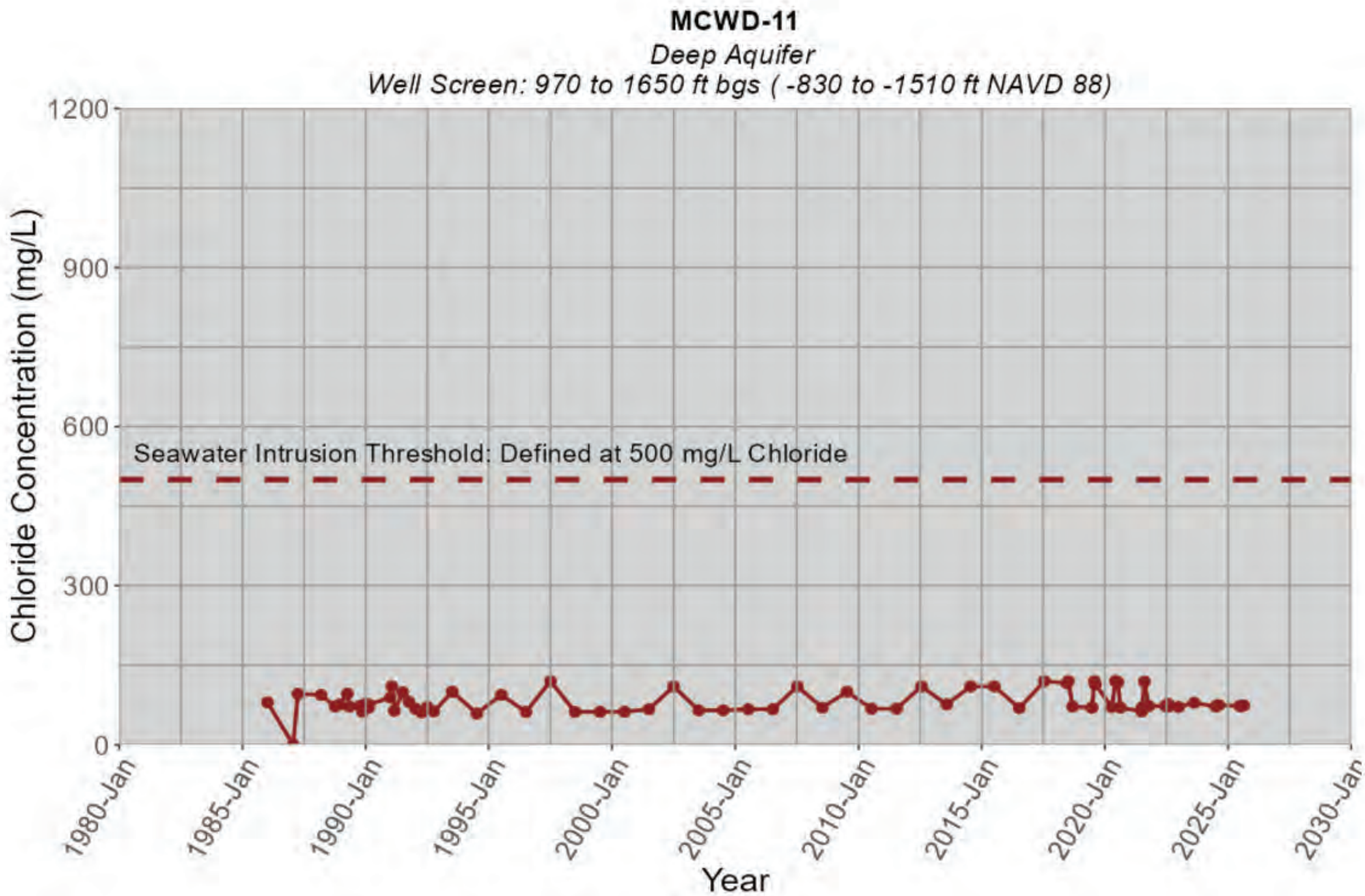

MPWMD#FO-11D
Lower Deep Aquifer
Well Screen: 1090 to 1120 ft bgs (-757 to -787 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year

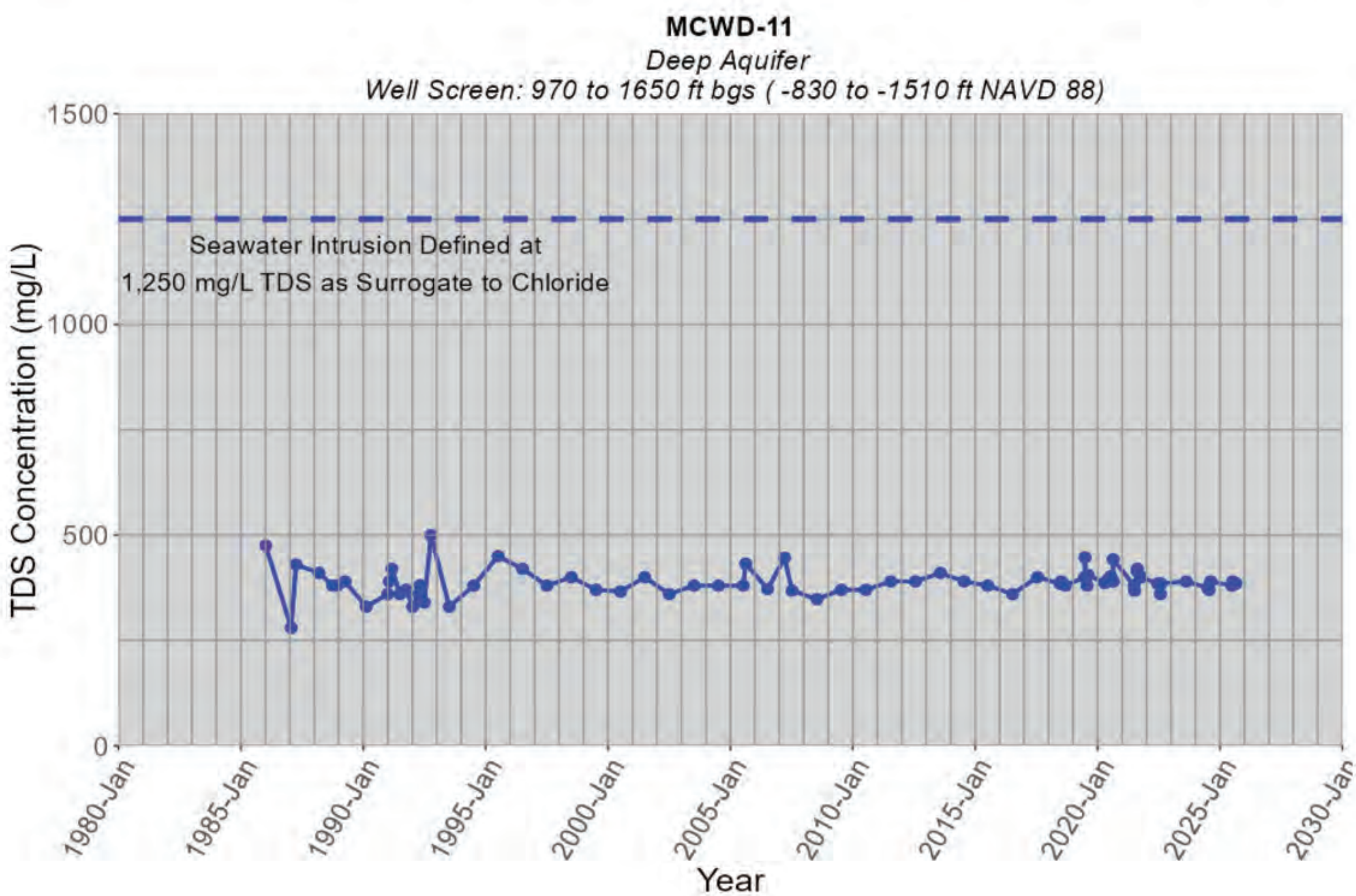
Chloride data for Sentinel MW #1 is not available.




MCWD-10
Deep Aquifer
Well Screen: 930 to 1540 ft bgs (-770 to -1380 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MCWD-10
Deep Aquifer
Well Screen: 930 to 1540 ft bgs (-770 to -1380 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MCWD-11
Deep Aquifer
Well Screen: 970 to 1650 ft bgs (-830 to -1510 ft NAVD 88)
Chloride Concentration (mg/L)
1200
900
600
300
0
Seawater Intrusion Threshold: Defined at 500 mg/L Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year


MCWD-11
Deep Aquifer
Well Screen: 970 to 1650 ft bgs (-830 to -1510 ft NAVD 88)
TDS Concentration (mg/L)
1500
1000
500
0
Seawater Intrusion Defined at
1,250 mg/L TDS as Surrogate to Chloride
1980-Jan
1985-Jan
1990-Jan
1995-Jan
2000-Jan
2005-Jan
2010-Jan
2015-Jan
2020-Jan
2025-Jan
2030-Jan
Year