



Rosedale-Rio Bravo Water Storage District 2024 Operations Report

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Table of Contents

SECTION 1 - INTRODUCTION.....	1
SECTION 2 – DISTRICT BACKGROUND AND FACILITIES.....	2
SECTION 3 – CONJUNCTIVE USE PROJECT OPERATIONS FOR CALENDAR YEAR 2024.....	10
SECTION 4 – GROUNDWATER LEVELS.....	13
SECTION 5 – GROUNDWATER QUALITY.....	17
SECTION 6 – STATUS OF DISTRICT GROUNDWATER BALANCE AND BANKING PROGRAMS.....	19
SECTION 7 – SUMMARY OF ACTIONS REGARDING DISTRICT BASIN MANAGEMENT OBJECTIVES.....	24
SECTION 8 – SUMMARY OF RRBWSD BANKING PROGRAM CEQA DOCUMENTS.....	30
SECTION 9 – REFERENCES.....	34

FIGURES:

1 - Vicinity Map	3
2 - District Boundary and Facilities	4
3 – End of Year Water Banking Account Balances	12
4 - Existing Depth to Groundwater Monitoring Well Locations	14
5 - Estimated Average Depth to Groundwater in Wells 1952-2025	16
6 - Location of Wells Monitored for Groundwater Quality	18
7 - RRBWSD Annual Water Balances 1995-2024	21
8 - RRBWSD Cumulative Change in Groundwater Storage 1995-2024.....	22
9 -Surface Water Deliveries vs. Average Depth to Groundwater in Wells 1962-2024.....	23

APPENDICES:

Appendix 1 – Groundwater Level Hydrographs	
Appendix 2 – Groundwater Model 2024 Update	
Appendix 3 – Groundwater Quality Data	
Appendix 4 – RRBWSD Groundwater Program Operations 1995-2024	
Appendix 5 – SGMA Timeline and RRBMA Implementation Progress for Water Year 2024	

SECTION 1 - INTRODUCTION

In February 2013, the Rosedale-Rio Bravo Water Storage District (RRBWSD or District) adopted an update to its Groundwater Management Plan in order to be consistent with California Water Code (CWC), Division 6, Part 2.75, Sections 10750 et seq. as amended by California Senate Bill 1938 (SB 1938). The District's Groundwater Management Plan outlines the contents of planned annual operations reports.

The Sustainable Groundwater Management Act (SGMA) was signed by the Governor on September 16, 2014 and includes requirements for the formation of local groundwater sustainability agencies (GSAs) to assess local groundwater conditions. The District is a member of the Kern Groundwater Authority GSA, which submitted a Groundwater Sustainability Plan (GSP) for review by the California Department of Water Resources (DWR) in January 2020. The KGA GSP received an Incomplete Determination from the DWR in January 2022. Revisions to the KGA GSP were submitted to the DWR in July 2022. The DWR responded with a subsequent Inadequate Status determination in March 2023.

On August 9, 2023, the District provided a Notice of Intent to Prepare a Groundwater Sustainability Plan for lands within its boundaries covering a portion of the Kern County Subbasin and formed the Rosedale-Rio Bravo Water Storage District GSA. As a part its implementation of the GSP, the District prepared a 2024 Annual Report for the RRBWSD GSA. A Groundwater Sustainability Plan for the Kern County Subbasin Groundwater Sustainability Agencies was adopted in December 2024.

This 2024 Operations Report has been prepared in accordance with the outline from its Groundwater Management Plan to summarize the District's operations for calendar year 2024. Included in this report are:

- 2024 water supplies, demands, and groundwater recharge project operations,
- Discussion of current groundwater levels and historical trends,
- Discussion of current groundwater quality and historical trends,
- Status of District's groundwater balance,
- Status of District's groundwater banking programs, and
- Summary of actions regarding Basin Management Objectives and SGMA implementation.

SECTION 2 – DISTRICT BACKGROUND AND FACILITIES

The District is located west of Bakersfield in Kern County (**Figure 1**) and contains approximately 43,000 acres of agricultural, urbanized, and undeveloped land. The District was formed in 1959 for the purpose of obtaining surface water supplies and constructing and operating a groundwater recharge project to offset declining groundwater levels. At the time of the District's formation, groundwater levels were declining at a rate of about nine feet per year.

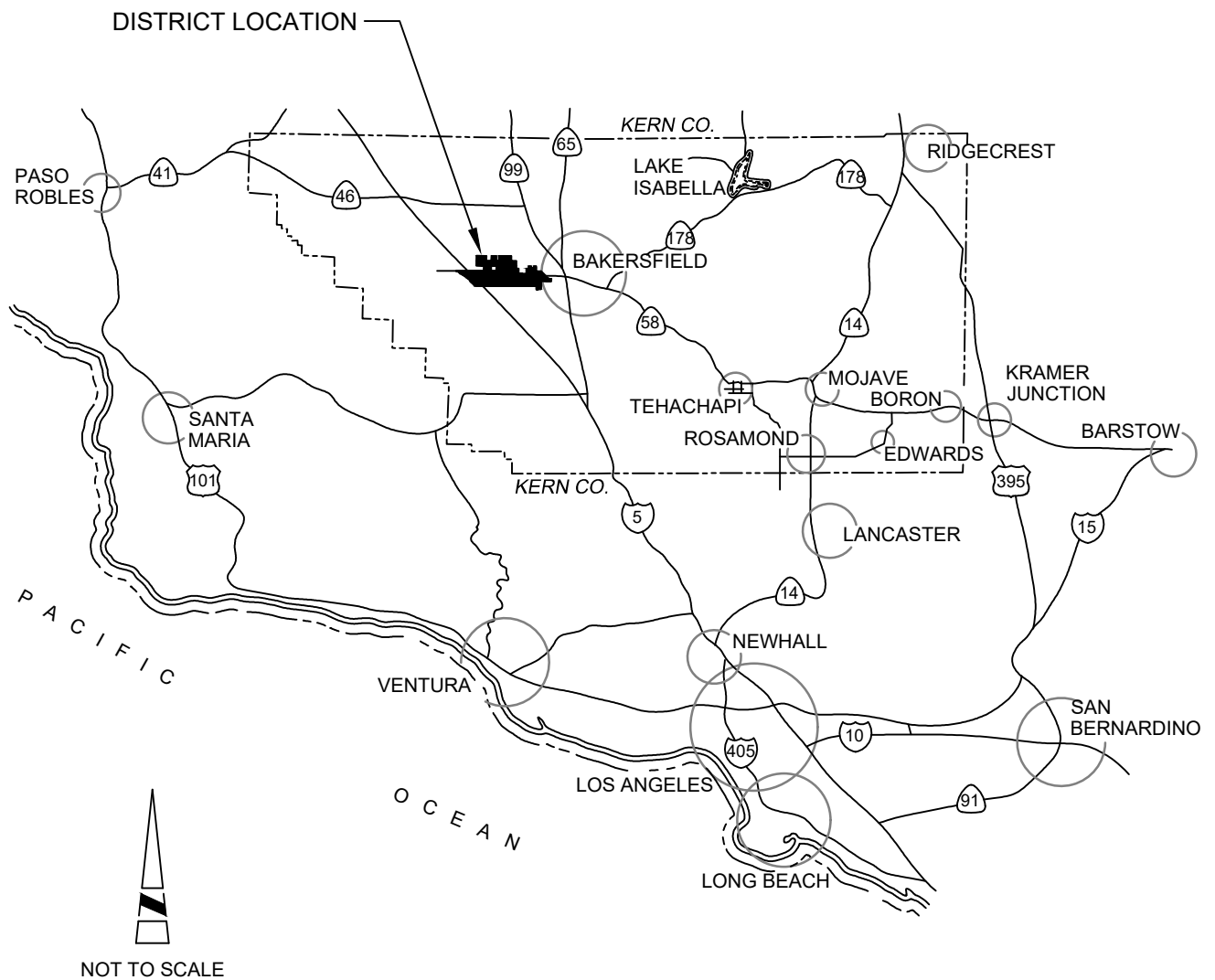
The District entered into long term contracts for delivery of surface water supplies from the Kern River and the State Water Project (SWP), as well as short term contracts for water from the Friant-Kern Canal (part of the United States Bureau of Reclamation Central Valley Project). Additional surface water supplies have been delivered to the District as a result of exchanges, groundwater banking programs, and other water purchases. The District entered into these water management programs in order to increase supplies, provide infrastructure, and offset operational and water purchase costs. From 1962 through 2024, the District has taken delivery of approximately 4.5 million acre-feet of imported surface water supplies.

The present developed area within the District is estimated to be 36,800 acres, with about 28,500 acres utilized for irrigated agriculture and about 8,300 acres dedicated to urban and industrial uses. Urban development is primarily located in the eastern end of the District and is expected to increase in the future as the City of Bakersfield expands to the west. There are approximately 1,500 acres of land in the central and western portions of the District that have never been developed, primarily due to the saline-alkali nature of the soils which limits the crops that could be produced.

The District's current boundary and recharge project facilities are shown on **Figure 2**. The District's groundwater recharge project was developed to take advantage of the Goose Lake channel, which traversed the District from east to west. Since the formation of the District, the channel has been modified for use as a water conveyance and groundwater recharge canal. The District participated in the initial construction and expansion of the Cross Valley Canal (CVC), and has constructed a network of groundwater recharge basins and channels as a part of its project that as of the end of 2024 covers approximately 2,288 net wetted acres.

In addition to groundwater recharge basins and channels, the District's facilities include recovery wells and pipelines for return of water as a part of its groundwater banking programs. The District also has the right to use groundwater recharge and recovery facilities in groundwater banking projects located to the south of the District as a part of agreements with the City of Bakersfield, Kern Water Bank, and the Kern County Water Agency (KCWA).

The District has partnered with the Irvine Ranch Water District (IRWD) in the development of the Stockdale Integrated Banking Project located along the south boundary of the District, which includes the District owned Stockdale East recharge and recovery area and the IRWD owned Strand Ranch and Stockdale West banking areas. The District is further partnering with IRWD through the Groundwater Banking Joint Powers Authority to implement the Kern Fan Groundwater Project Phase I which includes the West Enos and Stockdale North recharge basins being constructed in 2025-2026.



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The District's recharge facility characteristics and status at the end of 2024 are presented in **Table 1**. In **Table 1**, *Flow* represents the long-term recharge rate of the facility while *Fill Rate* represents the initial recharge rate after a dry period. These facility recharge rates were developed based on the District's recharge operations during 2017 and 2023.

Table 1
RRBWSD 2024 Recharge Facility Status and Characteristics

Basin Area	SCS Soil Map Units	Drainage Class	Infiltration (ft/day)	Flow (cfs)*	Fill Rate (cfs)	Wetted Area (acres)
Stockdale West	177, 244	Well	0.2	20	30	225
Strand	174, 243, 244	Well	0.2	40	60	449
Stockdale East	152, 243, 245	Moderate, Well	0.5	45	68	185
West Basins	245	Moderate	0.5	75	113	324
Enns	125, 244, 245, 229	Well, Somewhat Excessive	0.6	55	83	175
McCaslin	125,243, 244,245	Well, Somewhat Excessive	0.6	52	78	172
Superior	125, 127, 243, 245, 229	Well, Somewhat Excessive	0.6	160	240	605
Allen	125	Somewhat Excessive	1.2	90	135	153
Totals =				537	807	2,288
Weighted Average Infiltration = 0.46 ft/day						

**Based on 2017 and 2023 Operations*

A timeline of construction of recent facility improvement projects is provided in **Table 2**. A brief description of the facility improvements completed during 2024 follows the table.

Table 2
RRBWSD Facility Improvement Projects

Improvement Description	Completion Year
Enns Recharge Basins (130 acres)	2002
Strand Recharge Basins (449 acres)	2009
Enns Wells (3)	2010
Strand Wells (7)	2011
Stockdale West Recharge Basins (225 acres)	2011
CVC Turnout No. 1 Return Pipeline	2012
West Basin Wells (3)	2016
Kern River Intake Improvements (600 cfs capacity)	2016
West Basin Improvement Recharge Basins (55 acres)	2016
Stockdale West Wells (3)	2016
Central Intake Canal and CVC Turnout (200 cfs capacity)	2018
Superior Well Field (6)	2018

Table 2 (Continued)
RRBWSD Facility Improvement Projects

Improvement Description	Completion Year
Stockdale East Recharge Basins (185 acres)	2018
Superior Basins Improvement Project (addition of 50 acres)	2019
Central Intake Pump Station (200 cfs capacity)	2019
Stockdale East Well Drilling and Completion (2 new, 1 rehab)	2020
Houghton Weir Reconstruction Project	2021-22
McCaslin Recharge Ponds	2022
SCADA Project Phase 1	2022
Grimmway Multipurpose Recharge Ponds	2023
West Enos Recharge Pilot Project	2023

Facility Improvements Completed During 2024

McCaslin/Bowling Recovery Pipeline - In conjunction with the contract for the drilling and equipping of the recovery wells, collection pipelines were constructed to connect the new wells to the existing conveyance system. Approximately 7,500 feet of PVC irrigation pipe were installed to deliver future McCaslin Well recovery water to the West Intake (connecting to the Rosedale No. 1 CVC turnout). An additional 1,400 feet of PVC irrigation pipe were installed to connect the future Bowling Well to the East Superior Collection Pipeline for conveyance to the Central Intake.

The McCaslin Recharge Ponds are designed for dual use: during dry years they can be farmed, while in wet years they can be converted into recharge basins. The pipelines are part of a three-phase project. Basin development and earthwork were completed in 2021–2022, and the well drilling and equipping components are scheduled for completion in early 2025.

West Enos Recharge Project - This project was undertaken as part of the Groundwater Banking Joint Powers Authority and included the construction of approximately 175 acres of permanent recharge ponds located directly west of Enos Lane in the West Superior Recharge Area. The facility will be filled via three 48-inch HDPE pipes equipped with C-10 irrigation gates to control water flow. Water will be supplied to the West Enos property from the westernmost Superior Recharge Pond through the Goose Lake Channel.

To support this system, four large-diameter steel pipes were jacked beneath Enos Lane (State Route 43) to install the HDPE siphon delivery pipes. Four interbasin transfer structures were also constructed within the West Enos Recharge Project, each fitted with wingwalls and riprap for stability. In addition, a low-flow channel was constructed through the southern end of the first two ponds to improve the fill rate of the second and third ponds. The facility is designed to deliver approximately 50–80 cfs to the West Enos Recharge Project and is expected to be complete in 2025.



Installation of McCaslin/Bowling Recovery Pipeline

Groundwater Banking Joint Powers Authority (GBJPA) West Enos Recharge Project



- Legend**
- Proposed West Enos Wells
 - West Enos Recharge Ponds

0 0.05 0.1 0.2 0.3 0.4 Miles





Installation of 42" HDPE Pipe Underneath Enos Lane (State Route 43)



Construction of Levee Embankments

SECTION 3 – CONJUNCTIVE USE PROJECT OPERATIONS FOR CALENDAR YEAR 2024

2024 is considered a typical year with annual rainfall of 7.46 inches recorded for the Metropolitan Bakersfield area. The District received no water from its Kern River contracts and an allocation of 40 percent from the State Water Project (SWP). The District's banking partners enacted both additions to storage and return of previously stored supplies. A portion of the banking program return was from groundwater extraction.

A summary of the CEQA documentation prepared for the District's groundwater banking programs is included as **Section 8**. A brief description of the District's groundwater banking, sales, and water purchase programs with operations in 2024 follows:

Arvin-Edison Water Storage District (AEWSD) 2:1 Banking Agreement dated Oct 1, 2009

2,163 AF of water from Arvin was added to storage in 2024. 8,260 AF of water was returned by AEWSD by exchange and 1,740 AF of water was recovered from the JURP wells for return to AEWSD. At the end of 2024 AEWSD's account balance in RRBWSD is 45,145 AF.

Delano-Earlimart Irrigation District (DEID) 2:1 Banking Agreement dated Oct 1, 2009

493 AF of water from DEID was added to storage in 2024. At the end of 2024 DEID's account balance in RRBWSD is 30,499 AF.

Kern Tulare Water District (KTWD) 2:1 Banking Agreement dated July 10, 2001

8,948 AF of water from KTWD was added to storage in 2024. At the end of 2024 KTWD's account balance in RRBWSD is 37,955 AF.

Homer LLC 2:1 Banking Agreement dated May 26, 2017

The total account balance for the Homer LLC banking program in RRBWSD has been returned by exchange. The remaining account balance at the end of 2024 is 0 AF.

Buena Vista Water Storage District (BVWSD) Banking Agreement dated January 1, 2002

RRBWSD returned 8,250 AF of water to Santa Clarita Valley Water Agency (SCVWA) for BVWSD in 2024. At the end of 2024 BVWSD's account balance, for this program in RRBWSD, is 109,870 AF.

Irvine Ranch Water District (IRWD) Banking Agreement dated January 13, 2009

2,475 AF of water from IRWD was added to storage during 2024. At the end of 2024, IRWD's account balance with RRBWSD is 43,198 AF.

Castaic Lake Water Agency (now SCVWA) Banking Agreement dated November 11, 2005

6,001 AF of water from SCVWA was added to storage during 2024. At the end of 2024, SCVWA's account balance in RRBWSD is 82,283 AF.

Castaic Lake Water Agency (now SCVWA) 2:1 Banking Agreement dated September 1, 2011

No deliveries or returns were made for this program in 2024. At the end of 2024, SCVWA's account balance for this program in RRBWSD remains at 5,301 AF.

Coachella Valley Water District (CVWD) Water Sale Agreement amended July 24, 2012

No water was delivered to CVWD in 2024. At the end of 2024 RRBWSD has sold 122,000 AF to CVWD under this program. There is no available exportable balance at the end of 2024.

San Joaquin River Exchange Contractors (SJREC) 2:1 Program Agreement dated October 2, 2020

4,250 AF of water from SJREC was added to storage during 2024. At the end of 2024 SJREC's account balance in RRBWSD is 16,235 AF, which includes water recharged under 2017 and 2019 program agreements.

Antelope Valley-East Kern Water Agency (AVEK) 3:1 Banking Agreement dated December 28, 2018

No water was added to storage or returned during 2024. At the end of 2024 AVEK's account balance in RRBWSD remains at 5,333 AF.

Tulare Lake Basin Water Storage District (TLBWSD) 2:1 Agreement dated September 13, 2023

2,375 AF of water from TLBWSD was added to storage in 2024. At the end of 2024 TLBWSD's account balance in RRBWSD is 4,250 AF.

The end of year water banking account balances for each of the District's programs over the period 2004 through 2024 are shown graphically in **Figure 3**. Also shown is the RRBWSD Aggregate Benefit, which is the total volume of water allocated for the District's benefit and use as a result of the operations of these water banking programs. As of the end of 2024, the RRBWSD Aggregate Benefit is approximately 382,100 AF.

Table 3 provides a summary of the District's water supplies and deliveries for 2024. The values in **Table 3** are the best available at the time of report preparation. However, these values may be revised based on final records for the various water sources.

Table 3
RRBWSD 2024 Supplies and Deliveries
(All Values in Acre-Feet)

Supplies		Deliveries To	
SWP 2024 Entitlement	11,960	RRBWSD Kern River Intake	3,248
2023 Carryover	6,179	RRBWSD CVC Turnout No. 1	9,606
AEWSD Banking	4,325	RRBWSD CVC Turnout No. 2	6,089
KTWD Banking	19,038	Central Pump Station	5,359
DEID Banking	985	Strand Project Facilities	2,360
IRWD Banking	2,887	Stockdale West	1,571
SCVWA Banking	7,000	Pioneer Project	3,049
SJREC Banking	10,000	AEWSD	10,000
TLBWSD Banking	5,589	San Luis Reservoir (SJREC Banking)	10,000
Groundwater Recovery (JURP)	1,740	CLWA	8,250
Total	69,703	SWP 2024 Carryover	9,897
		Total	69,429

Notes:

1. The difference between supplies and deliveries consists primarily of transportation losses (estimated to be about 274 AF). These are not considered losses in the District's water balance since this water is recharged to the groundwater basin.

End of Year Water Banking Account Balances

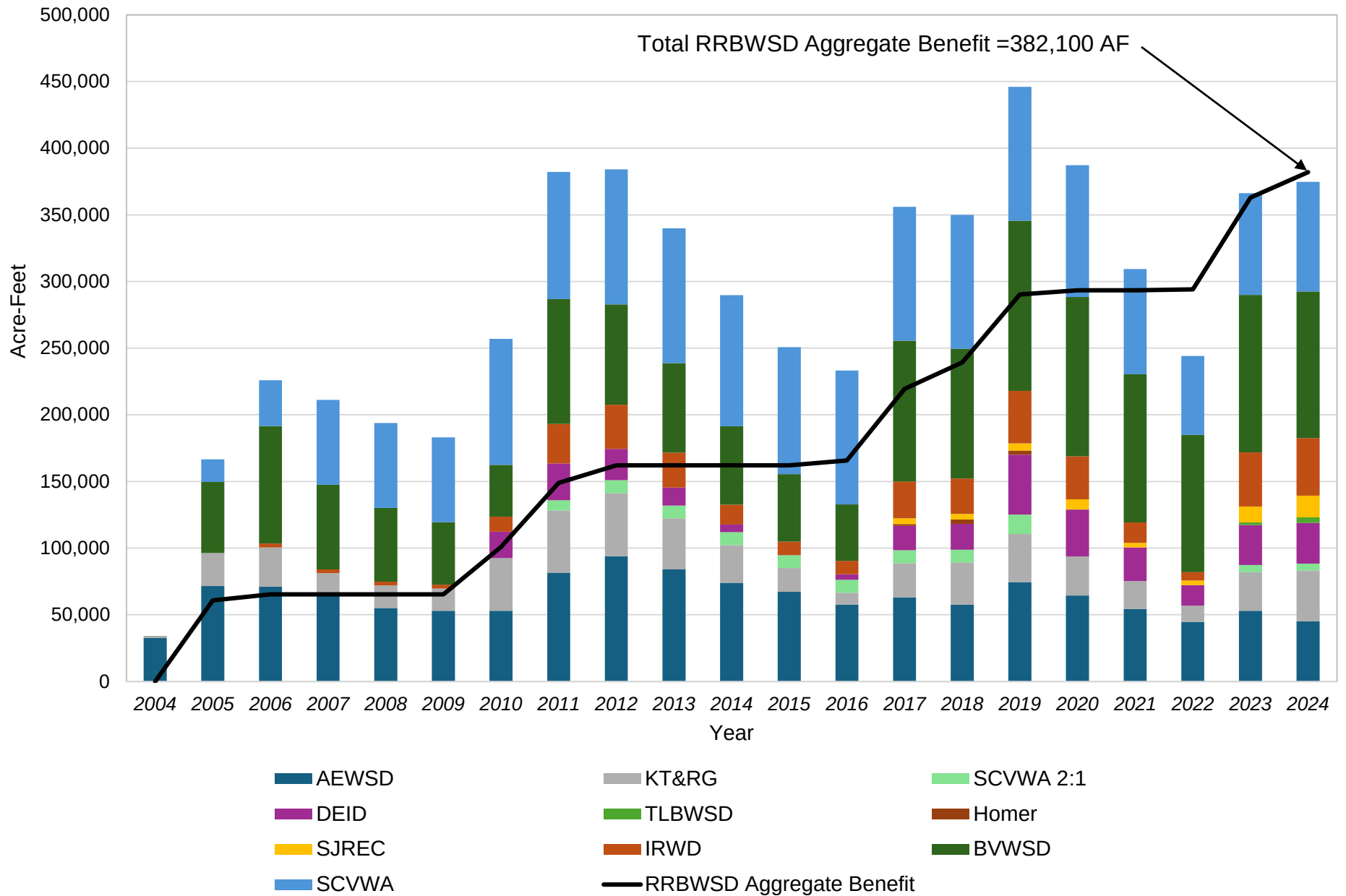


Figure 3

SECTION 4 – GROUNDWATER LEVELS

The District's 2024 Groundwater Level Monitoring Network is shown on **Figure 4**. The District currently measures depth to groundwater in these 19 representative monitoring wells monthly. The wells measured by the District are a combination of District and banking program production wells, abandoned wells, agricultural production wells, municipal supply wells, and dedicated monitoring wells. Included in the network are four double-completion monitoring wells constructed by the California Department of Water Resources (DWR).

A summary of the characteristics of the wells currently in the District's Groundwater Level Monitoring Network is presented in **Table 4**. The monitoring wells outside of the District boundary and south of the river shown on **Figure 4** are not included in **Table 4** and are not part of the analysis in this District Operations Report. District production wells are monitored for groundwater levels and quality during production operations. These District production wells are also included in **Table 4**.

Groundwater levels measured in January 2025 ranged from about 160 feet below ground surface in the southeastern portion of the District to about 325 feet below ground surface in the northwest. The average depth to groundwater in the District in January 2025 was estimated to be 233 feet. This is approximately 21 feet higher than the estimated average groundwater elevation in January 2024.

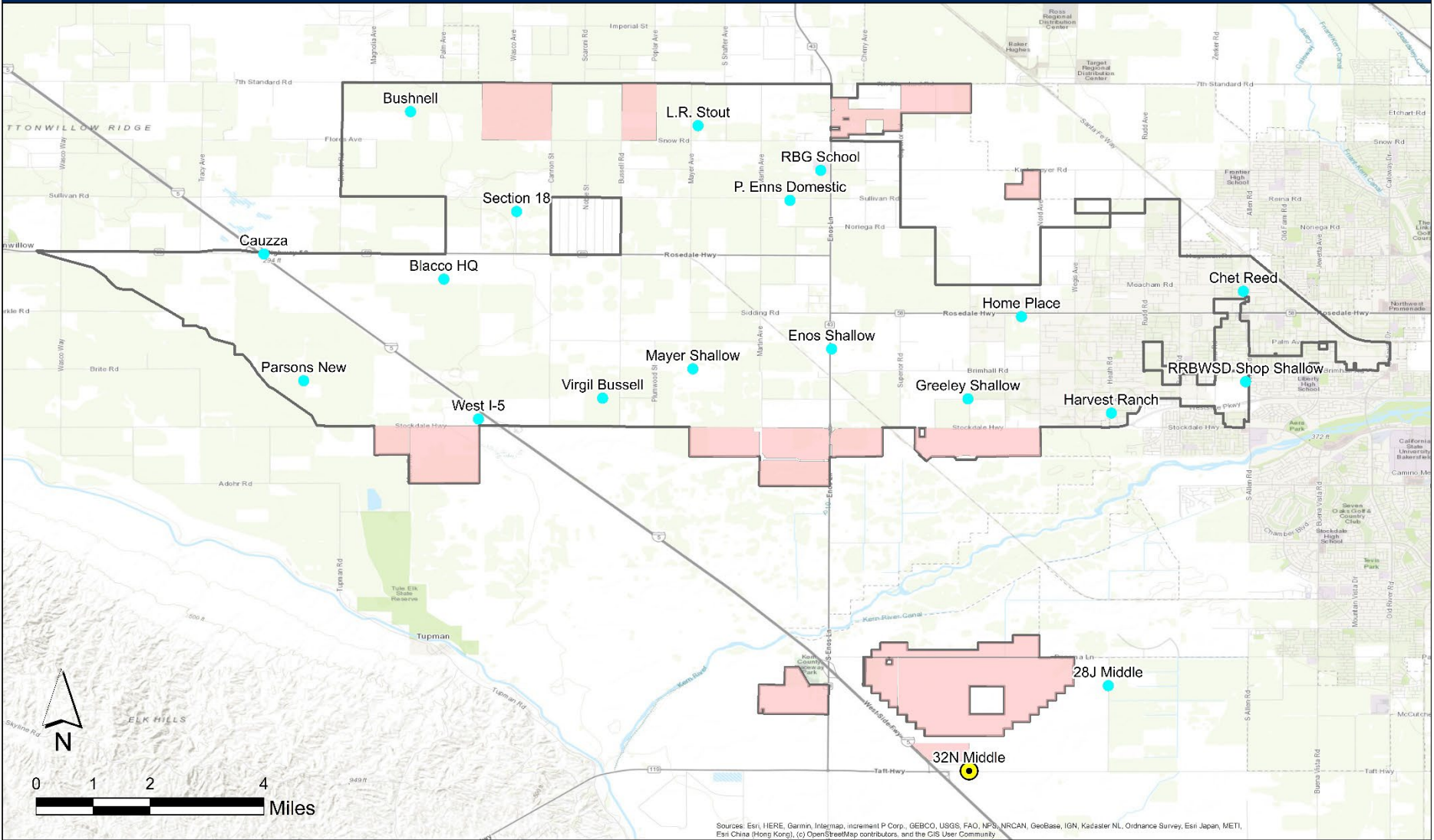
Groundwater levels within the District are also influenced by the recharge and recovery operations for adjacent groundwater banking programs. The District has developed a groundwater model to evaluate the impacts of these groundwater banking projects and also to develop projections of water levels based on implementation of the projects and management actions anticipated in the District's proposed Groundwater Sustainability Plan. An update of the District's groundwater model was conducted in 2024 to calibrate the model to observed water levels (see **Appendix 2**).

Long term historic groundwater level hydrographs have been prepared for the monitoring wells in **Figure 4** as part of the District's SGMA reporting program (see **Appendix 1**). Groundwater levels in monitoring wells located farther from the recharge and recovery facilities on the Kern River Fan experience a muted impact. Groundwater levels at these wells historically experienced a steady decline but have leveled out in the 2017-2025 period. Groundwater levels in monitoring wells closer to recharge and recovery operations experience significant fluctuations consistent with the large recharge and recovery cycles on the Kern River Fan. Groundwater levels in these monitoring wells at the end of 2024 are generally equal to or higher than experienced in 2014. Currently, the RRBWSD GSA is in full compliance with the Sustainable Management Criteria established in its Groundwater Sustainability Plan. See **Section 7** for more information on the District's SGMA compliance.

Figure 5 shows estimated average groundwater levels within the District in the month of January for the years 1952 through 2025. The rate of groundwater decline from 1976, when the first SWP deliveries were made to the District, to January 2025 has averaged about 1.9 foot per year. Prior to 1976, the average rate of groundwater decline was about 4.7 feet per year.

Figure 4

Rosedale-Rio Bravo Water Storage District GSA Groundwater Level Monitoring Network Bakersfield, CA



Legend

- Water Level Representative Monitoring Wells (RMWs)
- RRBWSD GSA White Lands
- RRBWSD GSA Boundary



Table 4
Rosedale-Rio Bravo Water Storage District
Representative Monitoring Well Characteristics¹

State Well Number	Well Name	Well Depth	Screen Interval	Type of Well ²	Start Date	Water Quality	Frequency
29/24 2 J1	Bushnell			Agricultural	1997	N	--
29/25 3 N1	L. R. Stout	433	351-433	Agricultural	1998	N	--
29/25 11 H	RBG School			Domestic	2016	N	--
29/25 14 C1	P. Enns Domestic			Domestic	2014	N	--
29/25 18 B1	Section 18	701	300-701	Agricultural	1997	N	--
29/24 24 F	BLACCO HQ New			Agricultural	2013	N	--
29/24 21 A1	Cauzza	800		Abandoned	1982	N	--
29/24 28 L	Parsons New			Agricultural	2019	N	--
29/24 36 R1	West –I-5			Agricultural	1982	N	--
29/25 33 E1	Virgil Bussell			Domestic	1993	N	--
29/25 27 N1	DWR 27N Mayer Deep-W	700	610-700	Monitor Well	1995	Y	Biannual
29/25 27 N2	DWR 27N Mayer Shallow-E	310	210-310	Monitor Well	1995	Y	Biannual
29/25 25 M1	DWR 25M Enos Deep-W	700	600-700	Monitor Well	1995	Y	Biannual
29/25 25 M2	DWR 25M Enos Shallow-E	350	260-350	Monitor Well	1995	Y	Biannual
29/26 23 J1	Chet Reed			Abandoned	1995	N	--
29/26 29 B	Home Place			Domestic	2015	N	--
29/26 31 H1	DWR 31H Greeley Deep-E	630	560-630	Monitor Well	1995	Y	Biannual
29/26 31 H2	DWR 31H Greeley Shallow-W	430	360-430	Monitor Well	1995	Y	Biannual
29/26 34 M1	Manon Manor (Harvest Ranch)			Municipal	1989	N	--
29/26 35 H1	Shop	500		Domestic	1981	N	--
29/26 35 H3	DWR 35H Shop Deep-SE	680	590-680	Monitor Well	1995	Y	Biannual
29/26 35 H4	DWR 35H Shop Shallow-NW	410	310-410	Monitor Well	1995	Y	Biannual
29/25 29 Q	WB-1 Prod			District	2017	Y	During production operations
29/25 28 N	WB-2 Prod			District	2017	Y	
29/25 28 P	WB-3 Prod			District	2017	Y	
29/25 34 A	ENNS-01 Prod.	475	185-455	District	2017	Y	
29/25 34 A2	ENNS-02 Prod.	750	460-740	District	2017	Y	
29/25 34 H	ENNS-03 Prod.	440	180-420	District	2017	Y	
30/25 2 E	SREX-01 Prod.			Banking program	2017	Y	
30/25 2 D	SREX-02 Prod.			Banking program	2017	Y	
30/25 2 G	SREX-03 Prod.			Banking program	2017	Y	
30/25 2 A	SREX-04 Prod.			Banking program	2017	Y	
30/25 2 L	SREX-05 Prod.			Banking program	2017	Y	
30/25 2 J4	SREX-07 Prod.			Banking program	2017	Y	
30/25 3	SWEX-01 Prod.			Banking program	2017	Y	
30/25 3	SWEX-02 Prod.			Banking program	2017	Y	
30/25 3	SWEX-03 Prod.			Banking program	2017	Y	

Notes:

1. District water level representative monitoring wells on Figure 4 are monitored for depth to groundwater monthly. South of the river wells are not included in Table 4 and are not a part of the analysis in this District Operations Report.
2. Abandoned status indicates wells that are no longer used in production and may differ from the KC Environmental Health Division designation.

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
ESTIMATED AVERAGE DEPTH TO GROUNDWATER IN WELLS 1952-2025

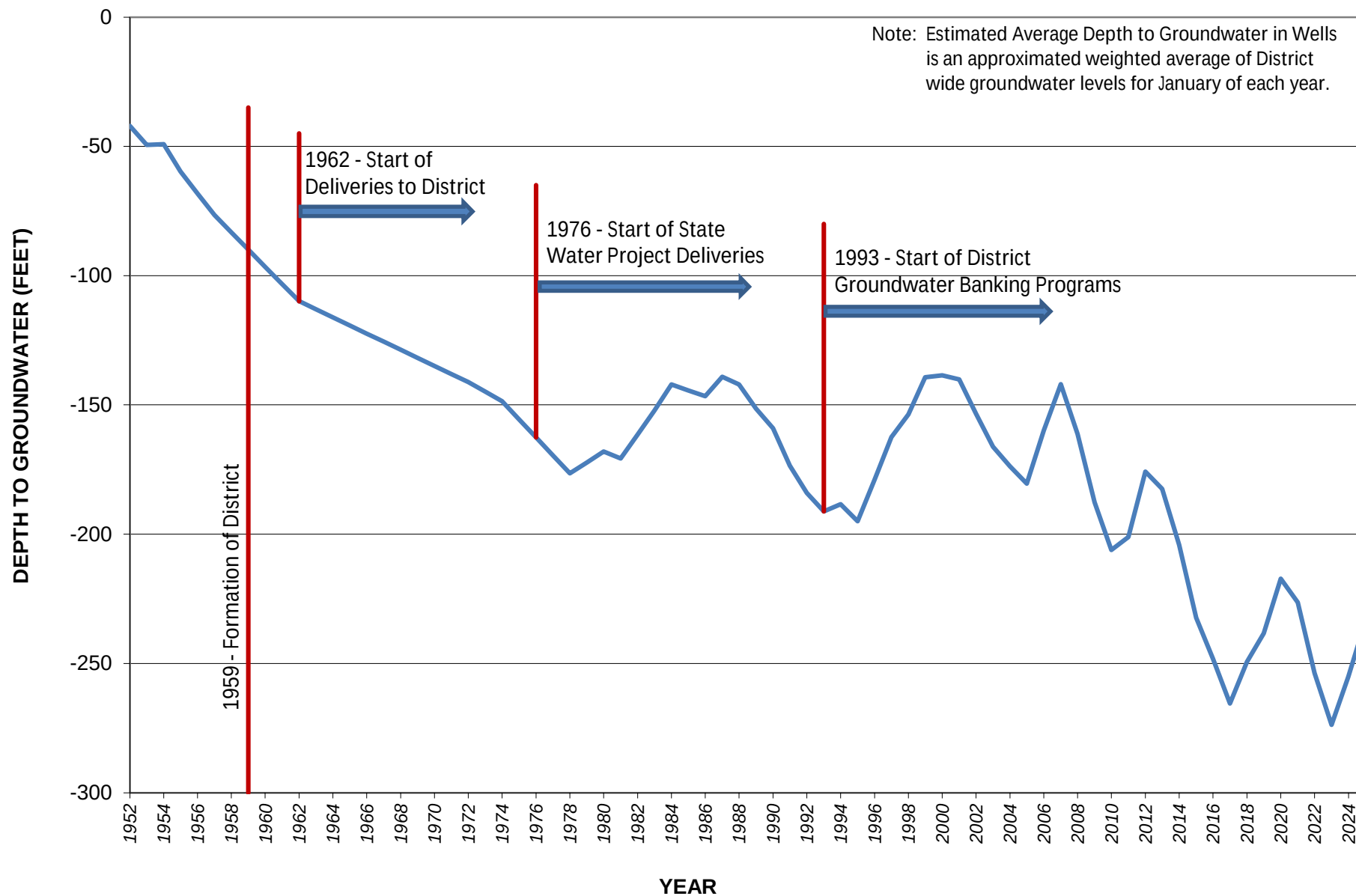


Figure 5

SECTION 5 – GROUNDWATER QUALITY

Groundwater quality in the basin underlying the District is generally of good quality for domestic and agricultural uses. However, groundwater in localized areas may not be suitable for the production of some crops and/or domestic uses. In the past, groundwater quality concerns were noted in the eastern portion of the District, where groundwater is primarily used for municipal supplies. The West Bakersfield Area Ground Water Quality Management Study (Longley, 1990) was undertaken due to concerns with groundwater quality in the study area, primarily from pesticides (EDB and DBCP), nitrates and salts (TDS). A number of wells within the District were identified with concentrations in excess of the Maximum Contaminant Level (MCL) for EDB, DBCP and nitrate. High TDS concentrations (700-1300 mg/l) were found in the vicinity of the Rio Bravo and Greeley Oil Fields. More recently, a MCL of 0.005 ug/l for 1,2,3-TCP was adopted by the California Division of Drinking Water with compliance required by January 2018. Groundwater with 1,2,3-TCP in excess of the MCL has been found in wells throughout the San Joaquin Valley due to the widespread use of soil fumigants that contained the chemical.

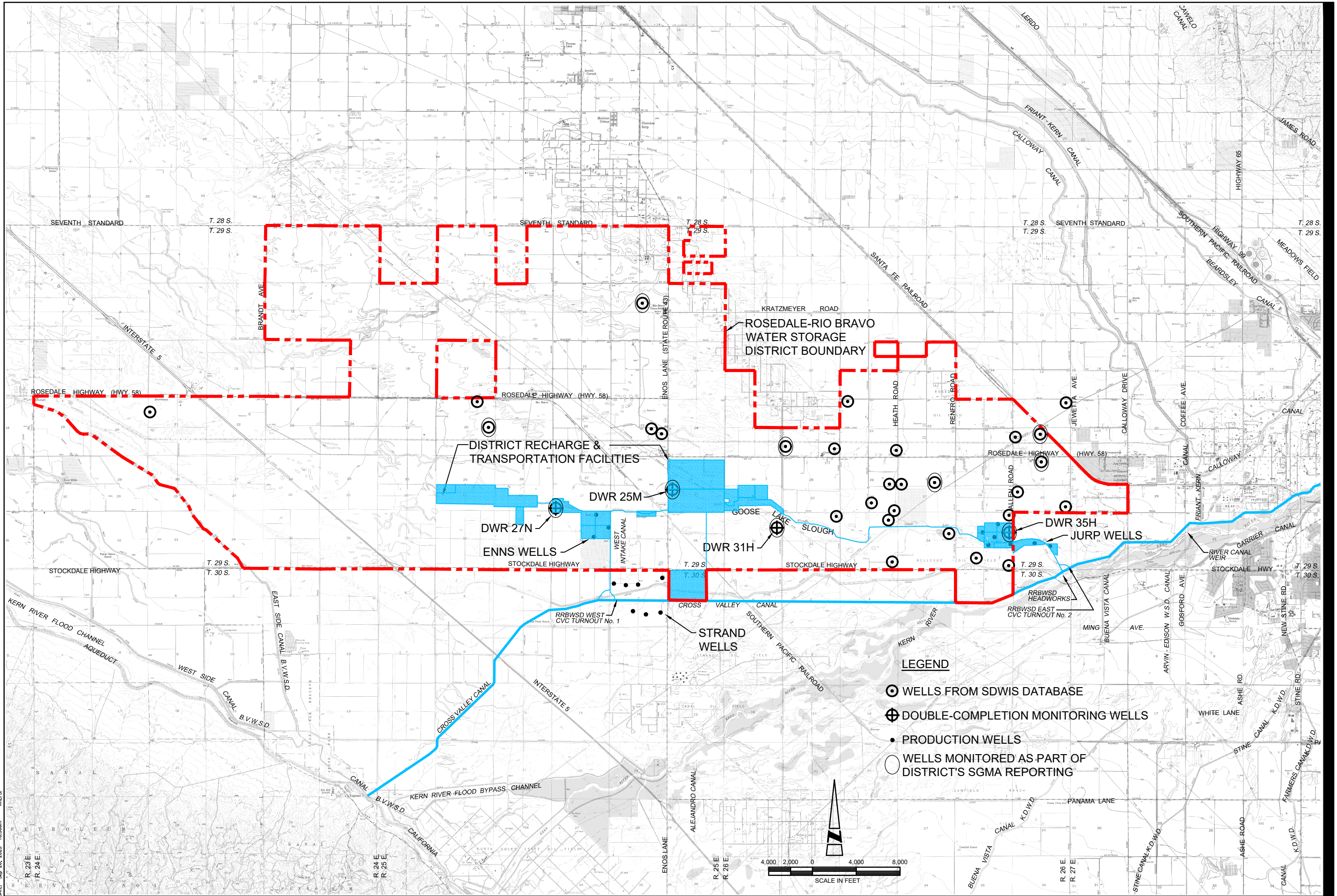
Groundwater quality within the District is currently monitored by the District, industrial users, numerous mutual water companies, the City of Bakersfield, the Kern Fan Monitoring Committee, and individual landowners. The District tests groundwater from the recovery wells (Enns Wells, West Basin Wells, Superior Wells, Stockdale East Wells, and Strand Wells) during pumping operations as noted in **Table 4**. Water quality data for over 30 wells located within the District is included in the State Water Resources Control Board Public Water Supply Systems online database (SDWIS), with the majority of these wells located within the urbanized area in the eastern half of the District. The Kern Fan Monitoring Committee takes samples semi-annually from the four double-completion monitoring wells within the District and tests for constituents of known concern (gross alpha, uranium, DBCP, EDB, and nitrate) and irrigation suitability analyses. The approximate locations of the wells that are monitored for water quality are shown in **Figure 6**.

The District has selected ten of these wells for monitoring as part of its SGMA reporting as noted on **Figure 6**. Water quality data for each of these wells is provided in **Appendix 3**. Since the last measured concentrations of EDB and DBCP greater than the MCL in these wells were in the late 1990s and early 2000s, these constituents are not included in the current reporting. The District's SGMA reporting for 2024 includes the following constituents:

- Arsenic (ug/l)
- TDS (mg/l)
- Nitrate as NO3 (mg/l)
- Chloride (mg/l)

The District has defined Minimum Thresholds (MTs) for their monitoring wells as the MCL or a 10% increase over the 2015-2020 measured concentrations for wells with historically high constituent concentrations. The established MTs for each well are shown on the long-term water quality graphs provided in **Appendix 3**.

In 2024, no exceedance of the established water quality MTs were observed in the RRBWSD GSA.



SECTION 6 – STATUS OF DISTRICT GROUNDWATER BALANCE AND BANKING PROGRAMS

The District calculates its balance of water supplies versus demands annually and cumulatively over time in order to assess the progress toward meeting its goal of eliminating groundwater overdraft within the District and progress towards sustainability. The period from 1995 to 2024 is used for analysis in this report per the terms of the agreement with the Kern Water Bank Authority and the Kern County Water Agency. This time period captures varying hydrologic cycles sufficient to understand long-term trends. Included in **Appendix 4** are tables indicating the District's water supplies, demands, water banking activities, and water balance for the years 1995 through 2024. The tables in **Appendix 4** generally follow the methodology developed by the Kern County Water Agency. The District's settlement with the City of Bakersfield regarding its contract water supplies has been incorporated in the District's water balance accounting through 2024.

For 2024, consumptive use demands for the District were based on a surface energy balance using satellite thermal imaging (data from Land IQ). This data is available on the District's Water Accounting Platform to allow its landowners to effectively and efficiently make informed decisions regarding water supply and land use. Further discussion of the District's Water Accounting Platform is provided in **Section 7**.

The main components of the water balance and the average annual quantities in acre-feet for the period 1995-2024 are summarized below.

Average Water Supplies

Surface water supplies (contract supplies and water purchases)	52,600
Purchased groundwater supplies	5,700
District share of groundwater recharge program supplies	15,600
Flood flows	3,400
Natural inflow from precipitation and share of basin native yield	31,300
Total Supplies	108,600 AF

Average Water Demands

District Consumptive Use	92,800
Water transfers	1,600
Assessed banking program losses	3,000
Total Demands	97,400 AF

The District's cumulative water balance over the period is a positive change in groundwater storage of approximately 213,200 acre-feet (see **Appendix 4**). This quantity does not include water in storage as a part of groundwater banking programs for third parties. As of the end of 2024, about 374,700 acre-feet was in storage for the District's banking partners. Therefore, the total increase in groundwater storage for the period 1995-2024 due to the District's operations is approximately 587,900 acre-feet.

The District calculates an exportable water supply balance annually (based on the period January 2004 to date) as agreed to in the District's MOU for its groundwater exchange program with GLC. The exportable water balance as of January 1, 2025 has been calculated to be a deficit of 10,203 acre-feet. The estimated balance for overdraft correction (ODC) is about a positive 223,400 acre-feet.

The District's annual water balances for the period 1995 through 2024 are shown on **Figure 7**. The District's cumulative change in groundwater storage for the same time period (not including groundwater banking operations for third parties) is presented graphically in **Figure 8**.

Graphs of depth to groundwater and total deliveries to the District for the years 1962 (when the first deliveries were made) through 2024 are shown on **Figure 9**. The Estimated Average Depth to Groundwater on **Figure 9** is calculated as a weighted average of District wide groundwater levels in January in order to reflect the groundwater operations from the previous year.

RRBWSD Annual Water Balances 1995-2024

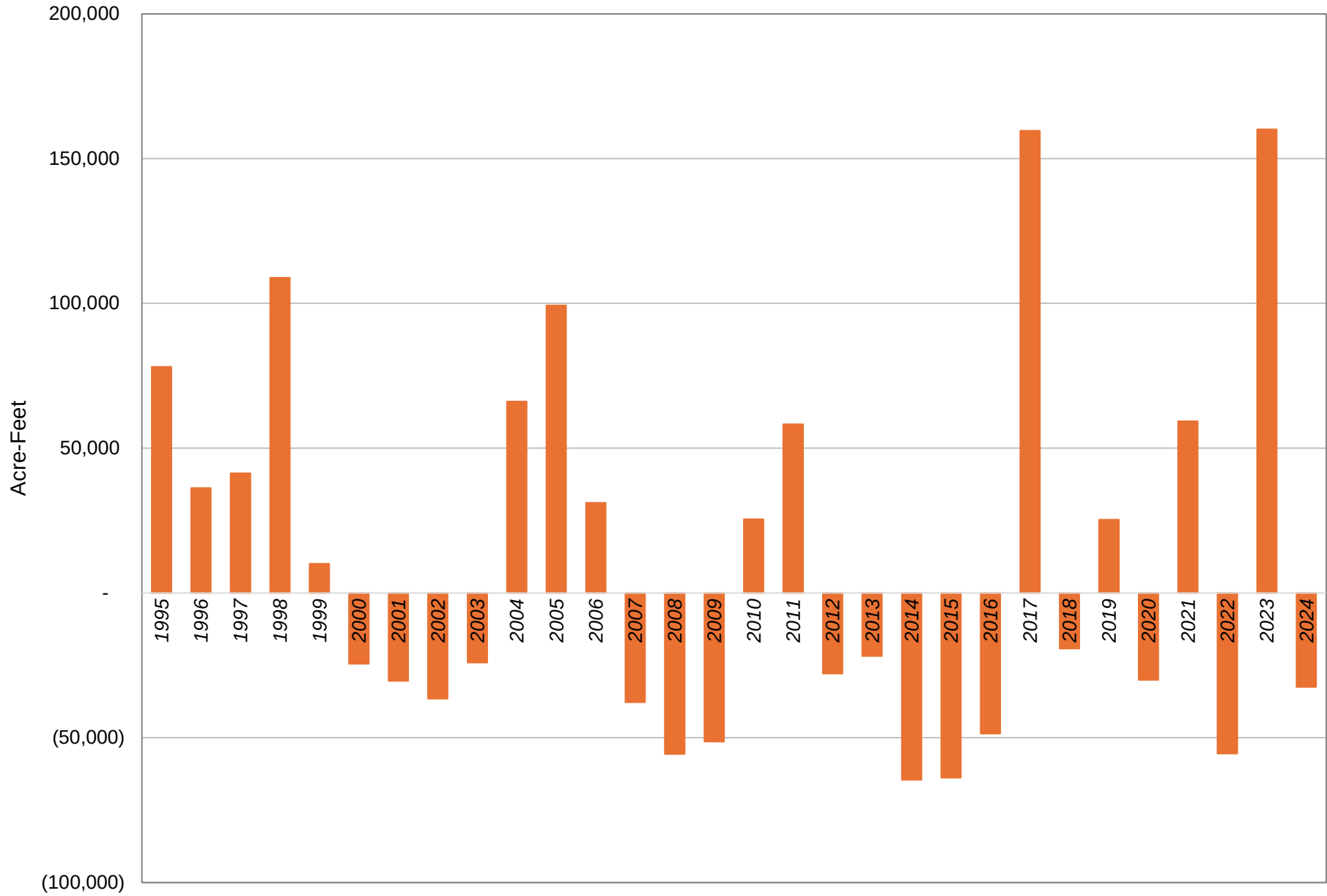


Figure 7

RRBWSD Cumulative Change in Groundwater Storage 1995-2024

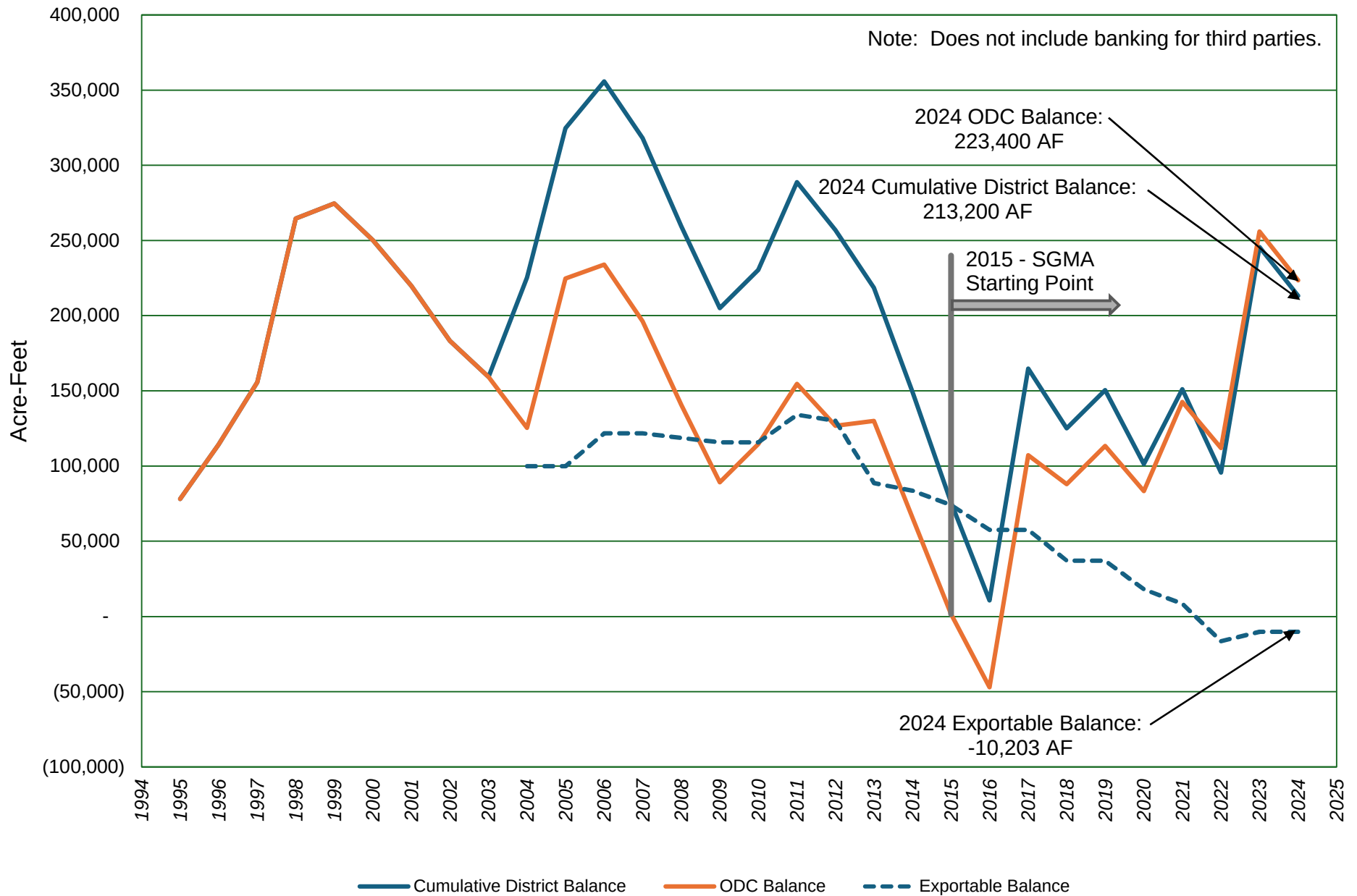


Figure 8

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT **SURFACE WATER DELIVERIES AND** **AVERAGE DEPTH TO GROUNDWATER IN WELLS (1962-2025)**

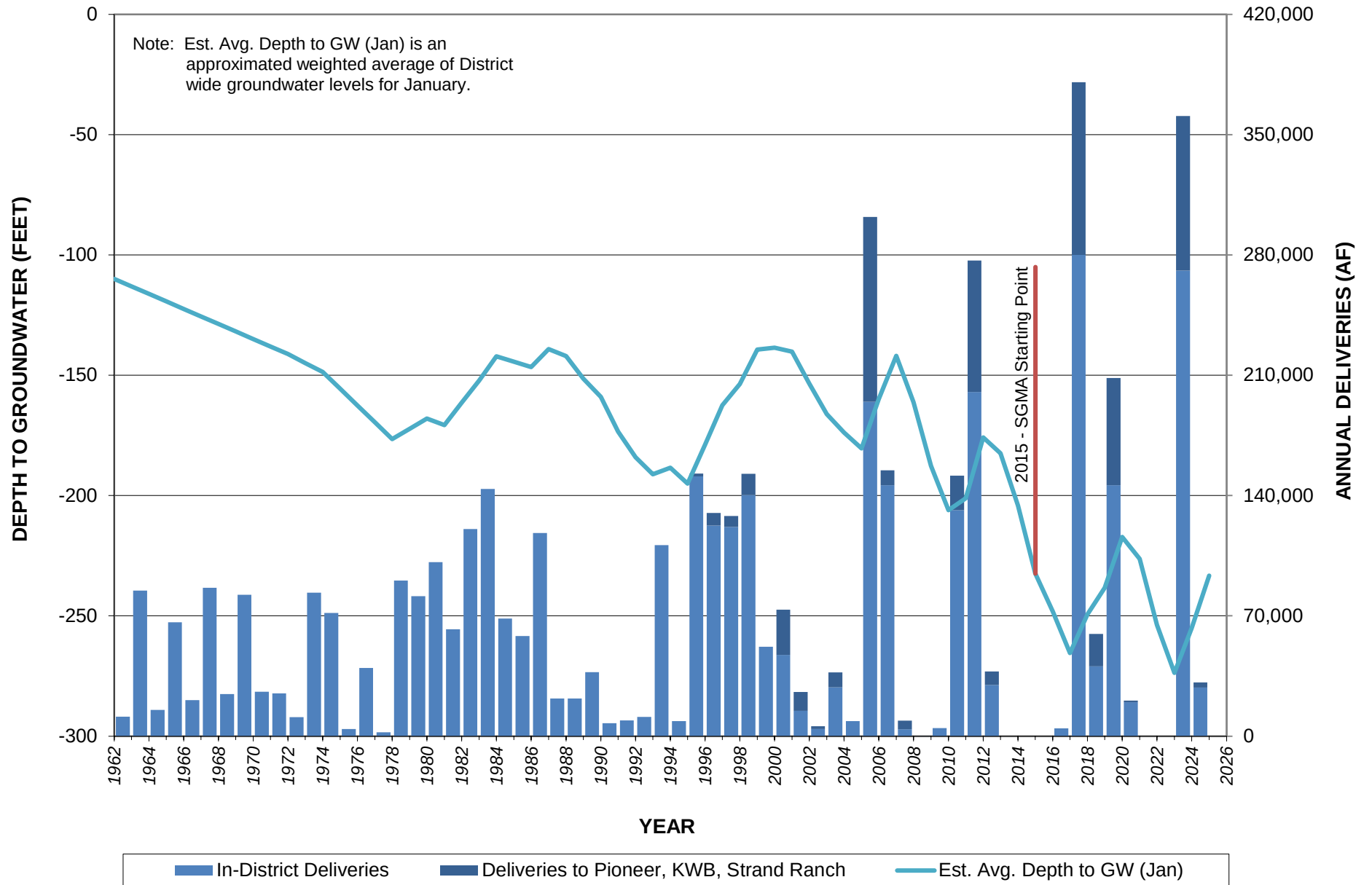


Figure 9

SECTION 7 – SUMMARY OF ACTIONS REGARDING DISTRICT BASIN MANAGEMENT OBJECTIVES

The District's Basin Management Objectives include:

- Maintaining a positive water supply balance for its landowners,
- Working cooperatively with landowners and other water agencies overlying the Kern County Subbasin on groundwater issues,
- Protecting groundwater quality, and
- Maintaining groundwater levels.

The Sustainable Groundwater Management Act (SGMA) was signed by the Governor on September 16, 2014 and includes requirements for the formation of local groundwater sustainability agencies (GSAs) that will assess local groundwater conditions.

The SGMA:

- Establishes a definition of sustainable groundwater management,
- Provides a framework for local agencies to develop and implement strategies to sustainably manage groundwater resources,
- Requires the prioritization of groundwater basins (with the most critical ranked as high priority),
- And sets a twenty-year timeline for implementation.

Sustainable groundwater management is defined in the SGMA as the “management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.”

Undesirable results include any of the following:

- Chronic lowering of groundwater levels, but excludes reductions in groundwater levels during a drought if they are offset by increases in groundwater levels during other periods,
- Significant and unreasonable reductions in groundwater storage,
- Significant and unreasonable seawater intrusion,
- Significant and unreasonable degradation of water quality,
- Significant and unreasonable land subsidence, and
- Surface water depletions that have significant and unreasonable adverse impacts on beneficial uses.

The District was a founding member of the Kern Groundwater Authority (Authority) which was formed (prior to the adoption of the SGMA) pursuant to the Groundwater Management Act (AB3030) with the purpose of developing a groundwater management plan for the Kern County Subbasin. The Authority worked with its members to develop a GSA in conformance with SGMA requirements including implementation measures to achieve groundwater sustainability. The Kern County Subbasin is shown as being a high priority basin in the June 2014 CASGEM Basin Prioritization.

The District prepared the Groundwater Sustainability Plan (GSP) Chapter for the Rosedale-Rio Bravo Management Area (RRBMA) which was included in the Kern Groundwater Authority Groundwater Sustainability Plan (KGA GSP) submitted to the DWR in January 2020. The KGA GSP received an Incomplete Determination from the DWR in January 2022. Revisions to the KGA GSP were submitted to the DWR in July 2022. The DWR responded with a subsequent Inadequate Status determination in March 2023. On August 9, 2023, the District provided a Notice of Intent to Prepare a Groundwater Sustainability Plan for lands within its boundaries covering a portion of the Kern County Subbasin and formed the RRBWSD GSA. As a part its implementation of the GSP, the District prepared a 2024 Annual

Report for the RRBWSD GSA and engaged in significant GSP related studies in 2024. A Groundwater Sustainability Plan for the Kern County Subbasin Groundwater Sustainability Agencies was submitted to SWRCB in June 2024 and adopted in December 2024.

The District's GSP Chapter for the RRBMA included measurable objectives and milestones to achieve sustainability by 2040 in accordance with the timeline established for SGMA milestones (from the Water Education Foundation Handbook, 2015) provided in **Appendix 5**. Also provided in **Appendix 5** are excerpts from the Kern County Subbasin Groundwater Sustainability Plans Sixth Annual Report Water Year 2024 relative to implementation progress for the RRBWSD GSA. GSP implementation status through Water Year 2024 is summarized below.

RRBWSD GSA groundwater levels trends sloped generally upwards because of the historical wet year in 2023. Water levels in the District's monitoring well network increased by an average of about 25 feet from Fall 2023 to Fall 2024. No exceedances occurred in 2024 within the RRBWSD GSA.

The District monitored eleven groundwater wells within the RRBWSD GSA for groundwater quality as part of its SGMA reporting. For 2024, the constituents of concern included Total Dissolved Solids (TDS), Chloride, Nitrate (as NO₃), and Arsenic. Groundwater quality data is sourced from publicly available data from the Groundwater Ambient Monitoring and Assessment (GAMA) Program, Kern Fan Monitoring Committee's winter and spring sampling events, and RRBWSD GSA's in-house monitoring efforts (see **Appendix 3**). Minimum Thresholds were defined as levels exceeding the current MLC or a 10% increase over the 2015-2020 values for wells with historically high constituent concentrations. No exceedances were reported in the 2024 reporting period.

Looking ahead, as part of the revised Subbasin GSP, the RRBWSD GSA will transition to a network of four representative monitoring wells: Enos Shallow, Greeley Shallow, RRBWSD Shop Shallow, and Frito Lay #1. The list of constituents of concern for this monitoring network will be expanded to include 1,2,3,-TCP, Arsenic, Nitrate (as NO₃ and NO₂), TDS, and Uranium.

The RRBWSD GSA has continued to make progress towards implementing several of its planned GSP Projects and Management Actions during 2024 including:

- Enns Basin Improvement Project (McCaslin Ponds)
- Onyx Ranch Project
- Kern Fan Groundwater Storage Project
- Western Rosedale Lands In-Lieu Service Area Project
- Ten Section Project
- Water Charge Demand Reduction
- RRBWL (White Land) Water Supplies and Demand Imbalance Reduction
- RRBWSD 3rd Party Recharge and Storage Program.

The District is committed to maintaining sustainable groundwater conditions for its landowners. The District continues to pursue options to reduce water demands, obtain additional water supplies, and protect its groundwater resources.

The District's ongoing existing activities and planned actions regarding groundwater management are summarized in **Table 5**.

Table 5
Rosedale-Rio Bravo Water Storage District
Management Action Summary – 2024 District Operations Report

Existing Management Actions	GMP Component Area(s)	Comments
Maintain District Website	- Stakeholder Involvement - Groundwater Sustainability and Operations	Website updated regularly.
Conduct Landowner Meetings	- Stakeholder Involvement - Groundwater Sustainability and Operations	Three Stakeholder Advisory Committee meetings were held during 2024 as a part of the GSP management actions.
Participation in Kern Fan and Semitropic Monitoring Committees	- Stakeholder Involvement - Monitoring Programs - Groundwater Resource Protection - Groundwater Planning and Management	Committee meetings are held on a regular basis.
KCWA Participation	- Stakeholder Involvement - Monitoring Programs - Groundwater Sustainability and Operations - Groundwater Planning and Management	Ongoing participation in KCWA activities.
Cooperation with Banking Partners	- Stakeholder Involvement - Monitoring Programs - Groundwater Sustainability and Operations - Groundwater Planning and Management	Coordination of operations to maximize use of available water supplies.
Cooperation with Kern County Environmental Health, DWR, RWQCB and other regulatory agencies	- Stakeholder Involvement - Monitoring Programs - Groundwater Resource Protection	Work with Kern County Environmental Health to convert abandoned wells to monitoring wells. Provide water level information to DWR and KCWA.
Participation in Kern River Watershed Coalition Authority, Kern County Groundwater Management Committee, Kern IRWMG, Kern River Fan Group and other similar agencies	- Stakeholder Involvement - Groundwater Resource Protection - Groundwater Sustainability and Operations - Groundwater Planning and Management	Ongoing work to address issues of common concern for the groundwater basin and for the development of a GSP in accordance with SGMA requirements.
Cooperation with Urban Water Purveyors	- Stakeholder Involvement - Monitoring Programs - Groundwater Resource Protection - Groundwater Sustainability and Operations	Review of groundwater quality and groundwater level data. Review of Urban Water Management Plans. Evaluated purveyor and private water system consolidations.
Monitor groundwater levels in District.	Monitoring Programs	Measured groundwater levels in 17 wells monthly.

Existing Management Actions	GMP Component Area(s)	Comments
Use of District Groundwater Model	Monitoring Programs	Model is being used to analyze proposed recharge and recovery programs, predict water levels, and evaluate and mitigate impacts.
Review of groundwater level monitoring network	Monitoring Programs	Monitoring well network is reviewed and updated as data gap locations are identified.
Add new wells to network	Monitoring Programs	New monitoring wells are added to the network to replace wells that are lost.
Review of available groundwater quality data	- Monitoring Programs - Groundwater Resource Protection	Review of groundwater quality data was conducted during 2024.
Groundwater level monitoring protocols	Monitoring Programs	Followed when monitoring groundwater levels in wells.
Flow measurement in District facilities	Monitoring Programs	Surface and return water flows are measured into and through the District's facilities daily.
Review of surface water quality data	- Monitoring Programs - Groundwater Resource Protection	Surface water quality is monitored by the DWR, City of Bakersfield, and KCWA.
Encourage landowner compliance with water well standards	- Groundwater Resource Protection - Groundwater Sustainability and Operations	Work with Kern County Environmental Health to provide information to landowners on proper abandonment of wells.
Maintenance of channels and basins	- Groundwater Resource Protection - Groundwater Sustainability and Operations	Routine maintenance operations were conducted during 2024.
Review of development plans, land use plans, and environmental documents	- Groundwater Resource Protection - Groundwater Planning and Management	Comments are made to planning agencies as appropriate.
Require fencing with development	Groundwater Resource Protection	Comments are made to planning agencies as land development occurs.
Protect facilities from urban and agricultural storm water runoff	Groundwater Resource Protection	Performed ongoing maintenance of channel and basin levees.
Encourage proper design and operation of storm drain, septic and wastewater systems	Groundwater Resource Protection	Comments are made to planning agencies as appropriate.

Existing Management Actions	GMP Component Area(s)	Comments
Participate in Irrigated Lands Regulatory Program	- Groundwater Resource Protection - Groundwater Sustainability and Operations	Active in development of the Kern Watershed Coalition Authority. Encouraged landowner involvement in process
Encourage proper use of pesticides, herbicides and fertilizers	- Groundwater Resource Protection - Groundwater Sustainability and Operations	Continued support of Mobile Lab and other educational efforts.
Operate project facilities to maximize conjunctive use of available water supplies	Groundwater Sustainability and Operations	Made use of operational exchanges and coordination with other water agencies.
Encourage water conservation measures	- Stakeholder Involvement - Groundwater Sustainability and Operations	Continued support of Mobile Lab and other educational efforts.
Protect potential recharge areas from development	- Groundwater Resource Protection - Groundwater Planning and Management	Recharge areas are protected from development.
Notice availability of Groundwater Reports	- Stakeholder Involvement - Groundwater Planning and Management	Reports are available on the District's website.
Monitoring programs for groundwater banking program operations	- Monitoring Programs - Groundwater Resource Protection	Monitoring programs were followed for banking program operations.
Groundwater quality monitoring program protocols	Monitoring Programs	Followed standard groundwater quality test methods and procedures.
Program funding	Groundwater Planning and Management	Service charges and banking program proceeds are used to fund management actions.
District Operations Report	Groundwater Planning and Management	Report prepared for 2024.
Groundwater Advisory Committee meetings	- Stakeholder Involvement - Groundwater Sustainability and Operations - Groundwater Planning and Management	Conduct annual meeting to discuss District Operations Report.
Update of Groundwater Model	Monitoring Programs	Update model as necessary to include new facilities and programs.
Add Shallow Depth Piezometers	Monitoring Programs	Shallow depth piezometers are planned adjacent to Allen Road basins.
District Wellhead protection	Groundwater Resource Protection	Protect wellhead during operations and maintenance of District wells.

Existing Management Actions	GMP Component Area(s)	Comments
Prevention of Saline Water Intrusion	Groundwater Resource Protection	Monitor saline water intrusion in adjacent areas.
Acquire additional recharge land	- Groundwater Sustainability and Operations - Groundwater Planning and Management	Identify potential recharge land for possible purchase.
Investigate future use of reclaimed water	Groundwater Sustainability and Operations	Work with NORSD to investigate potential recharge of reclaimed water.
GSP Plan Chapter for the RRBMA	Groundwater Planning and Management	Annual Report for 2024 prepared for RRBMA
Investigate grant funding options	Groundwater Planning and Management	Applied for Water Storage Investment Program Grant funding in conjunction with IRWD for Kern Fan Groundwater Storage Project

SECTION 8 – SUMMARY OF RRBWSD BANKING PROGRAM CEQA DOCUMENTS

Groundwater Storage, Banking, Exchange, Extraction and Conjunctive use Program Master EIR (2000) SCH#2000101059

- Up to 100,000 AFY recharge and over 300,000 AF of groundwater storage volume used for programs.
- Construction of 15 to 20 wells, extraction capacity of 35,000 to 45,000 AFY.
- Recharge in advance of extraction. Water supplies from SWP, Kern River, Friant-Kern Canal, or other sources.
- Program goal that for each acre foot of water extracted, one acre foot would remain in District (2:1 program).
- Expects that a MOU will be entered into and a monitoring committee will be established.
- States that as details of each project are defined, site specific environmental reviews per CEQA will be conducted.

Master EIR Addendum No. 1

- The program consists of proposed projects that will increase groundwater supply within the Rosedale-Rio Bravo Water Storage District. Future projects include wells and pipelines to extract and convey banked water from the District's Goose Lake Slough area and recharge basins to the Cross Valley Canal.
- Sources of water include the Kern River, State Water Project, and Friant-Kern Canal water.
- Available storage capacity underlying the District is 930,000 AF (per "Determination of Aquifer Storage Capacity" by Sierra Scientific Services, January 20, 2003).

Master EIR Addendum No. 2

- Addendum No. 2 is intended to update the Master FEIR with respect to available storage capacity (1,756,900 AF) and maximum recharge capacity (234,549 AFY) available to Rosedale for Project and other purposes as of the date hereof.
- The extraction capacity described in the Master FEIR has been fully subscribed by one or more projects relying thereon. The Master FEIR contemplated construction of up to 20 wells to provide extraction recovery capacity of up to 45,000 AFY. The extraction recovery capacity identified in the Master FEIR has been fully subscribed as follows: Kern-Tulare/Rag Gulch project (7,500 AFY); Arvin-Edison/Delano-Earlimart project (10,000 AFY); GLC sale project/Castaic Lake Water Agency Banking project (20,000 AFY); Rosedale/Buena Vista Project (8,250 AFY).

Master EIR Addendum No. 3 "Master Integrated"

- Within the confines of the broad parameters described in Addendum No. 3, Rosedale is free to make operational decisions based on best management practices. This includes the interim use of surplus capacity in existing facilities to accommodate emergency programs, short-term (five years or less) programs, and spot market opportunities. Any such operational decision instituted under the auspices of the Master FEIR would not infringe upon existing contractual commitments, would not expand the annual limits for storage, recharge or recovery, and would comply with the following stipulations:
 - A contractor wanting to transfer, store or exchange water would negotiate and execute a contract for the delivery of water with Rosedale for recharge in the Rosedale facilities.
 - The participant would negotiate and execute an exchange/water supply agreement with Rosedale that would provide for the delivery of the water and for the extraction or exchange of the water when the water is returned to the participating entity.
 - Water would be returned to the contractors via the CVC, SWP, or a combination of the two using Rosedale's entitlement or other capacities available for the proposed projects. Actual operations would be defined as individual projects are developed.
 - The entity receiving water would put that water to beneficial use. Water stored in the groundwater aquifer underlying Rosedale would be extracted for delivery to the participants through wells, pipelines and canals to the CVC. Alternatively, Rosedale could agree to a transfer of its SWP entitlement, or other water supplies available to Rosedale, and transfer the banked water to Rosedale's account underground thereby eliminating the need for any direct extraction within Rosedale.

BVWSD/RRBWSD Water Banking and Recovery Program EIR (2002) SCH#2002041044

- 25% of groundwater banking from existing accounts in BVWSD.
- 75% from accounts developed primarily from recharge of BVWSD Kern River high flow water in RRBWSD.
- 100% of recovery for first two years will be from previously banked water in BVWSD. Thereafter, recovery will be made jointly by RRBWSD and BVWSD from the previously banked accounts and the accounts to be developed through recharge within RRBWSD.
- More than 80,000 AFY could be recharged in RRBWSD. Recovery/delivery may be more than 20,000 AFY.
- Primary method of recovery/delivery will be via SWP exchange. RRBWSD to construct three additional extraction wells, and possibly replace two existing wells (Westside Well Field).
- Maximum program storage of 200,000 AF in RRBWSD.
- New recharge basins to be constructed for 200-300 cfs additional capacity (includes Paul Enns and Fanucchi basins).

Banking Partner	Type	Max Recharge ¹ (AFY)	Max Extraction ² (AFY)	# of Wells	Max Storage ³ (AF)
BVWSD (SCVWA)	Sale	80,000	15,000	3	200,000

¹Maximum recharge from BVWSD in RRBWSD.

²Maximum return from RRBWSD (primarily from SWP exchange). SCVWA recovery by contract is 8,250 AFY.

³Maximum storage in RRBWSD.

GLC Banking and Recovery Program Negative Declaration (2003) SCH#2003091083

- Development of recharge areas for total District capacity of 600 cfs
- Sale of total of 220,000 AF to GLC according to buildup schedule, maximum delivery of 9,500 AFY.
- Maximum delivery of 20,000 AFY with MWD exchange.
- 10 additional extraction wells to be constructed (8 new and replacement, Westside Well Field).

GLC Program Addendum No. 1 to Negative Declaration

- Increases the total sale quantity to 262,500 AF if sufficient water supplies are available.

Kern Tulare and Rag Gulch Groundwater Banking- Allen Road Wellfield (AEWSD) Negative Declarations (2001) SCH#2001111160

- Construction of a total of 7 extraction wells (20,500 AFY).
- 2:1 Groundwater Banking Programs
- Provides for the construction of a monitoring well.

Banking Partner	Type	Max Recharge (AFY)	Max Extraction (AFY)	# of Wells	Max Storage ⁵ (AF)
Kern-Tulare/Rag Gulch WD	2:1 Banking	20,000	10,000	3	50,000
Arvin-Edison WSD	2:1 Banking	30,000	10,500	4	90,000
Castaic Lake WA (SCVWA)	Banking	20,000	20,000	8	100,000
GLC (CVWD)	Sale	N/A	9,500 ⁴	3	N/A
Total		70,000	50,000	18	240,000

⁴ Water will be sent to GLC at RRBWSD's discretion. Deliveries will be made to GLC by exchange of SWP supplies in above normal years for high flow Kern River water previously brought to RRBWSD. Pumping would not occur if a positive balance did not exist within the RRBWSD. Pumping would also be limited to keep the total pumping for the programs covered by the Master EIR under 45,000 AF in any one year (pumping in excess of 45,000 AFY would require additional CEQA).

⁵ Maximum storage for Kern-Tulare and Arvin Edison estimated based on operations studies.

Note: Negative Declarations were prepared for the Kern-Tulare, Arvin-Edison, and GLC programs. The facilities needed for the Castaic Lake Program were included in these previous environmental reviews. The Negative Declaration for the GLC program included the construction of approximately 10 wells (20,000 AFY) and the acquisition and improvement of additional recharge lands (to bring RRBWSD recharge capacity to 600 cfs).

Delano-Earlimart Irrigation District's Water Banking Program with Rosedale-Rio Bravo Water Storage District Negative Declaration (2009) SCH#2009071108

- 2:1 Groundwater Banking Program
- No construction of new facilities

Banking Partner	Type	Max Recharge (AFY)	Max Recovery (AFY)	# of Wells	Max Storage (AF)
Delano-Earlimart ID (DEID)	2:1 Banking	80,000	10,000	0	100,000

Western Rosedale In-Lieu Service Area Recharge Ponds Expansion Mitigated Negative Declaration (2014) SCH#2014101016

- Construction and operation of up to ten (10) miles of water conveyance pipelines; the pipelines would extend from the East Side Canal to various locations within the In-Lieu Service Area.
- Construction and operation of two recharge ponds, totaling approximately 55 acres.
- The maximum recharge under the Master FEIR shall be increased by up to 15,000 AFY through the operation of the Project. This includes approximately 10,000 AF through in-lieu recharge and direct recharge in the existing sump, and 5,000 AF through direct recharge in the two proposed groundwater recharge ponds adjacent to the existing Westside Recharge Area.

Strand Ranch Integrated Banking Project EIR (Not Tiered from Master EIR) (2007) SCH#2007041080

- Rosedale and IRWD propose to develop groundwater banking facilities on the Strand Ranch for use by both districts.
- Facilities would be constructed to recharge and recover up to 17,500 AFY for IRWD. When not in use by IRWD, the facilities could also be used by Rosedale to serve its existing commitments.
- IRWD would be provided a cumulative maximum banking allotment (maximum storage capacity) within Rosedale's Conjunctive Use Program of 50,000 AF.
- All groundwater banking facilities on the Strand Ranch would be owned by IRWD and operated and maintained by Rosedale for the duration of the proposed project.

Stockdale Integrated Banking Project EIR (Not Tiered from Master EIR) (2015) SCH#2013091076

- Construction of Stockdale East, Stockdale West and the Central Intake Pipeline.
- Establishes storage for Stockdale West of approximately 26,000 AF and Stockdale East of approximately 18,400 AF.
- IRWD would have access to an additional 50,000 AF of storage in Rosedale's Conjunctive Use Program.
- Recharge capacities for the Stockdale Properties is approximately 27,100 AFY for Stockdale West and approximately 19,000 AFY for Stockdale East.
- Recovery of approximately 11,250 AFY at Stockdale West and 7,500 AFY at Stockdale East.
- A third proximate site of up to 640 acres may have recharge capacities of approximately 52,200 AFY and recovery of approximately 22,500 AFY was covered as programmatic.
- Central Intake Pipeline would connect the Goose Lake Slough to the CVC and recharge water to Stockdale East and the existing Superior Basins, and for delivery of water pumped from Stockdale East and Superior Basins to the CVC.

Addendum No. 1 to Stockdale Integrated Banking Project EIR (2020)

- Construction and operation of recharge ponds on four parcels totaling approximately 315 acres. These facilities expand the District's maximum annual recharge by 61,000 AFY to 290,000 AFY and increase the maximum banking capacity to 700,000 AF (Note: the referenced maximum annual recharge and maximum banking capacity did not include the DEID banking program Negative Declaration).

Addendum No. 2 to the Stockdale Integrated Banking Project EIR (2022)

- This Addendum clarifies Addendum No. 1 and amends construction and operation of recharge ponds down to 285 acres.
- Includes the construction and operation of 3 new wells and pipelines adding about 7,500 AF of annual recovery on these properties.

A “Fallow Transfer Program” was also included in the project which takes the water savings resulting from conversion of the McCaslin property from an almond orchard to recharge facilities and allows the District to make Third Party Exchanges for water supply and/or financial payments.

Kern Fan Groundwater Storage Project EIR (2020) SCH#2020049019

- Construction of recharge ponds in two phases totaling approximately 1,300 acres. Project recharge capacity of approximately 100,000 AFY.
- Project storage available to RRBWSD and IRWD is estimated to be a minimum of 37,500 AF each.
- Twenty-five percent storage allocation (25,000 AF) to Ecosystem Benefit Pool (1:1 Exchange).
- Construction of up to 12 recovery wells on Kern Fan Project Properties with an anticipated annual recovery capacity of up to 50,000 AF.
- Construction of Kern Fan Conveyance Facilities consisting of canals and/or pipelines, pump stations, and a new turnout at the California Aqueduct with a target capacity of up to 500 cfs.

Banking Partner/Project	Type	Max Recharge (AFY)	Max Extraction (AFY)	# of Wells	Max Storage (AF)
IRWD Strand	Banking	17,500	17,500	8	50,000
IRWD Stockdale West	Banking	27,100	11,250	3	76,000
RRBWSD Stockdale East	Banking	19,000	7,500	2	18,400
RRBWSD Western Rosedale	Banking	15,000			
Addenda to Stockdale Integrated Banking Project EIR	Banking	61,000	7,500	3	115,600
Kern Fan Groundwater Storage Project	Banking	100,000	50,000	12	100,000
Total		239,600	93,750	28	360,000

Maximums per All Project Level CEQA 469,600 168,750 49 900,000

Onyx Ranch South Fork Valley Water Project (2020) SCH#2018021061

- Change in points of diversion of pre-1914 appropriative water rights from the South Fork Valley to or near the RRBWSD service area.
- Fields would be converted from intensive irrigated agriculture to non-irrigated pasture or native vegetation.
- Water supplies intended to mitigate for shortages experienced on contracted SWP supplies from the State of California.

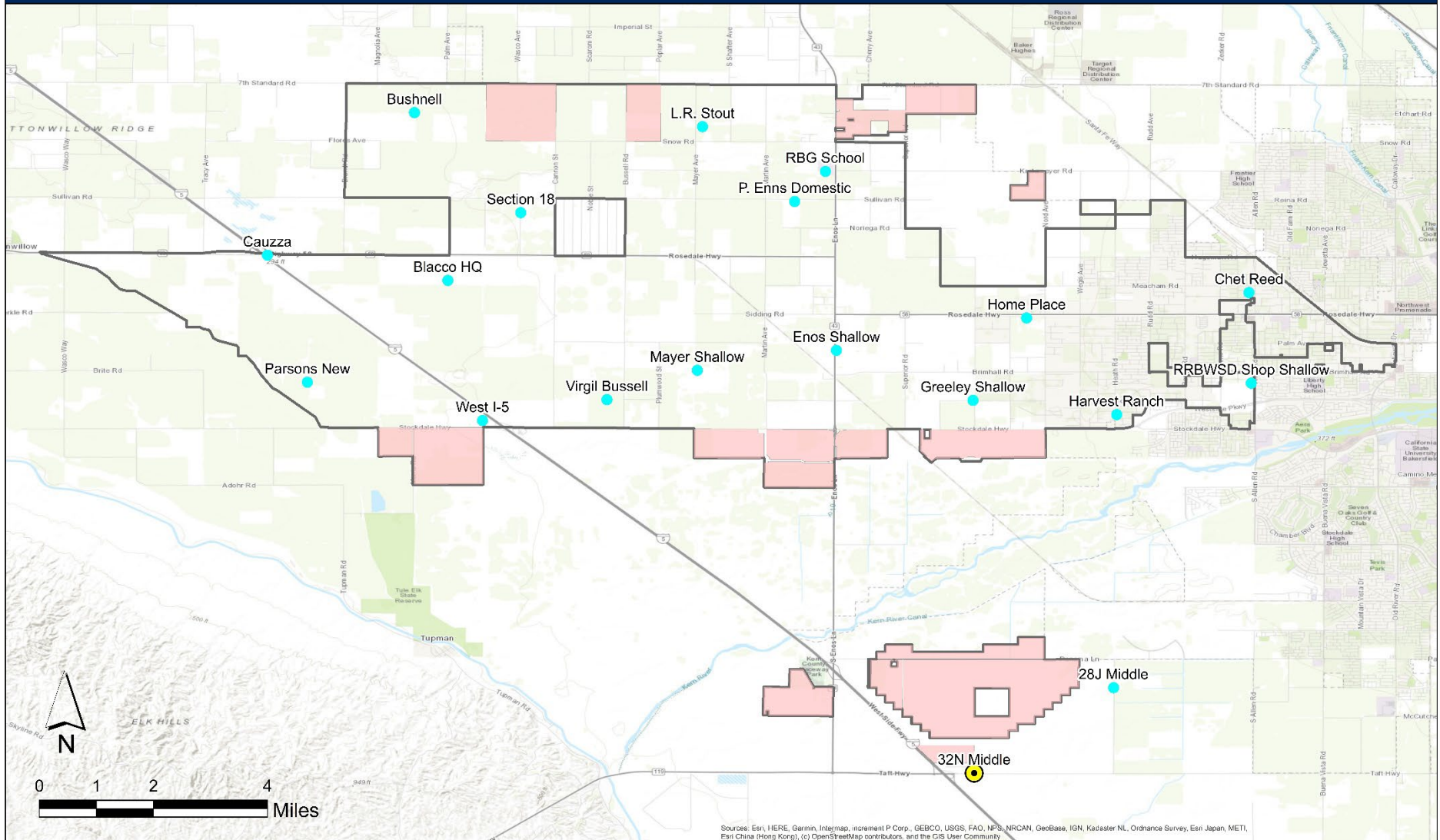
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2. Boyle Engineering Corporation, *Final Master Environmental Impact Report Groundwater Storage, Banking, Exchange, Extraction & Conjunctive Use Program Rosedale-Rio Bravo Water Storage District*, July 2001.
3. Boyle Engineering Corporation, *Rosedale-Rio Bravo Water Storage District Report on Groundwater Recharge Project*, June 1988.
4. ESA, *Rosedale-Rio Bravo Water Storage District Environmental Compliance Summary of District Operations Including Groundwater Banking and Sales Programs*, April 2011.
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6. Longley, K. E., *West Bakersfield Area Ground Water Quality Management Study Final Report*, August 1990.
7. Kern County Subbasin Groundwater Sustainability Agencies, *Kern County Subbasin Groundwater Sustainability Plan 2025 Amended Final Version*, August 2025.
8. Rosedale-Rio Bravo Water Storage District, *Groundwater Sustainability Plan Chapter for the Rosedale-Rio Bravo Management Area, Kern Groundwater Authority Groundwater Sustainability Agency*, December 12, 2019.
9. Rosedale-Rio Bravo Water Storage District, *2020 Revision Groundwater Sustainability Plan Chapter for the Rosedale-Rio Bravo Management Area, Kern Groundwater Authority Groundwater Sustainability Agency*, July 12, 2022.
10. State of California Water Resources Control Board, California Public Water Systems online database (SDWIS), <https://sdwis.waterboards.ca.gov/PDWWW/>.
11. Todd Groundwater, *Kern Subbasin Groundwater Sustainability Plans Sixth Annual Report Water Year 2024*, March 31, 2025.
12. Water Education Foundation, *The 2014 Sustainable Groundwater Management Act: A Handbook to Understanding and Implementing the Law*, 2015.

Appendix 1

Groundwater Level Hydrographs

Rosedale-Rio Bravo Water Storage District GSA Groundwater Level Monitoring Network Bakersfield, CA



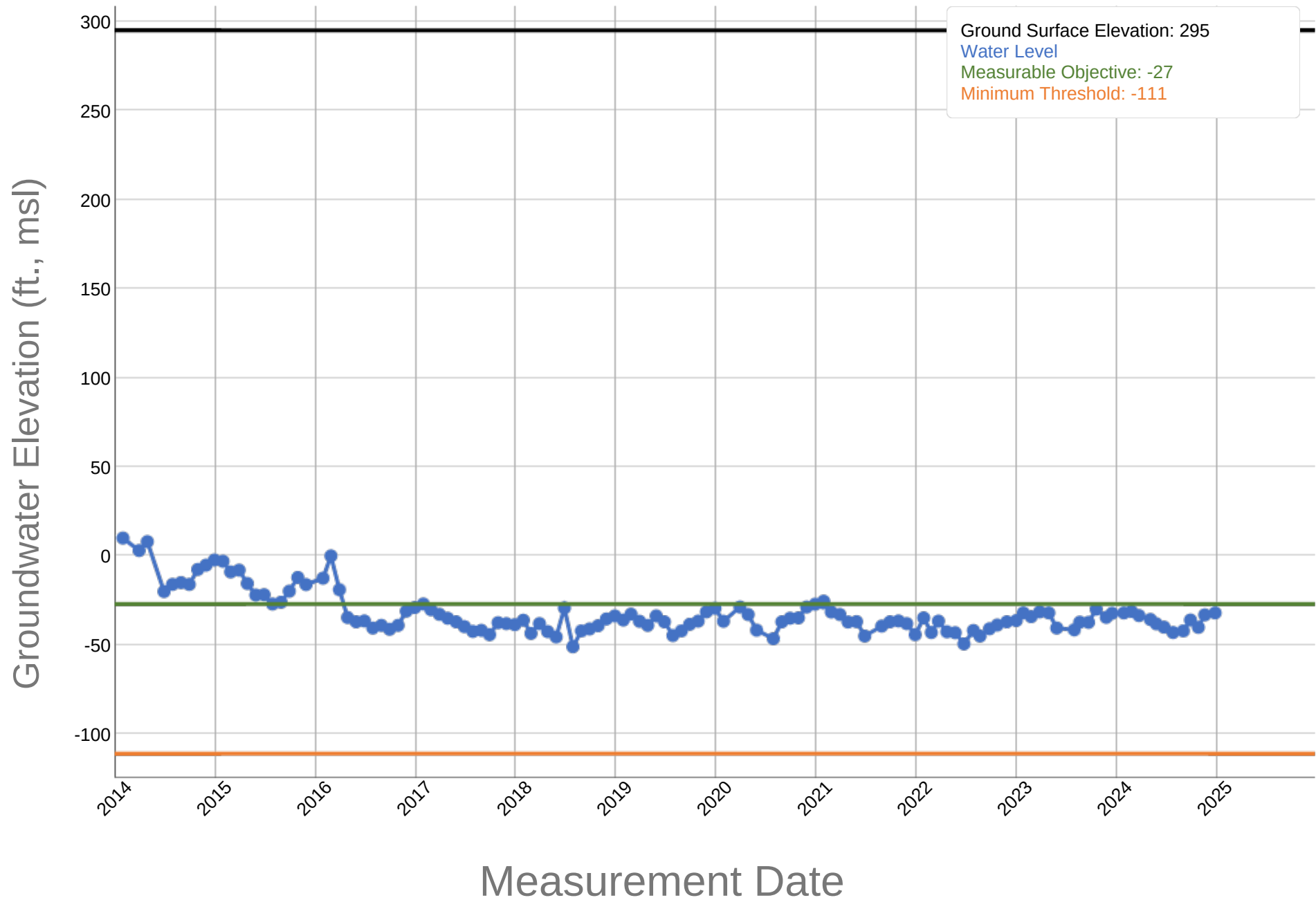
Legend

- Water Level Representative Monitoring Wells (RMWs)
- RRBWSD GSA White Lands
- RRBWSD GSA Boundary

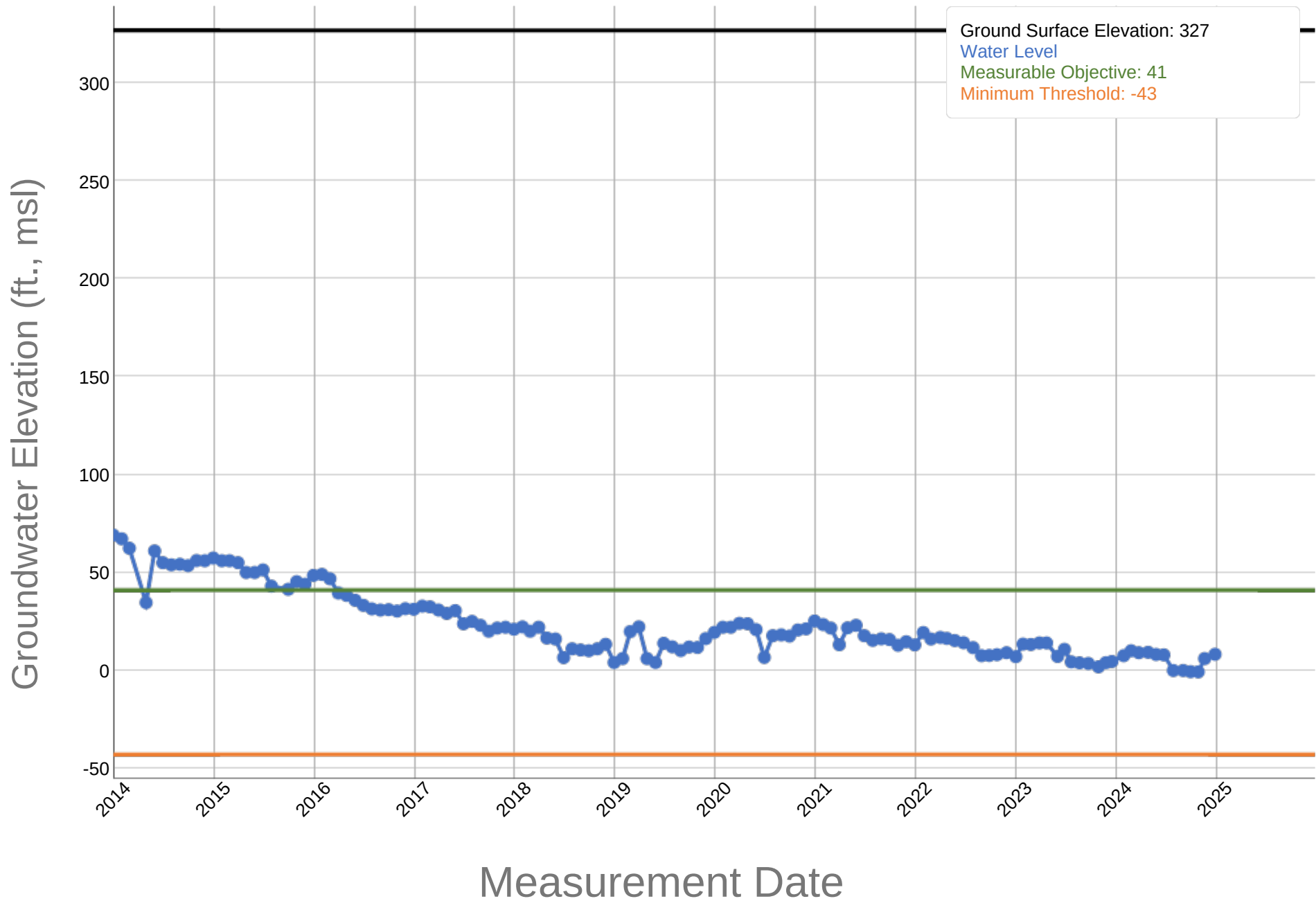
RRB ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT

RRBWSD
GSA
ROSEDALE RIO BRAVO WATER STORAGE DISTRICT
GROUNDWATER SUSTAINABILITY AGENCY

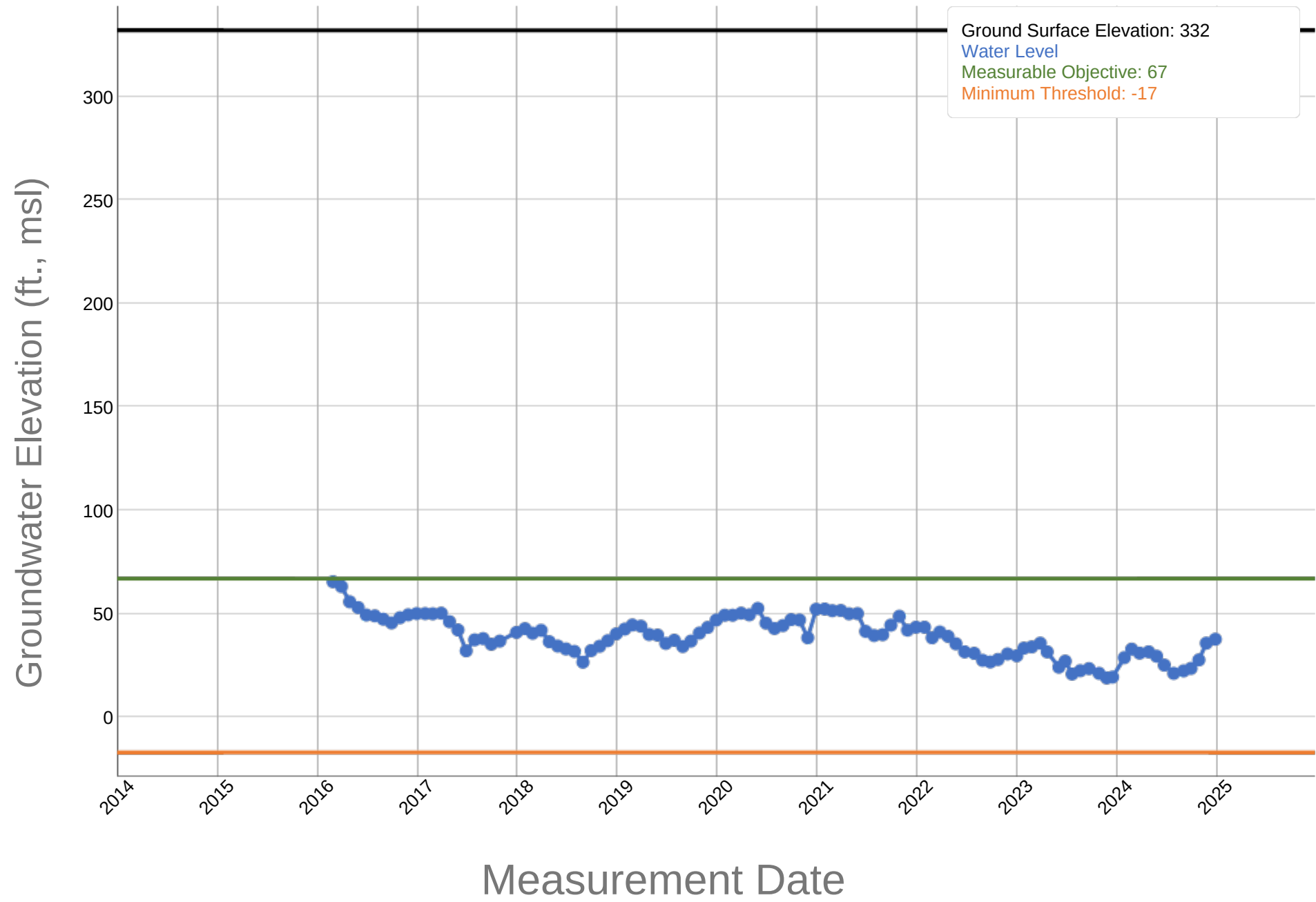
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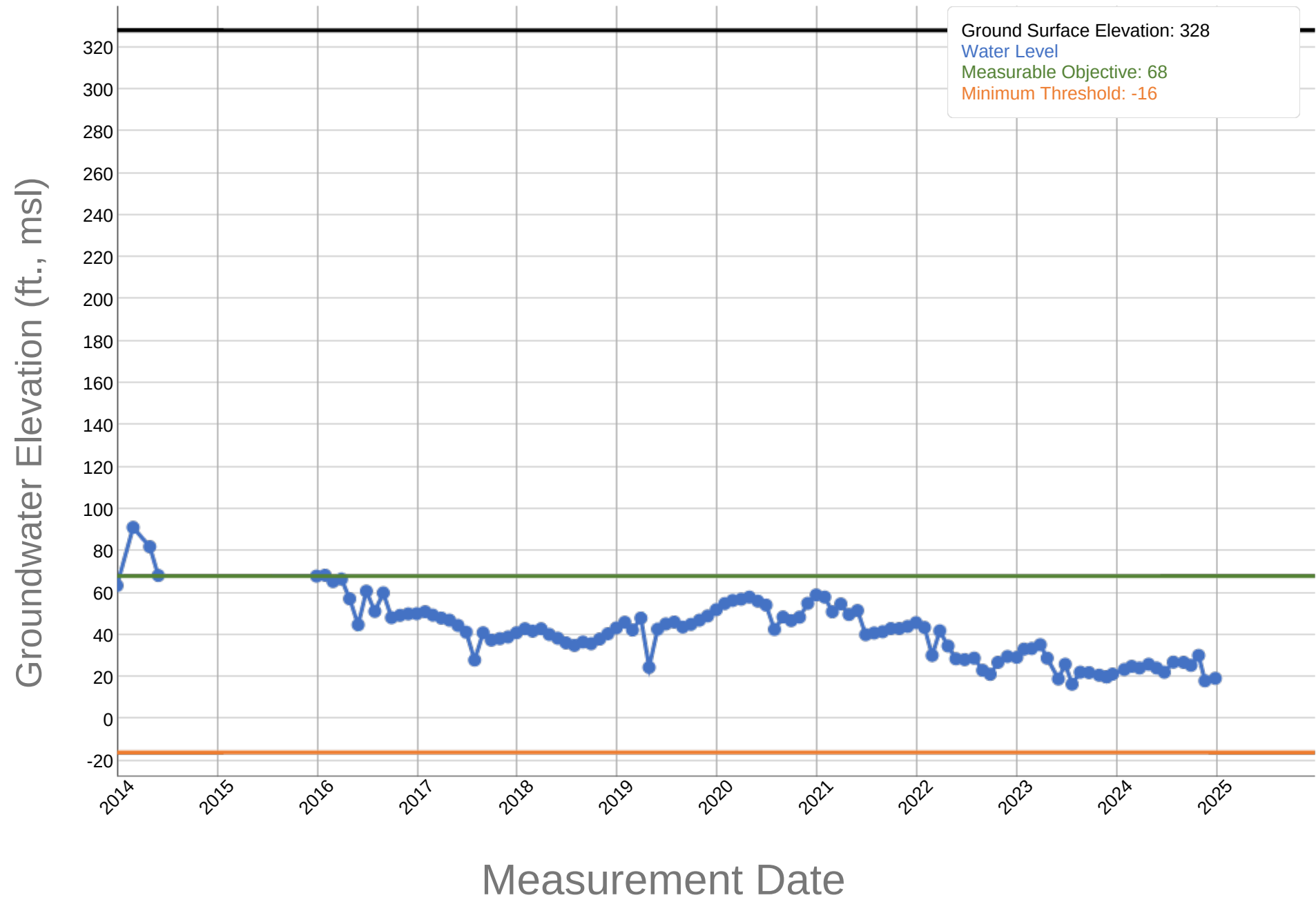
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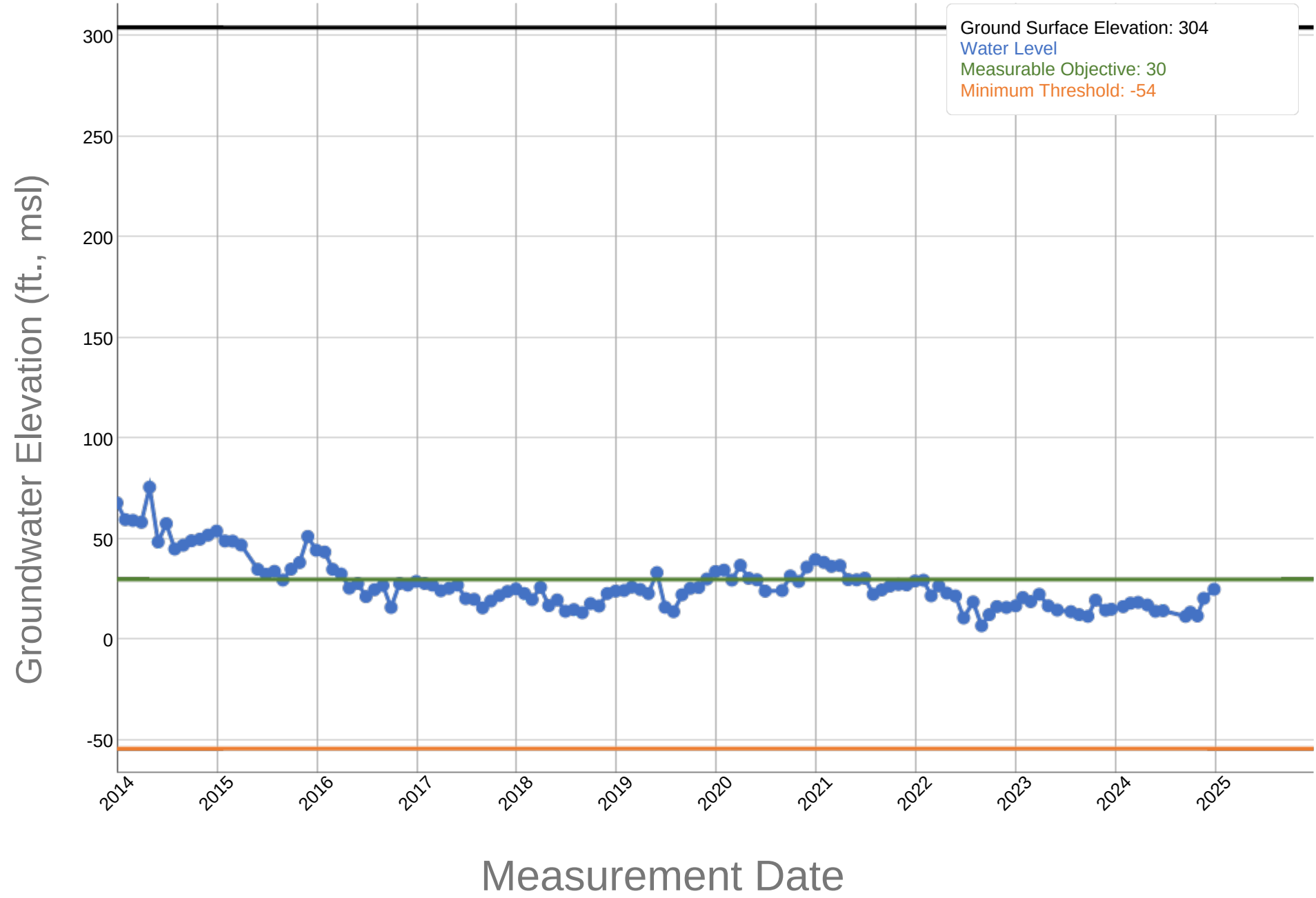
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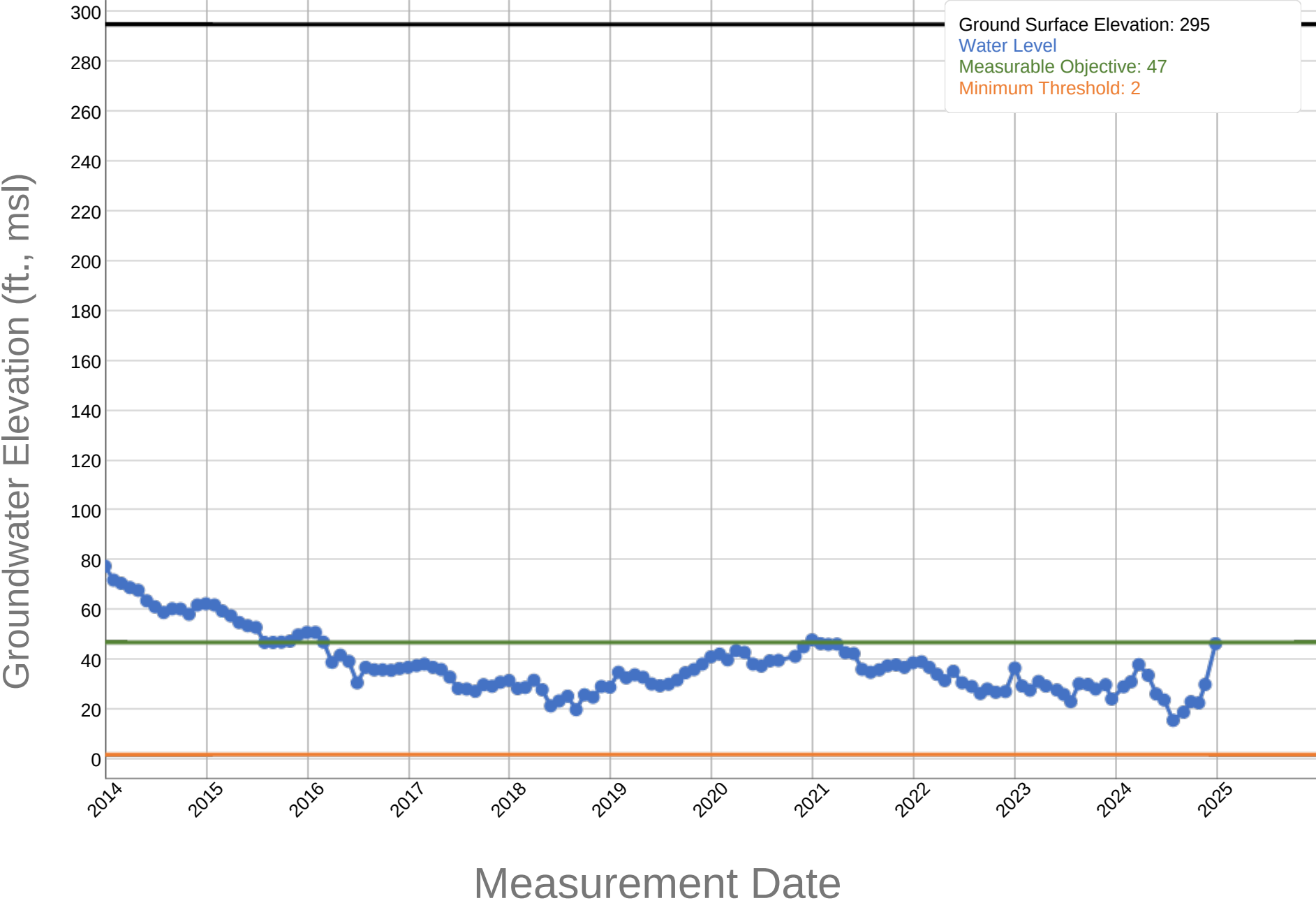
Rosedale-Rio Bravo Water Storage District - P. Enns Domestic - 354121N1192623W001



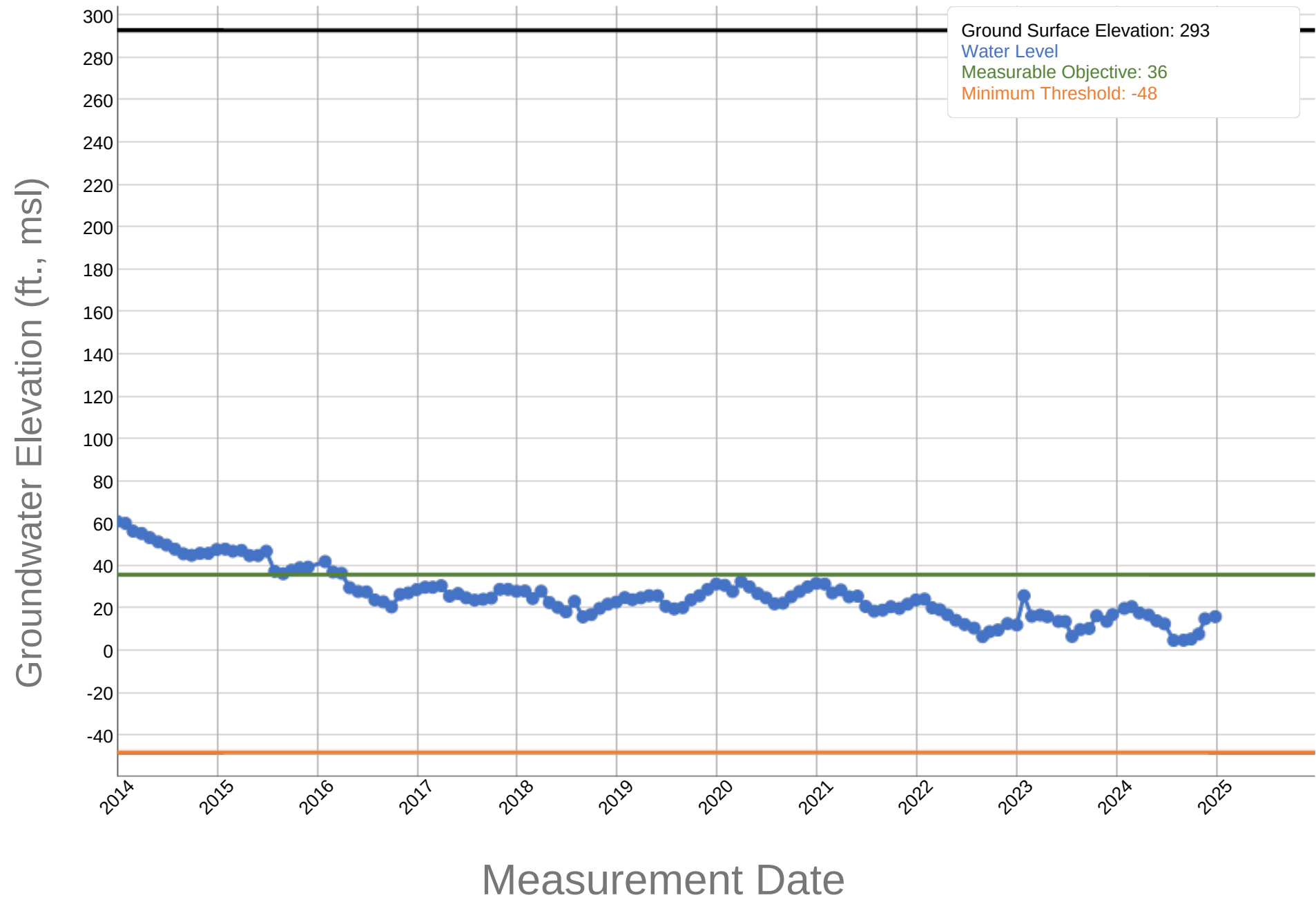
Rosedale-Rio Bravo Water Storage District - Section 18 - 354090N1193318W001



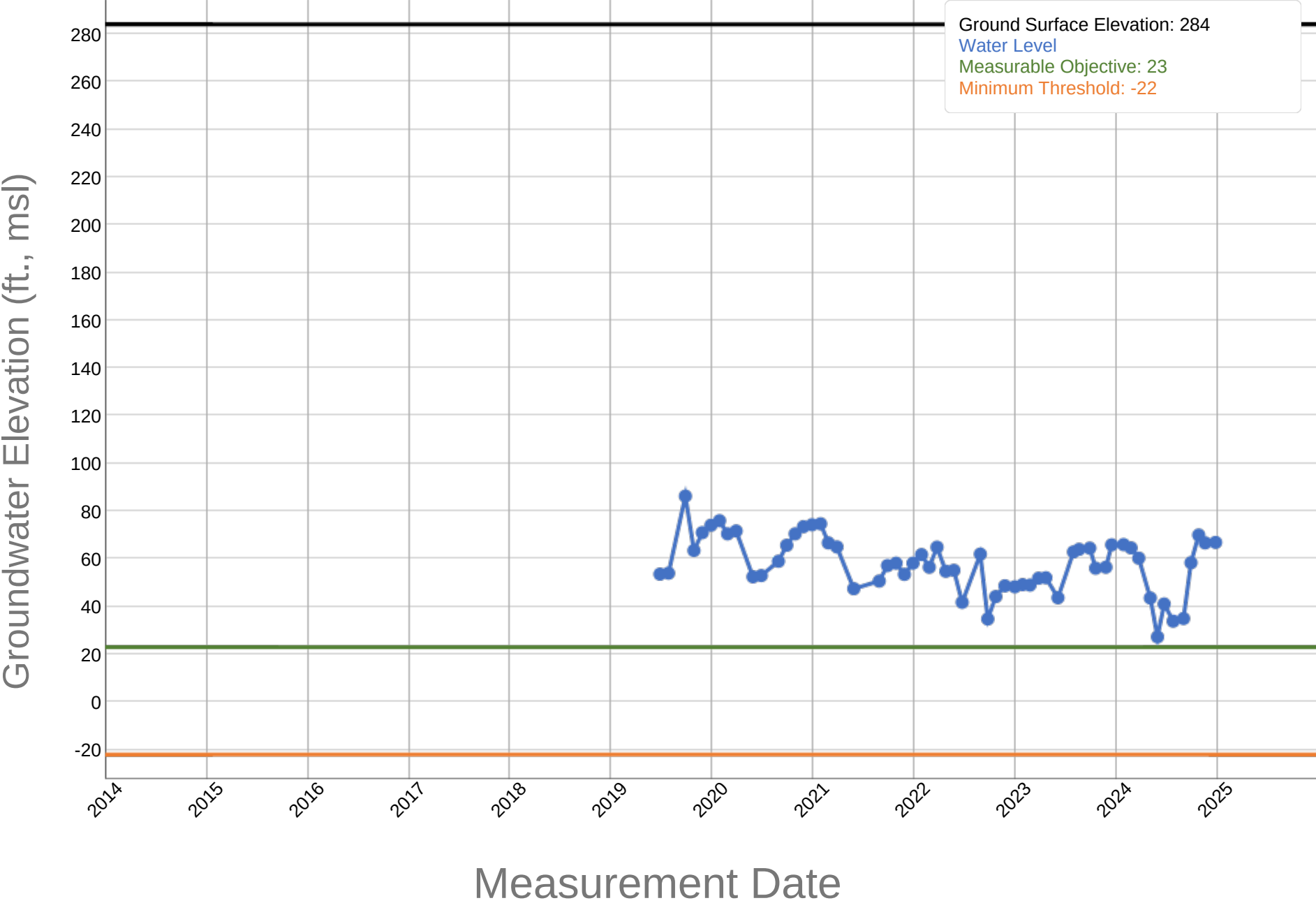
Rosedale-Rio Bravo Water Storage District - Blacco HQ - 353915N1193454W001



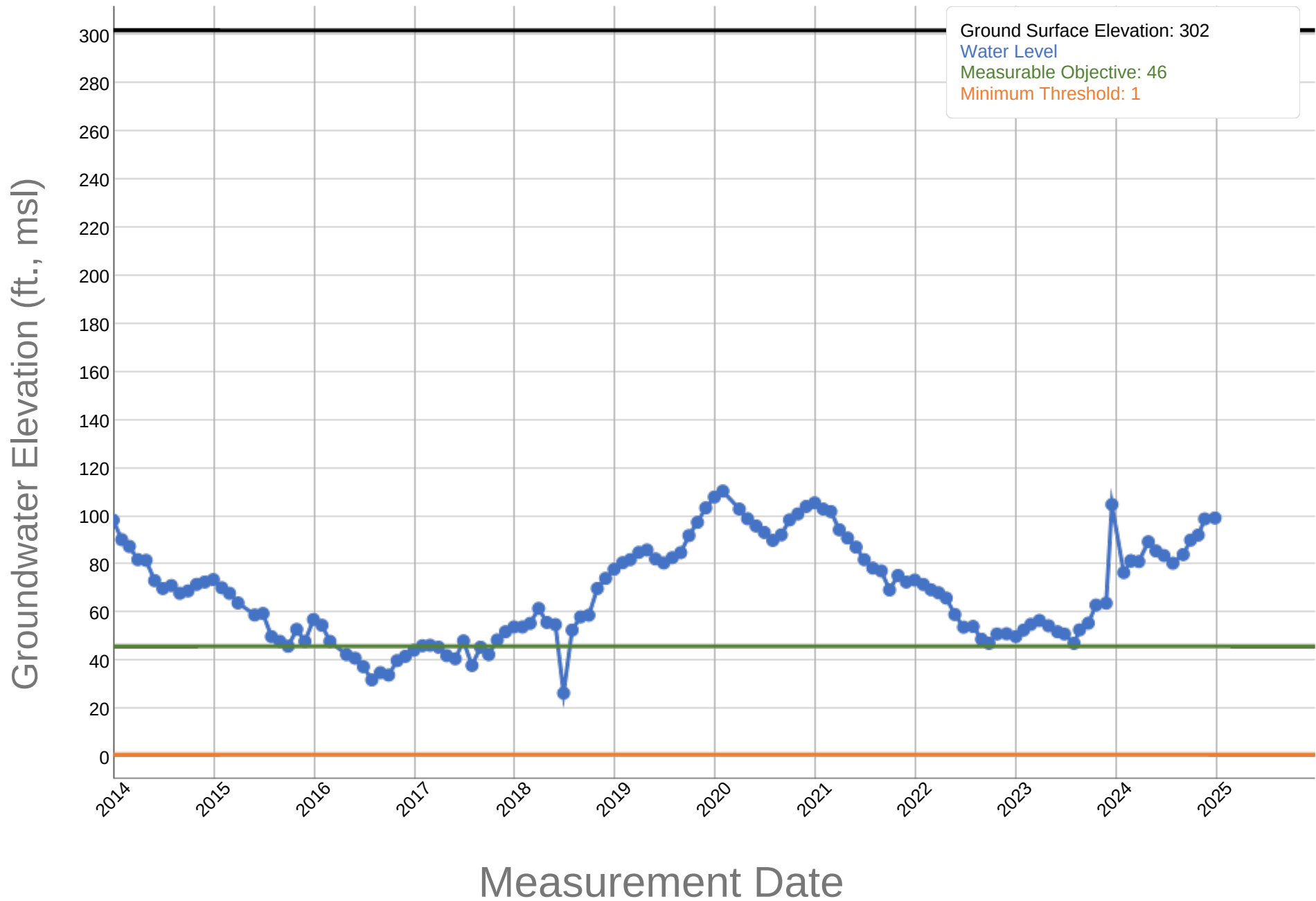
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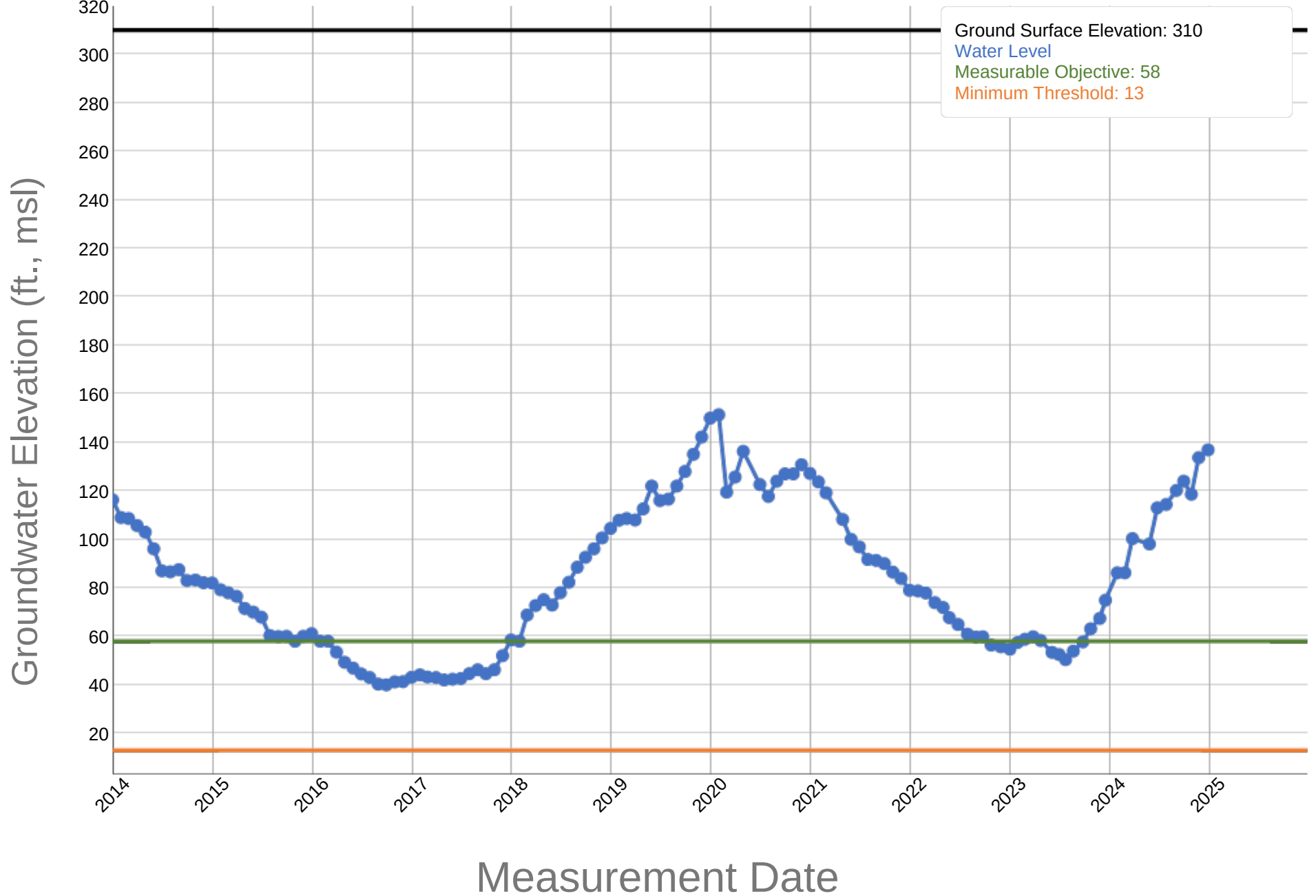
Rosedale-Rio Bravo Water Storage District - Parsons New - 353660N1193859W001



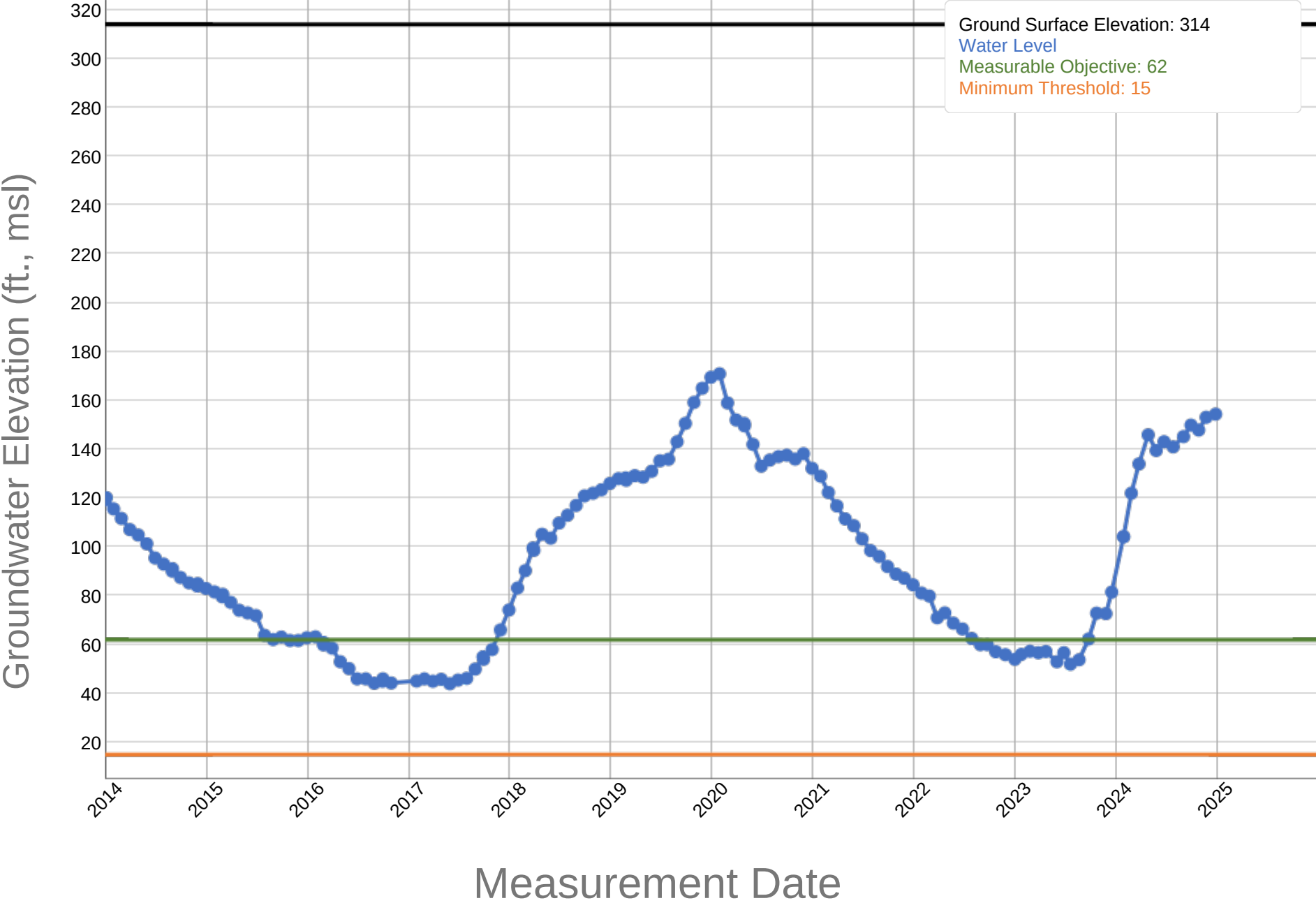
Rosedale-Rio Bravo Water Storage District - West I-5 - 353564N1193412W001



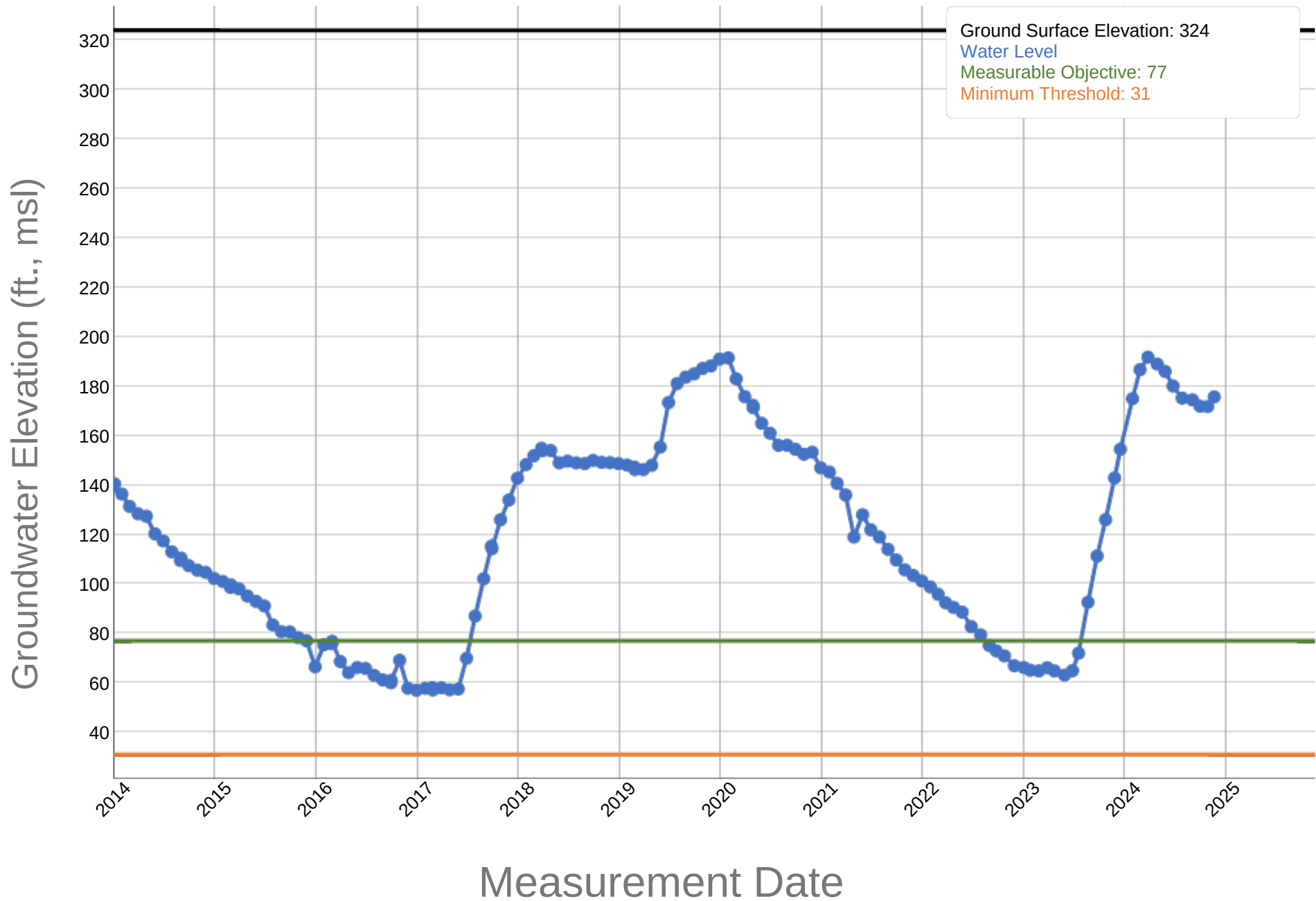
Rosedale-Rio Bravo Water Storage District - Virgil Bussell - 353619N1193099W001



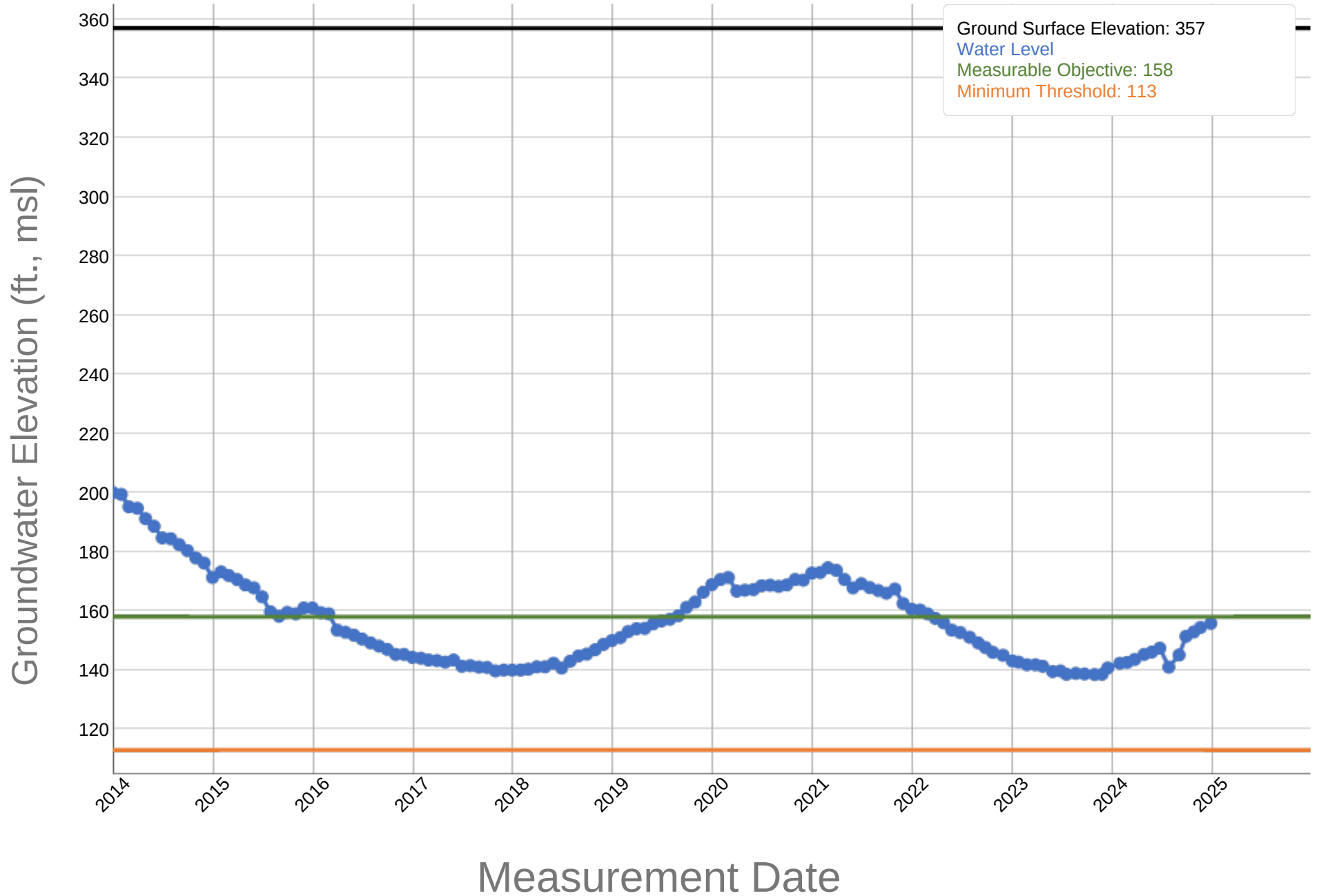
Rosedale-Rio Bravo Water Storage District - 27N Mayer - 353699N1192856W002



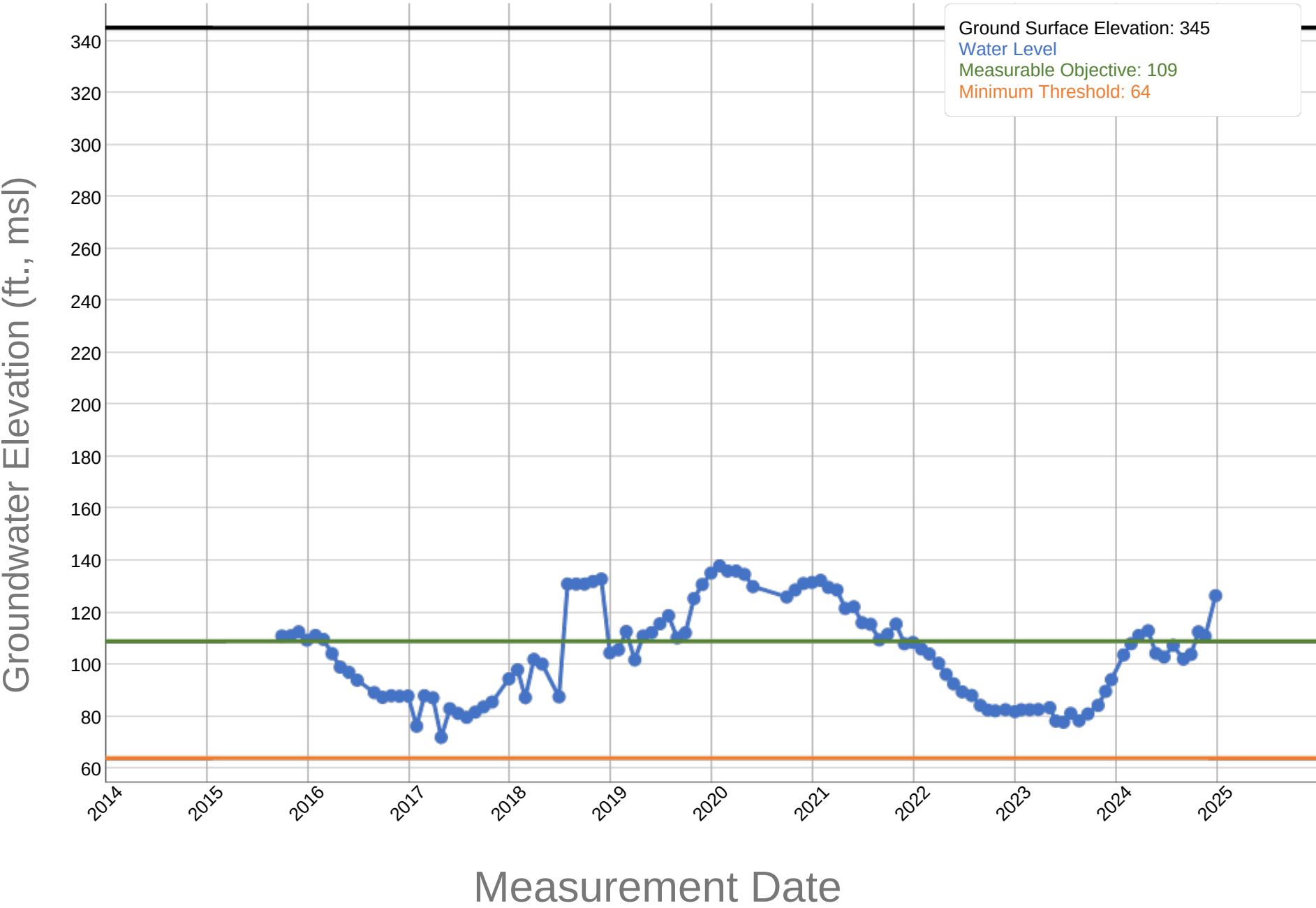
Rosedale-Rio Bravo Water Storage District - 25M Enos - 353760N1192498W002



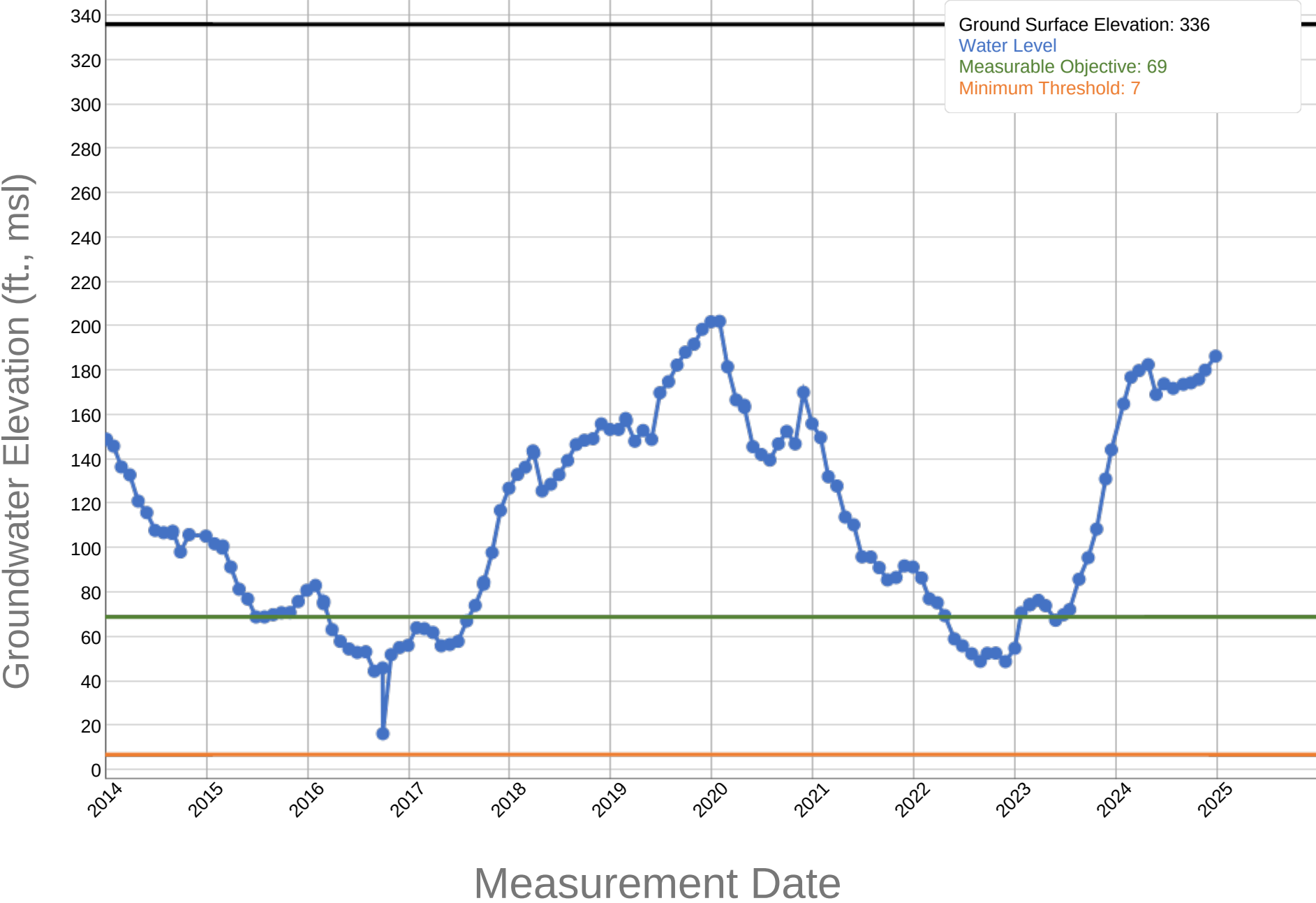
Rosedale-Rio Bravo Water Storage District - Chet Reed - 353890N1191471W001



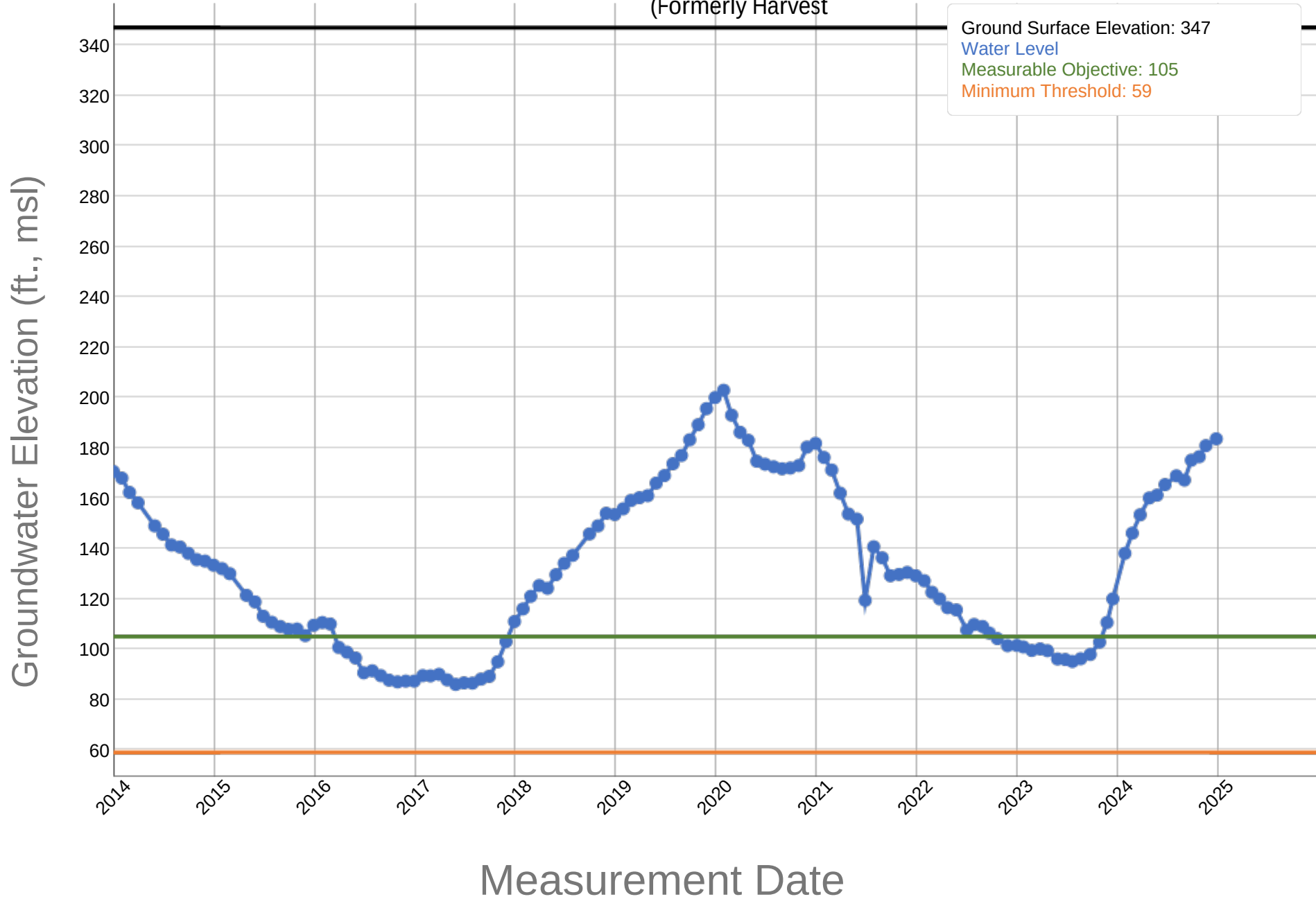
Rosedale-Rio Bravo Water Storage District - Home Place - 353824N1192035W001



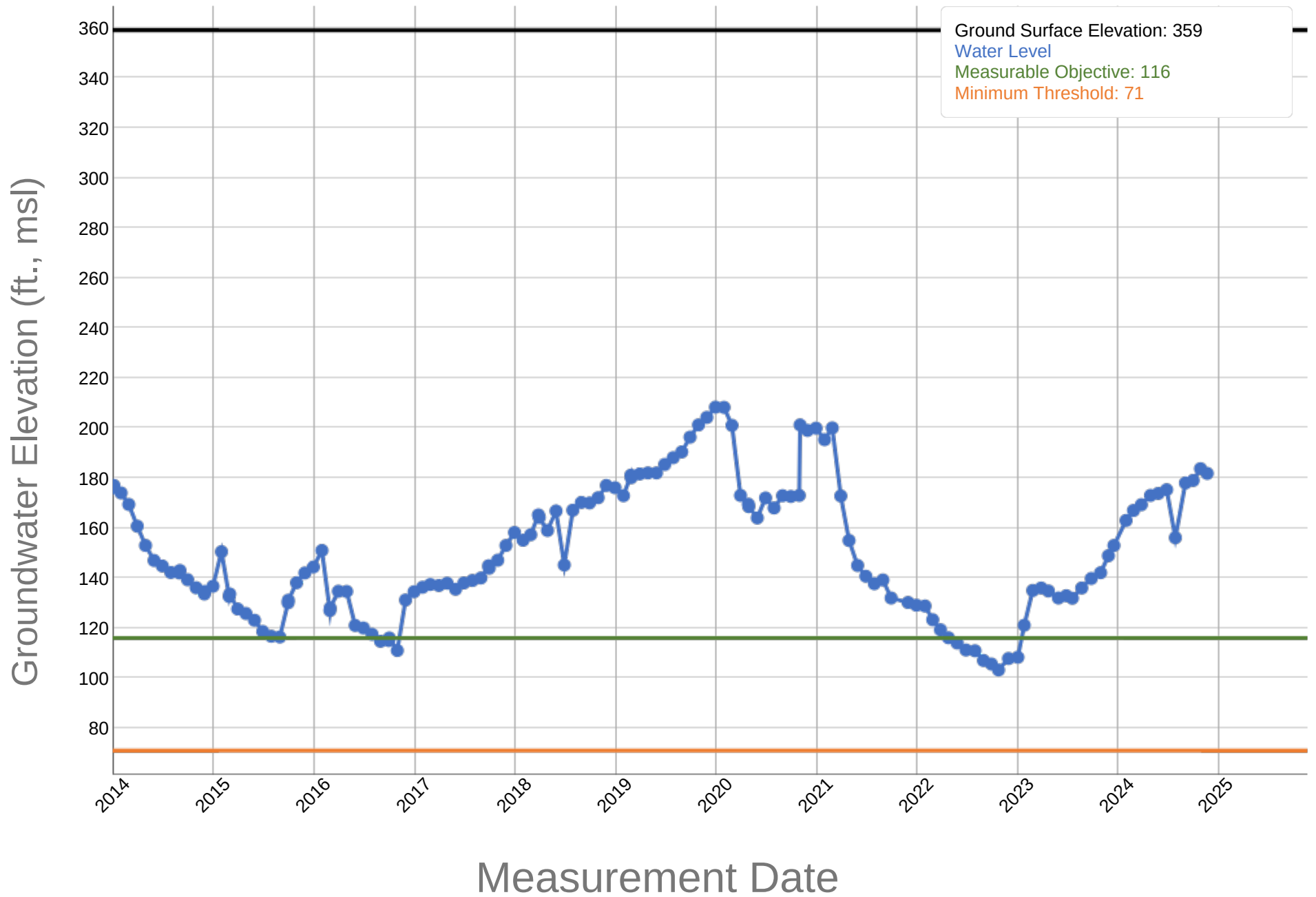
Rosedale-Rio Bravo Water Storage District - 31H Greeley - 353618N1192169W001



Rosedale-Rio Bravo Water Storage District - Manon Manor Mutual Water Co - 353634N1191766W001
(Formerly Harvest)



Rosedale-Rio Bravo Water Storage District - 35H RRBWSD Shop - 353620N1191457W002

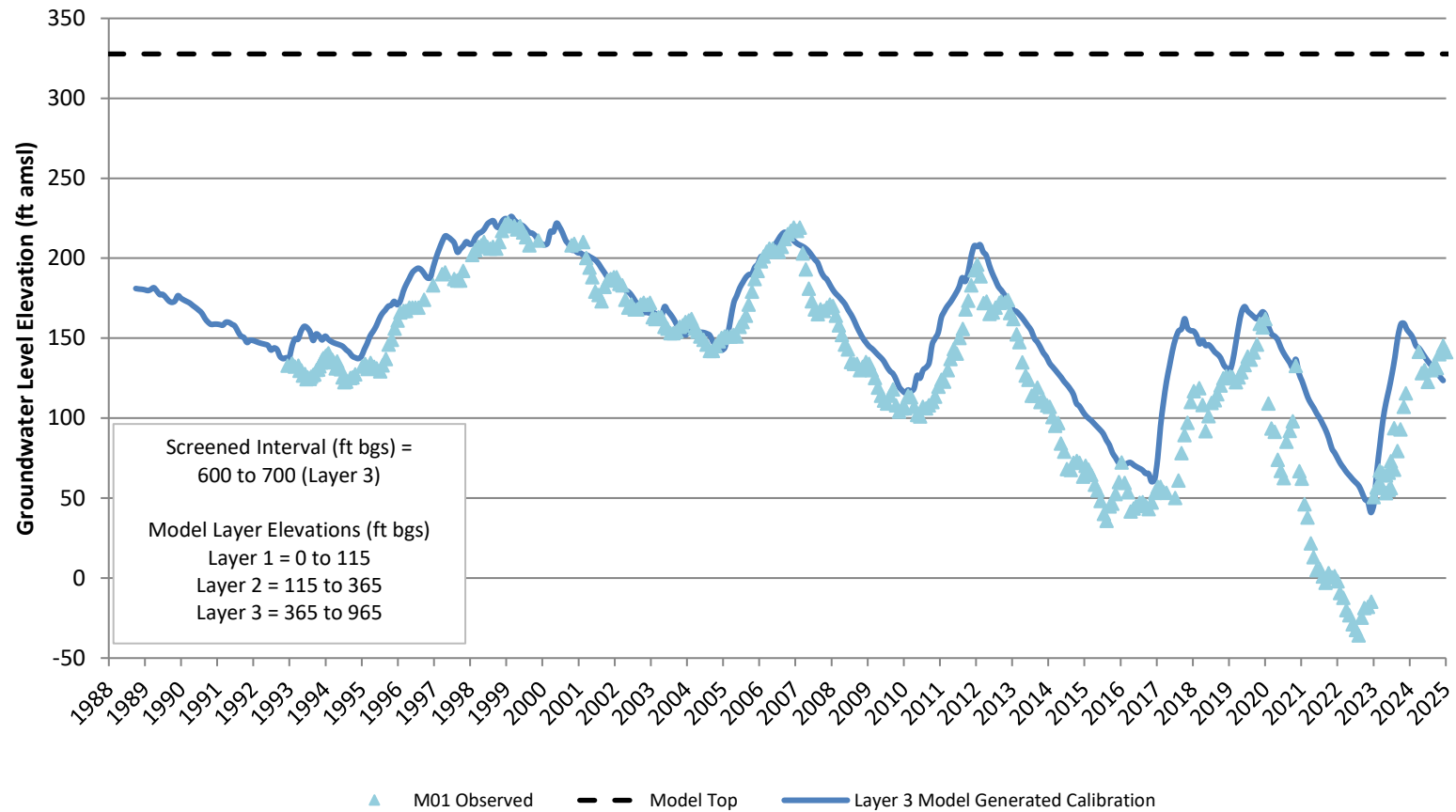


Appendix 2

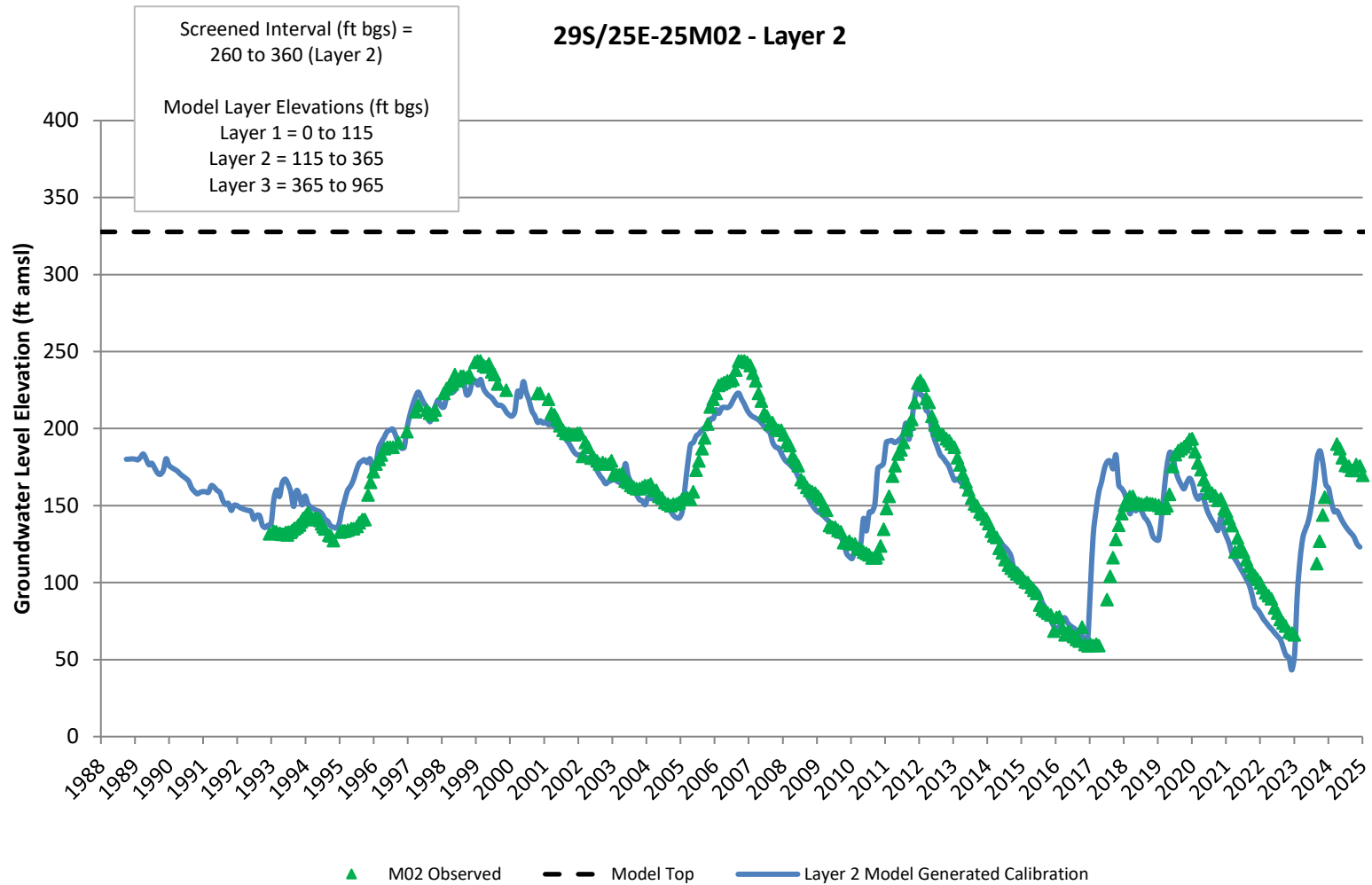
Groundwater Model 2024 Update

Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

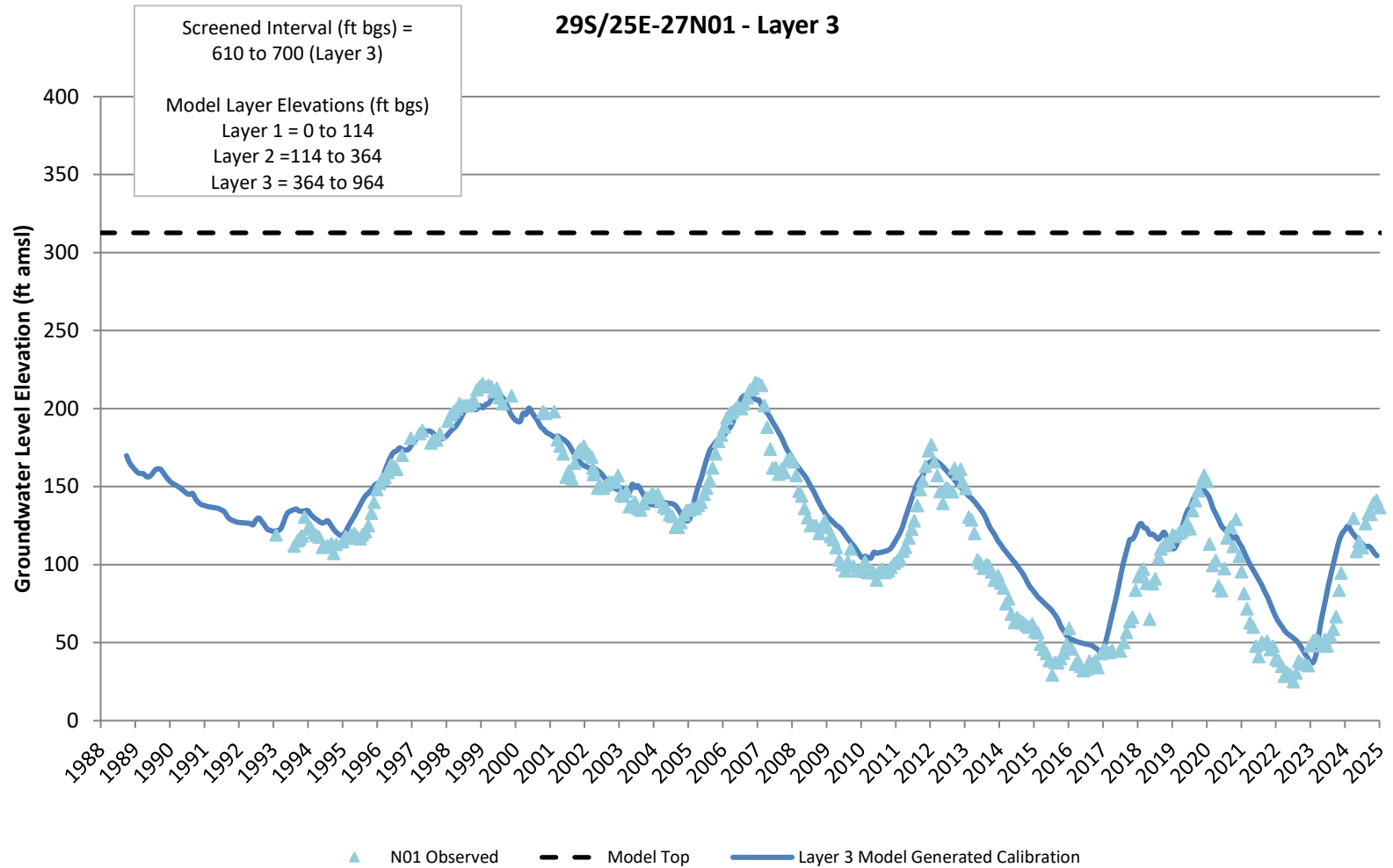
29S/25E-25M01 - Layer 3



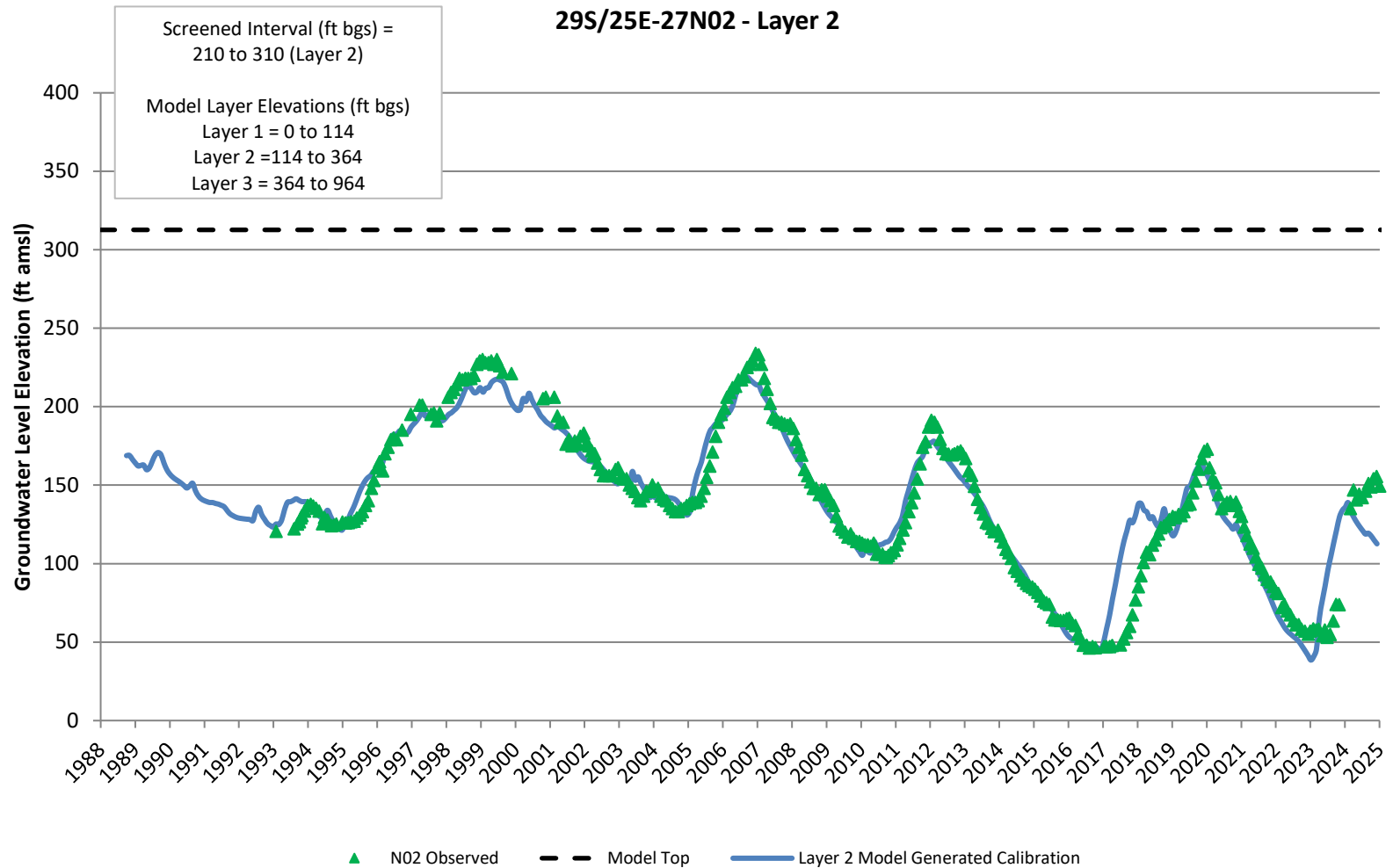
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

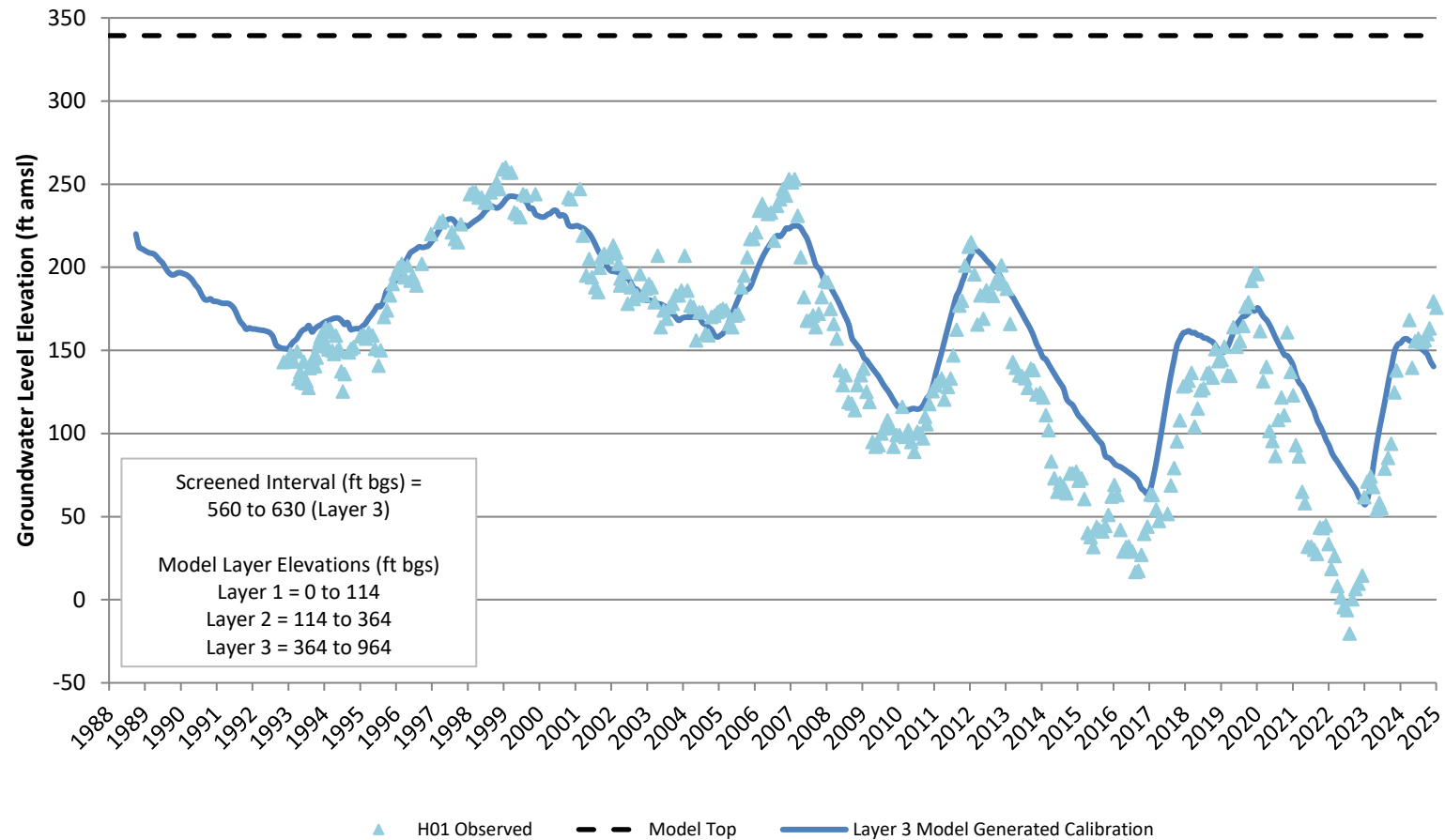


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



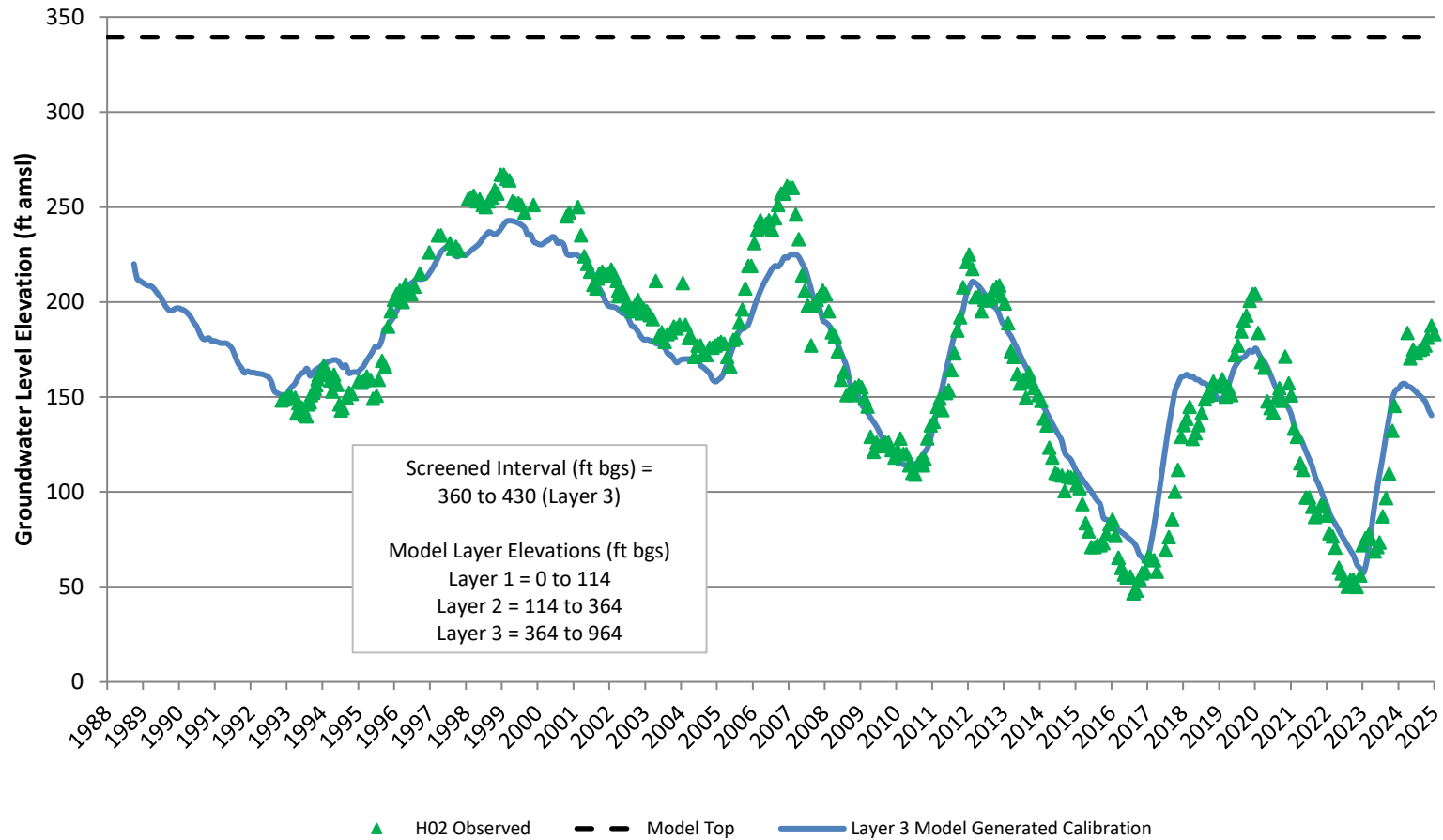
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-31H01 - Layer 3



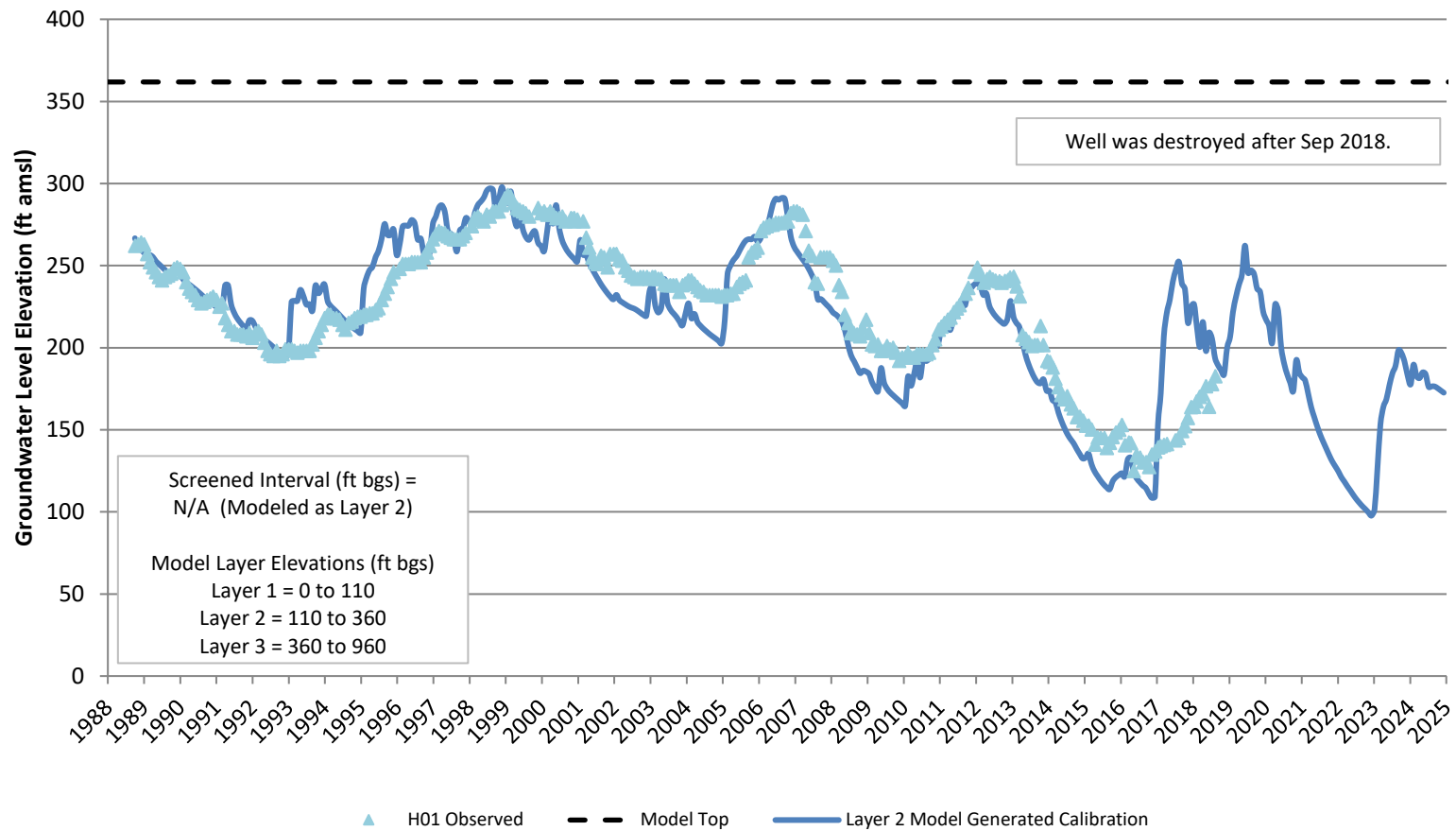
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-31H02 - Layer 3



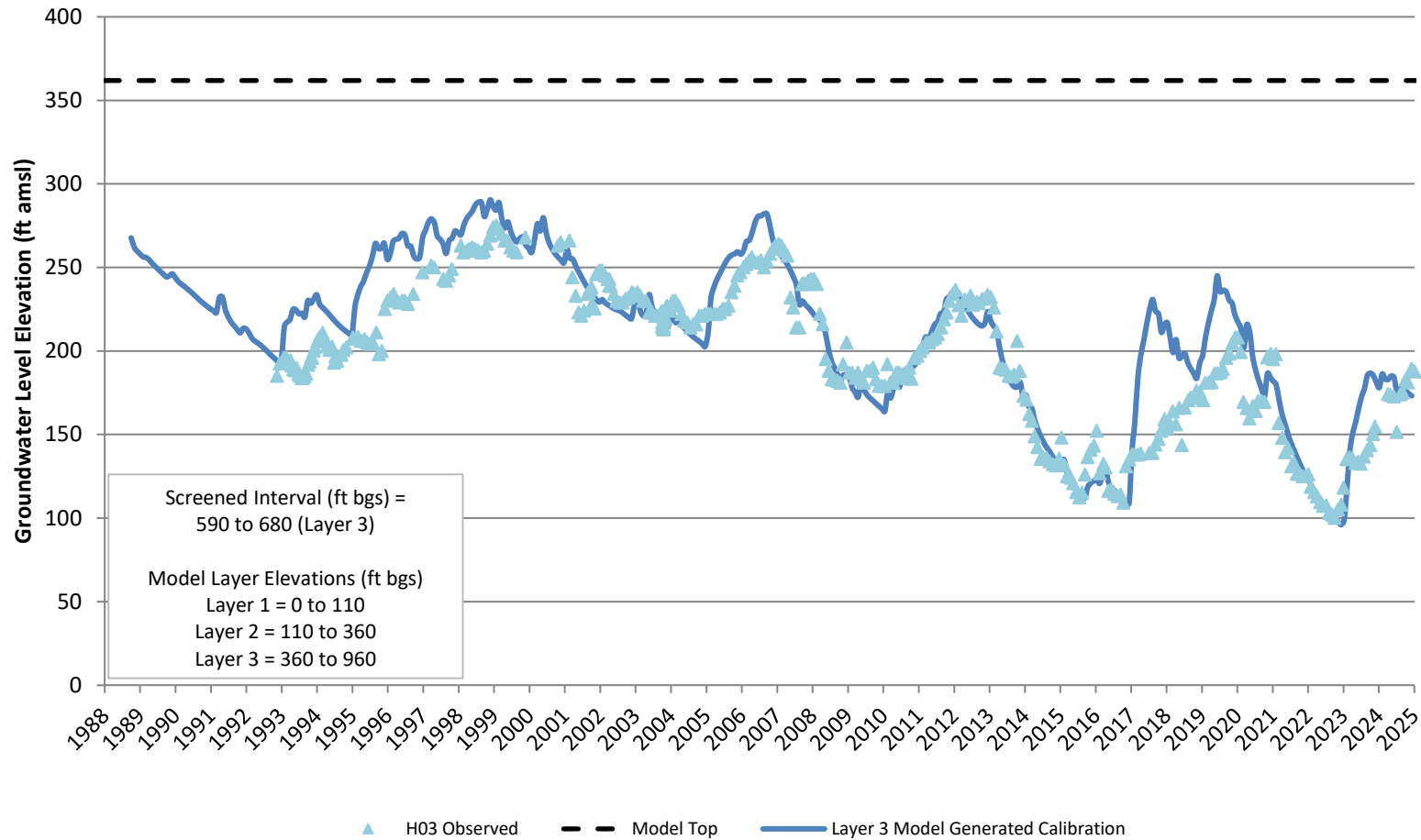
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-35H01 - Layer 2



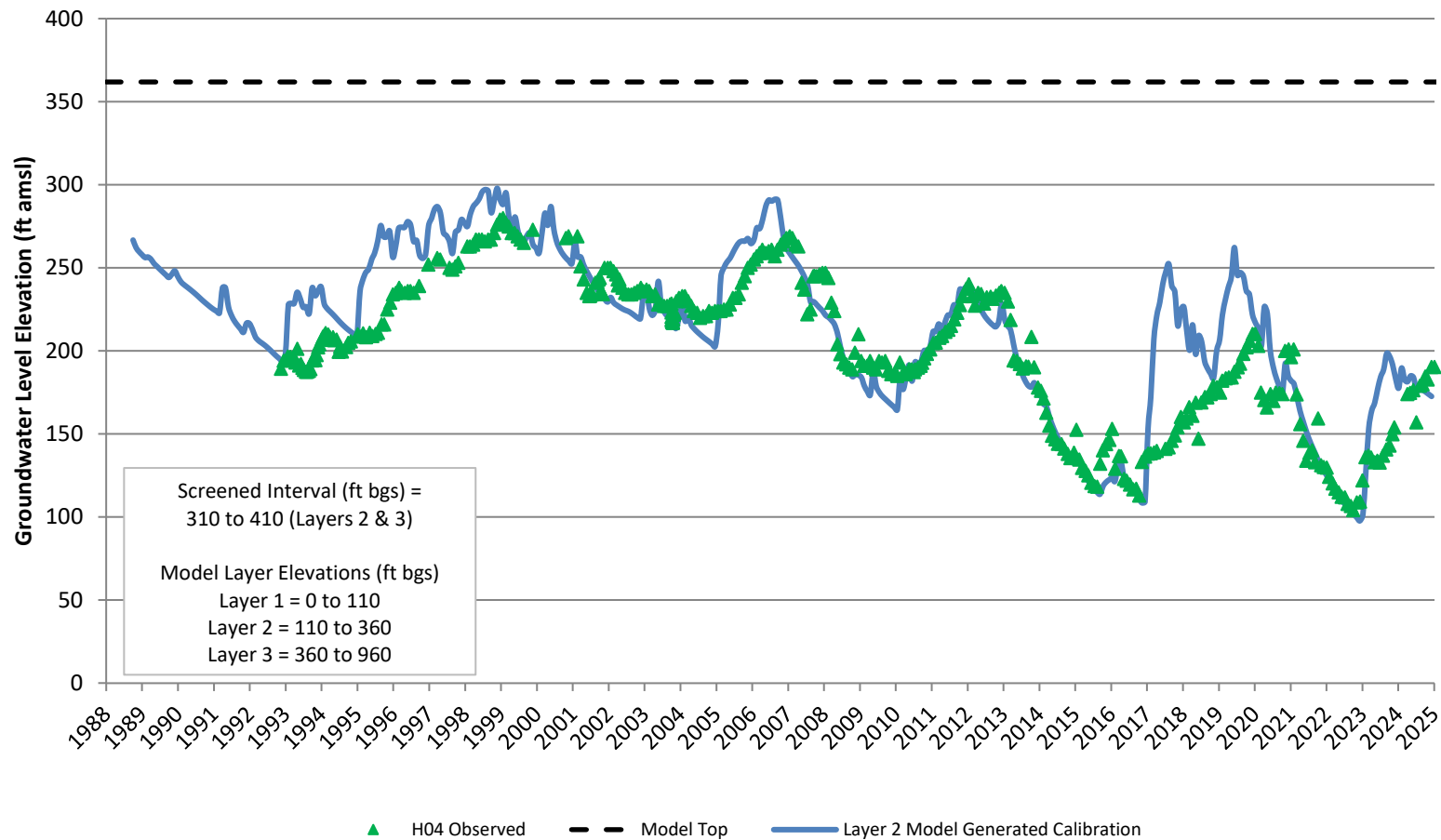
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-35H03 - Layer 3

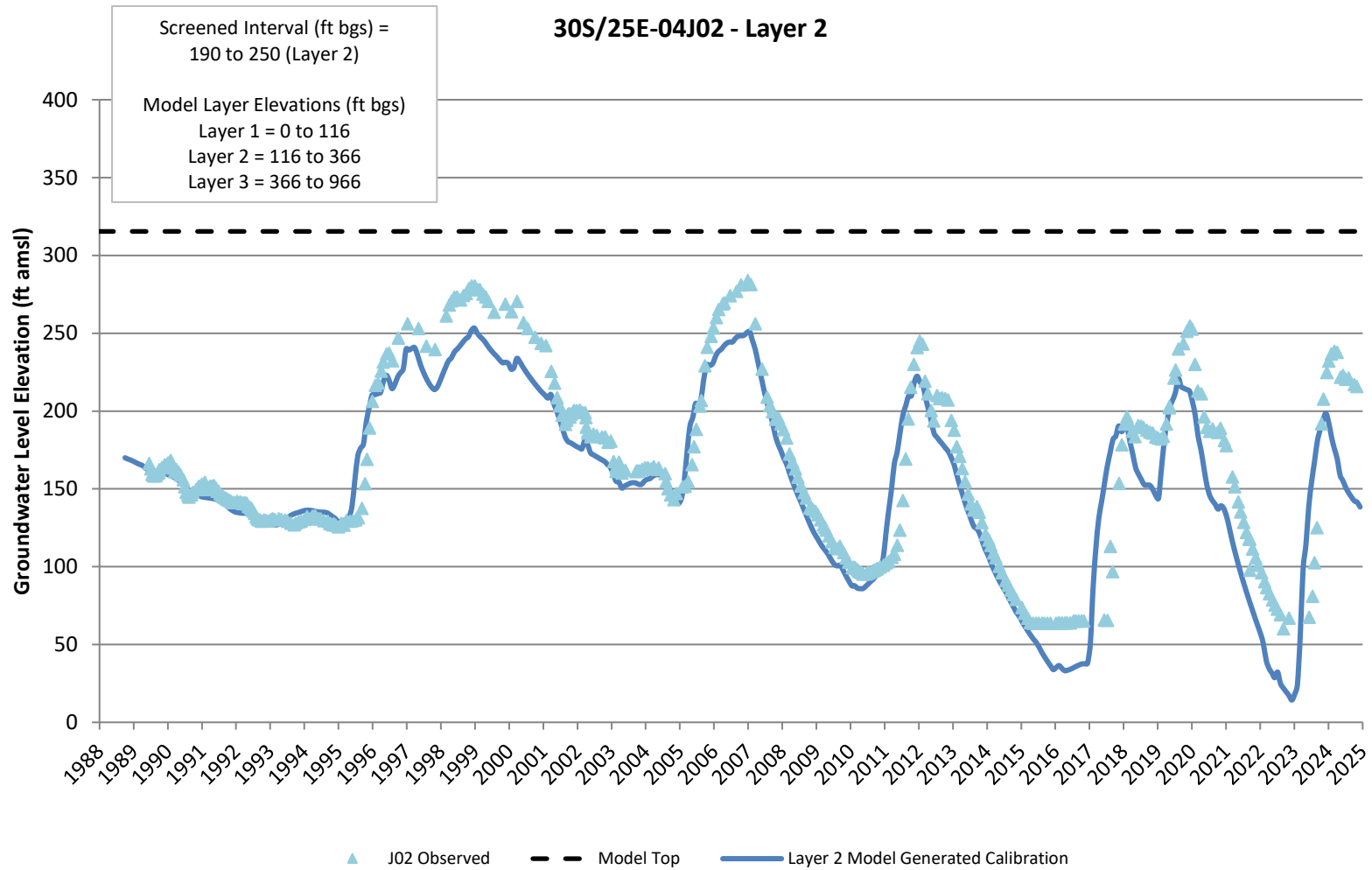


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-35H04 - Layer 2

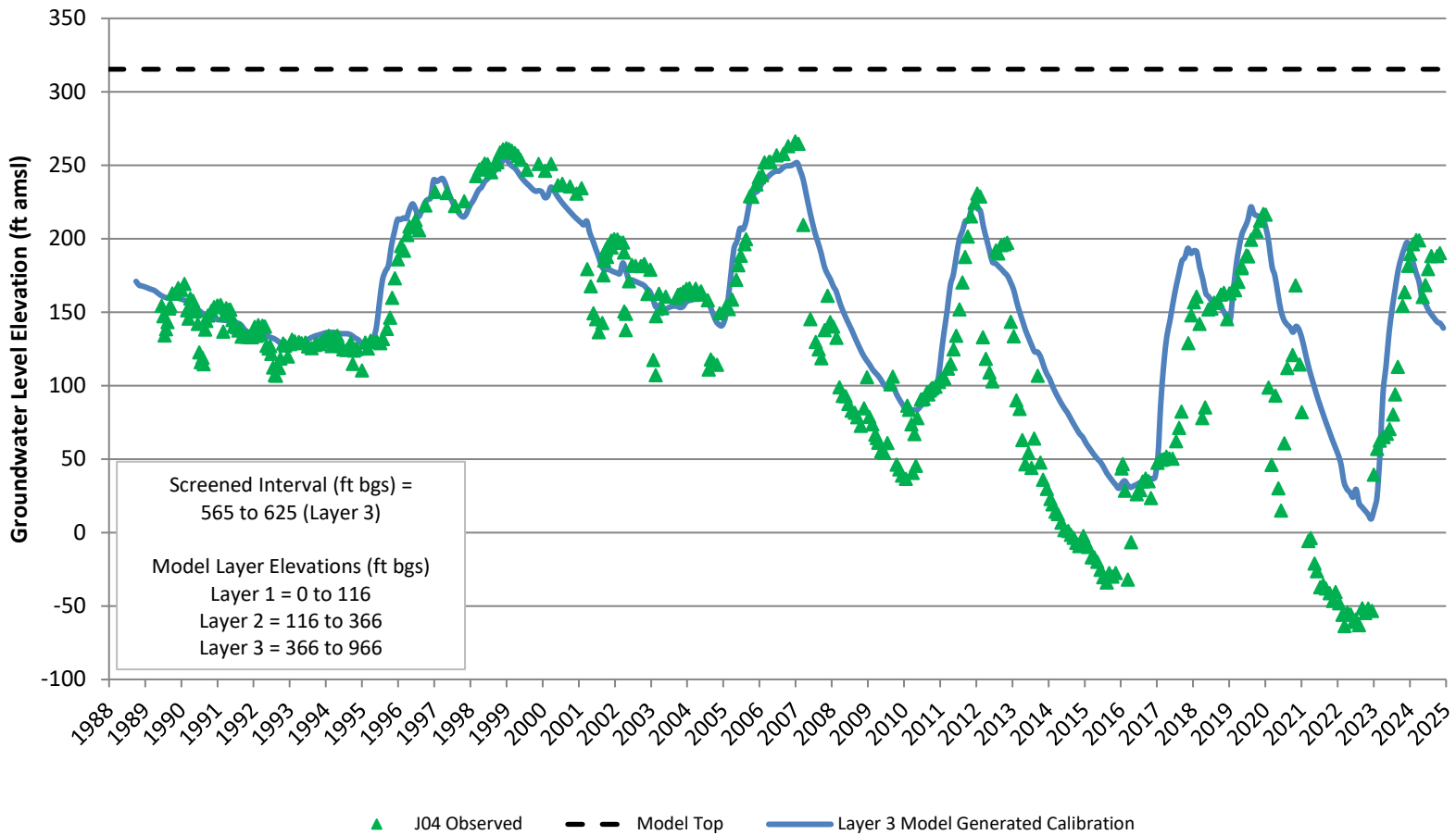


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



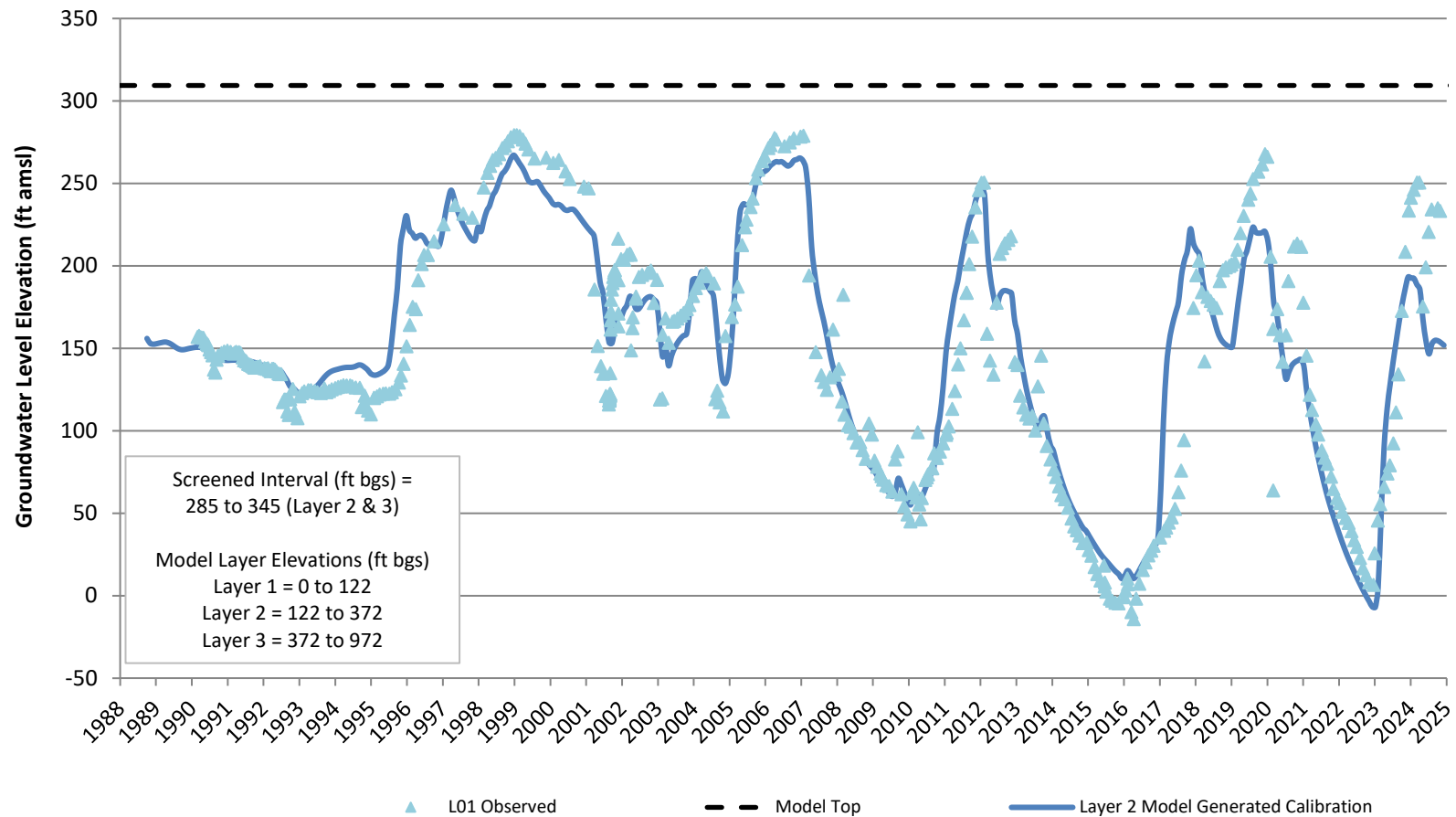
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/25E-04J04 - Layer 3



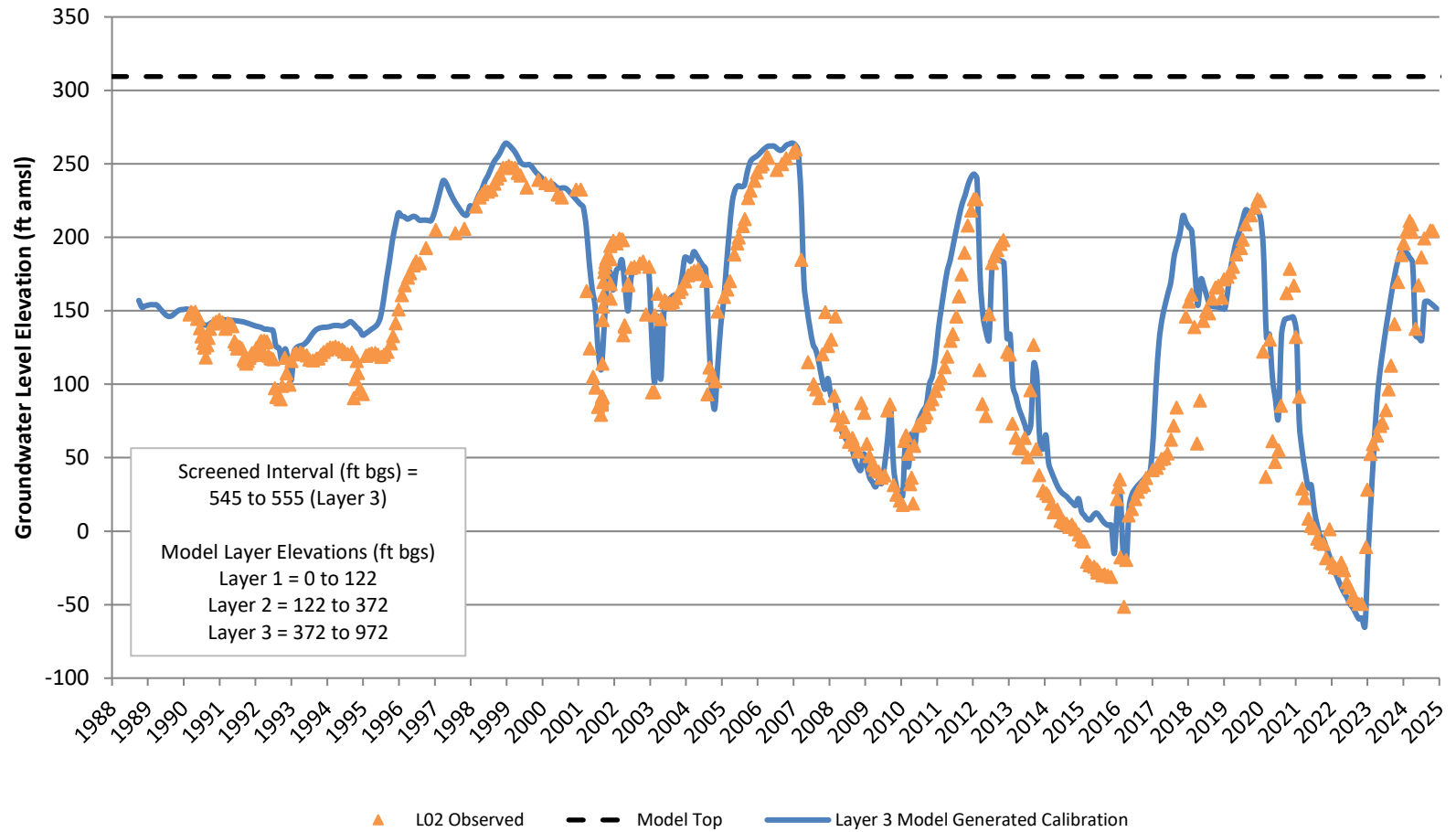
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/25E-16L01 - Layer 2



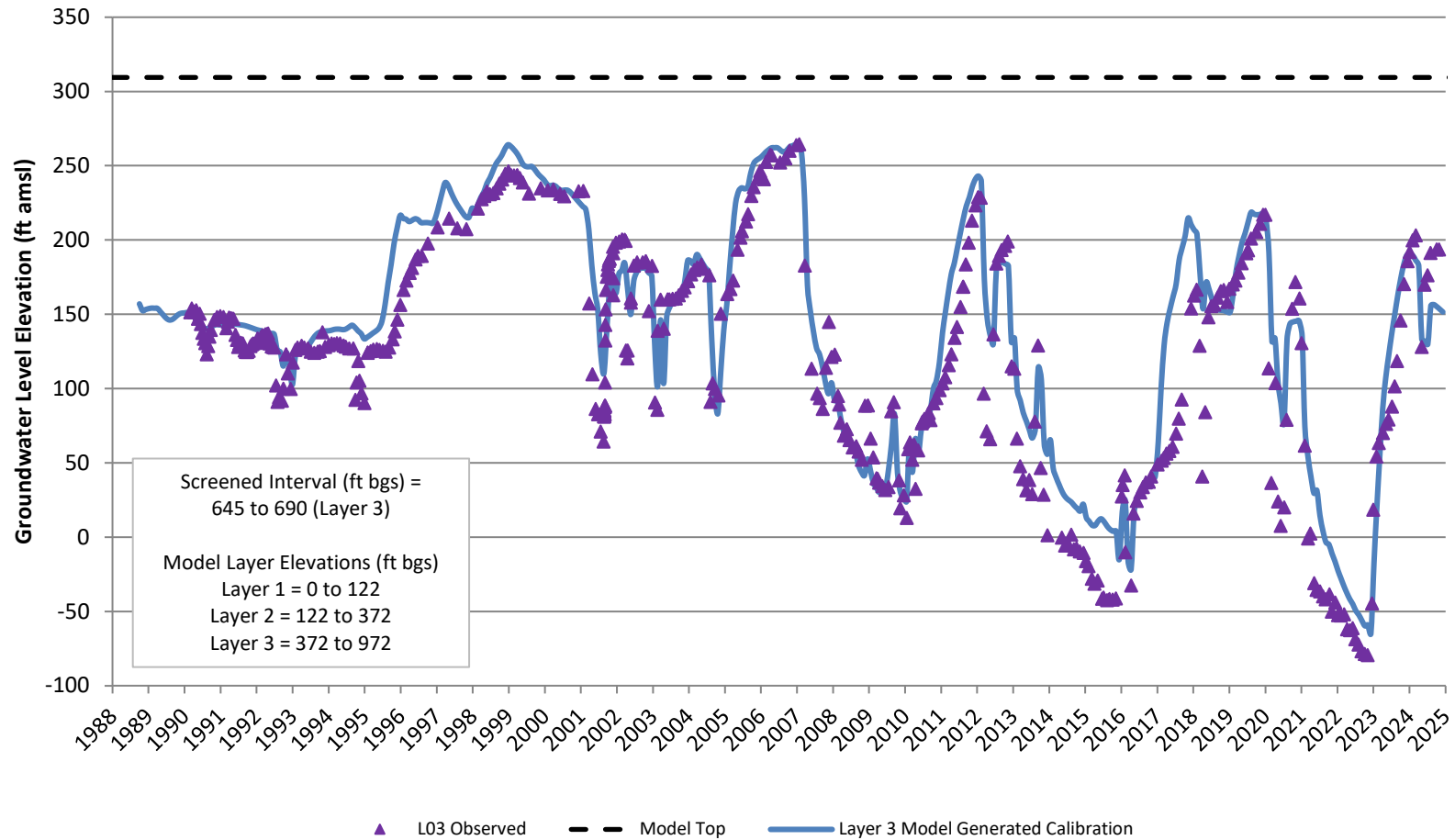
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/25E-16L02 - Layer 3



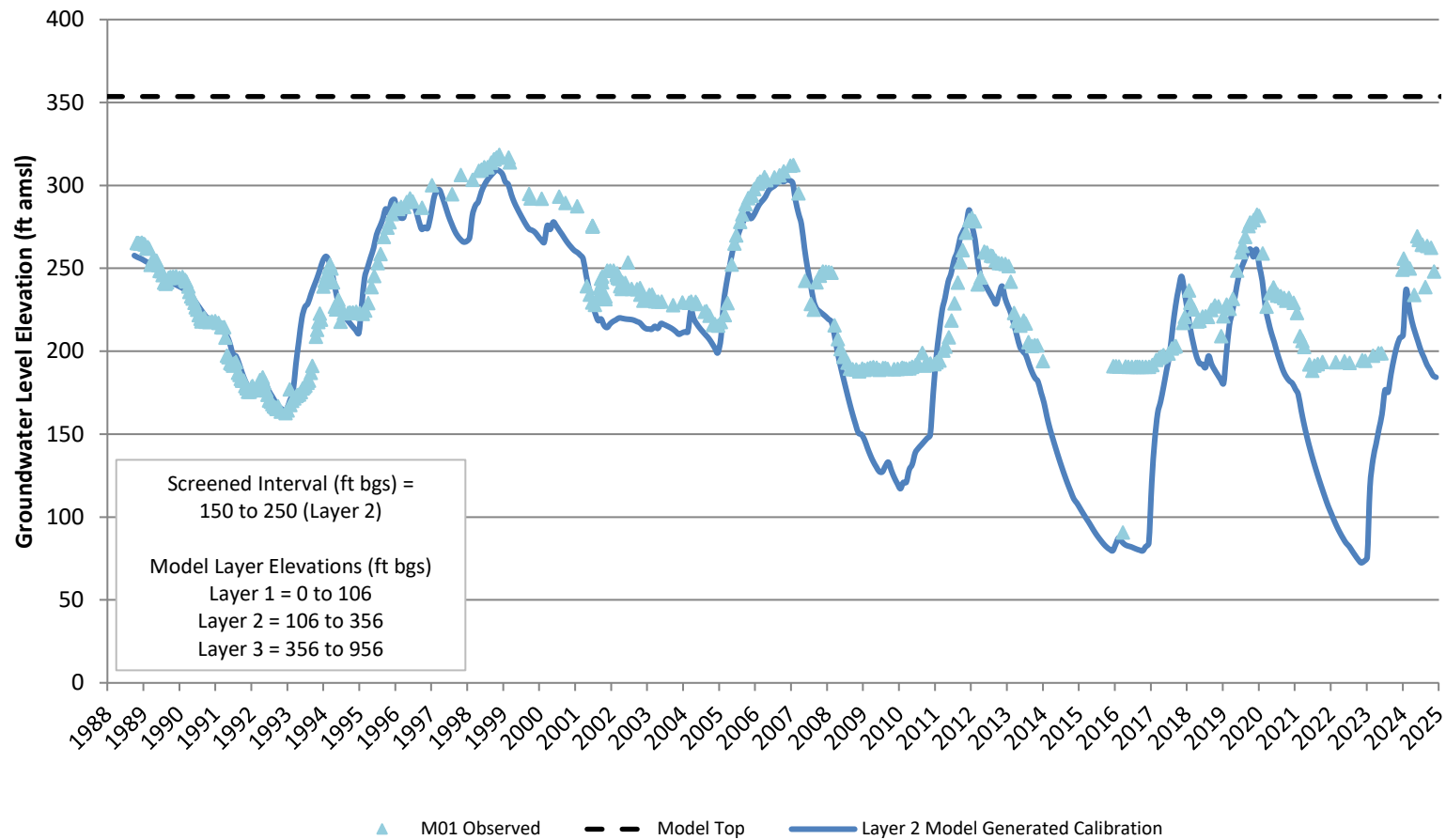
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/25E-16L03 - Layer 3



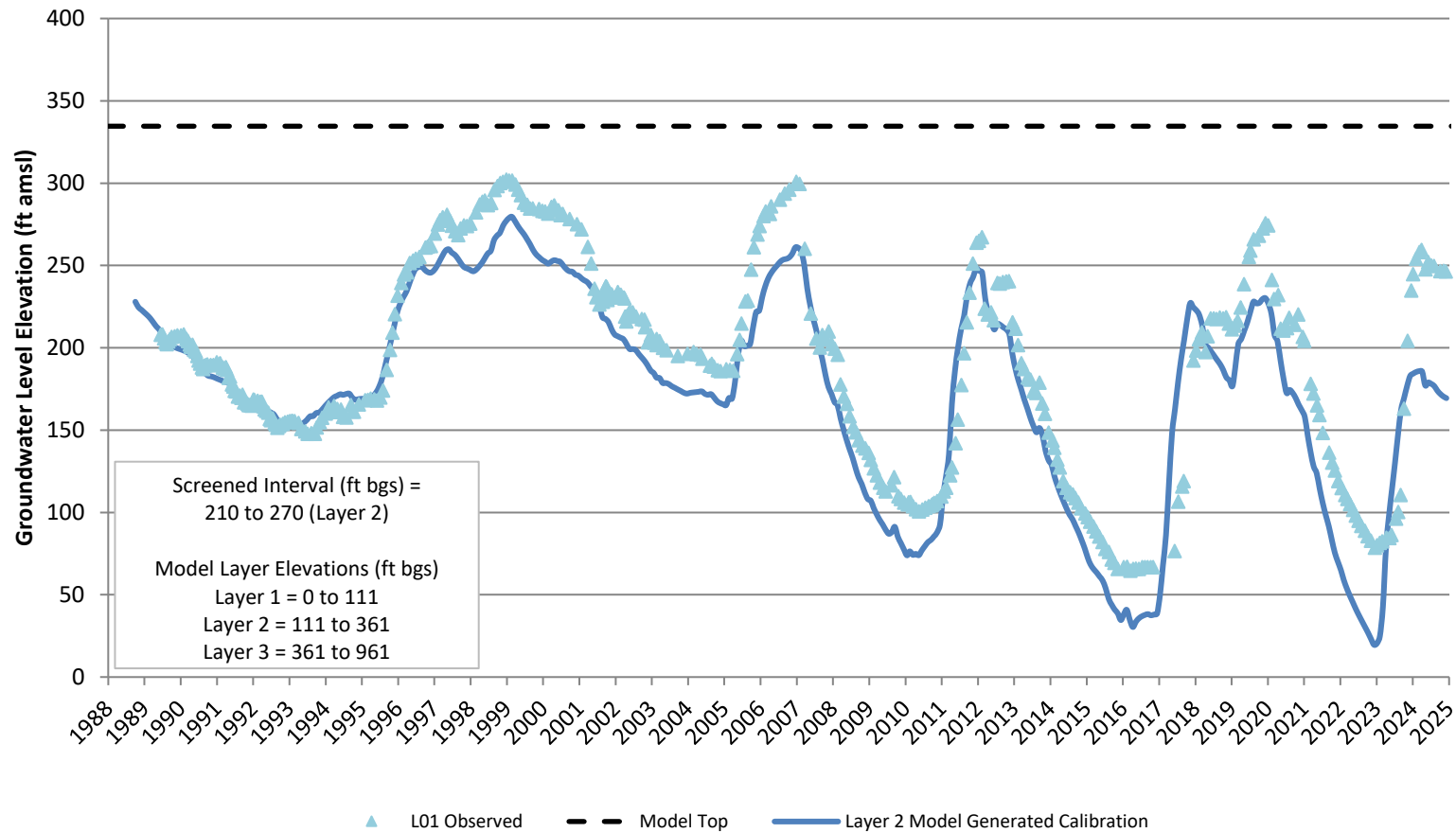
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-02M01 - Layer 2



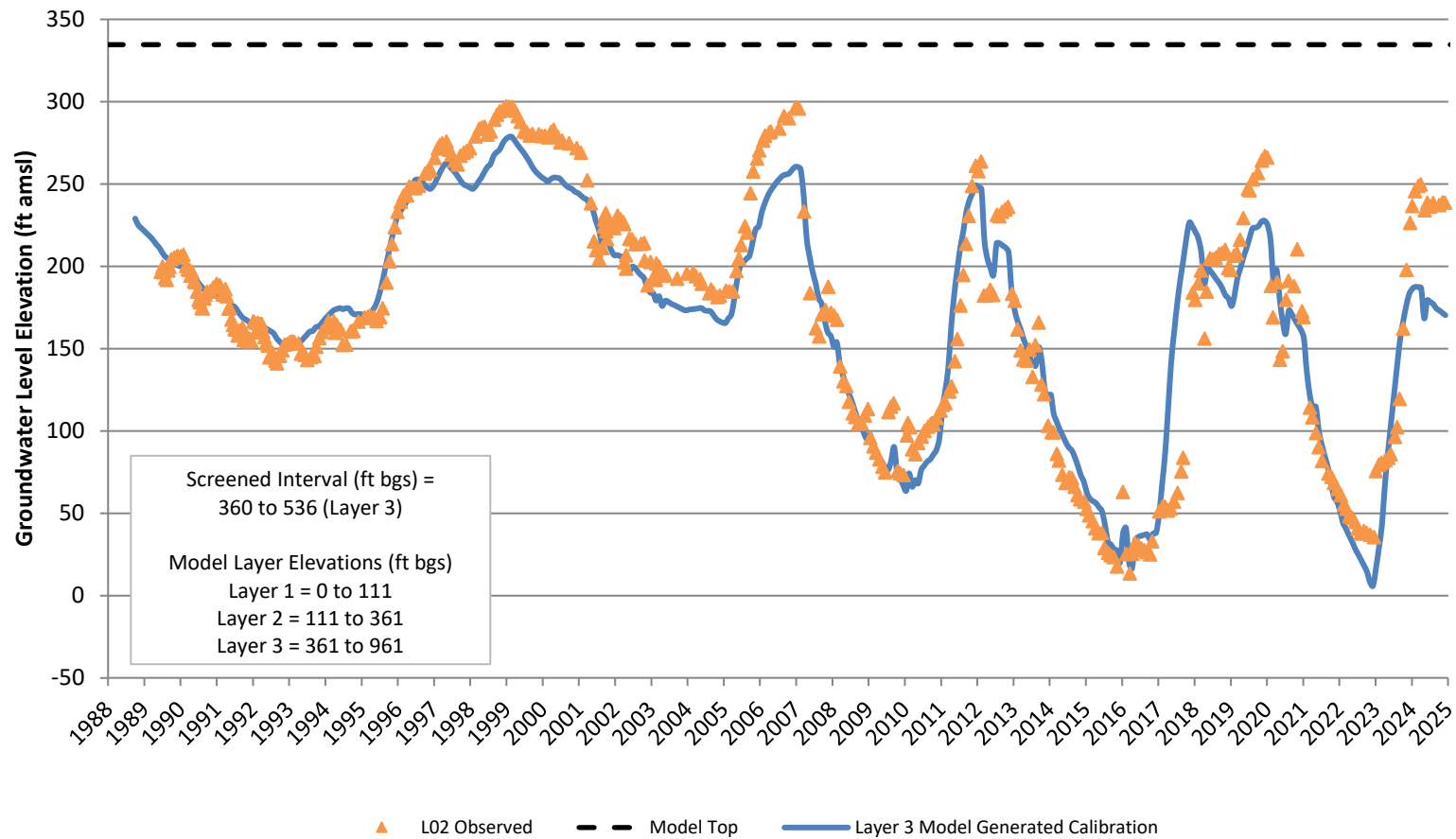
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-06L01 - Layer 2



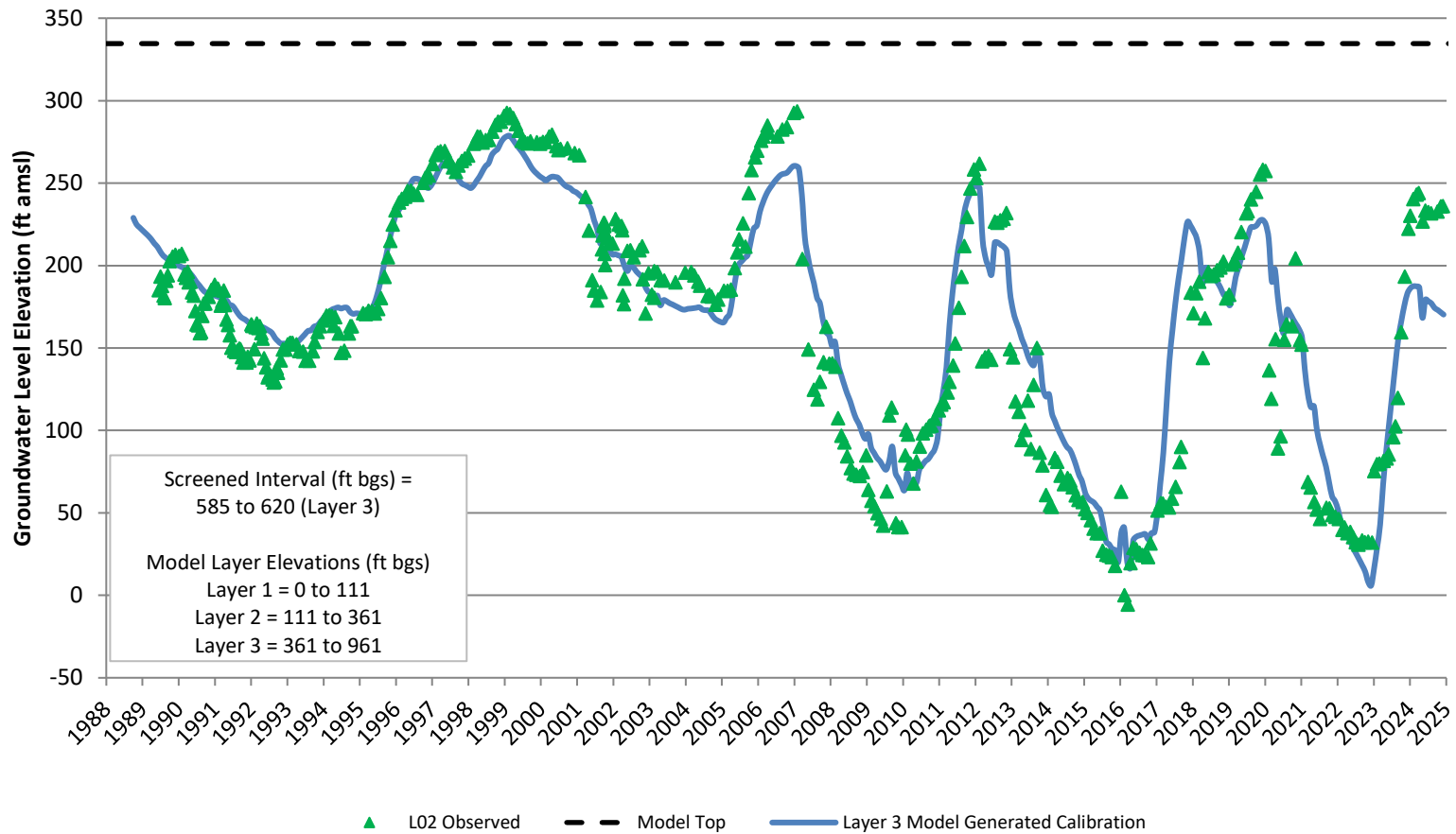
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-06L02 - Layer 3



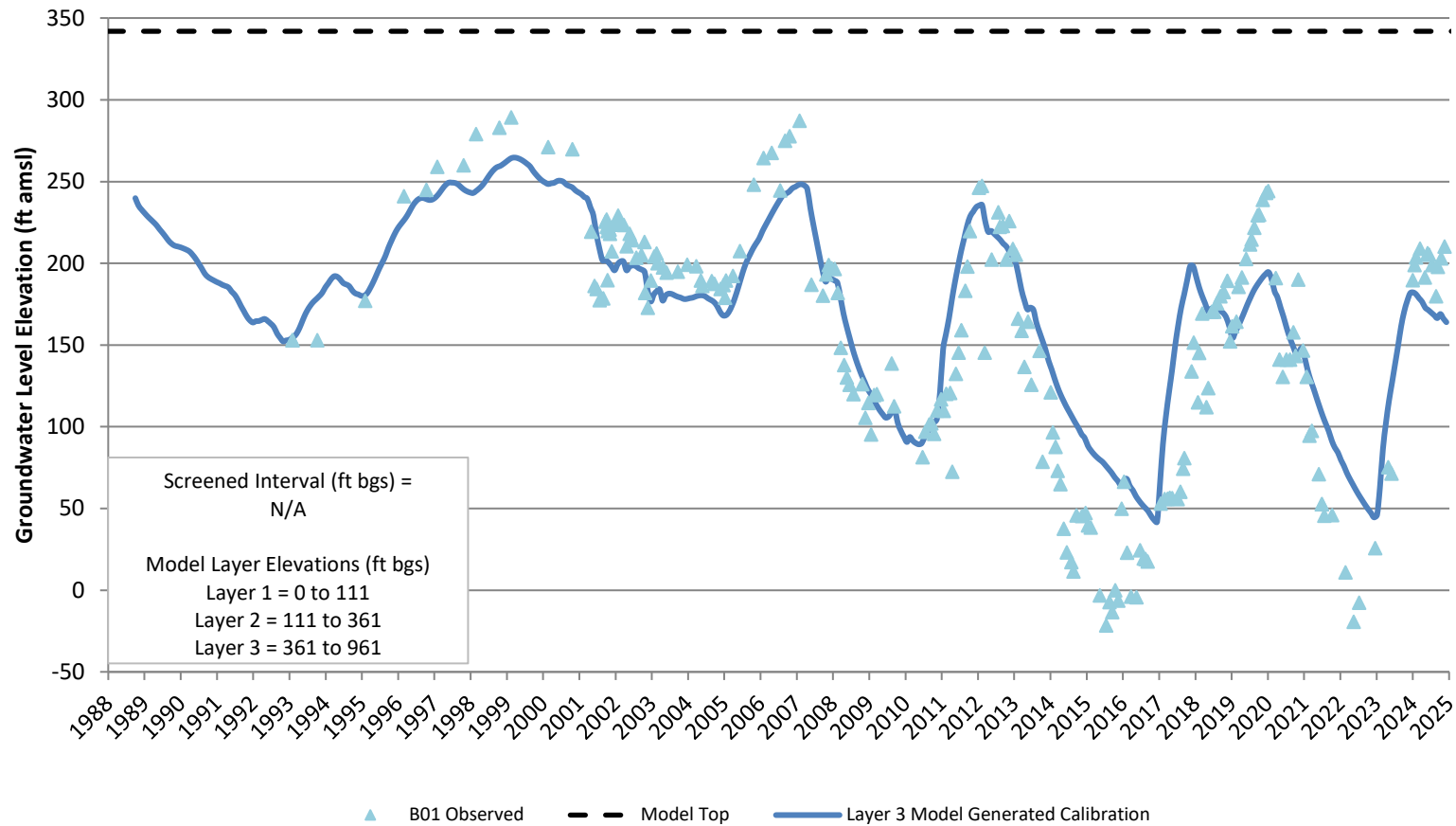
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-06L03 - Layer 3



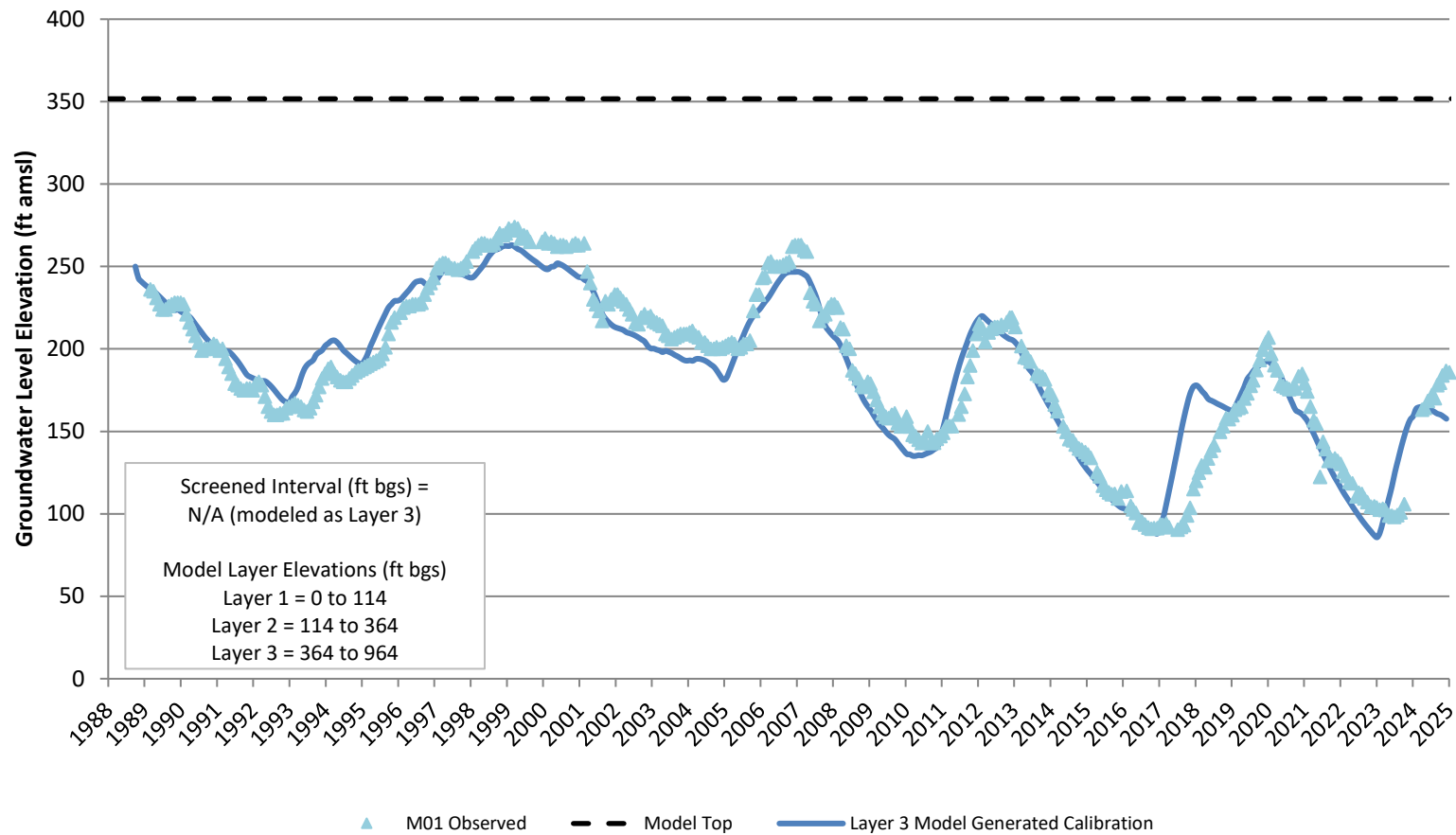
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-05B01 - Layer 3



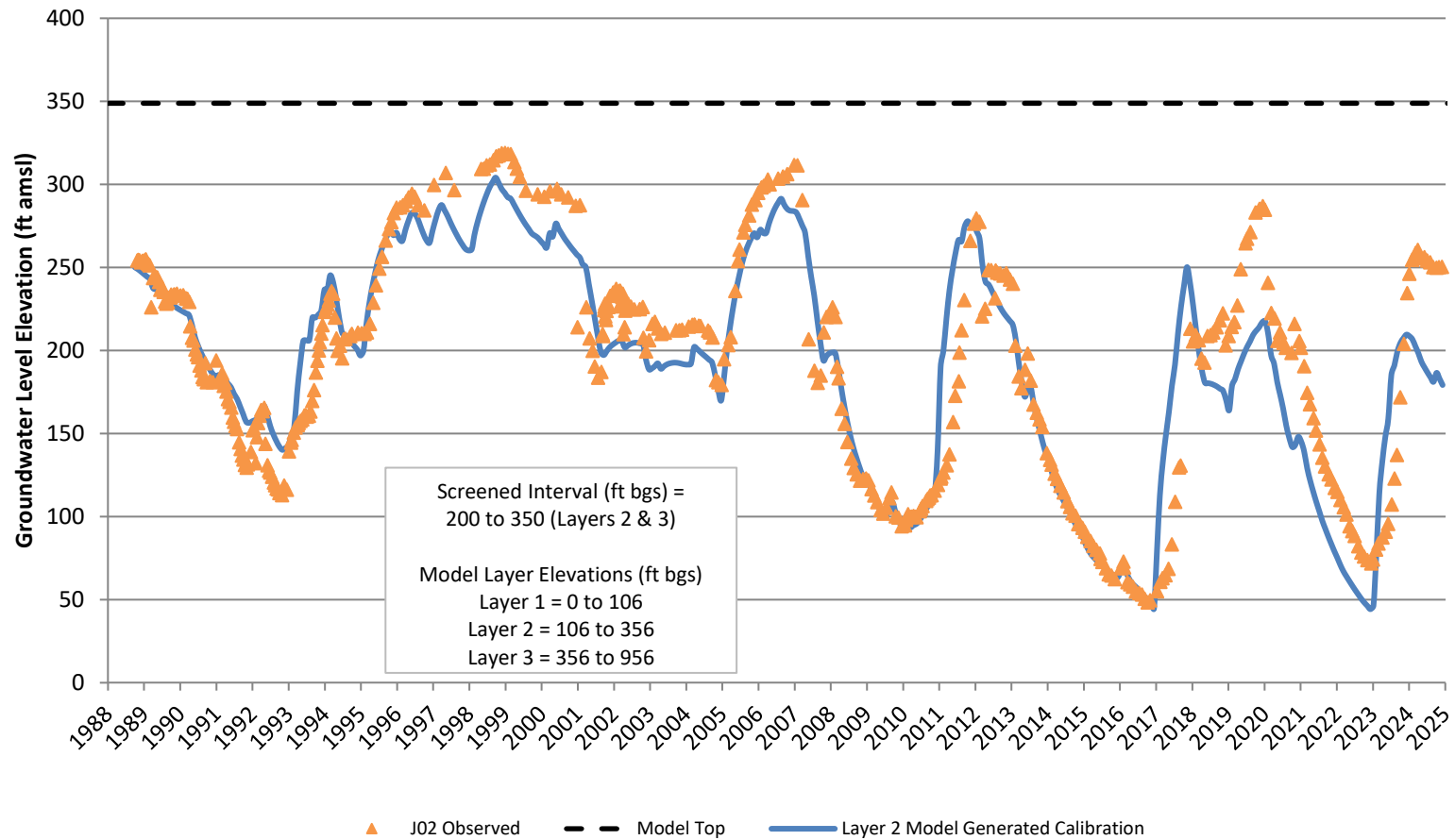
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-34M01 - Layer 3



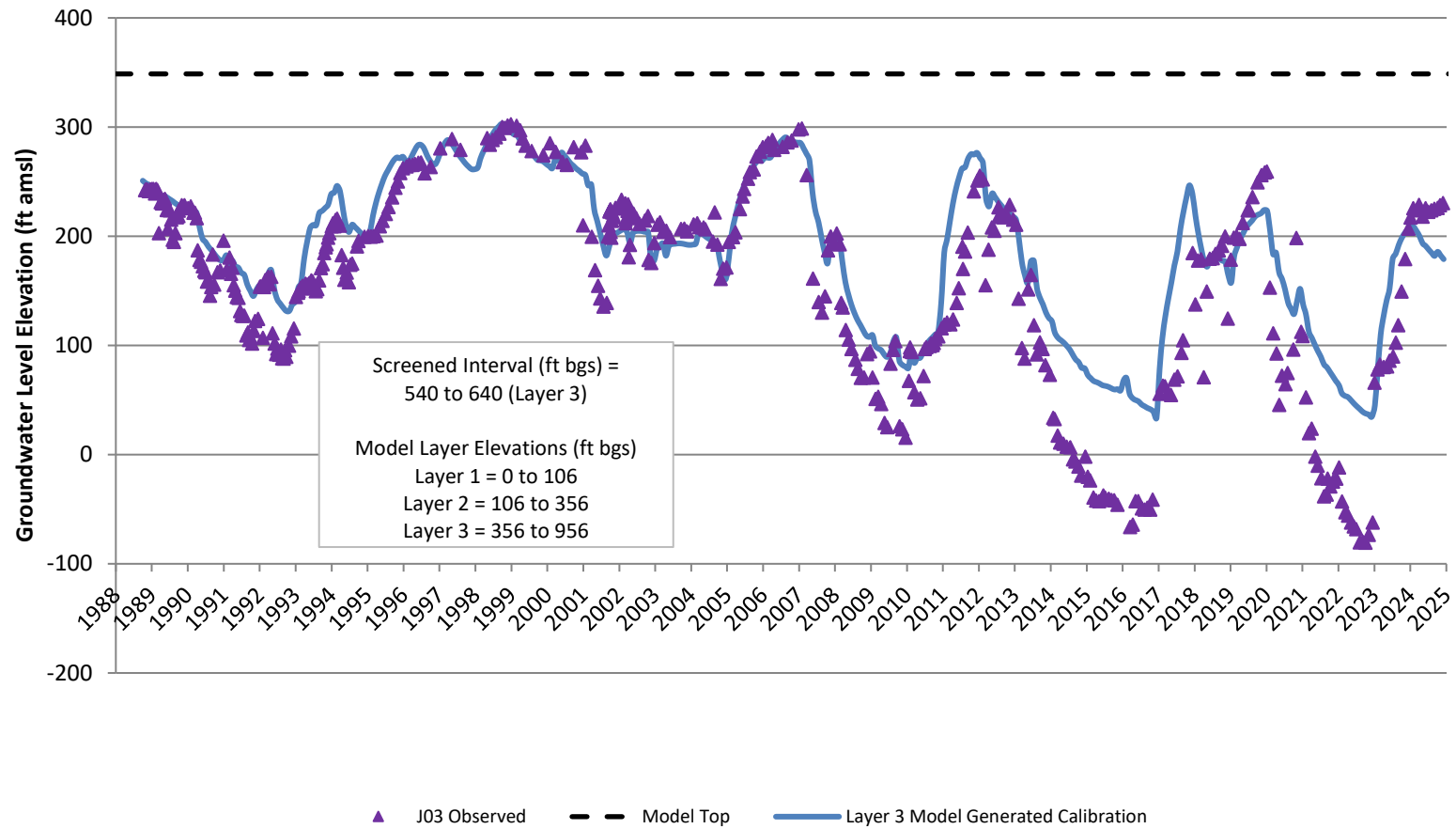
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-04J02 - Layer 2

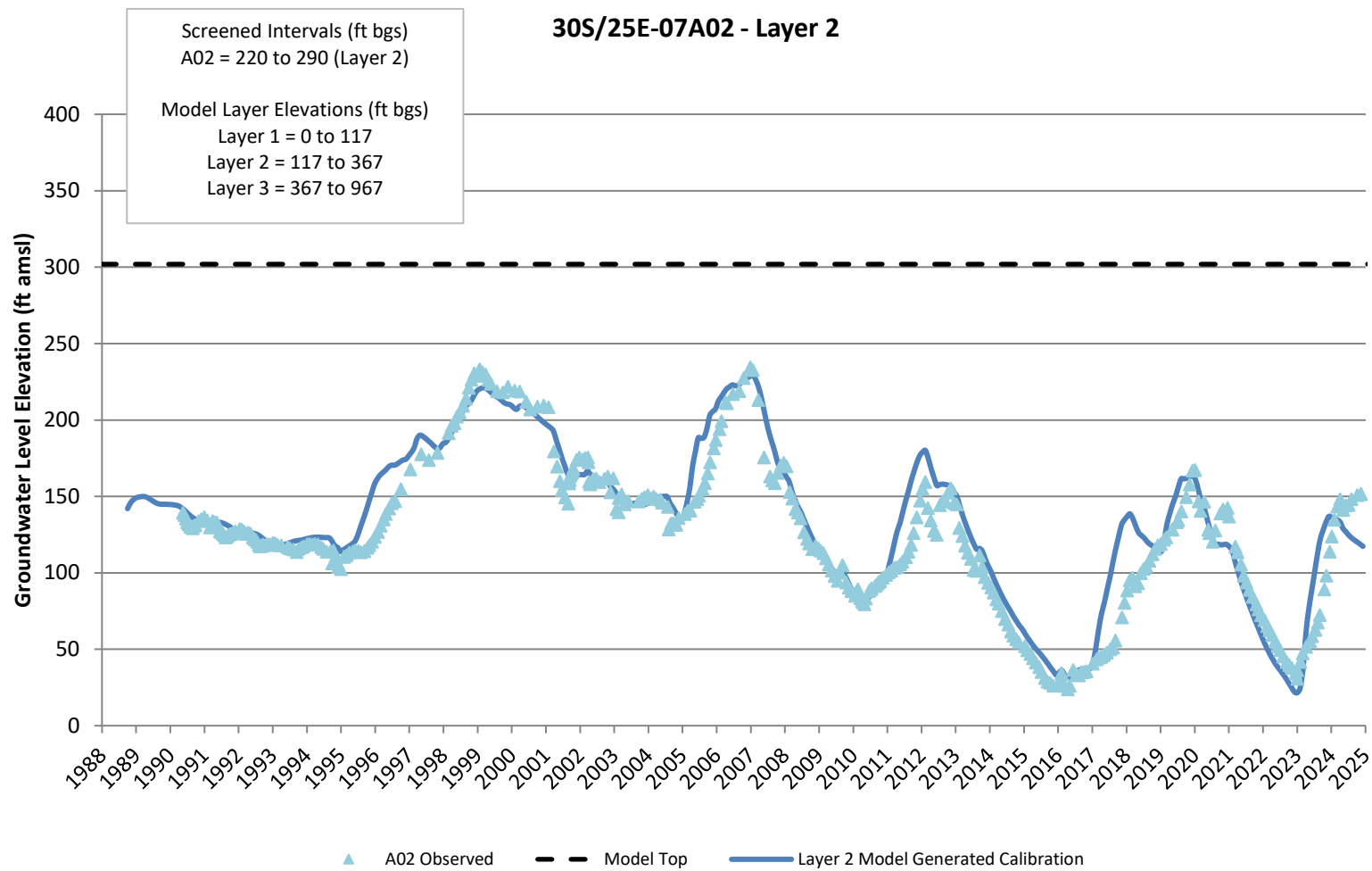


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

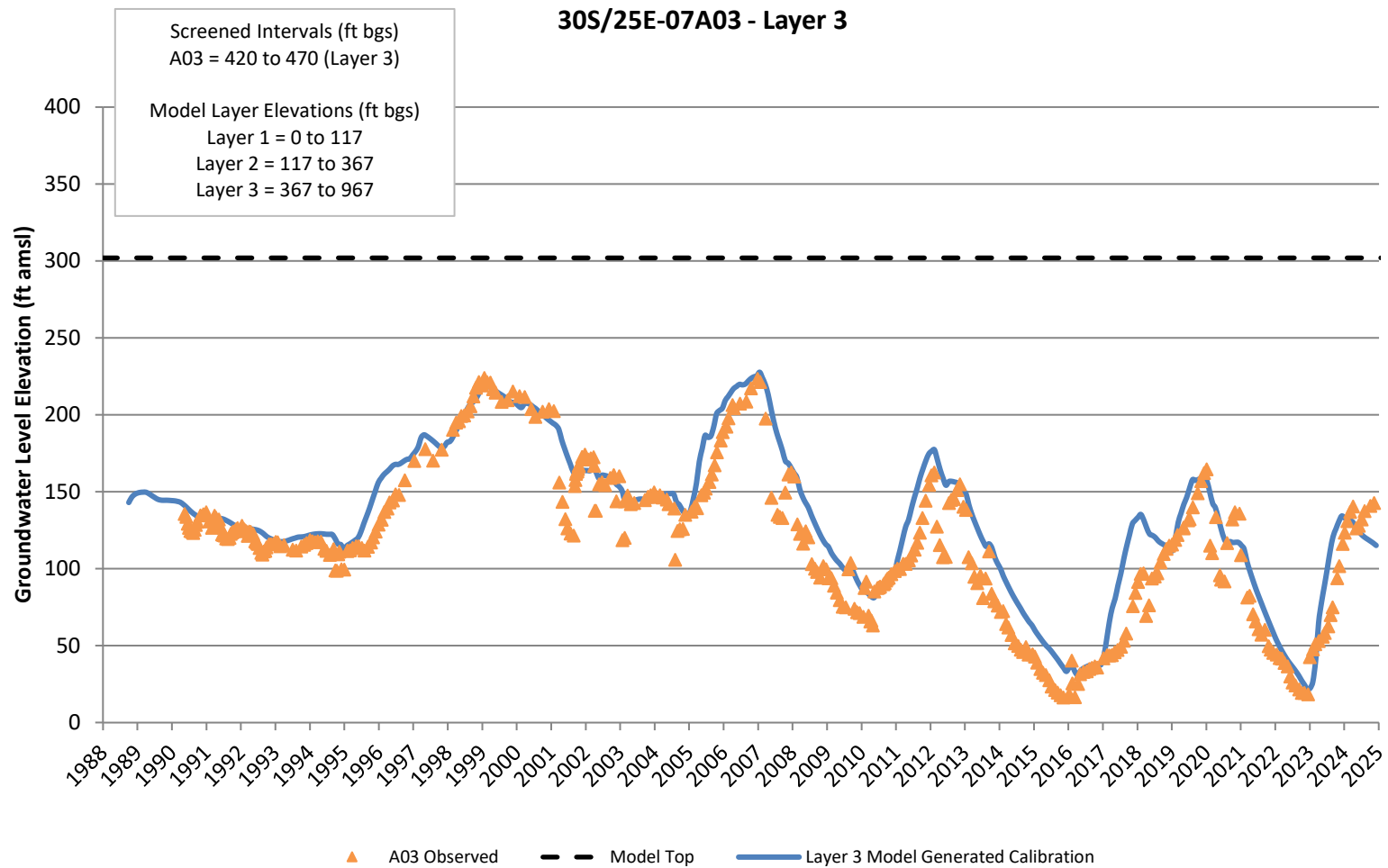
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Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

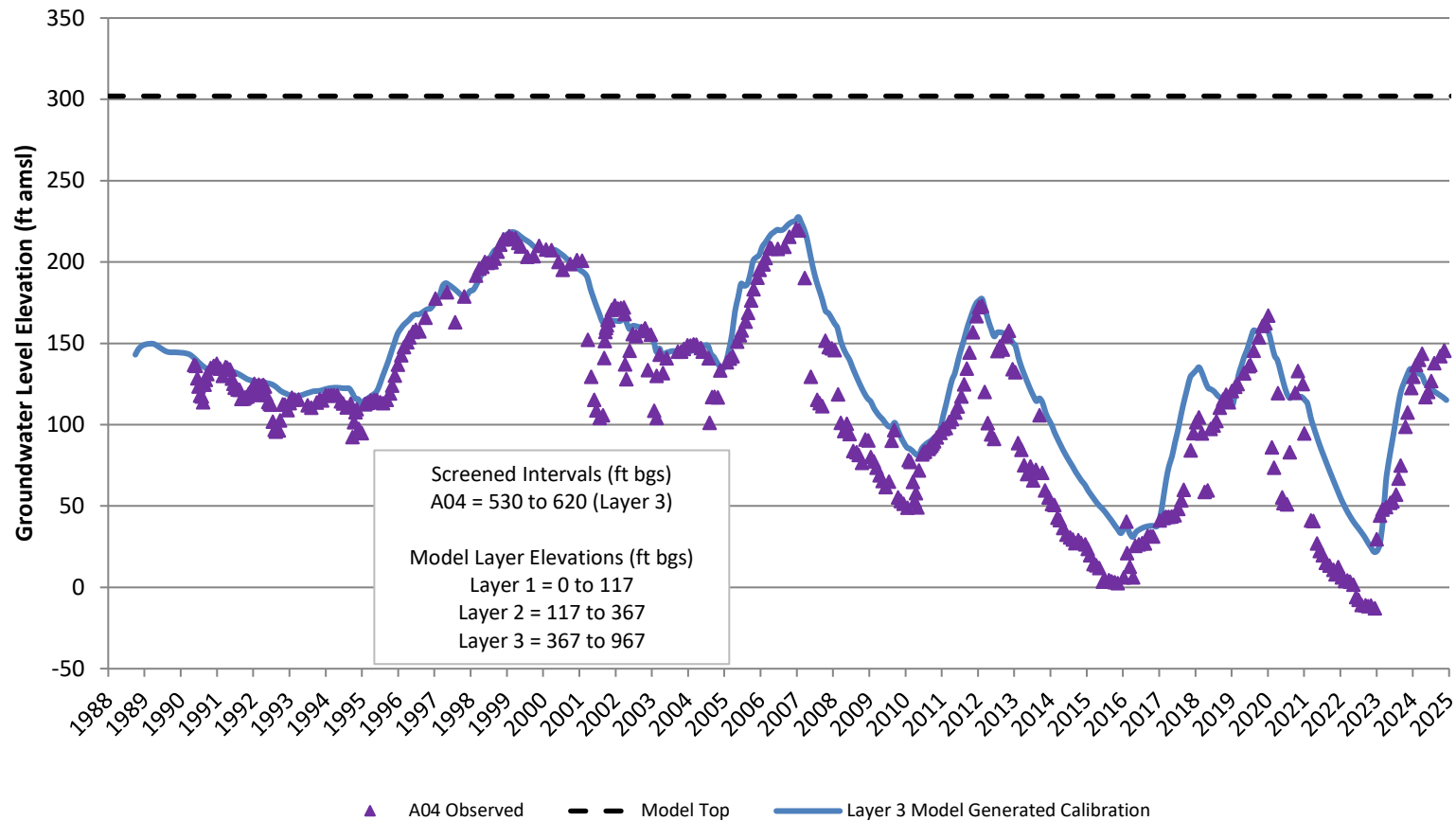


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



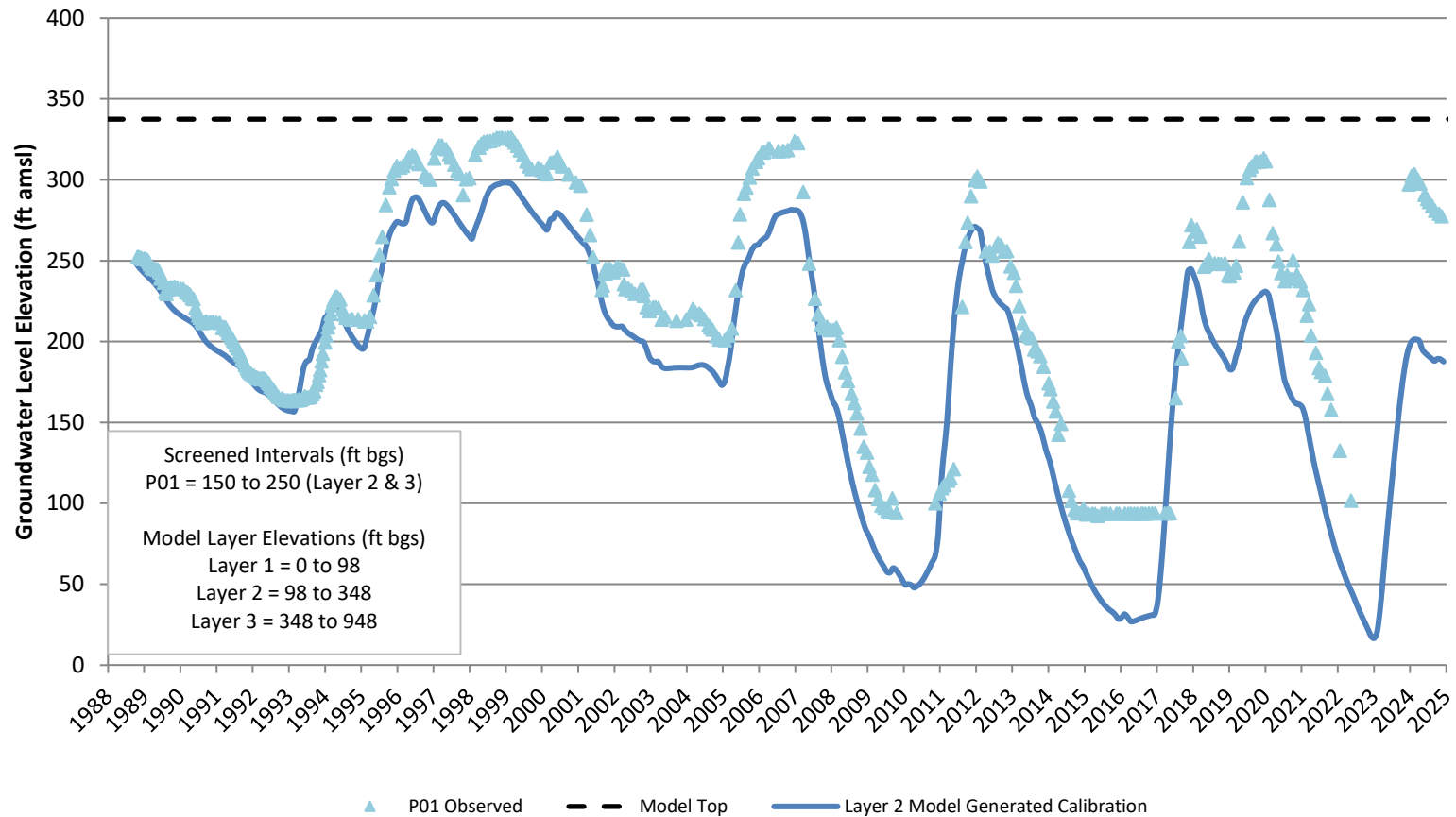
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/25E-07A04 - Layer 3



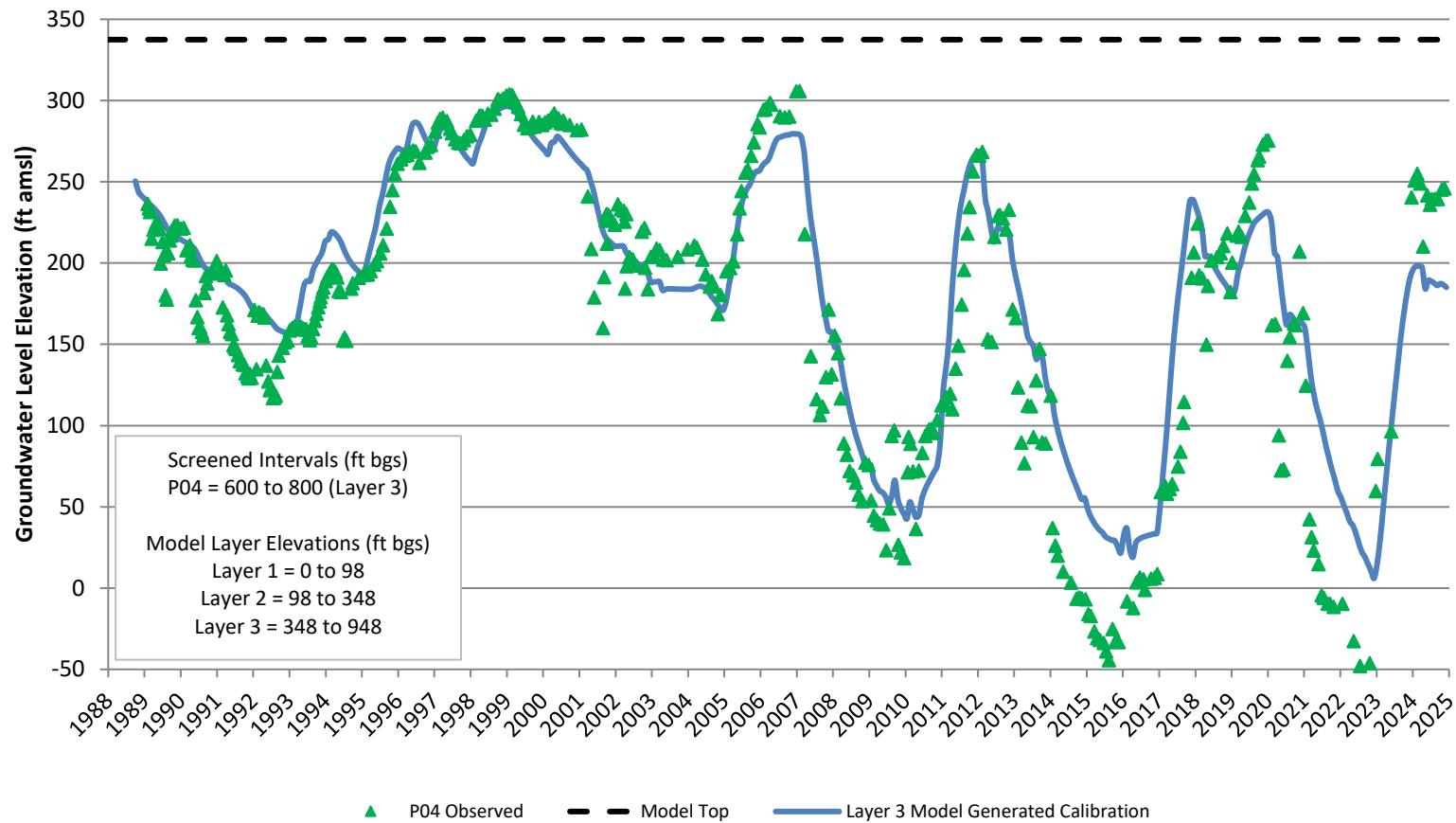
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-08P01 - Layer 2



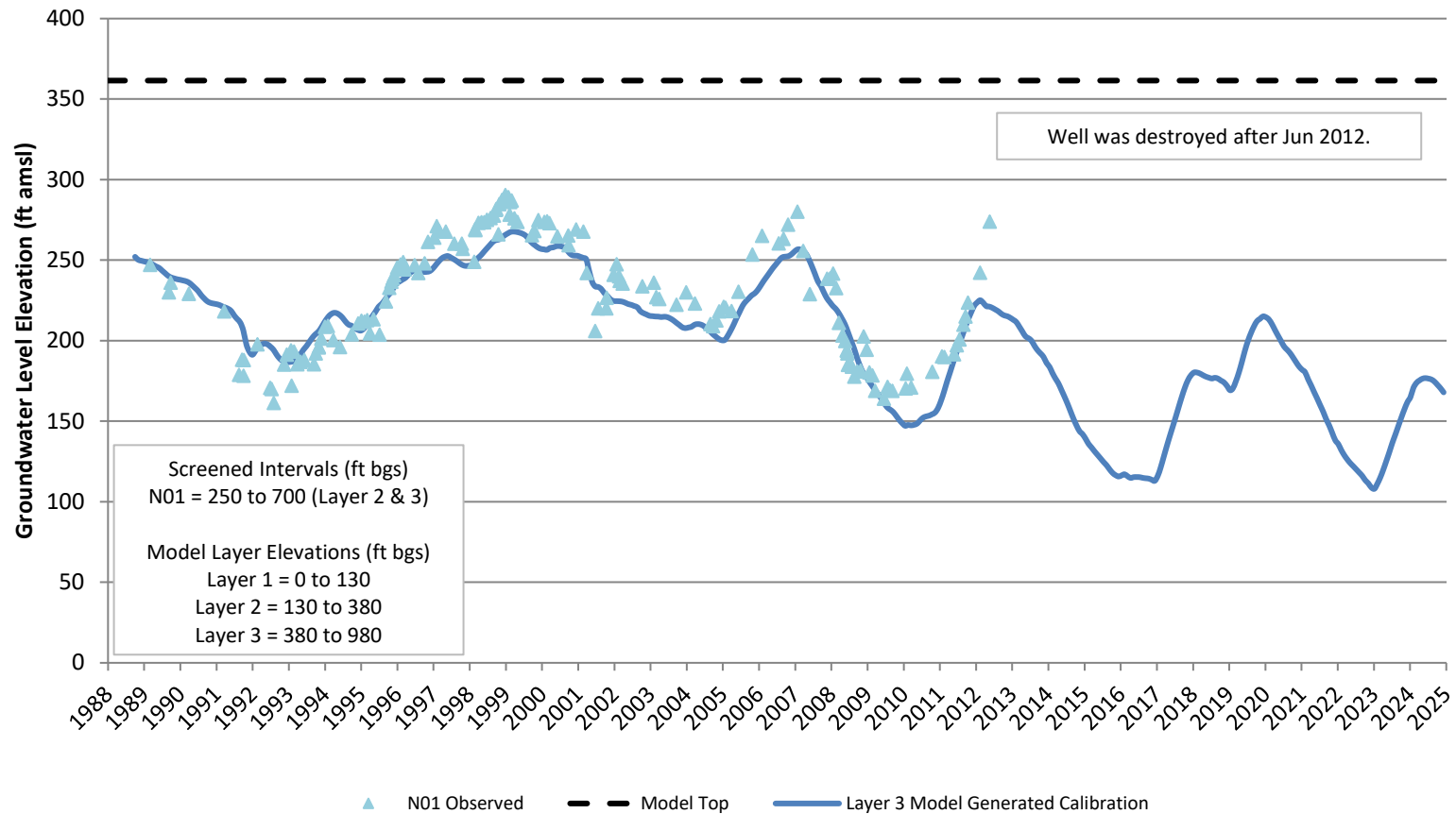
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30S/26E-08P04 - Layer 3



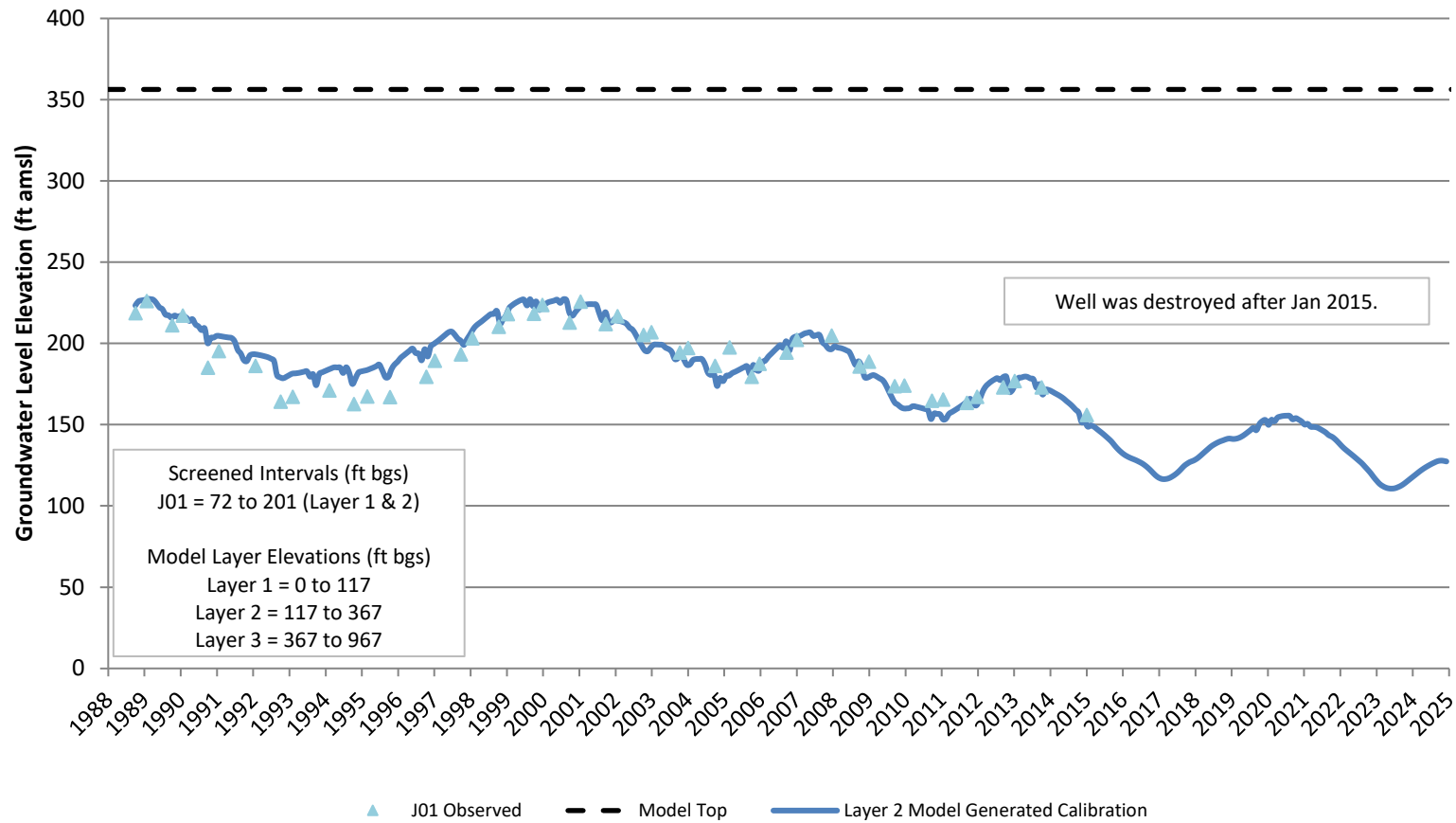
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-12N01 - Layer 3



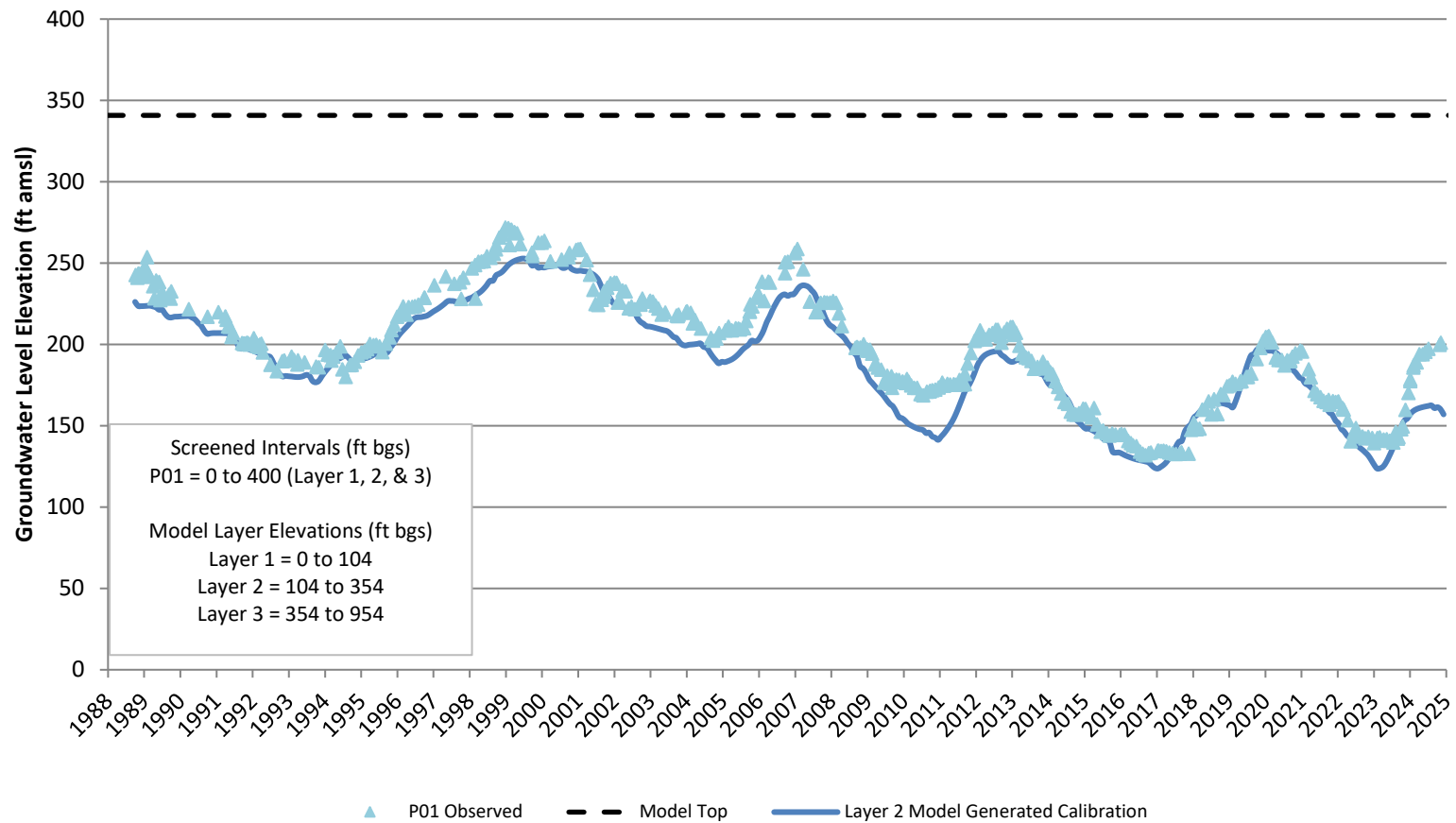
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/26E-15J01 - Layer 2



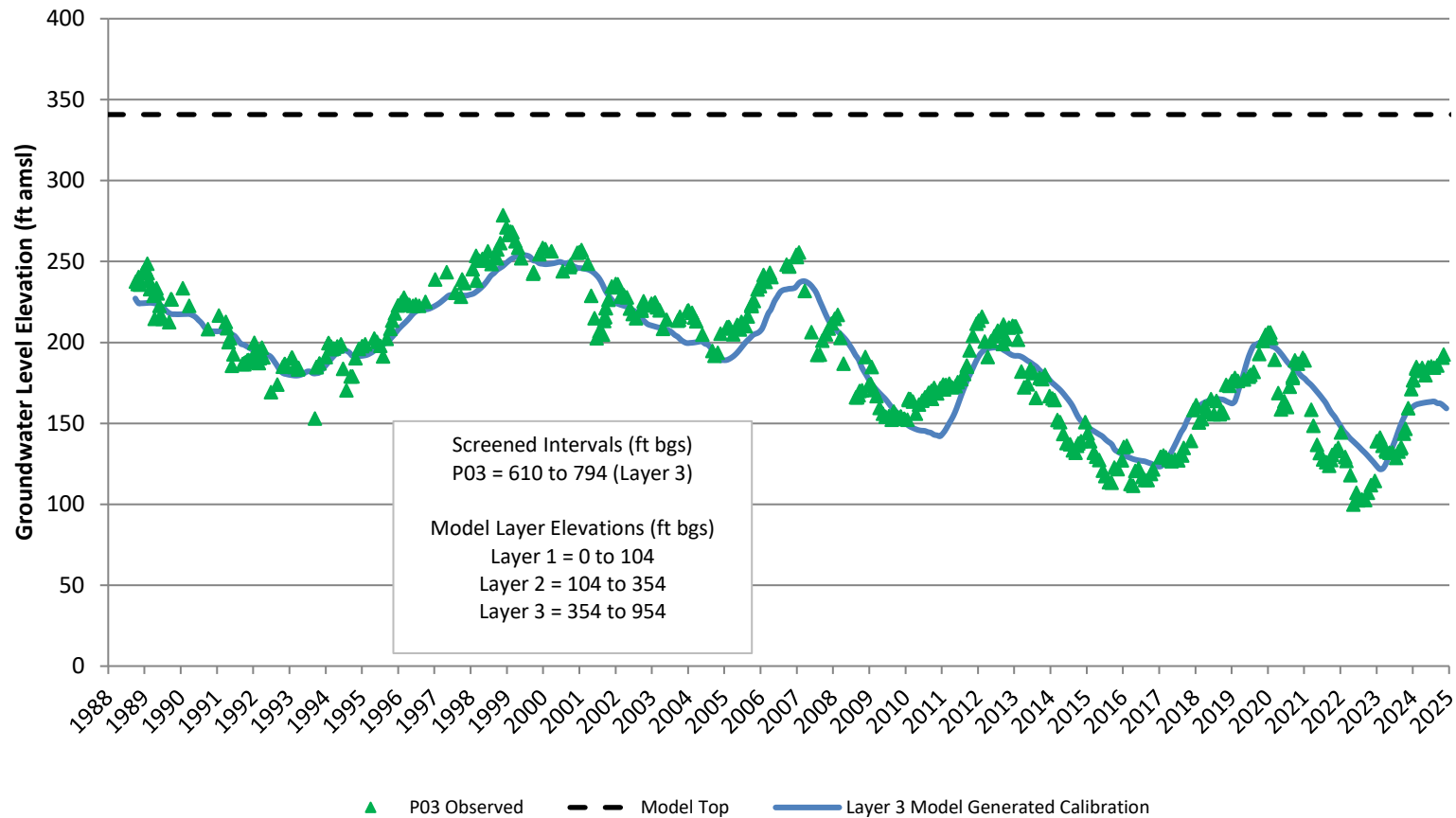
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-22P01 - Layer 2



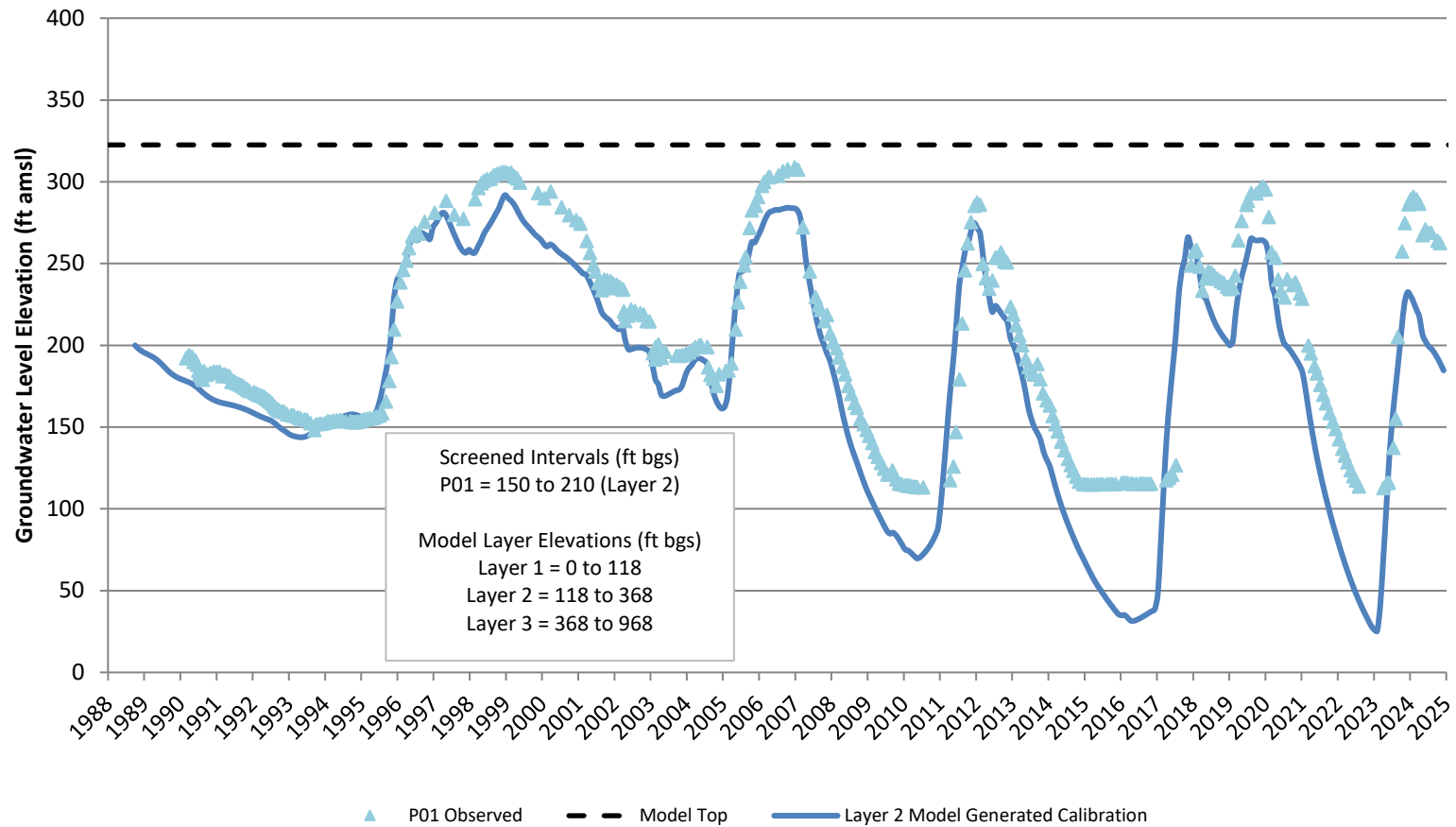
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

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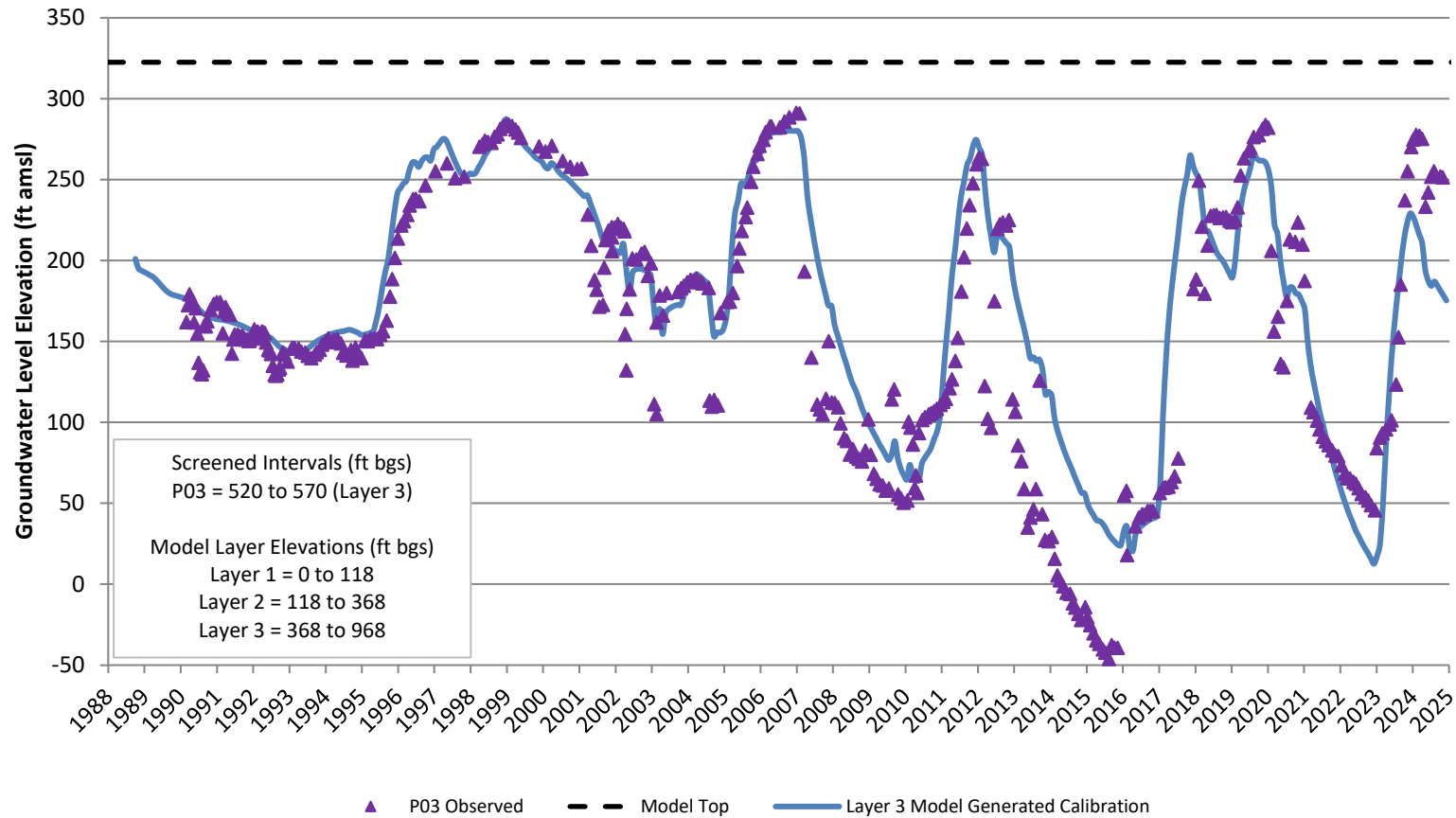
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/25E-11P01 - Layer 2

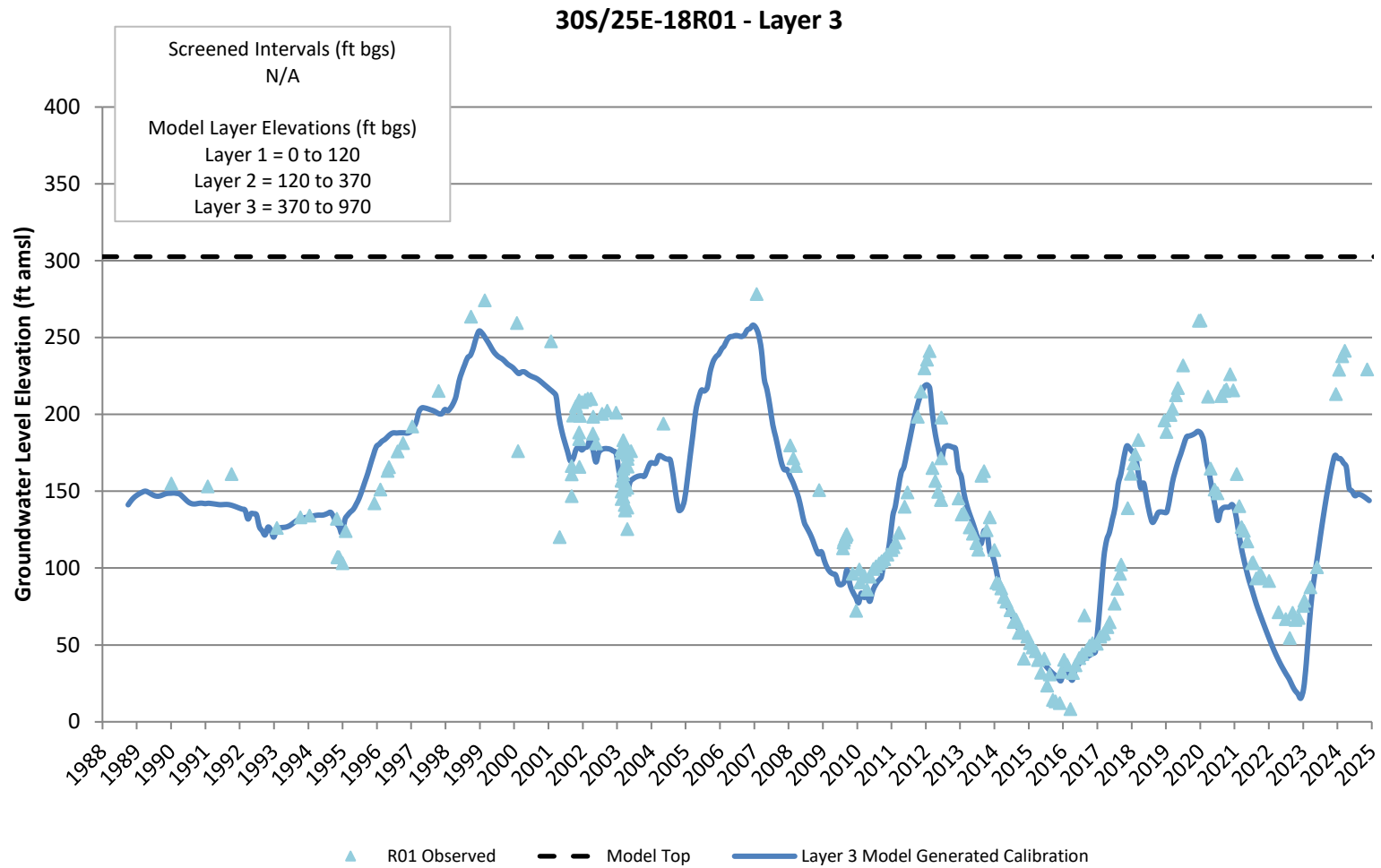


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

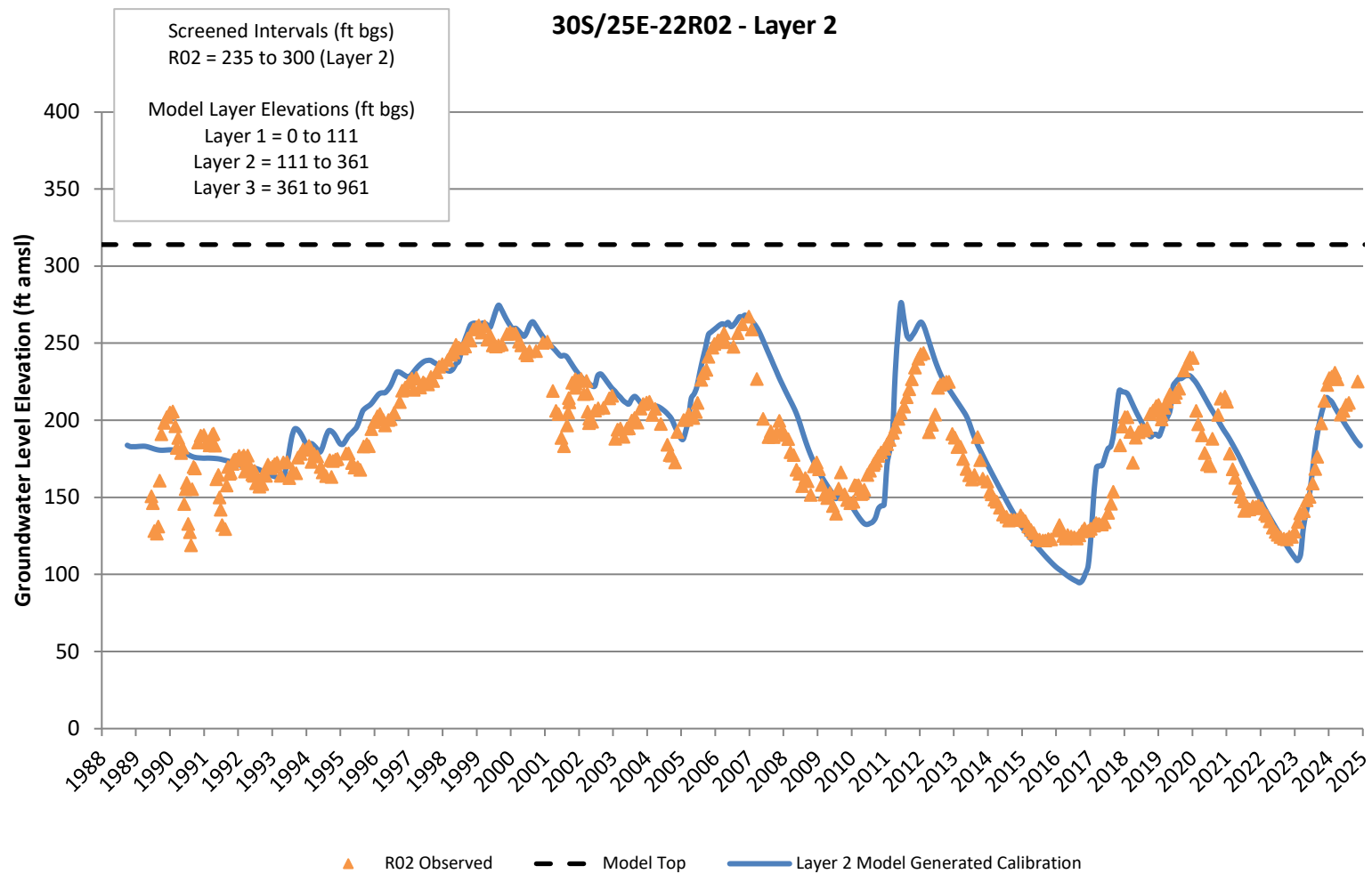
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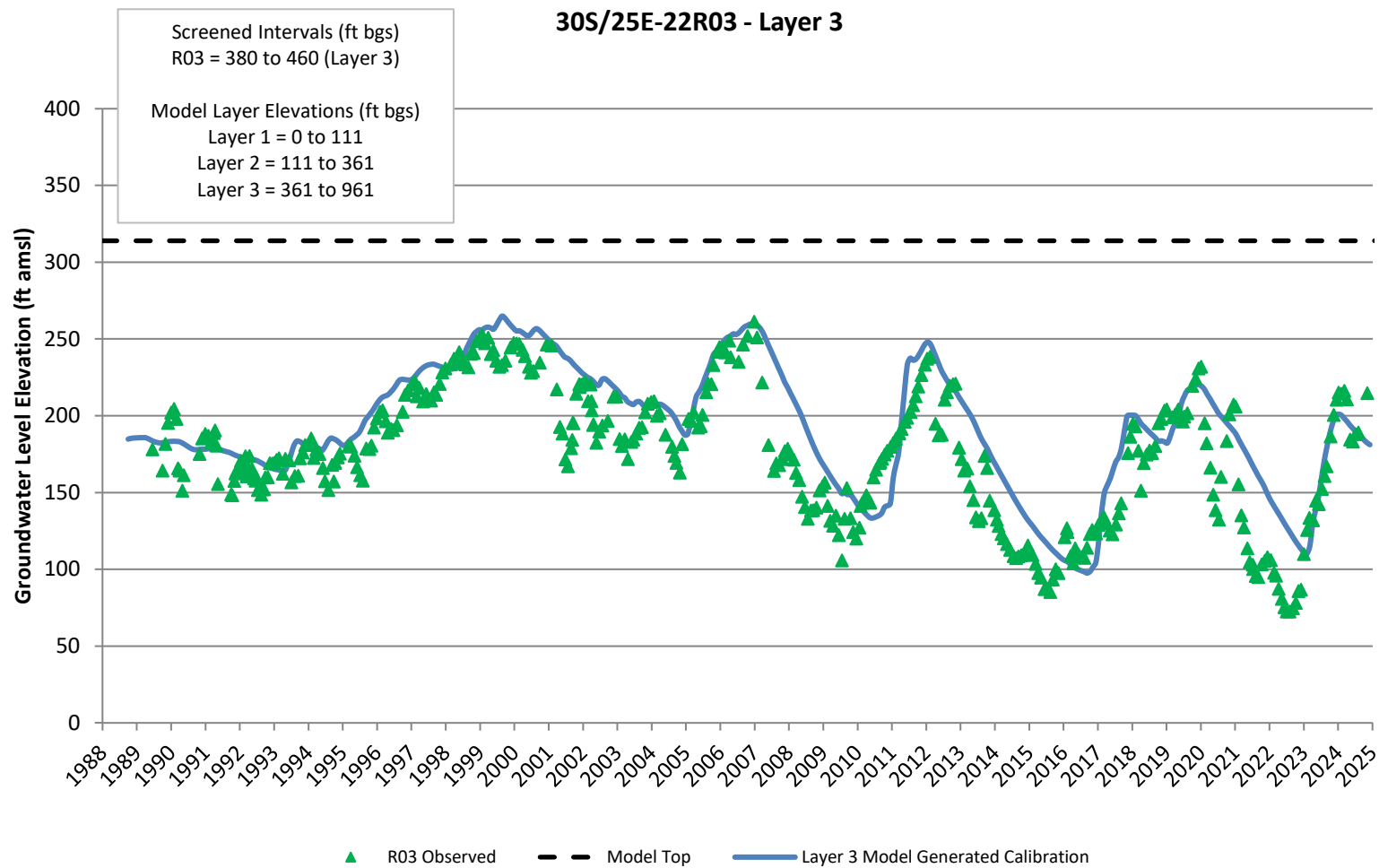
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



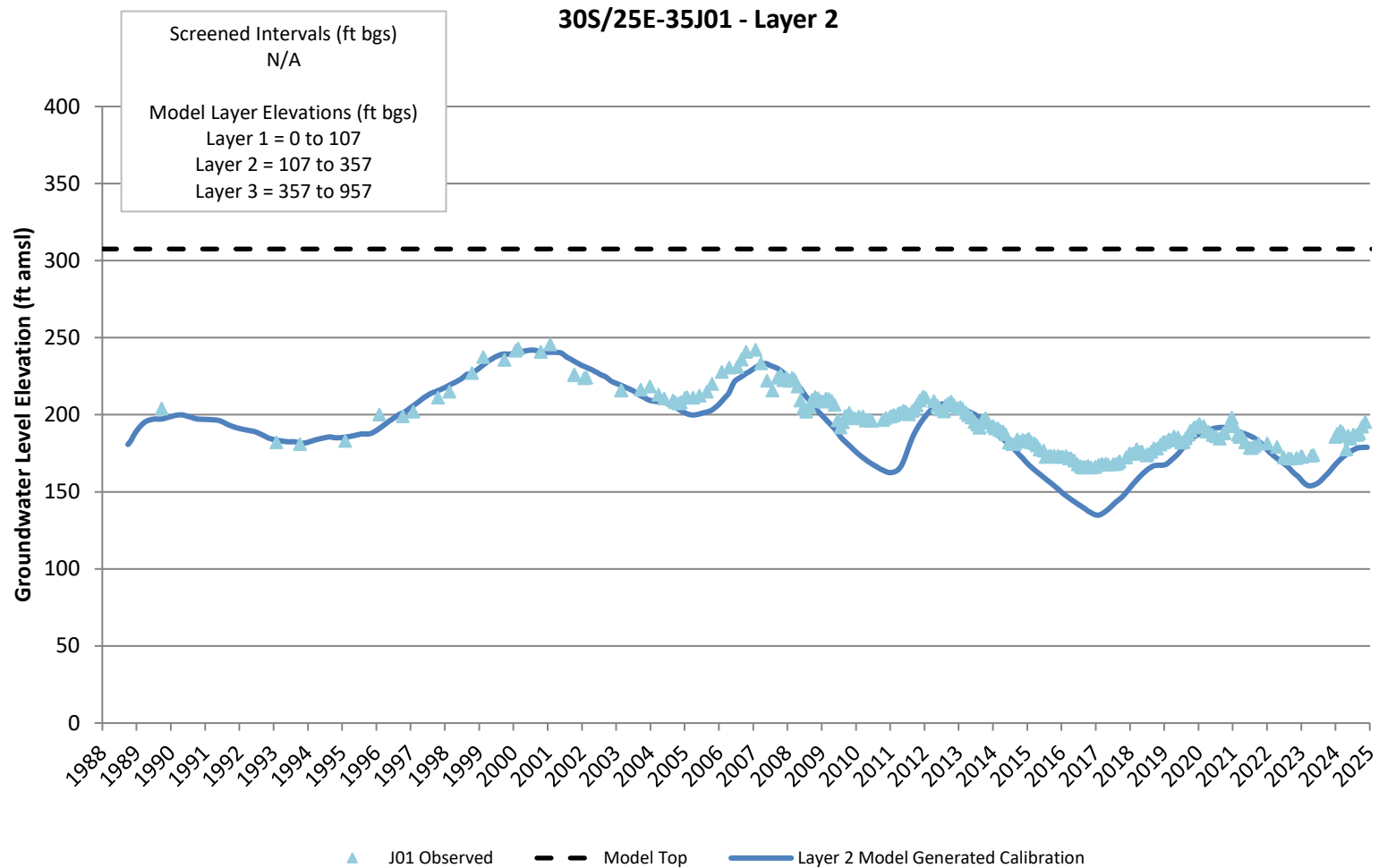
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

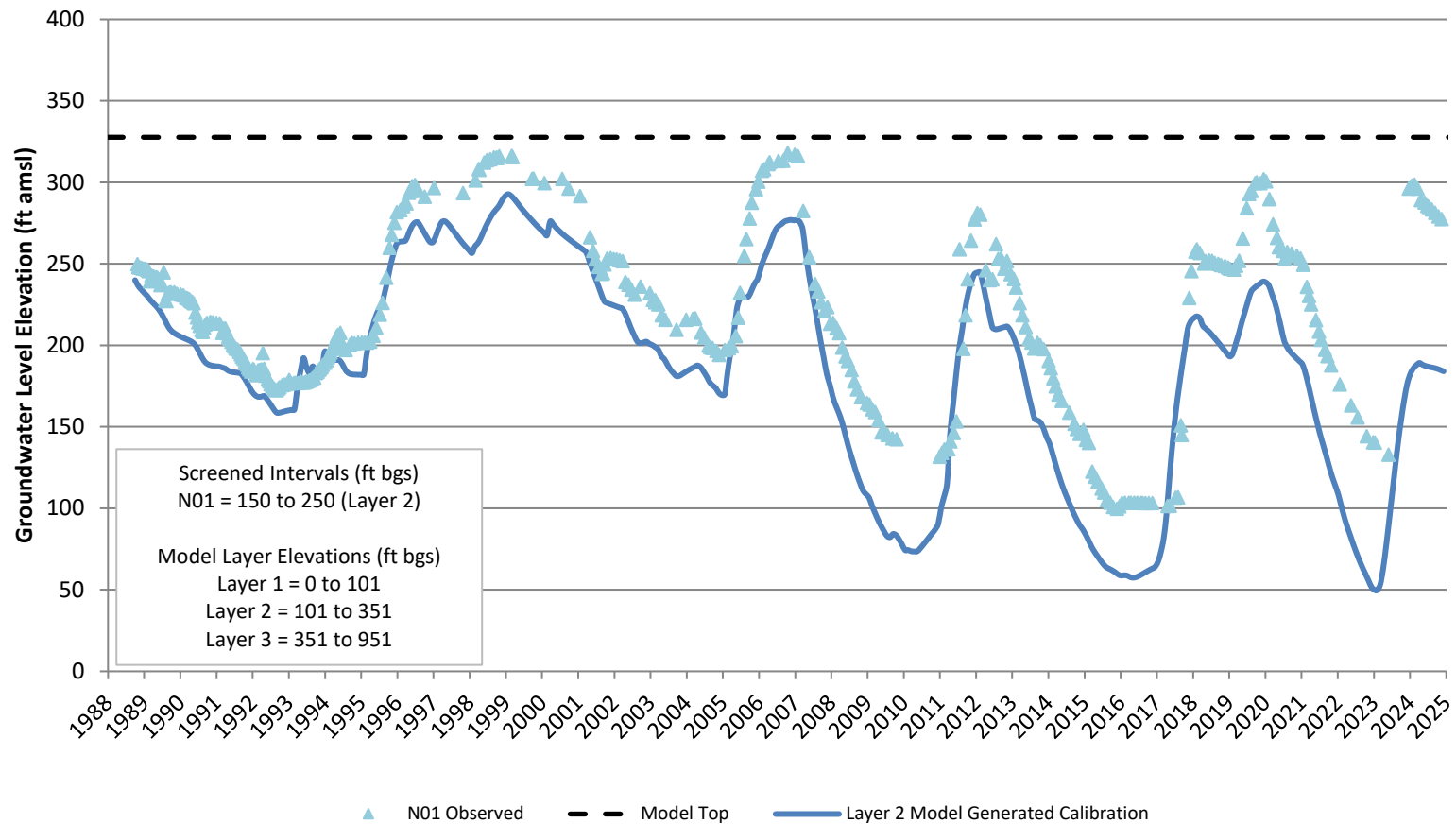


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



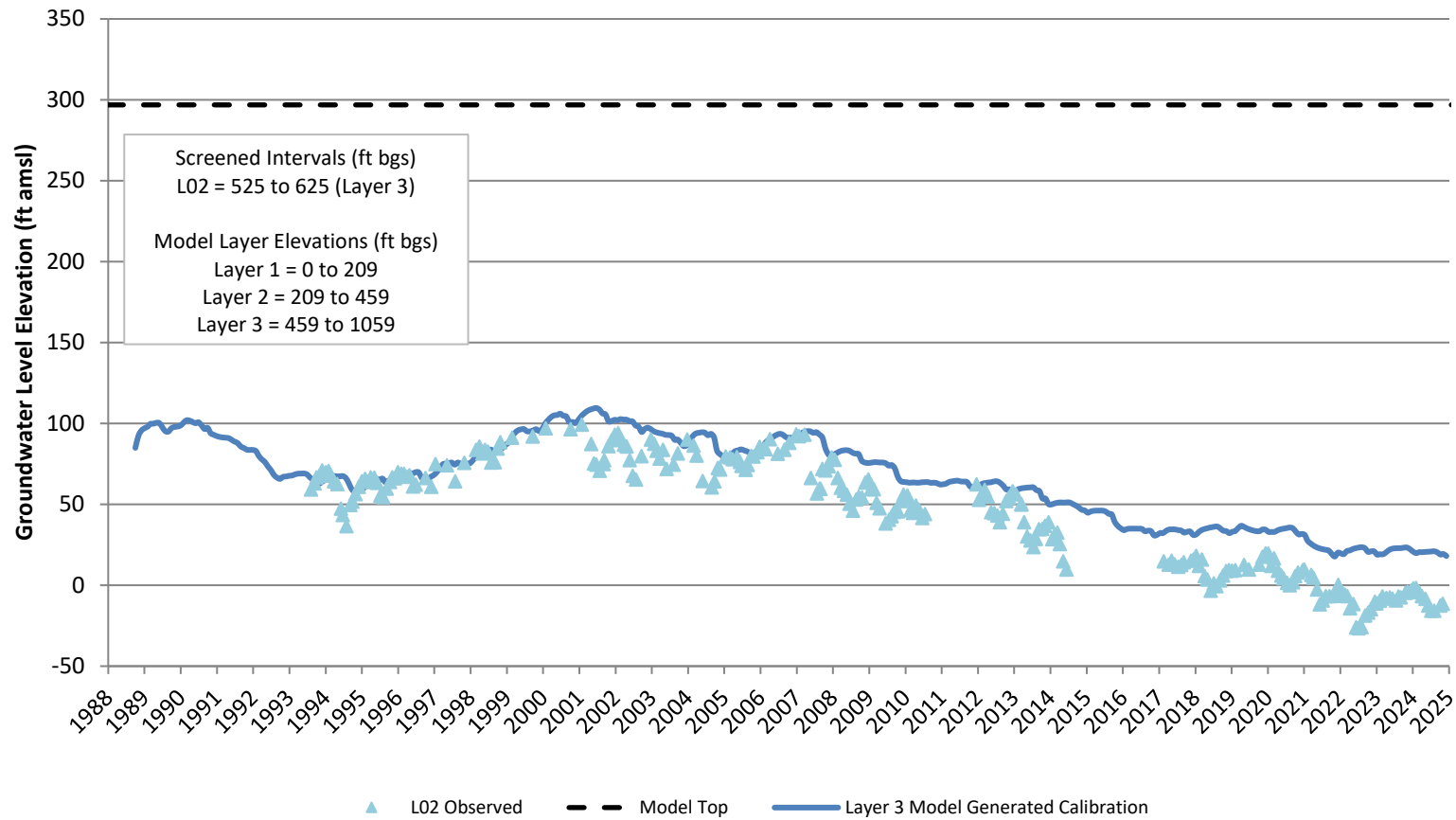
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

30S/26E-18N01 - Layer 2



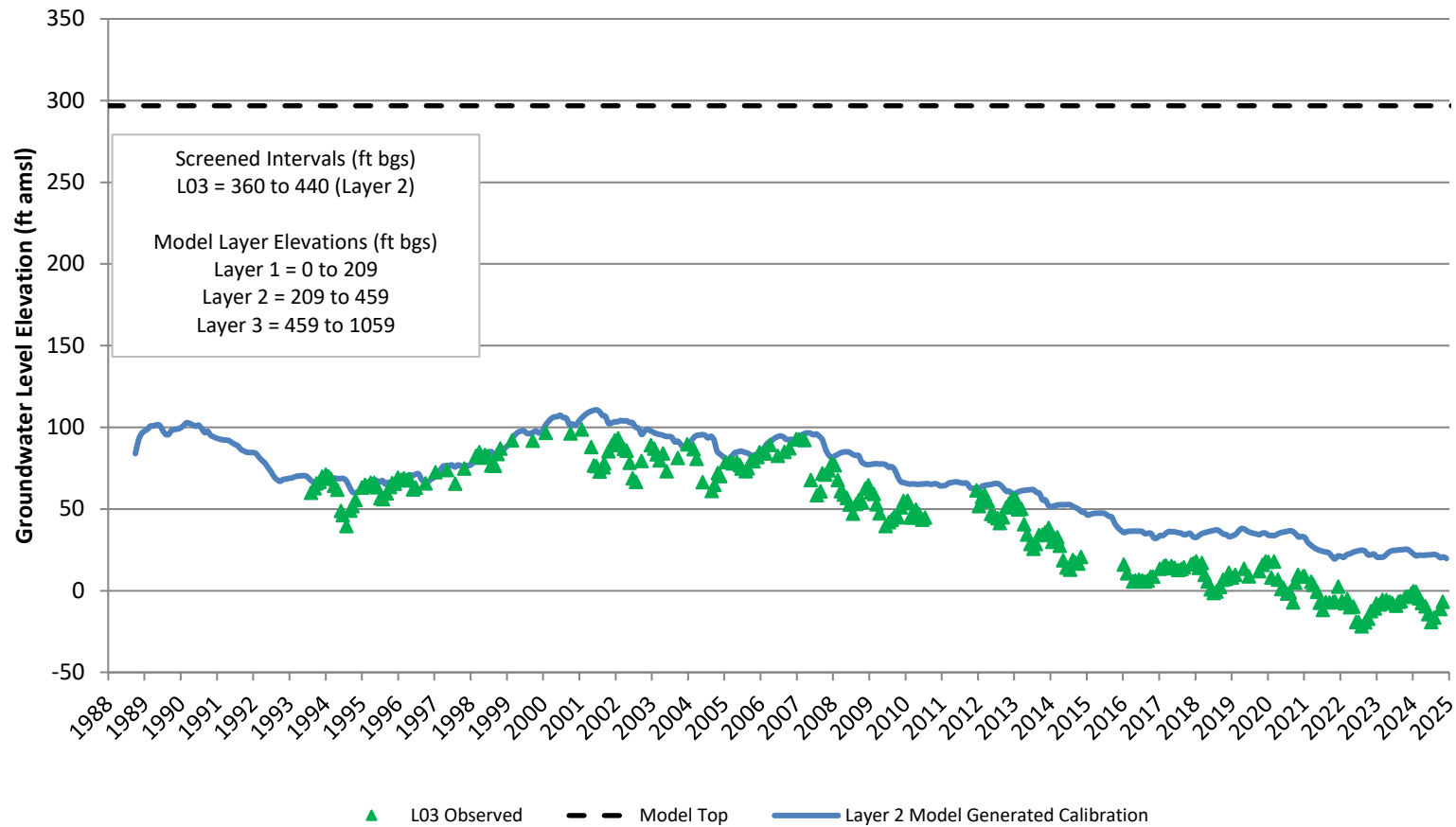
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

29S/24E-08L02 - Layer 3

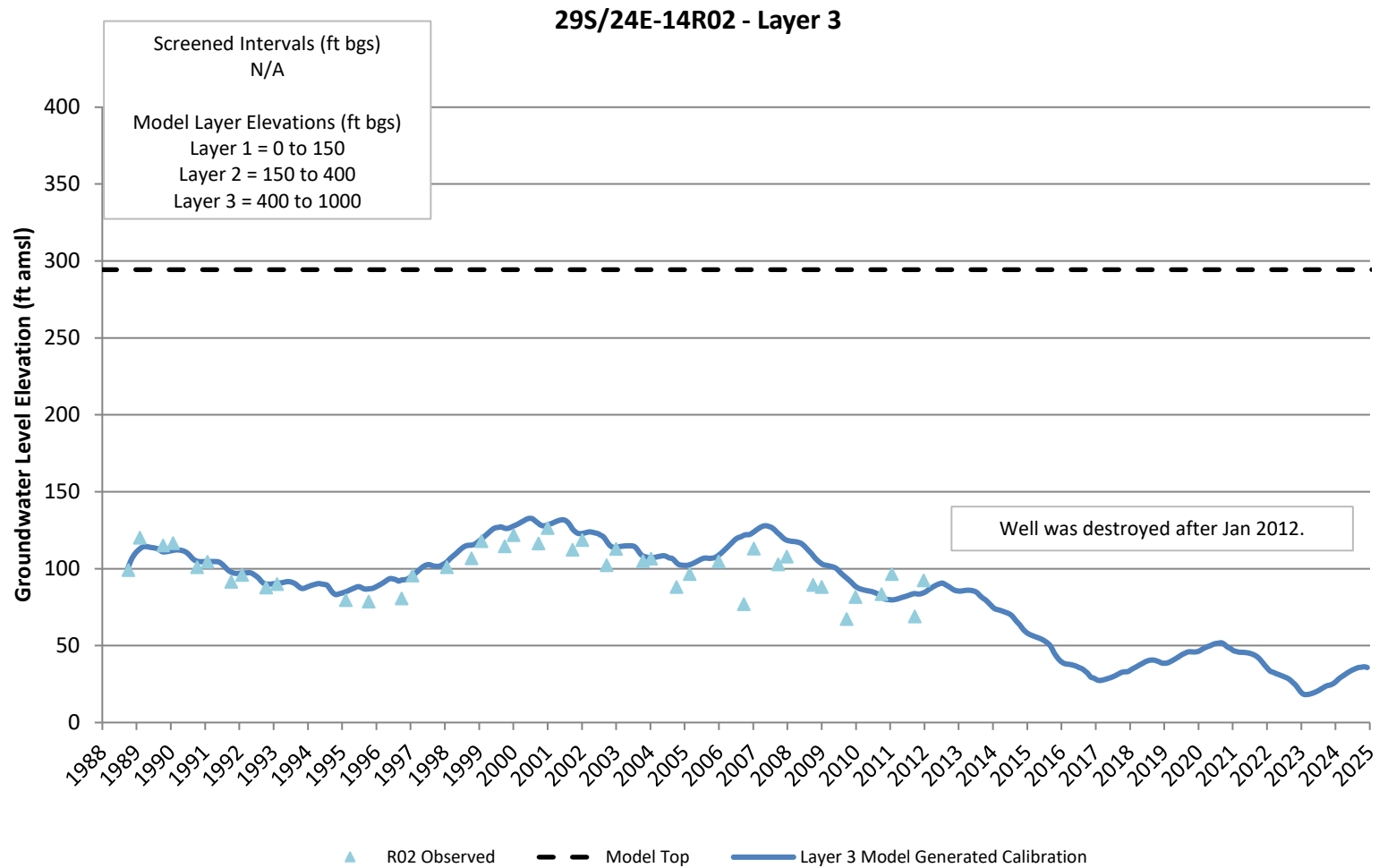


Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update

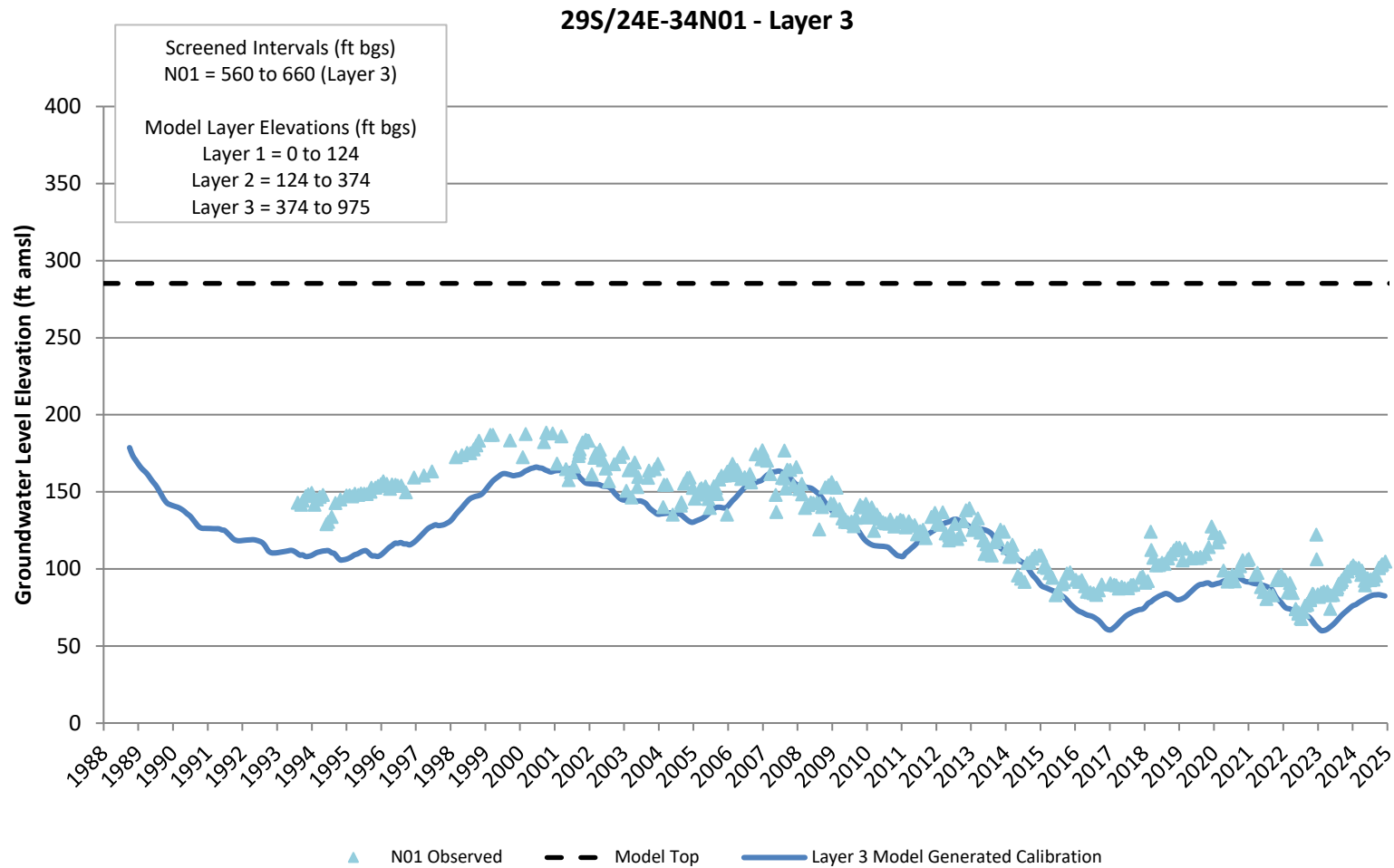
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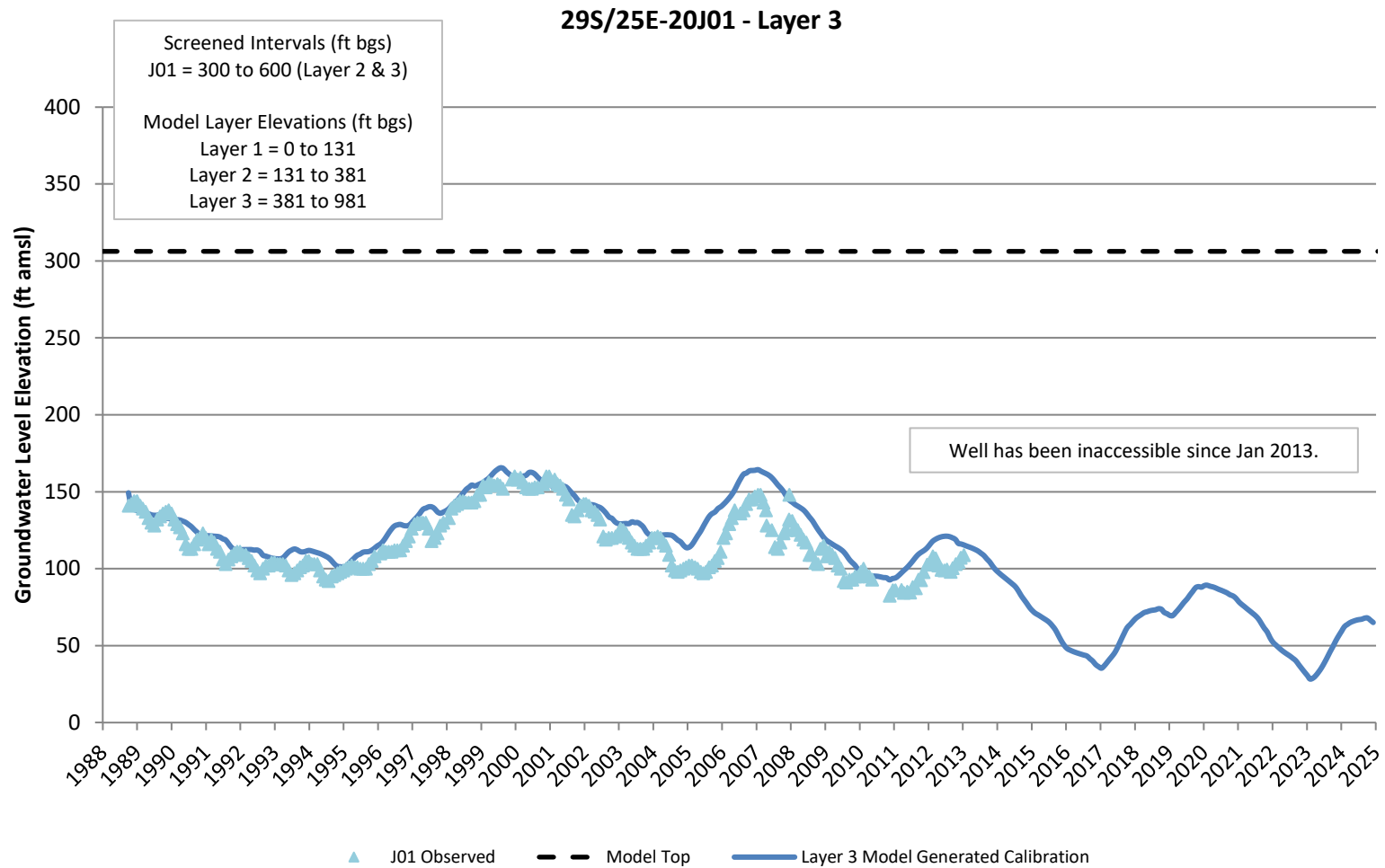
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



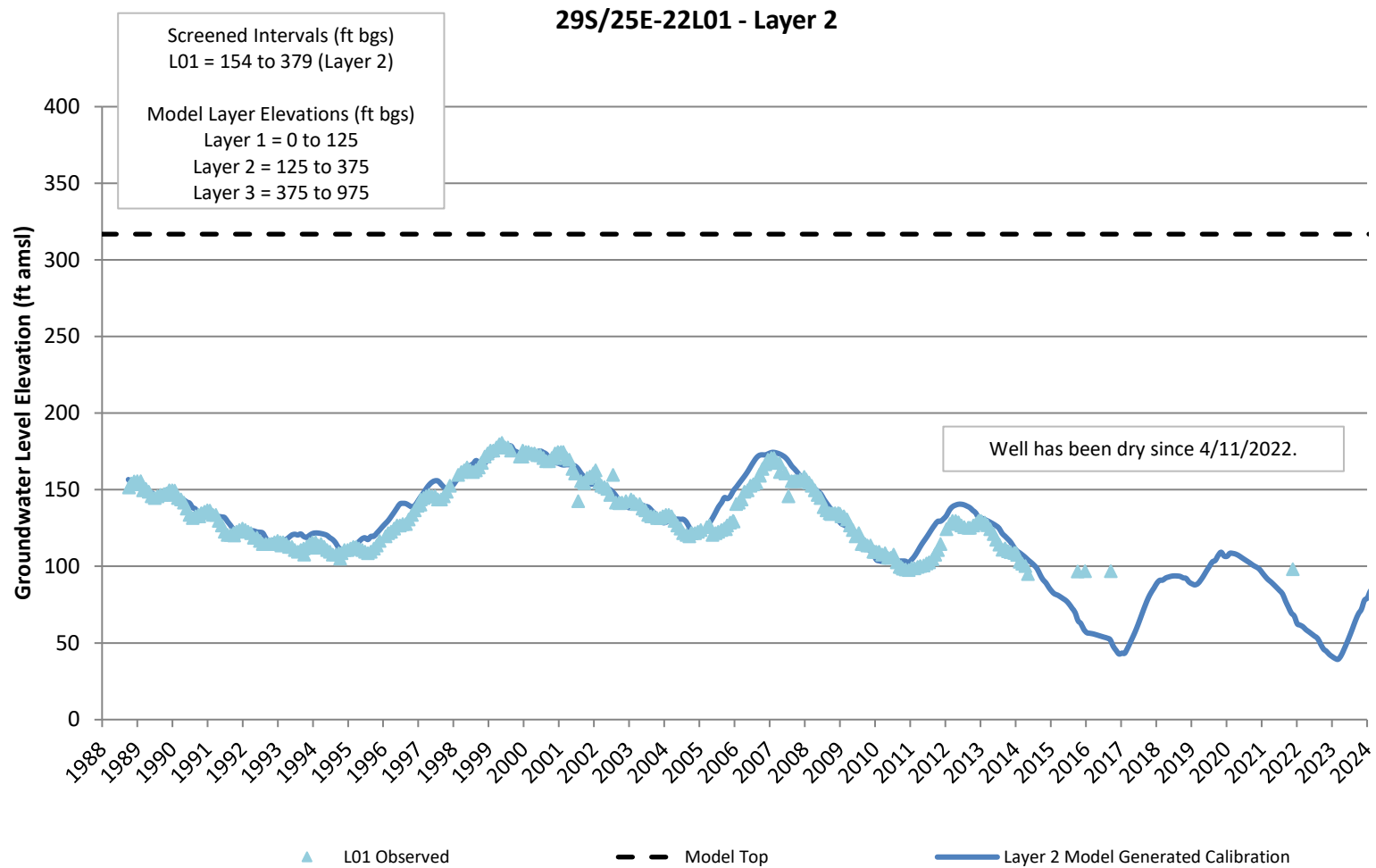
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



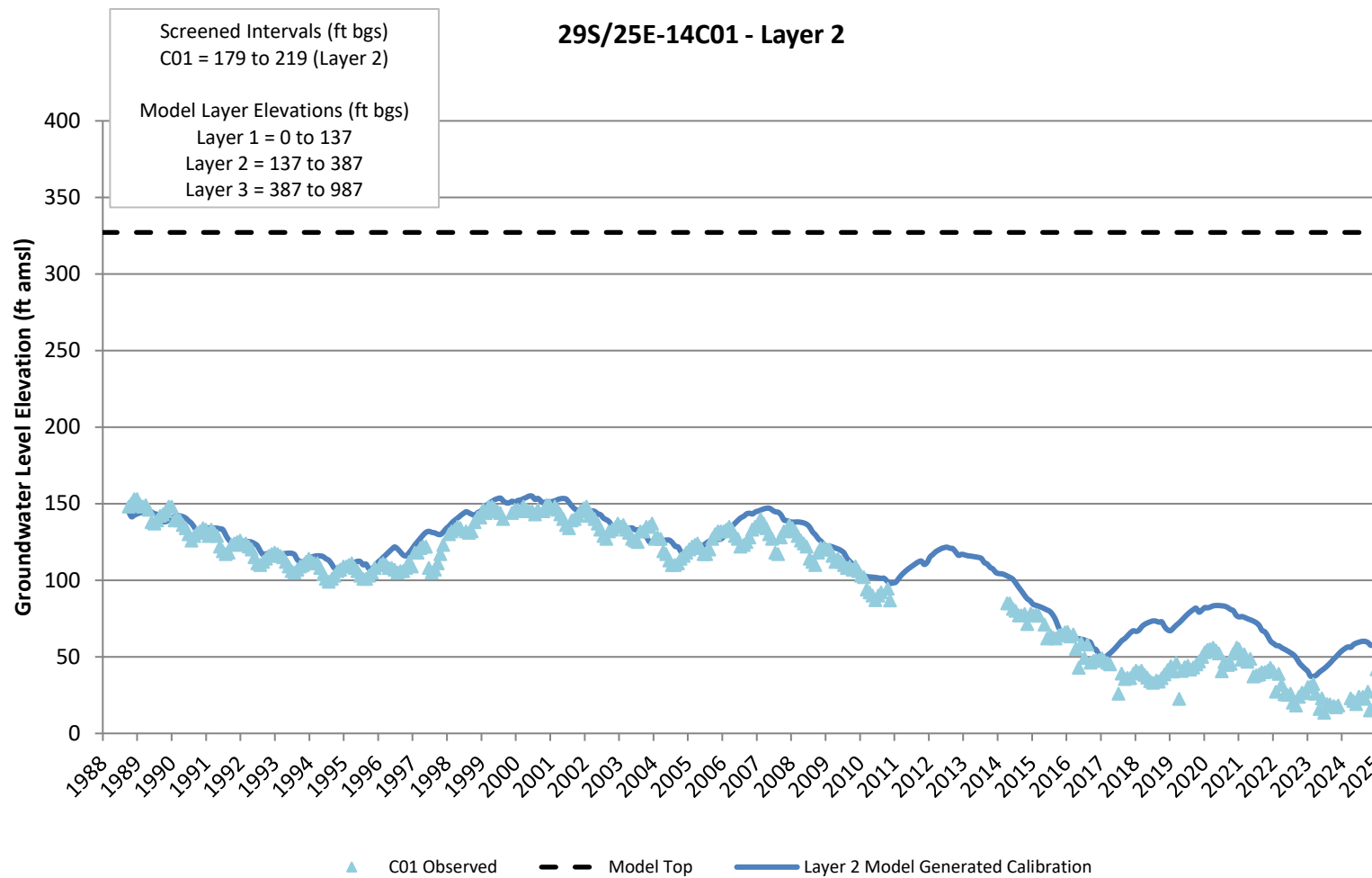
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



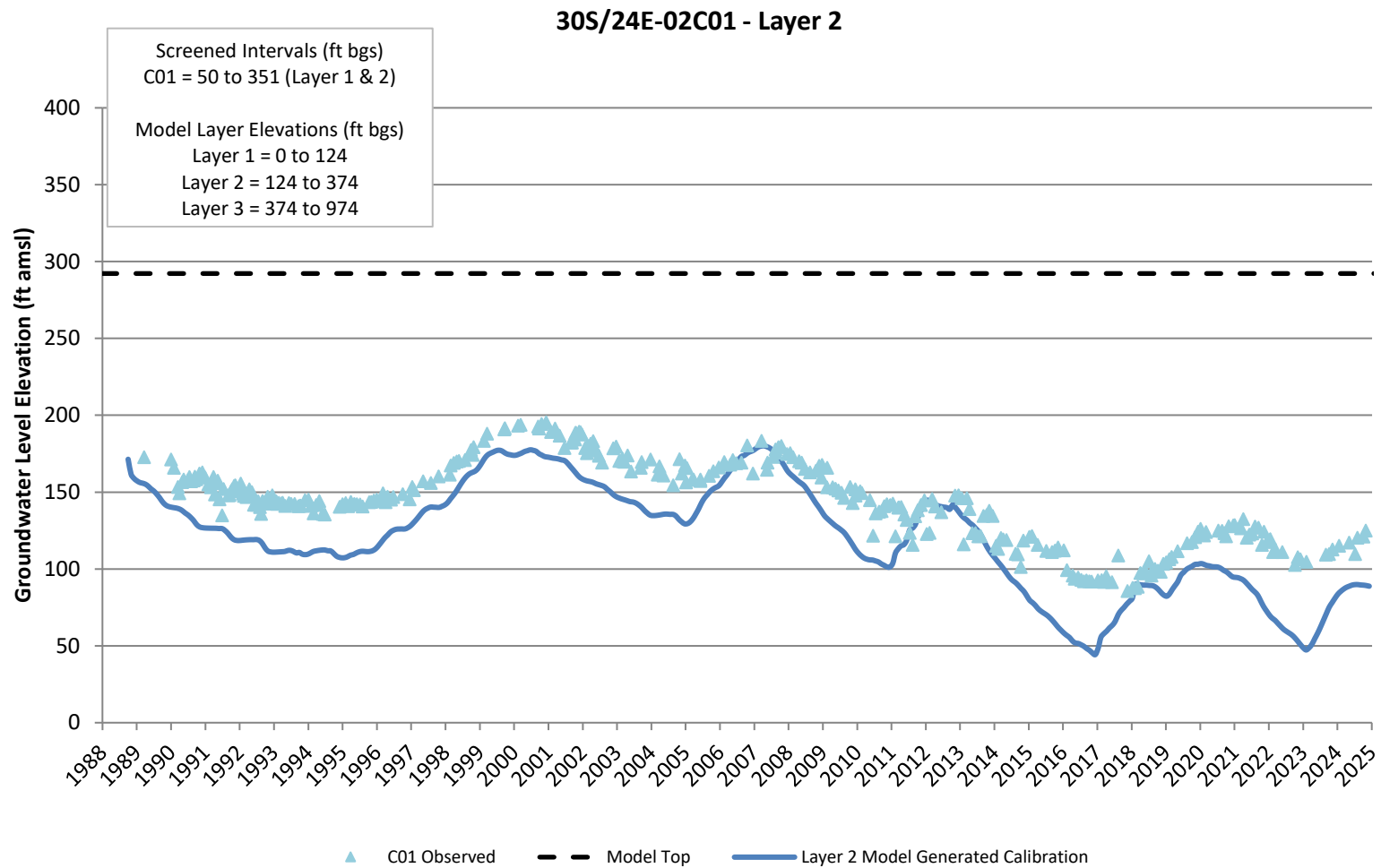
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



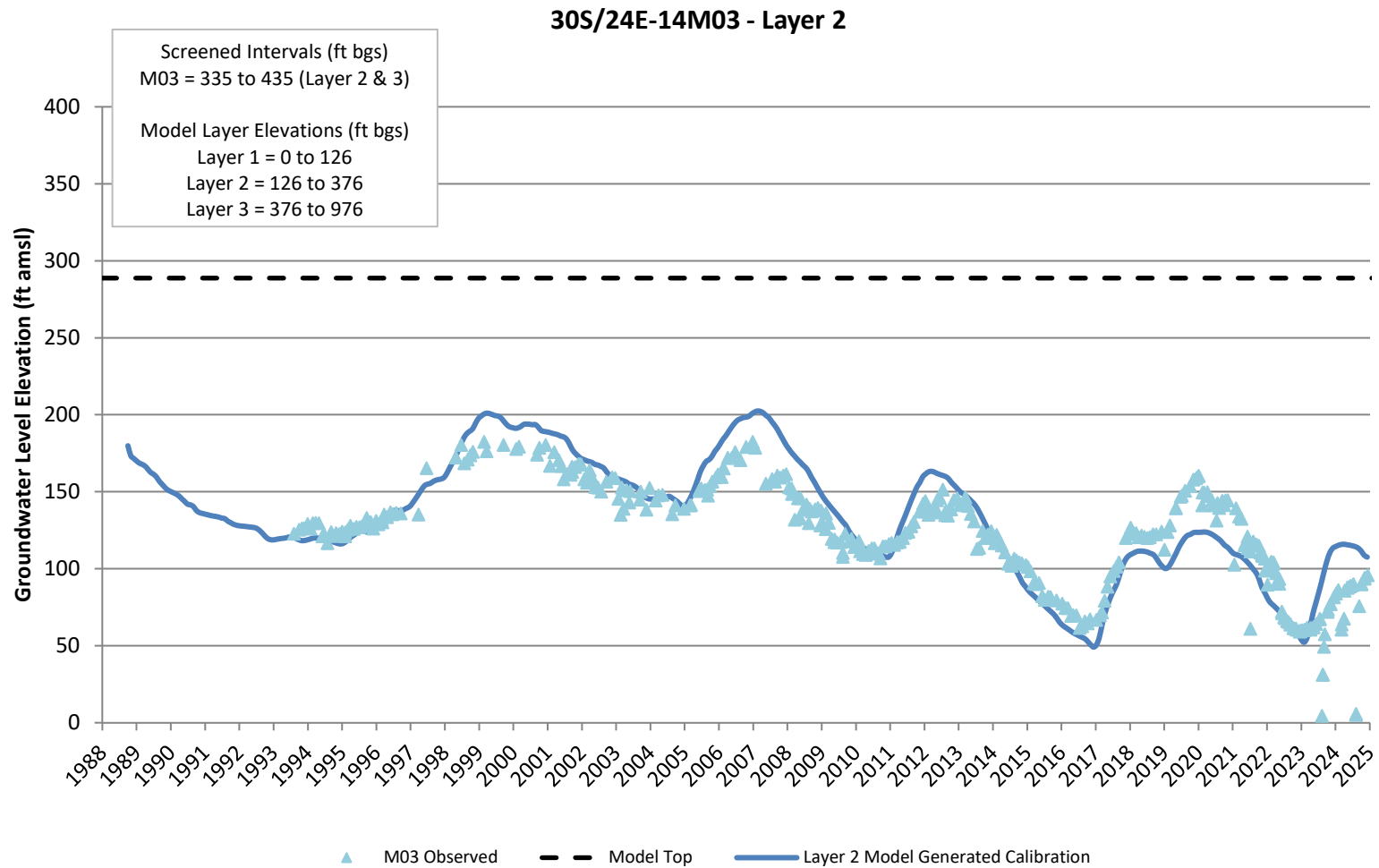
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



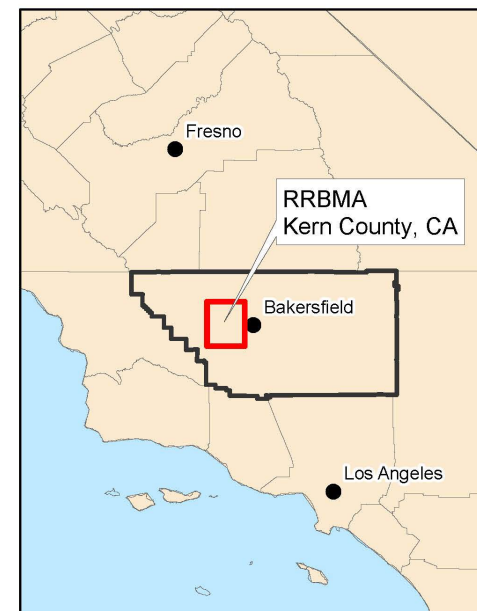
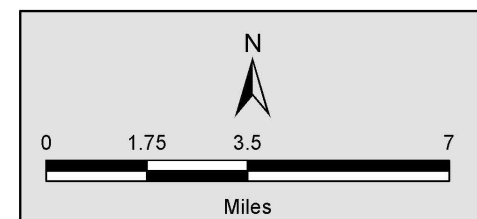
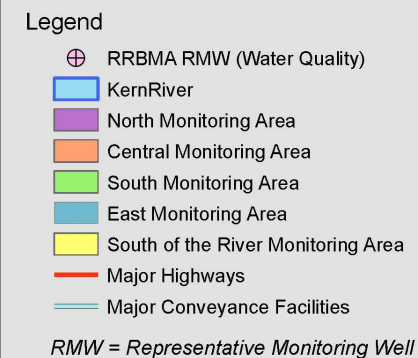
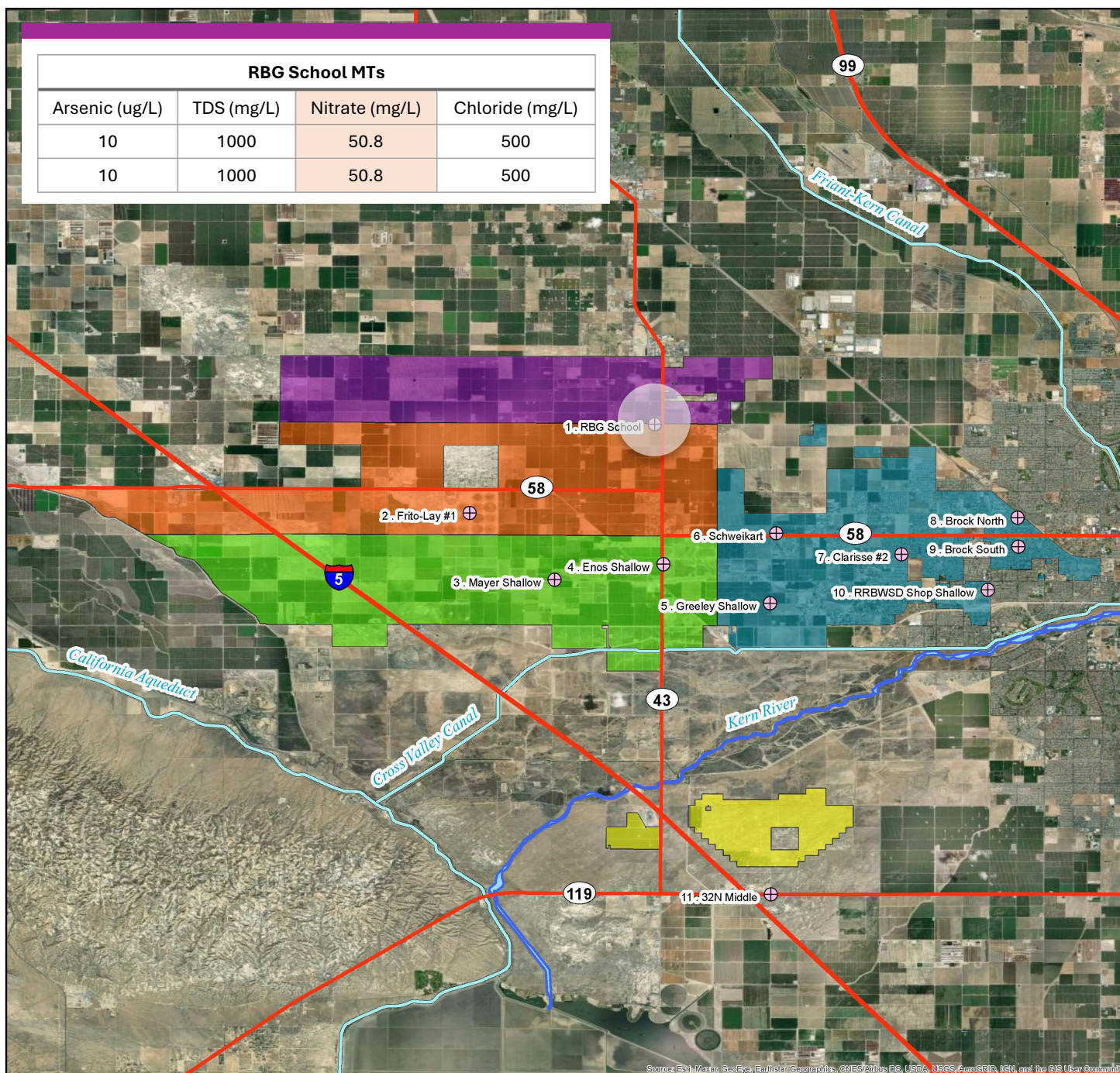
Comparison of Model-Generated Calibration and Observed Water Levels - 2024 Update



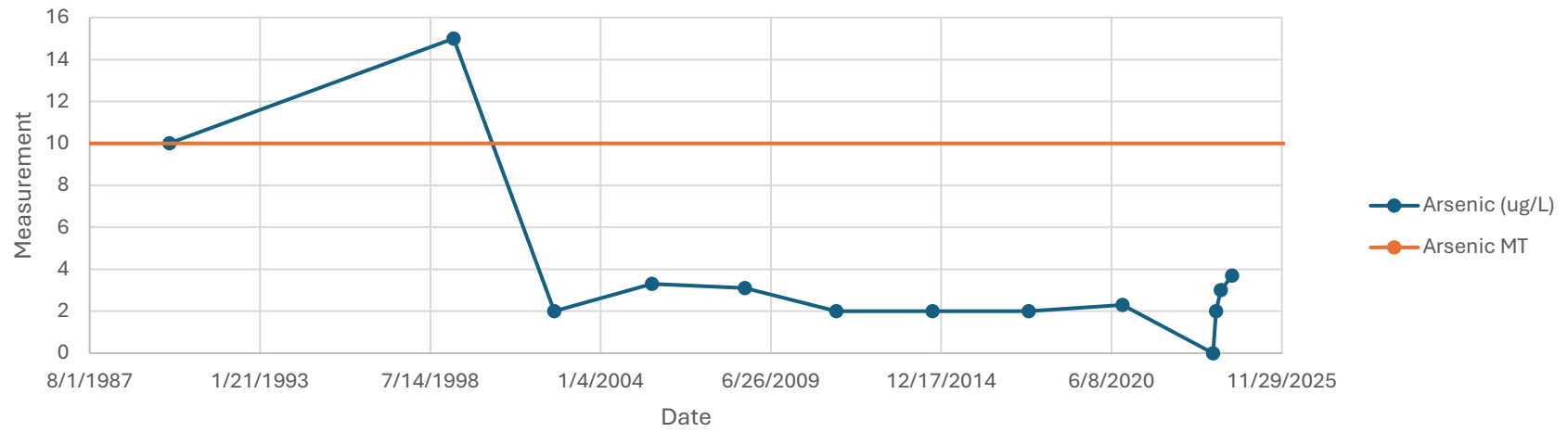
Appendix 3

Groundwater Quality Data

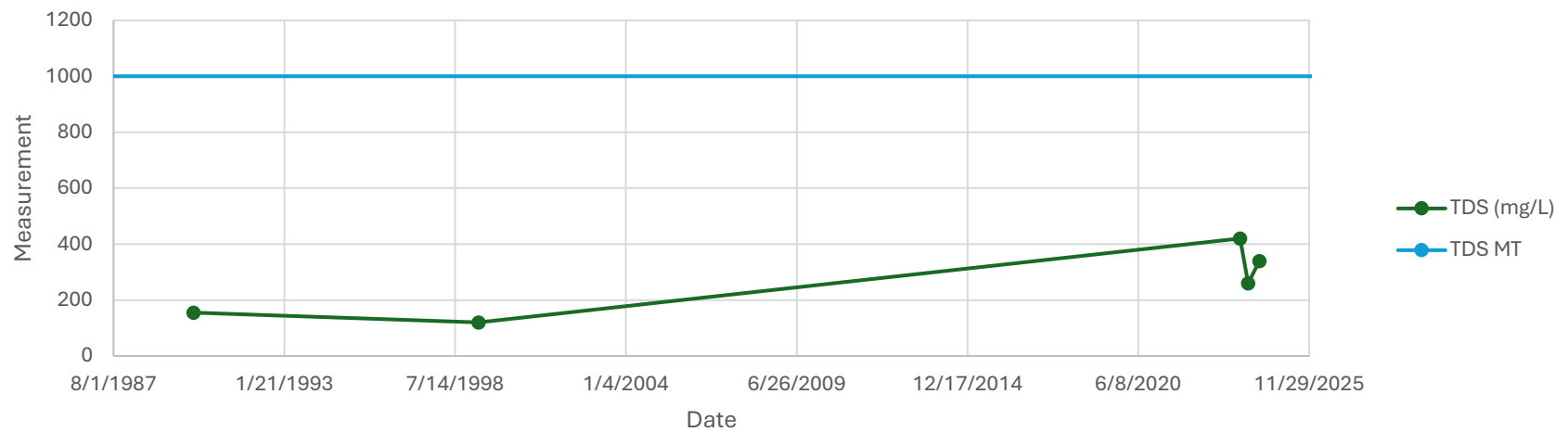
RRBMA Monitoring Areas - Water Quality Wells



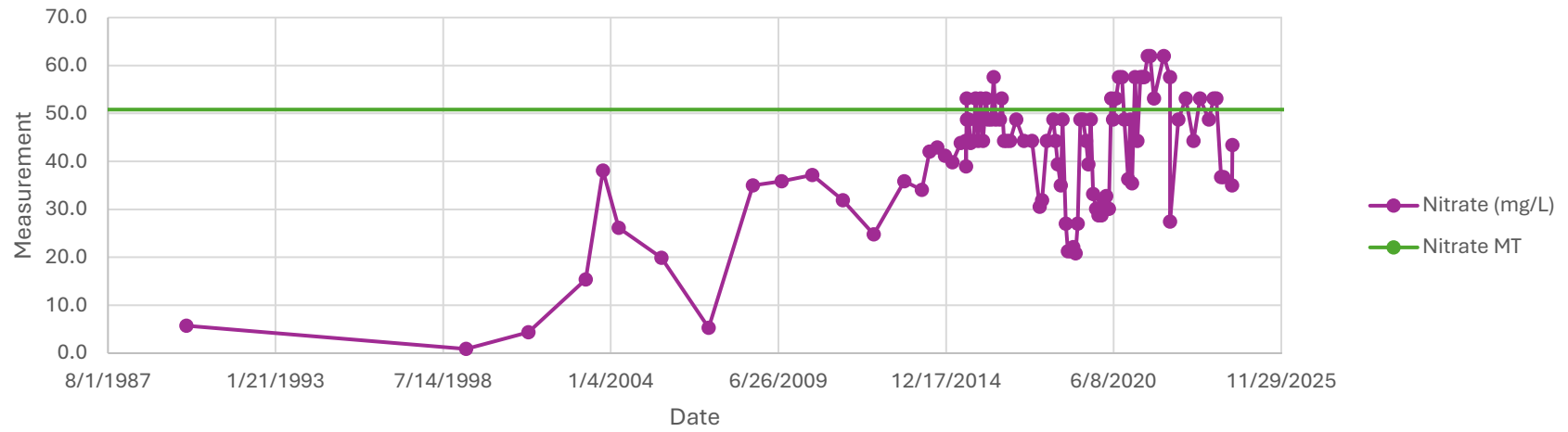
RBG School



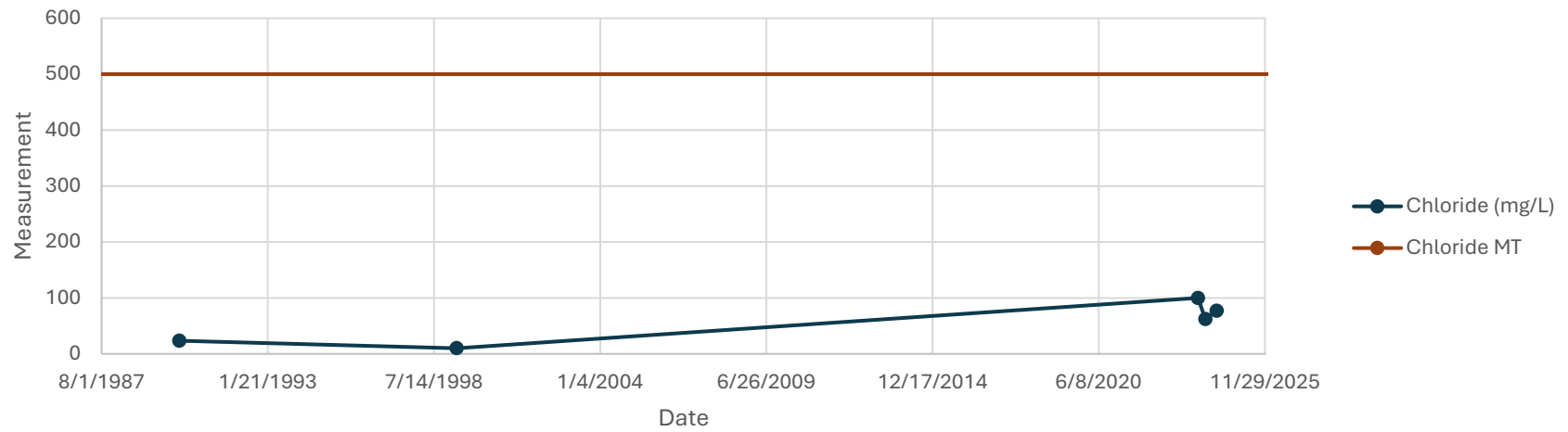
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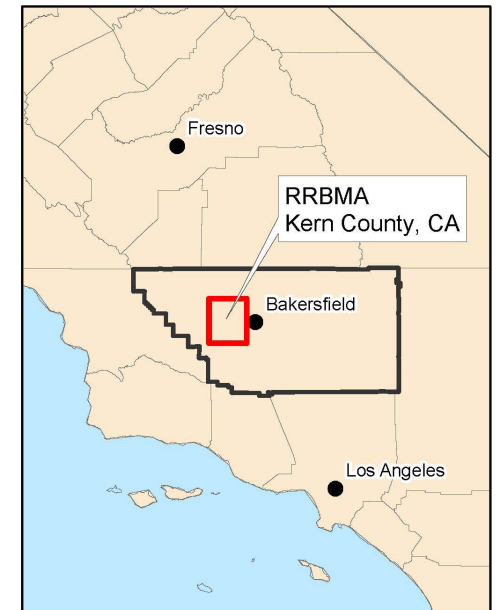
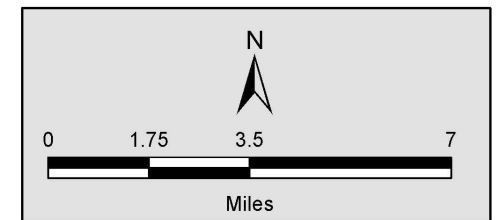
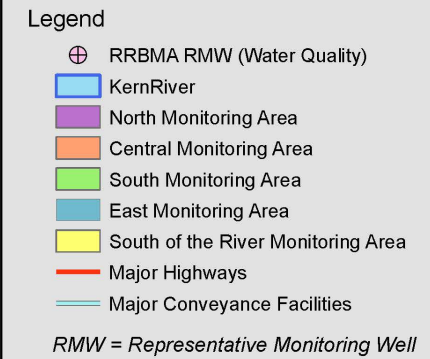
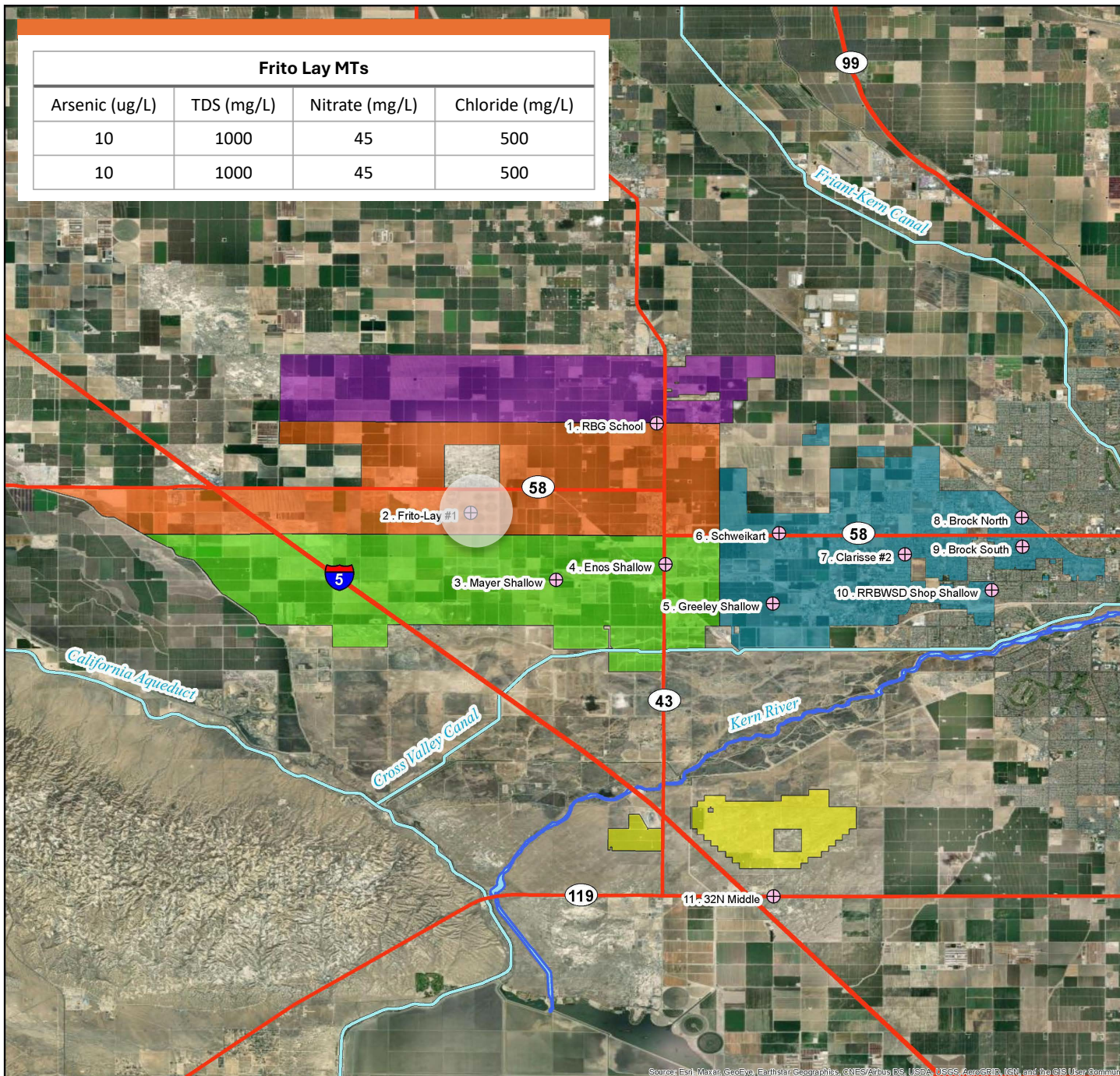
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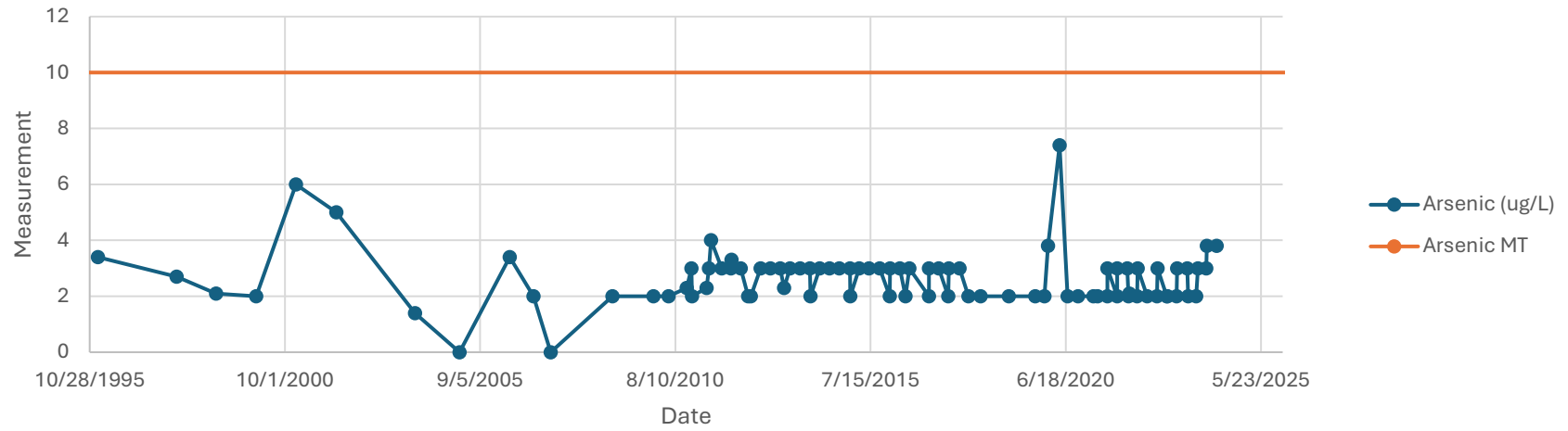
RBG School



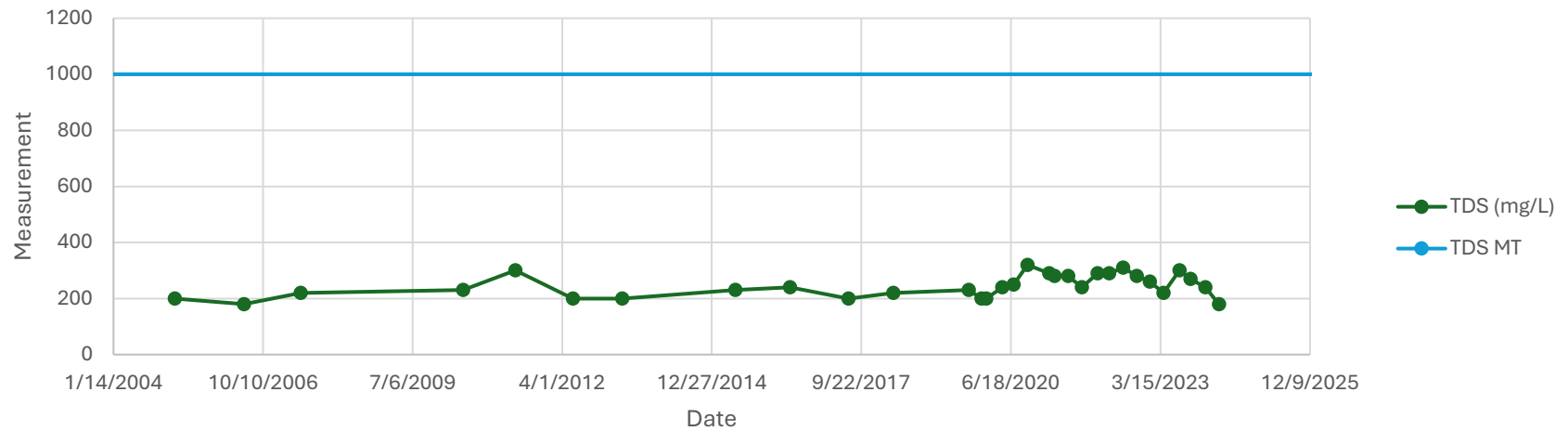
RRBMA Monitoring Areas - Water Quality Wells



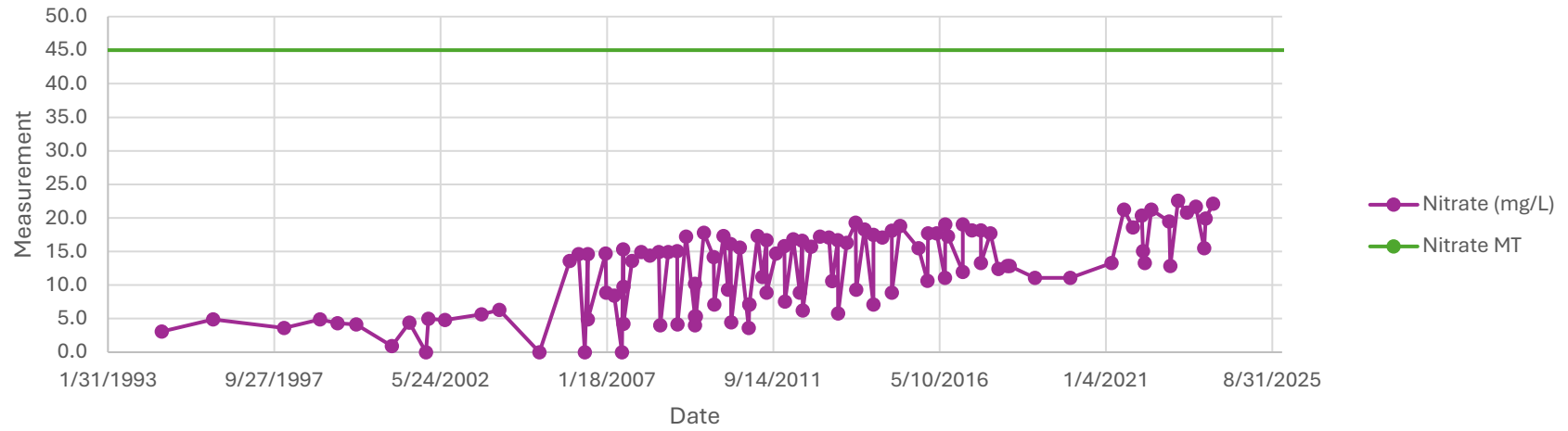
Frito Lay



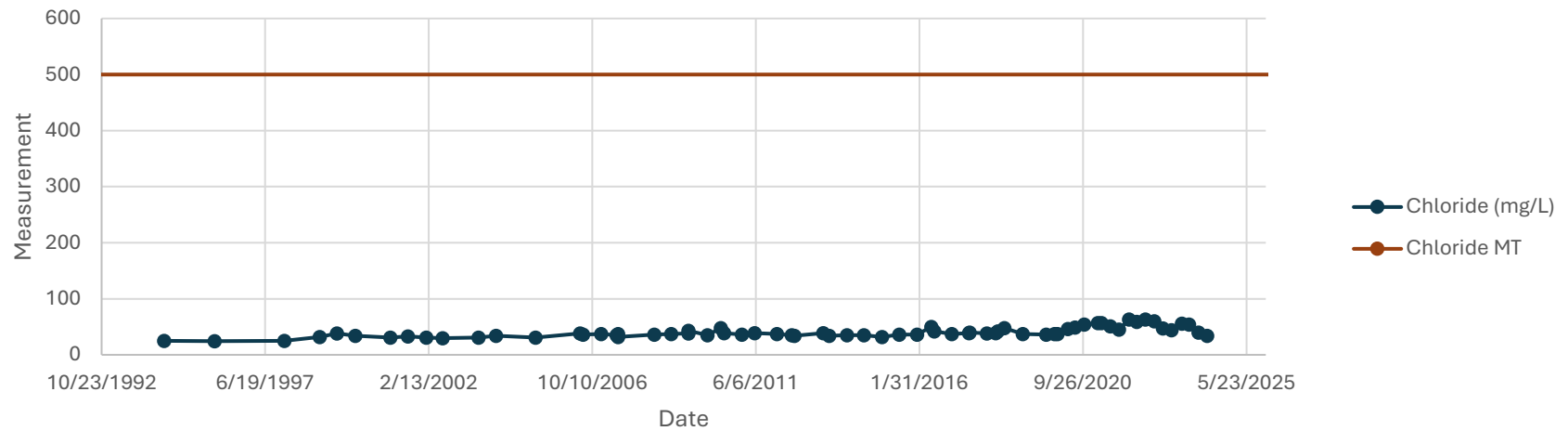
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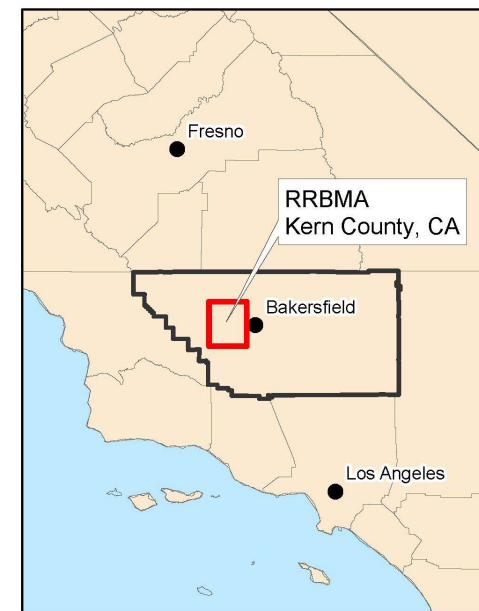
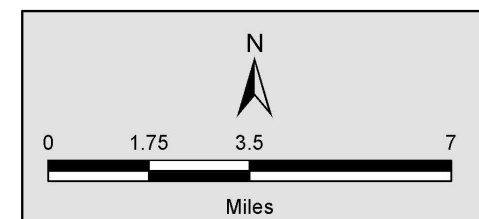
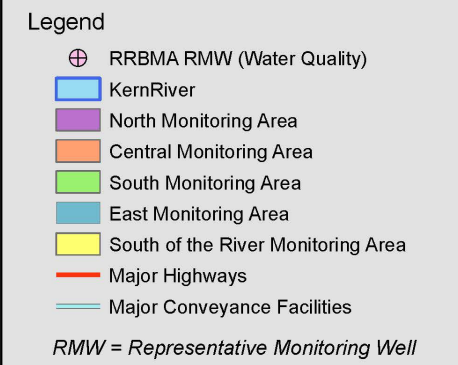
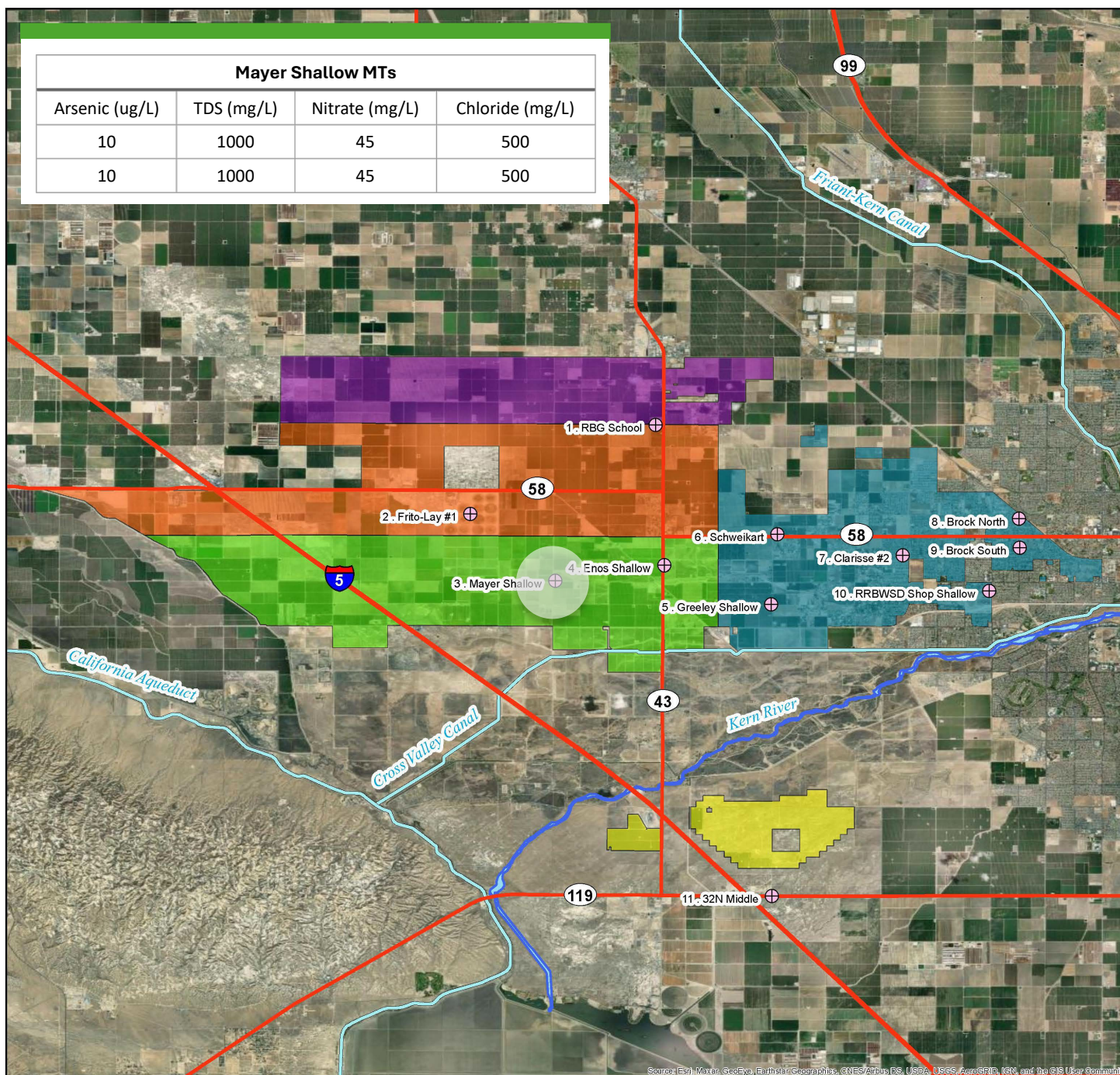
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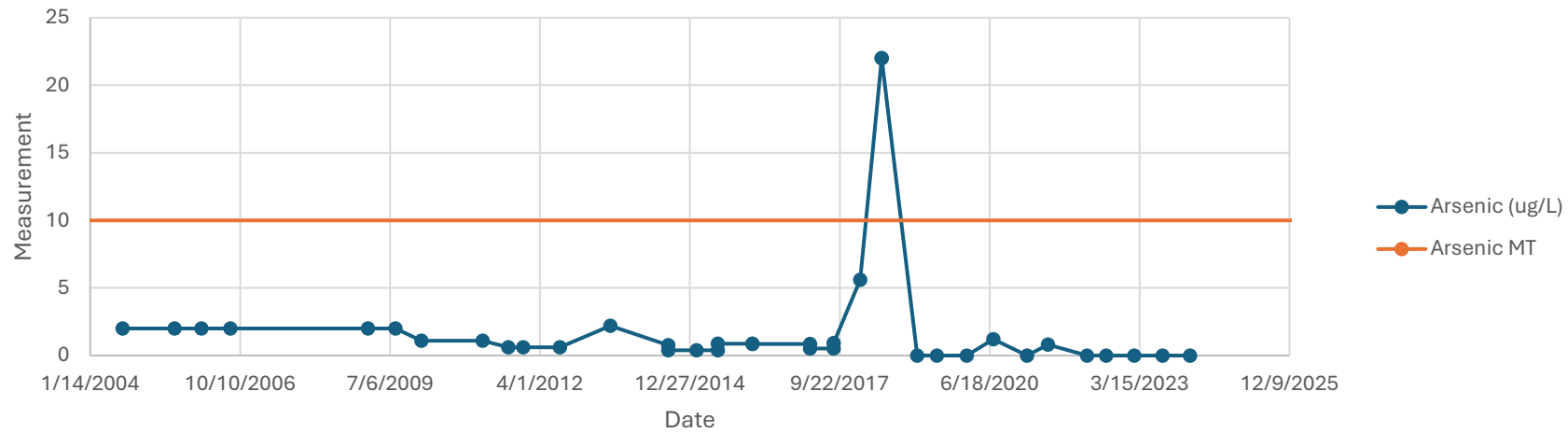
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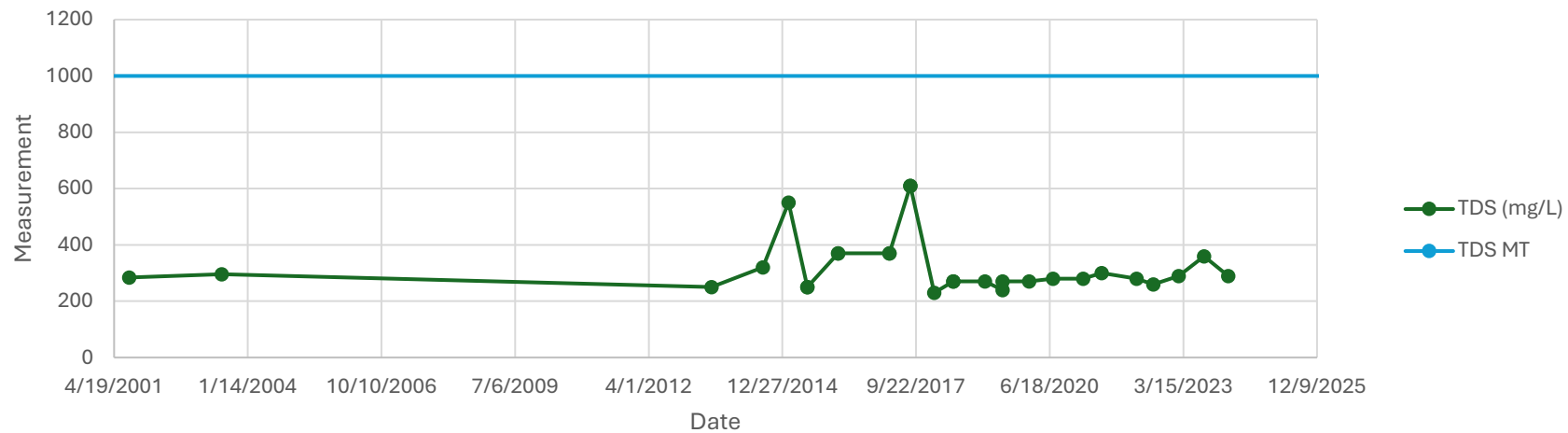
RRBMA Monitoring Areas - Water Quality Wells



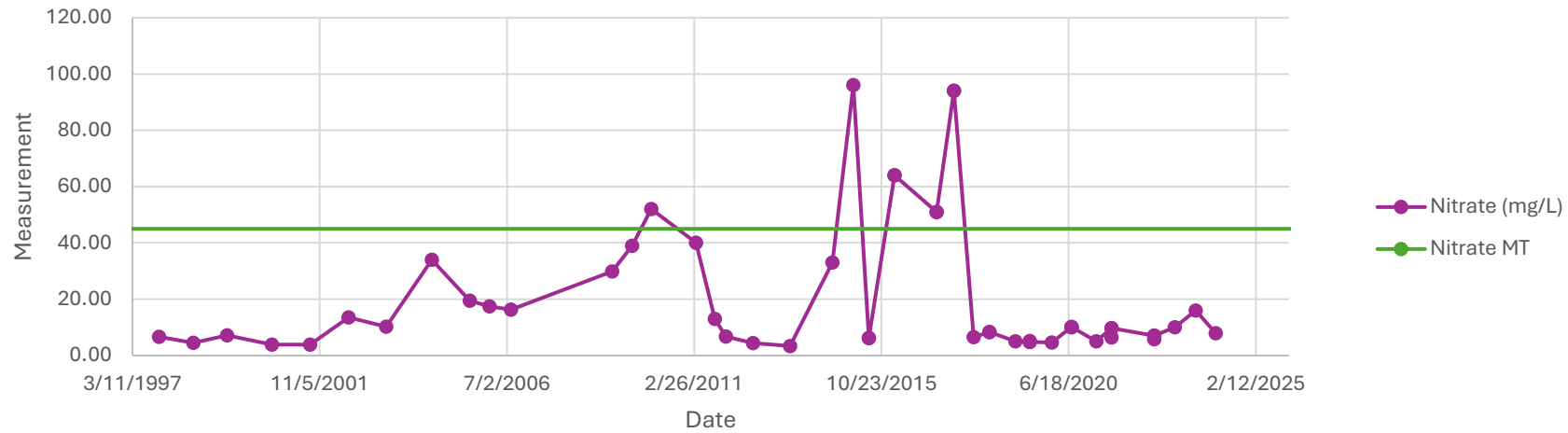
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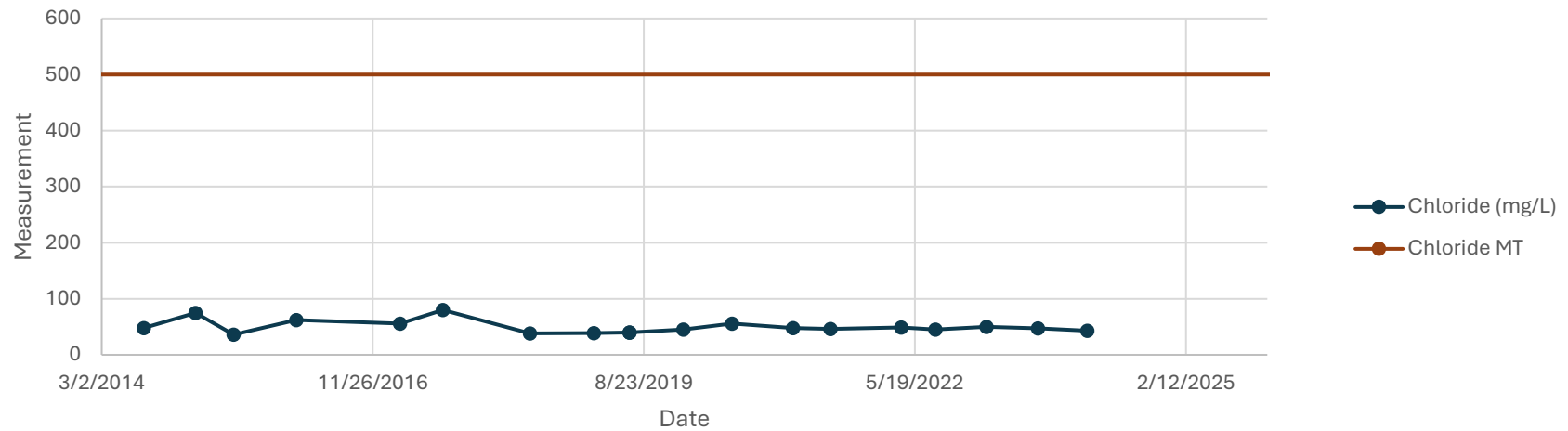
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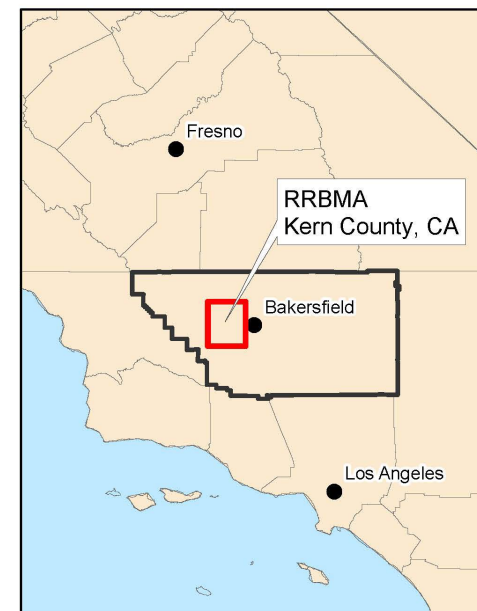
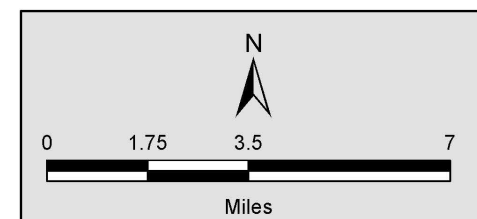
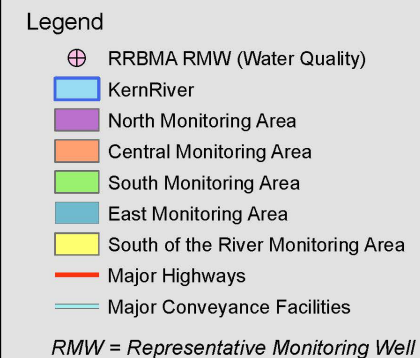
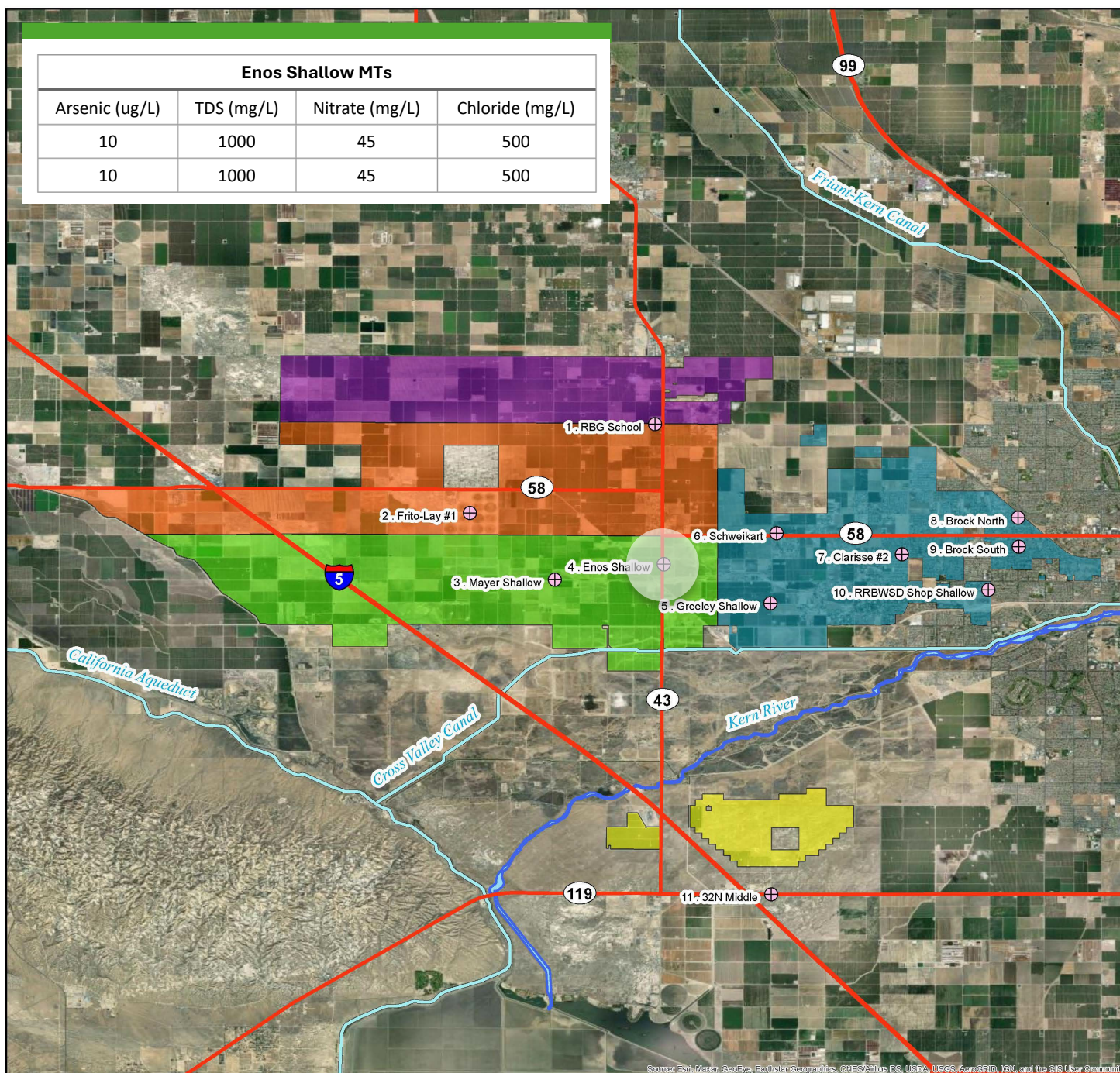
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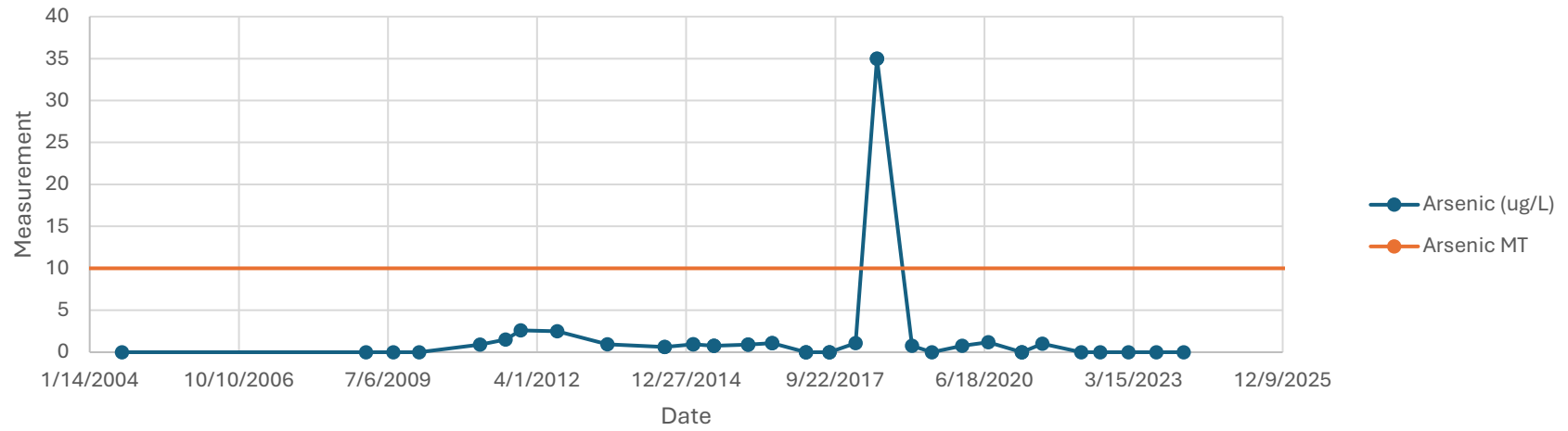
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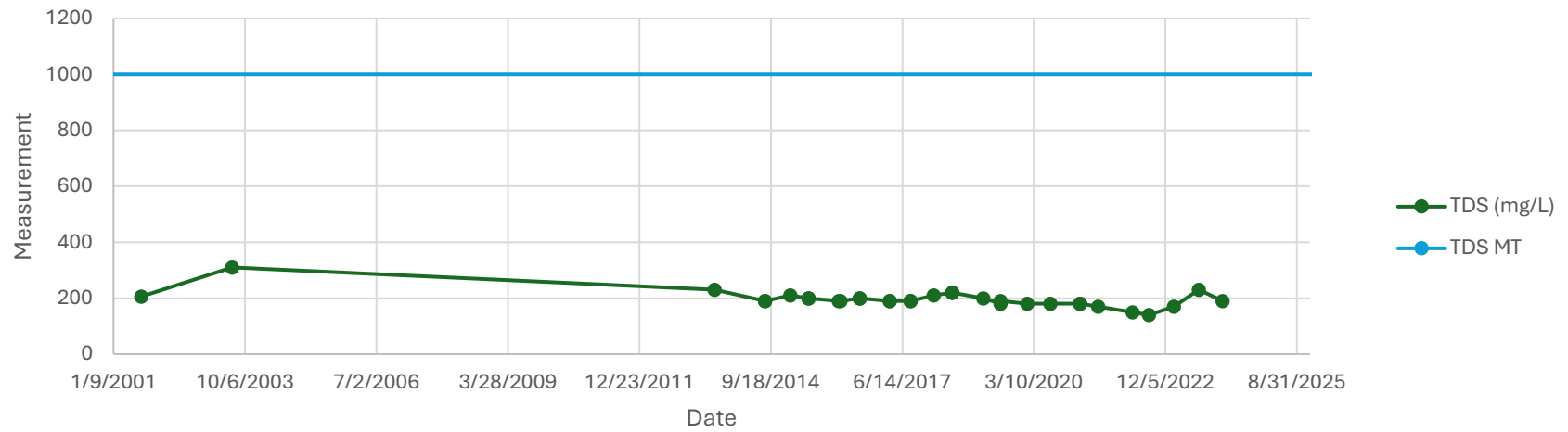
RRBMA Monitoring Areas - Water Quality Wells



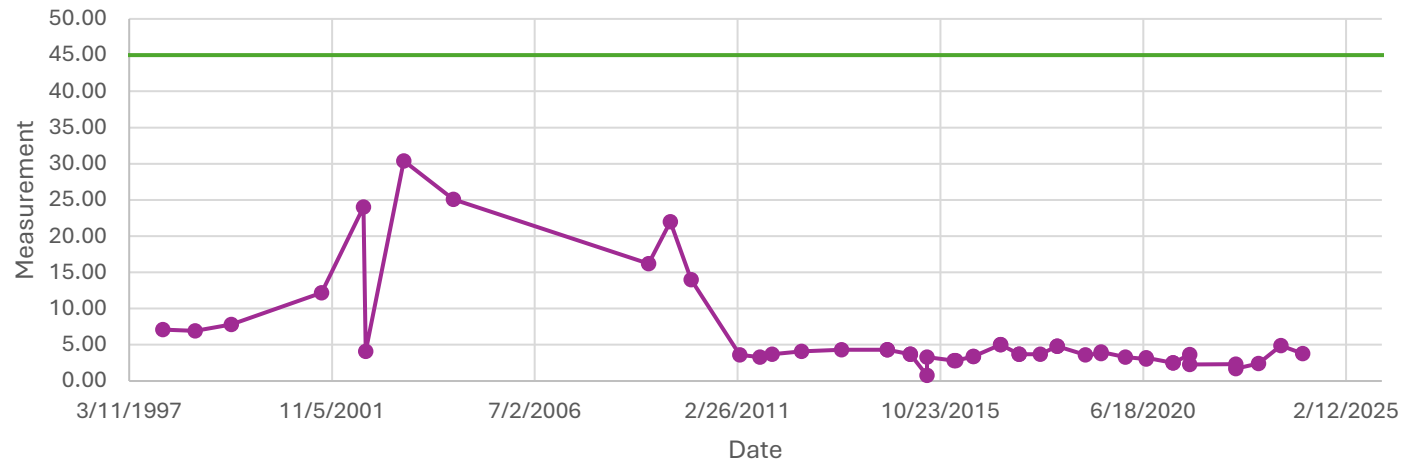
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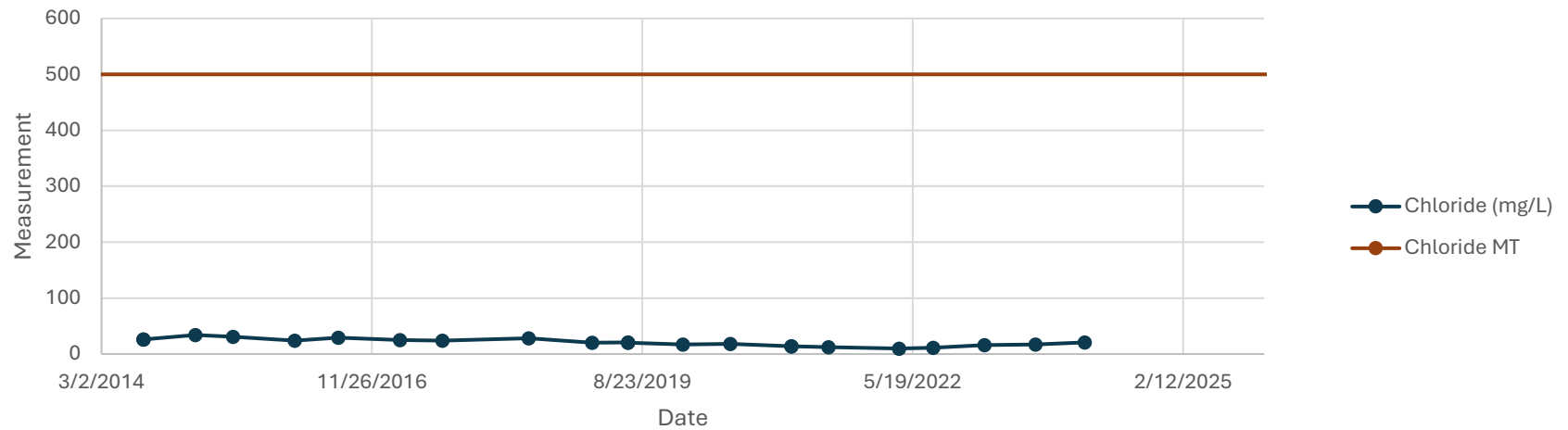
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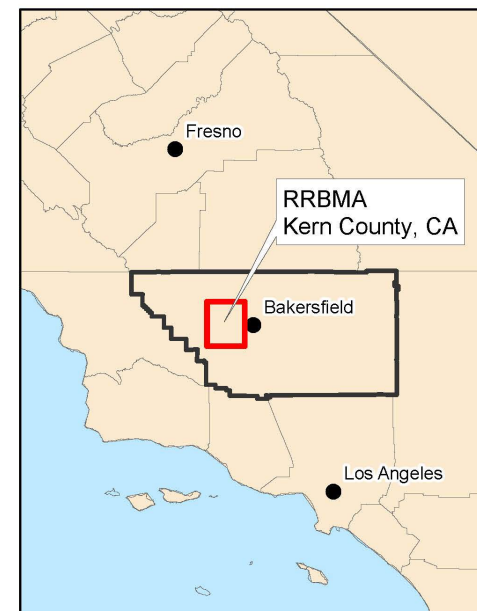
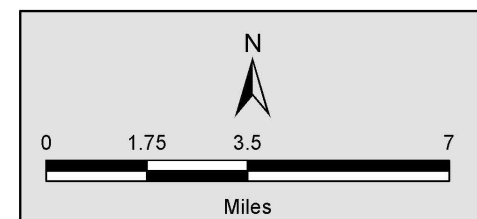
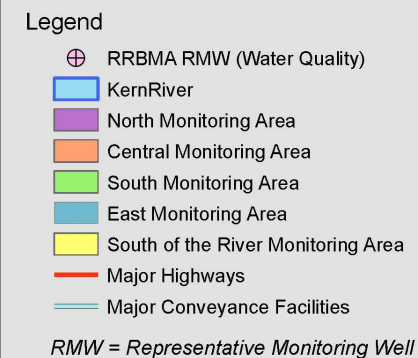
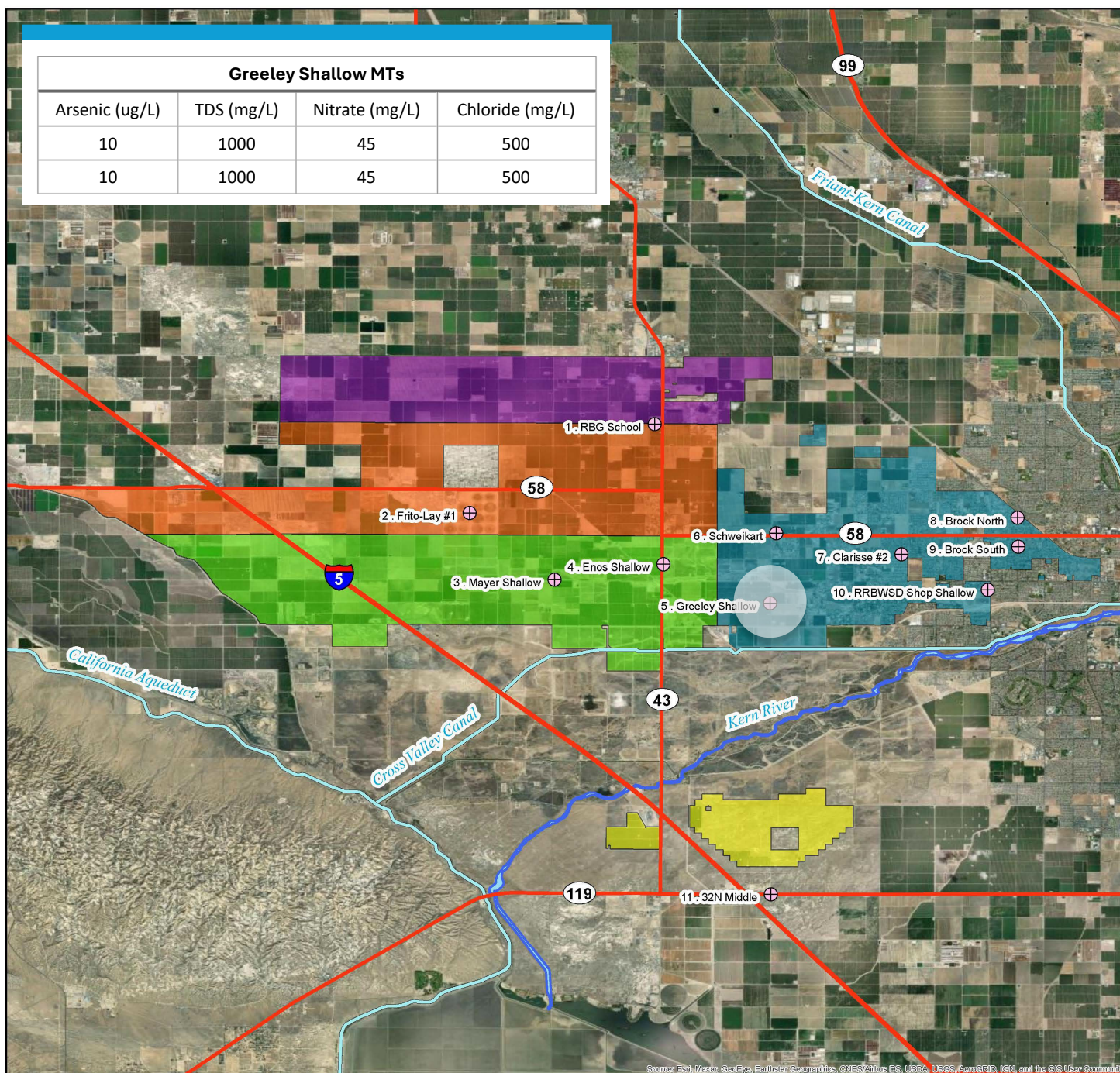
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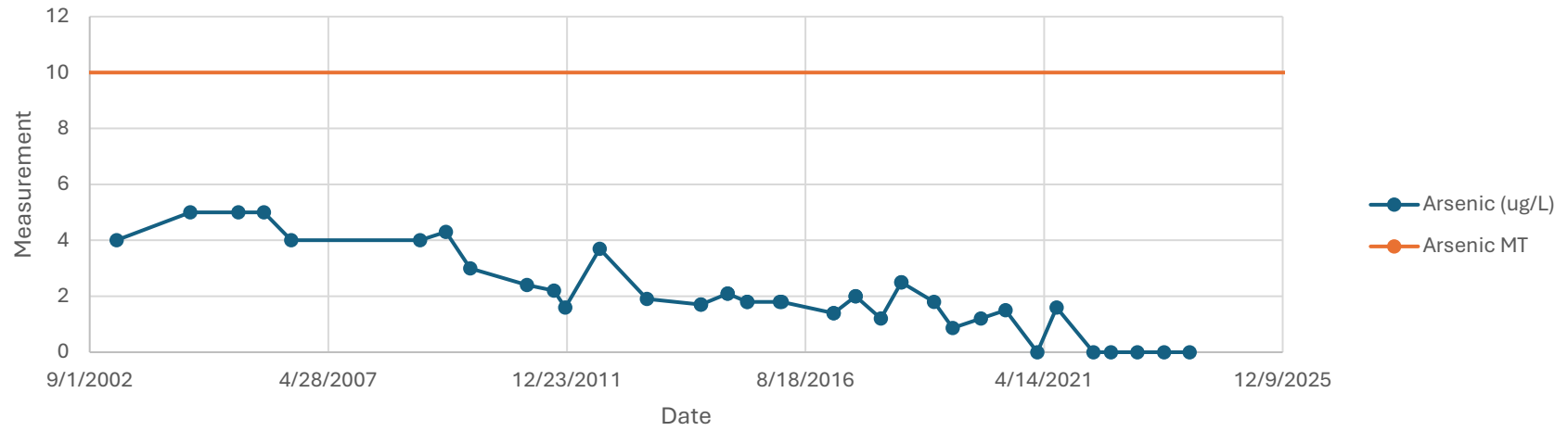
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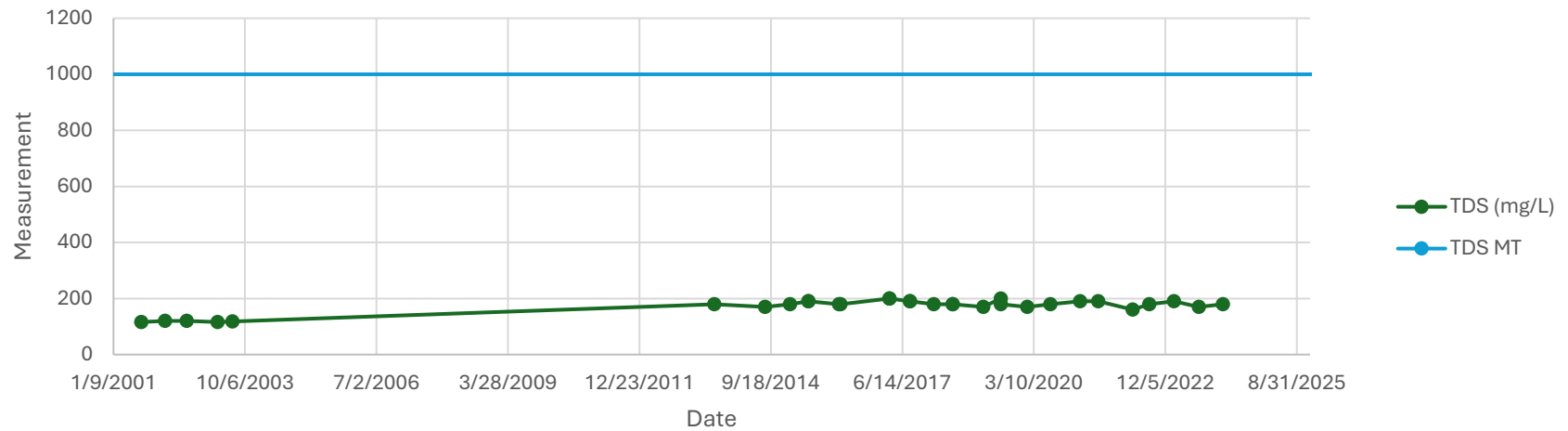
RRBMA Monitoring Areas - Water Quality Wells



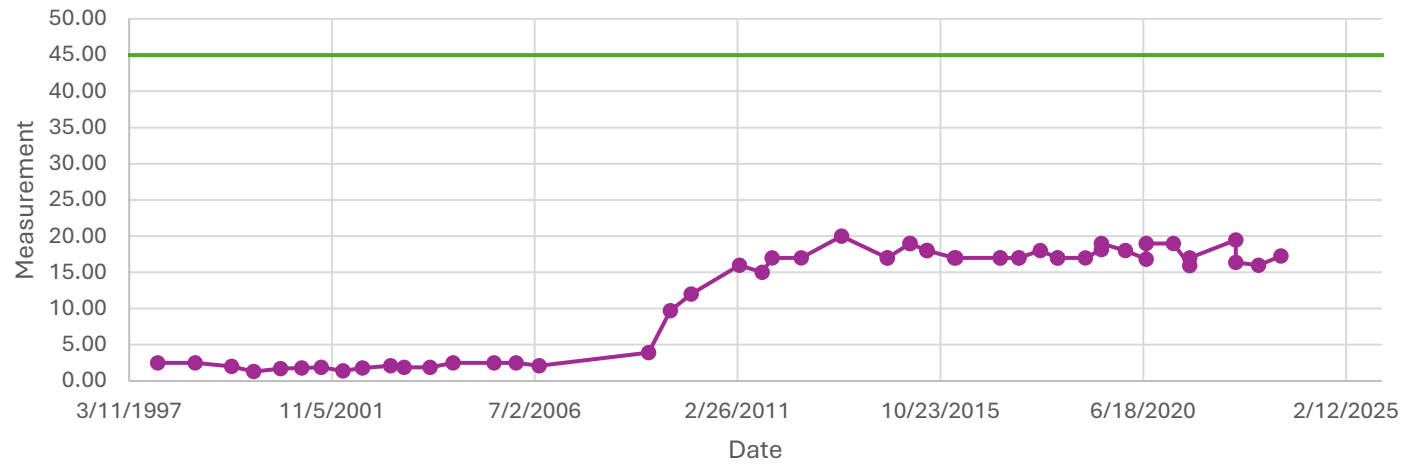
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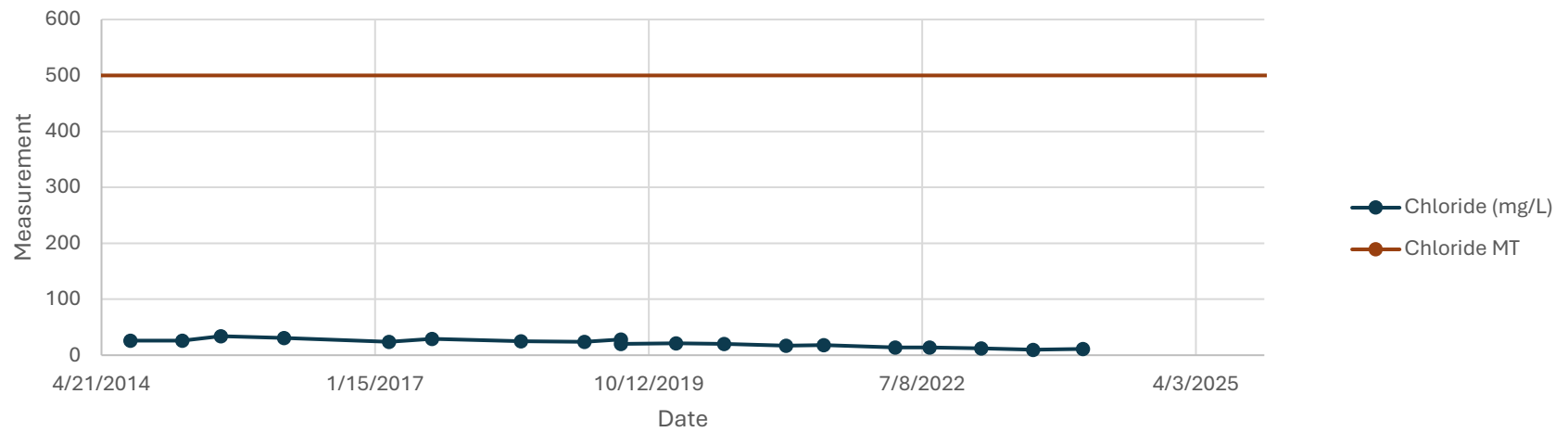
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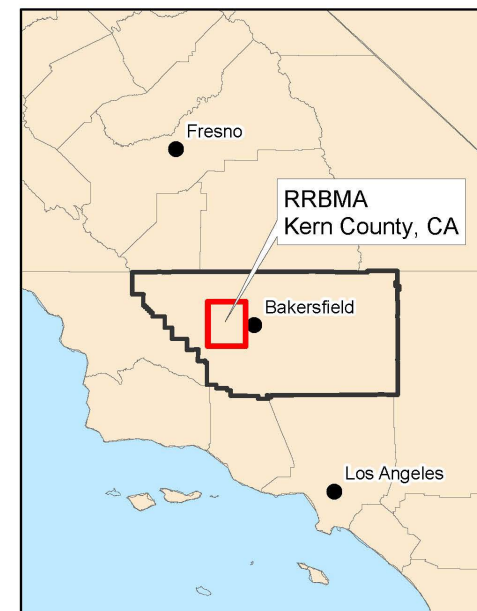
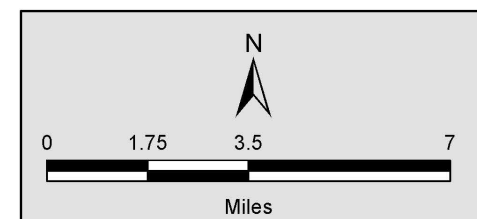
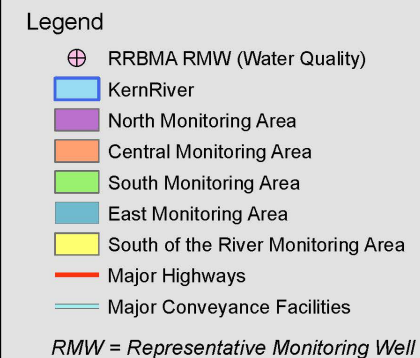
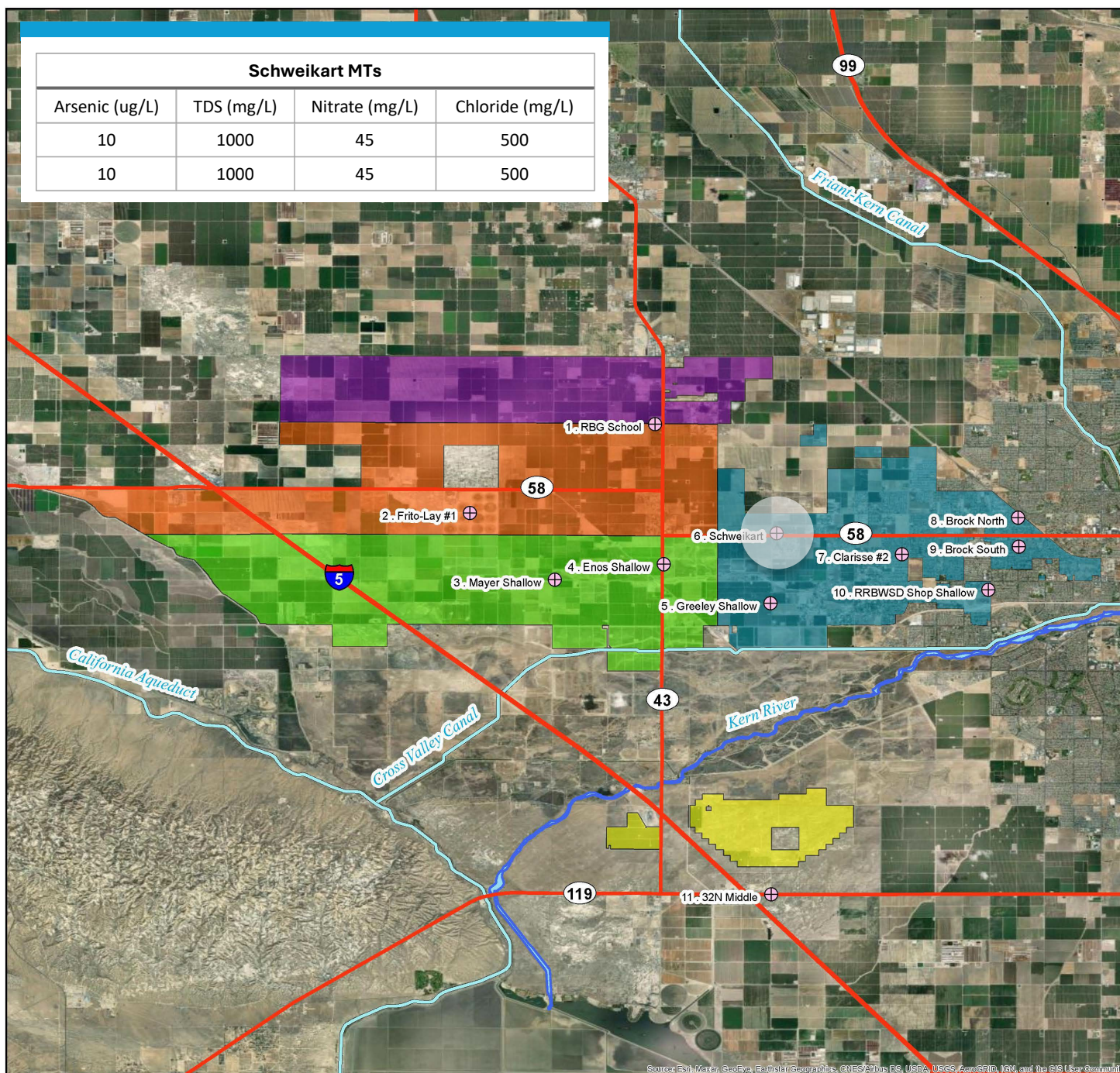
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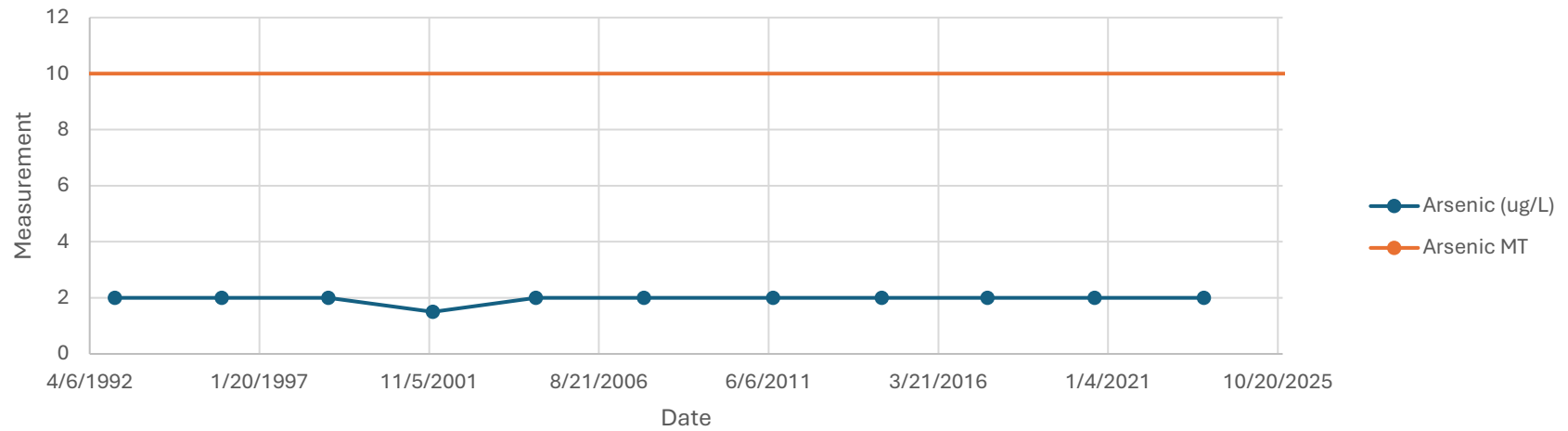
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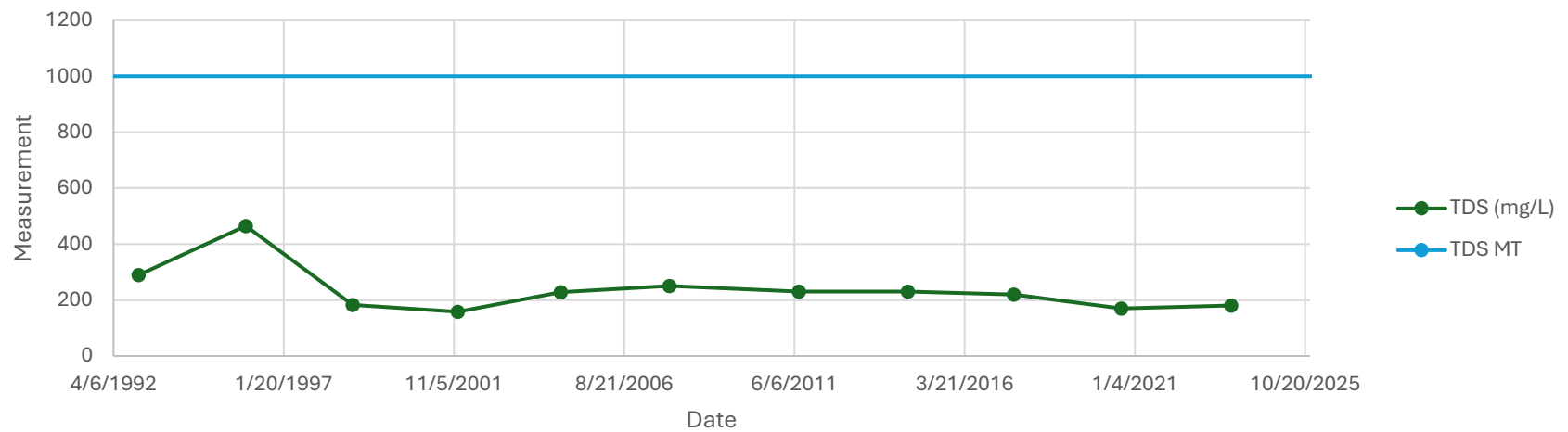
RRBMA Monitoring Areas - Water Quality Wells



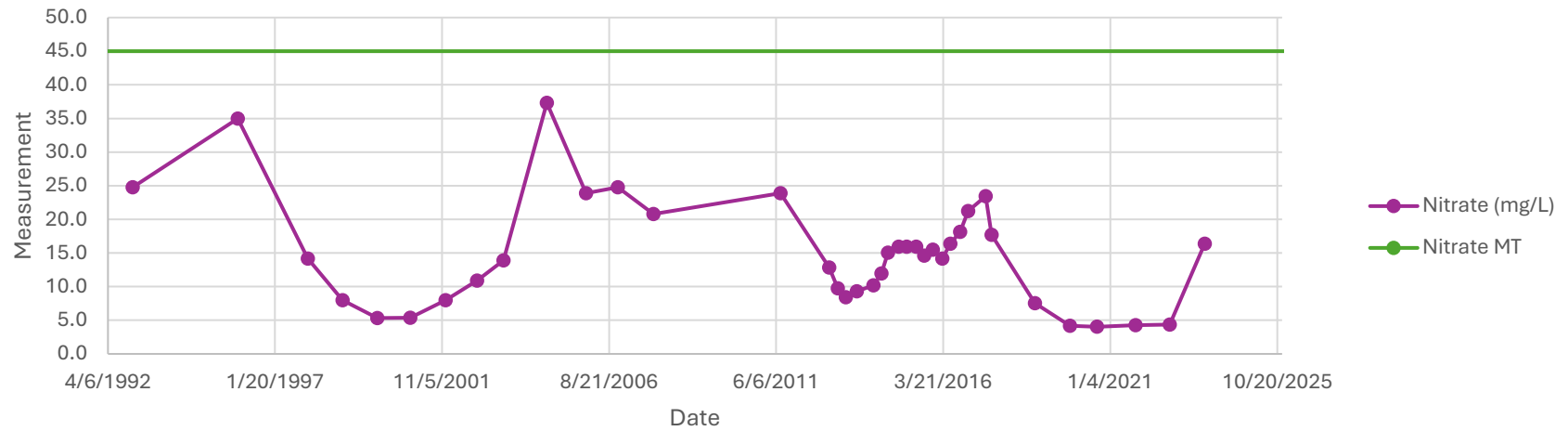
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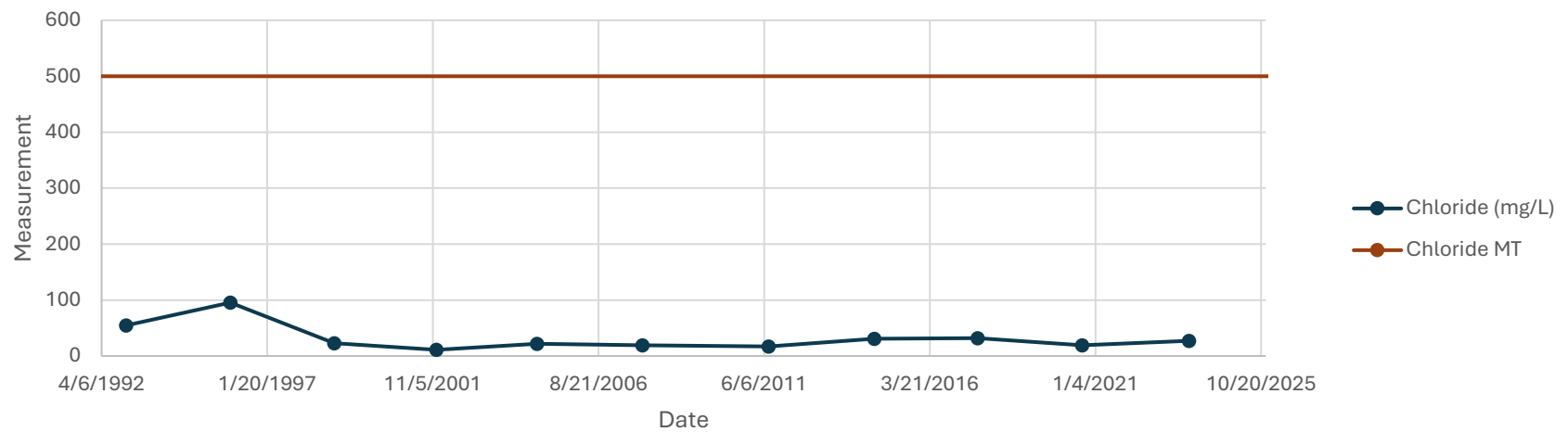
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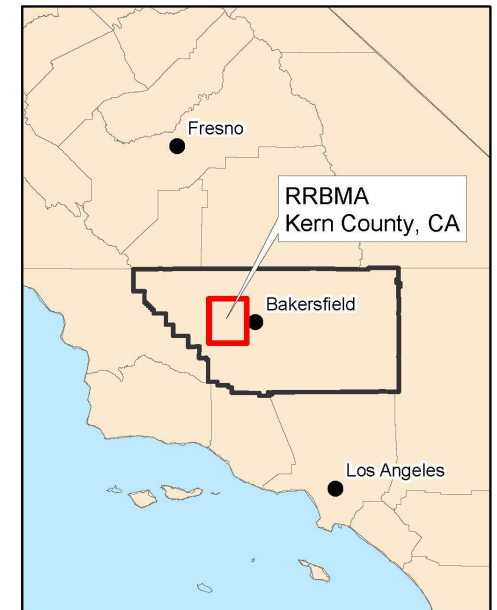
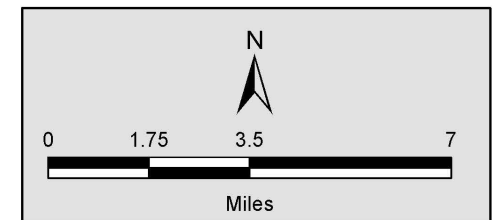
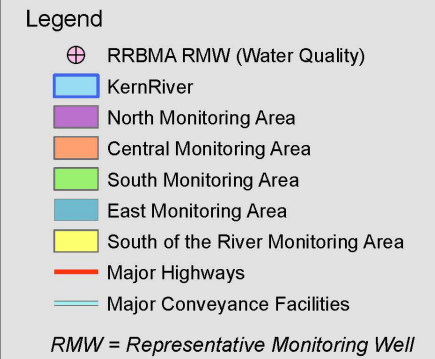
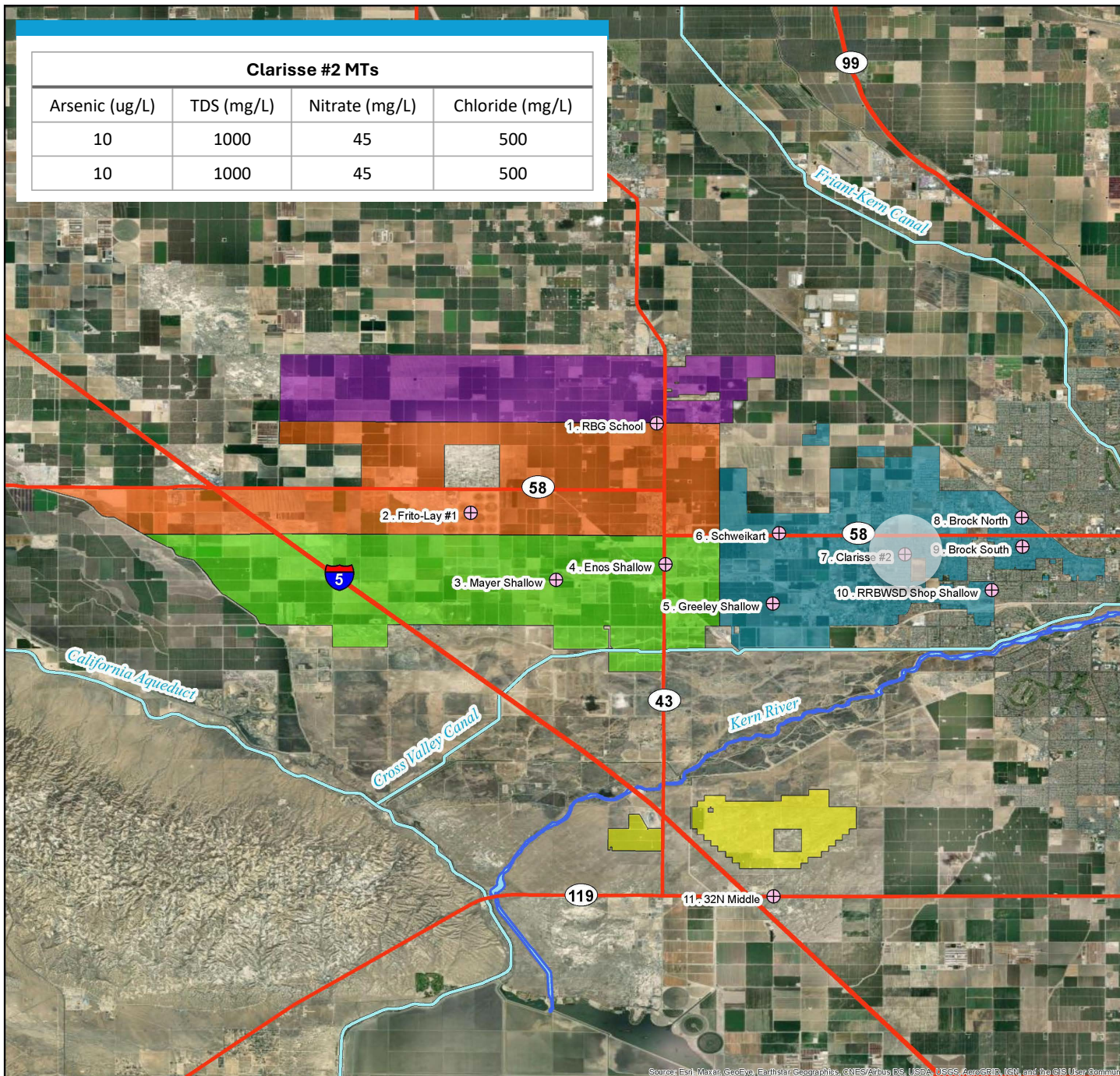
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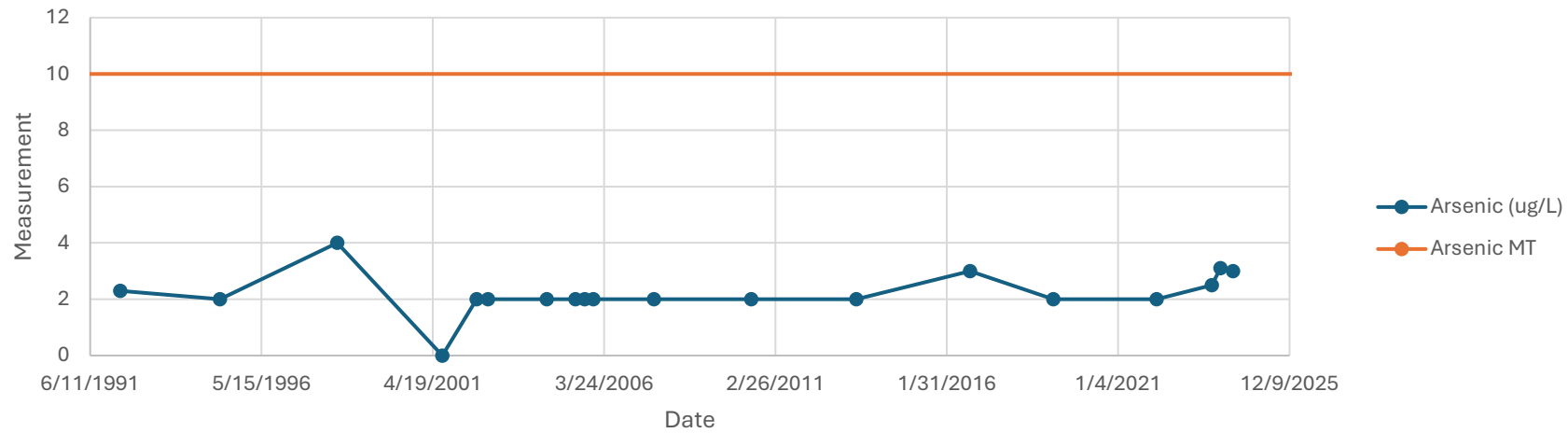
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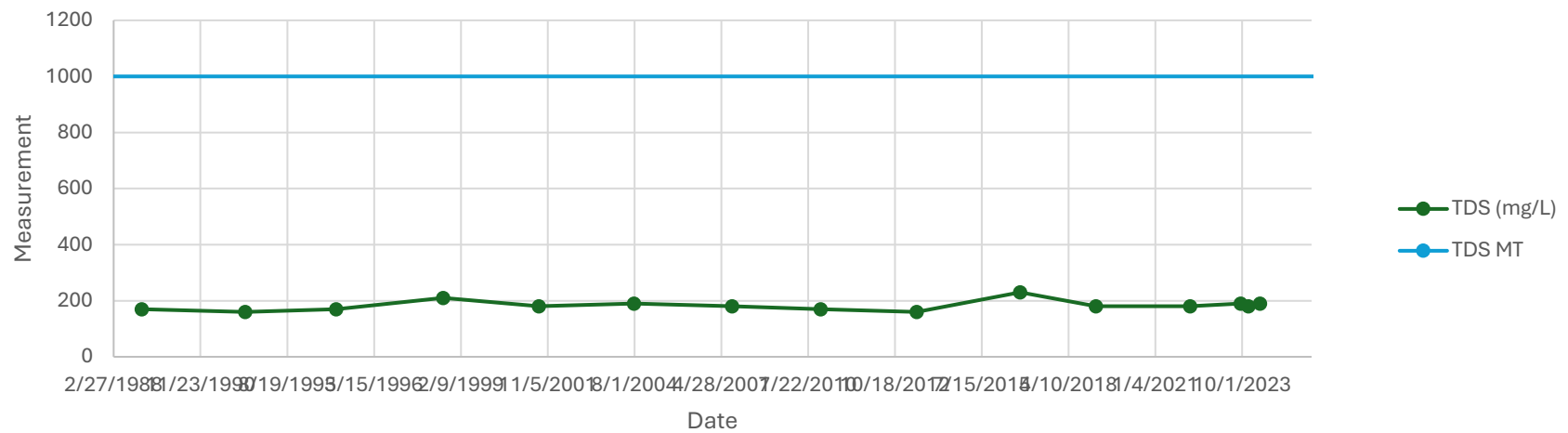
RRBMA Monitoring Areas - Water Quality Wells



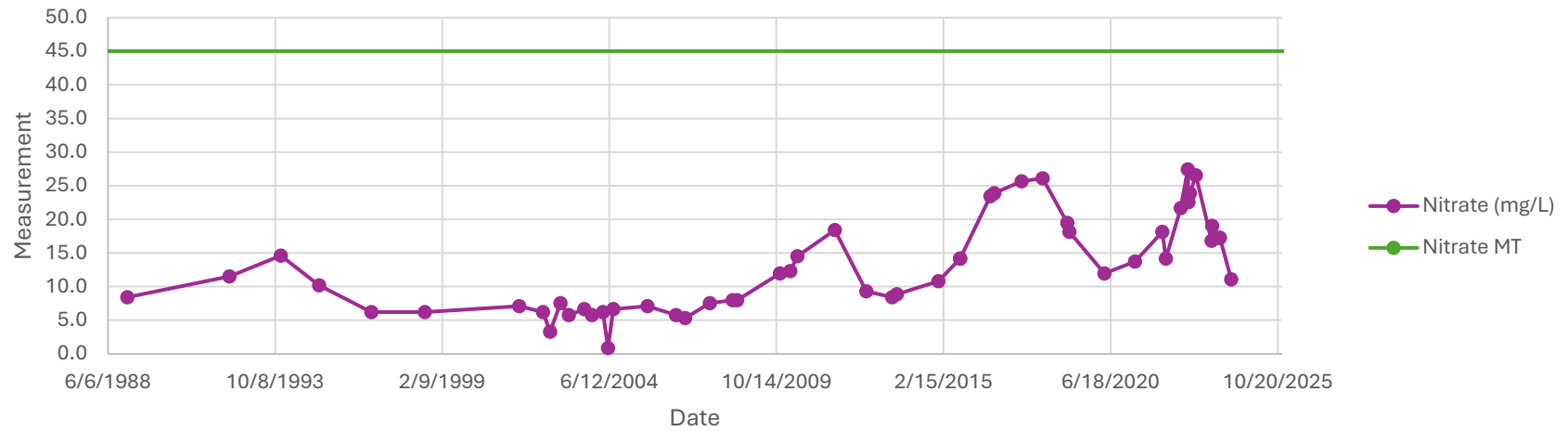
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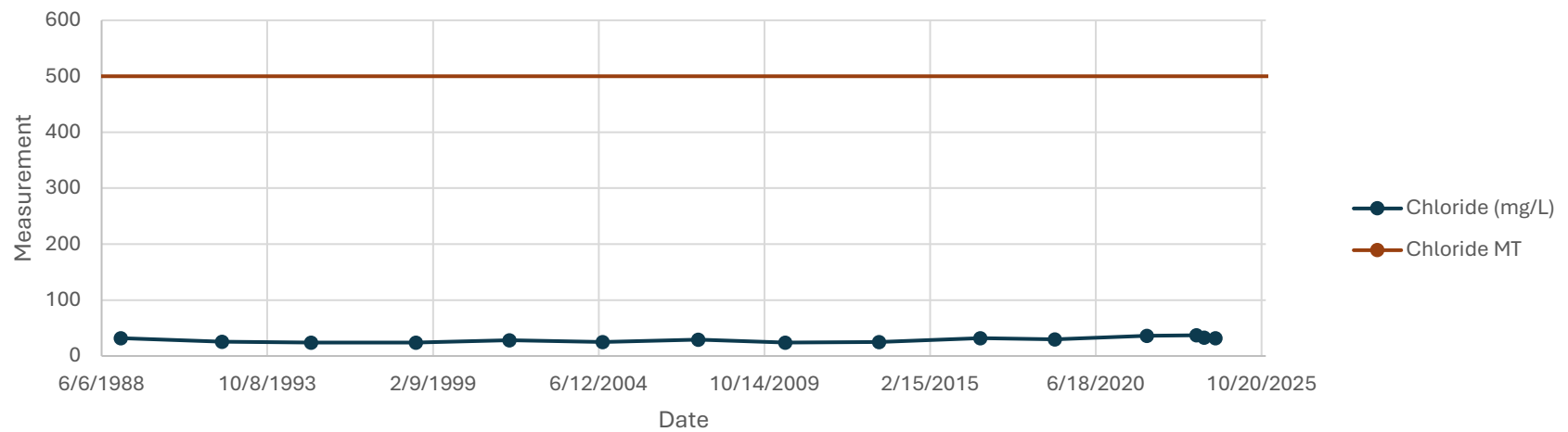
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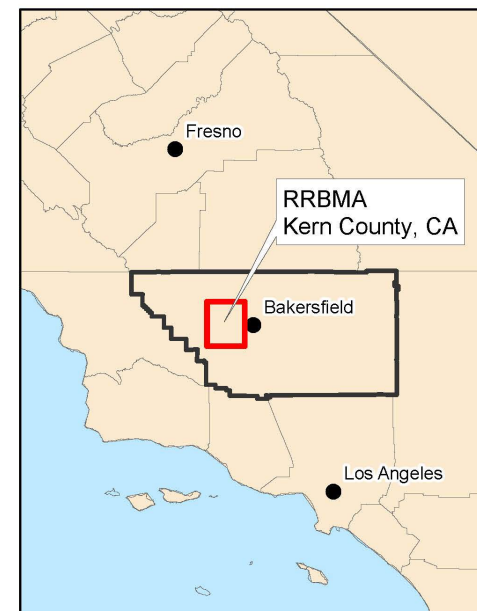
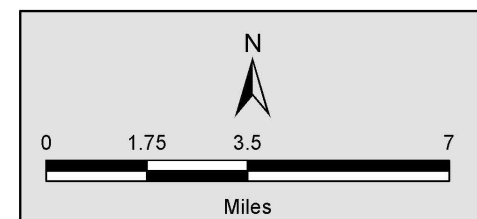
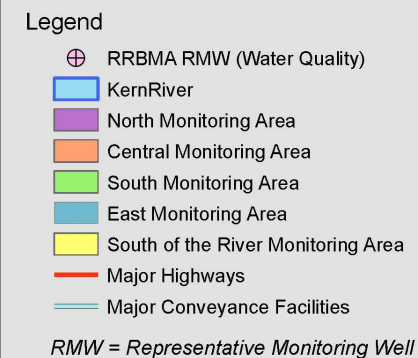
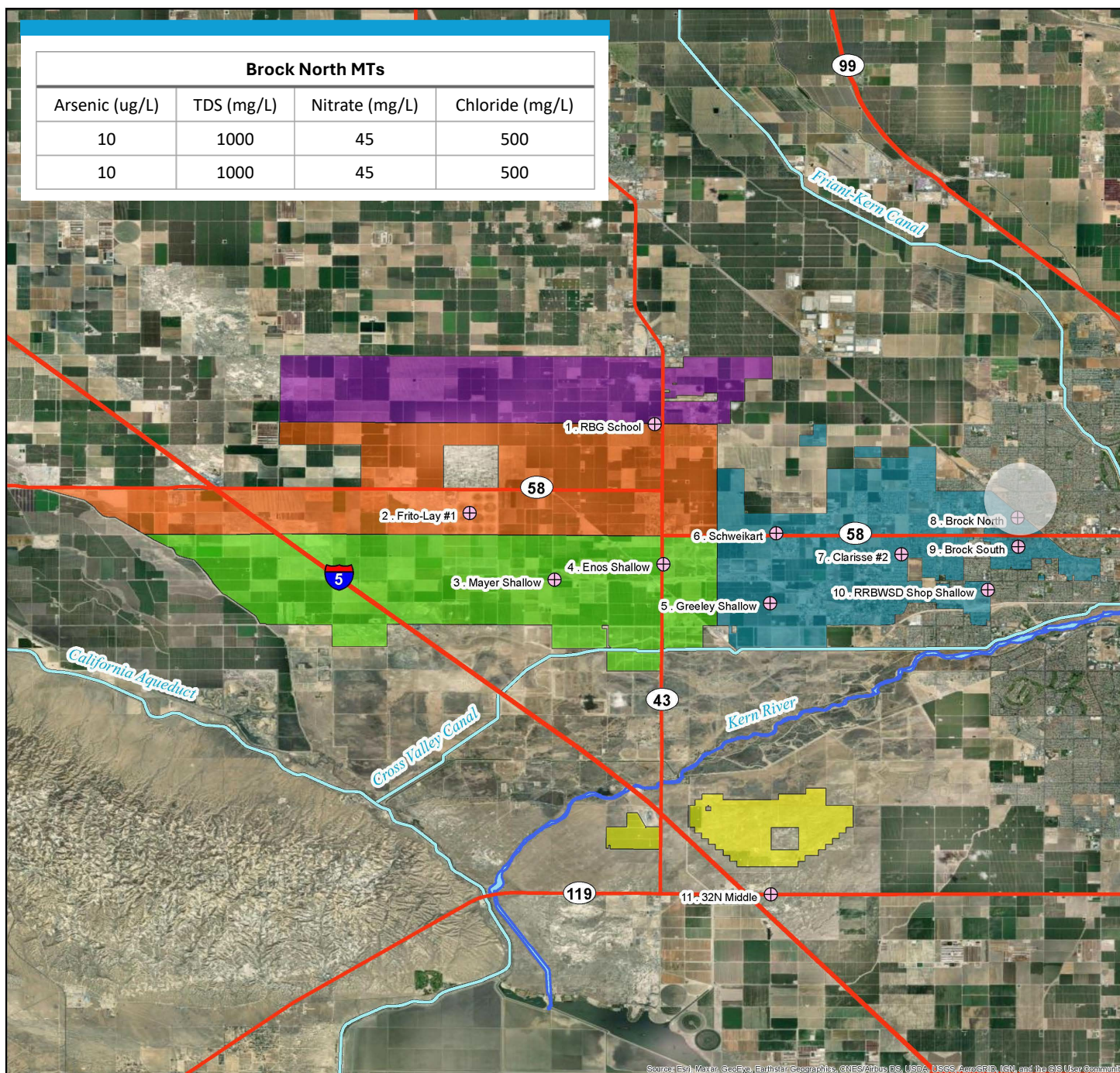
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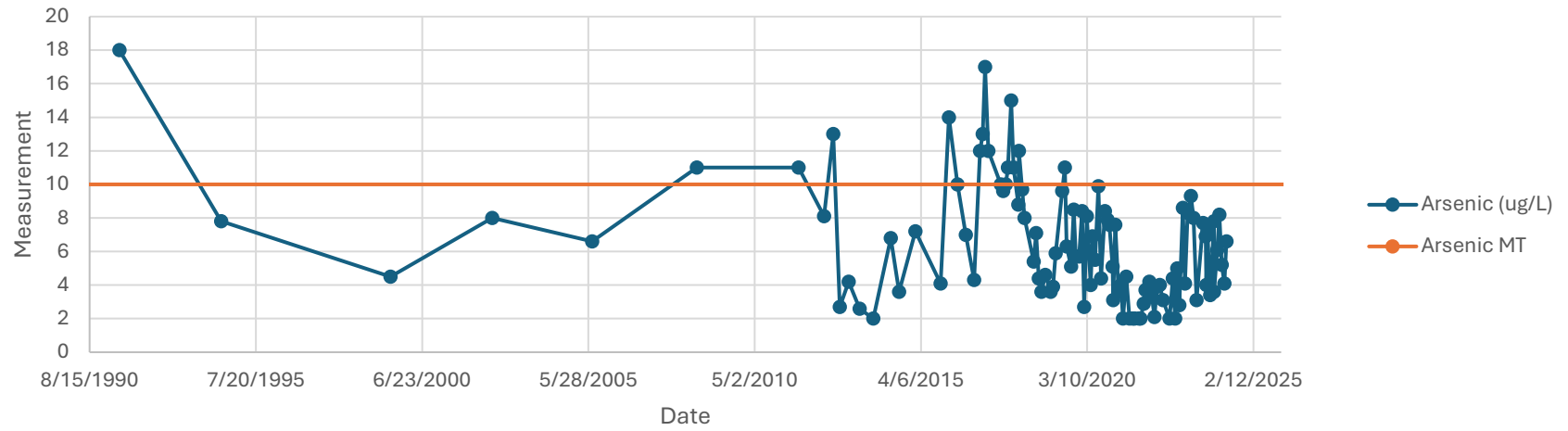
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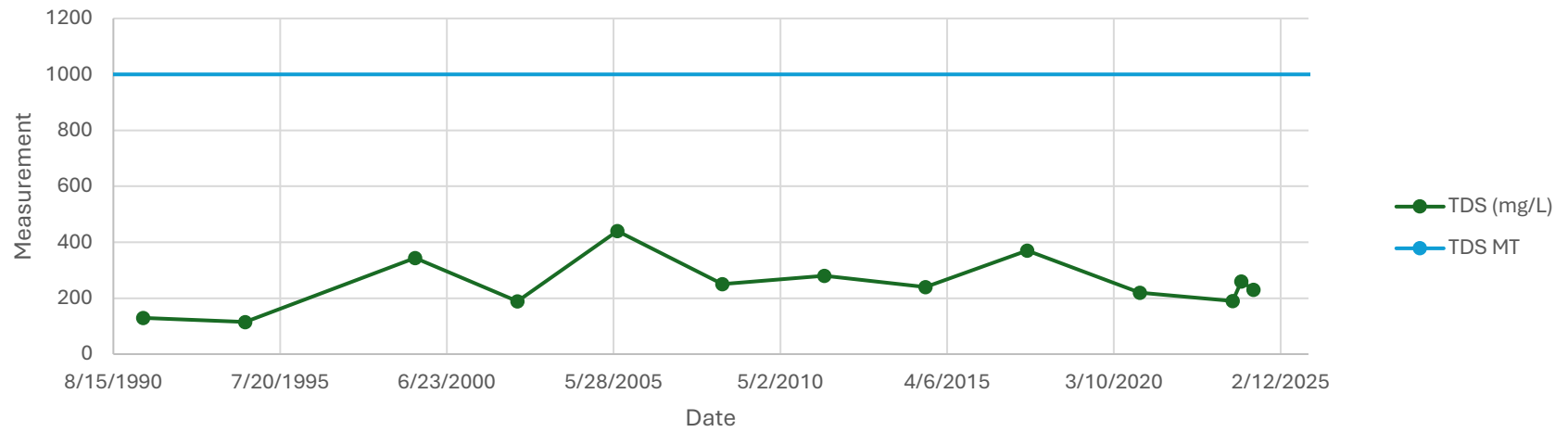
RRBMA Monitoring Areas - Water Quality Wells



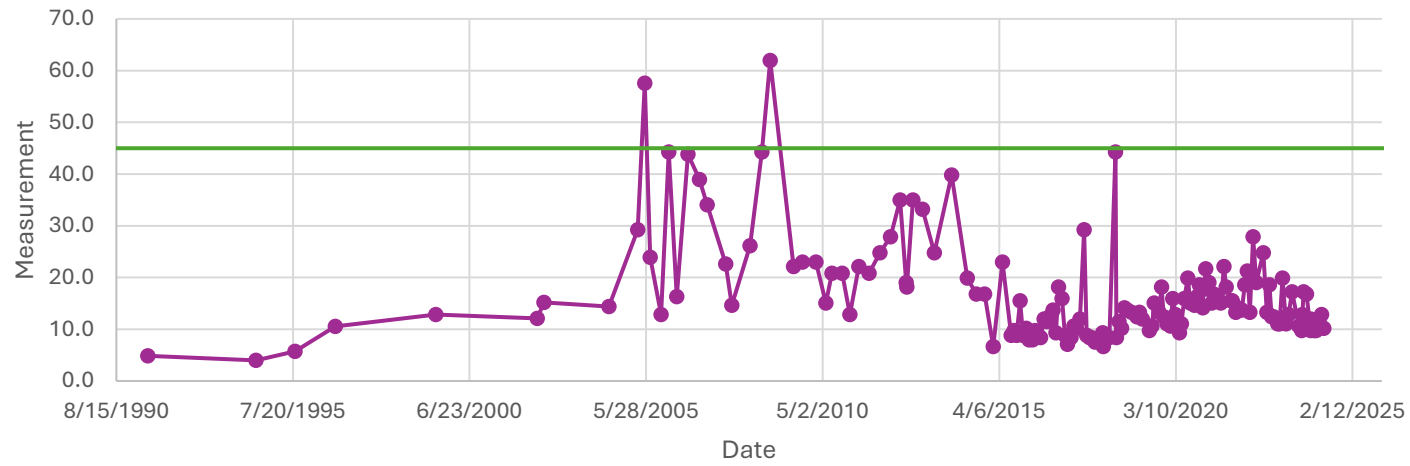
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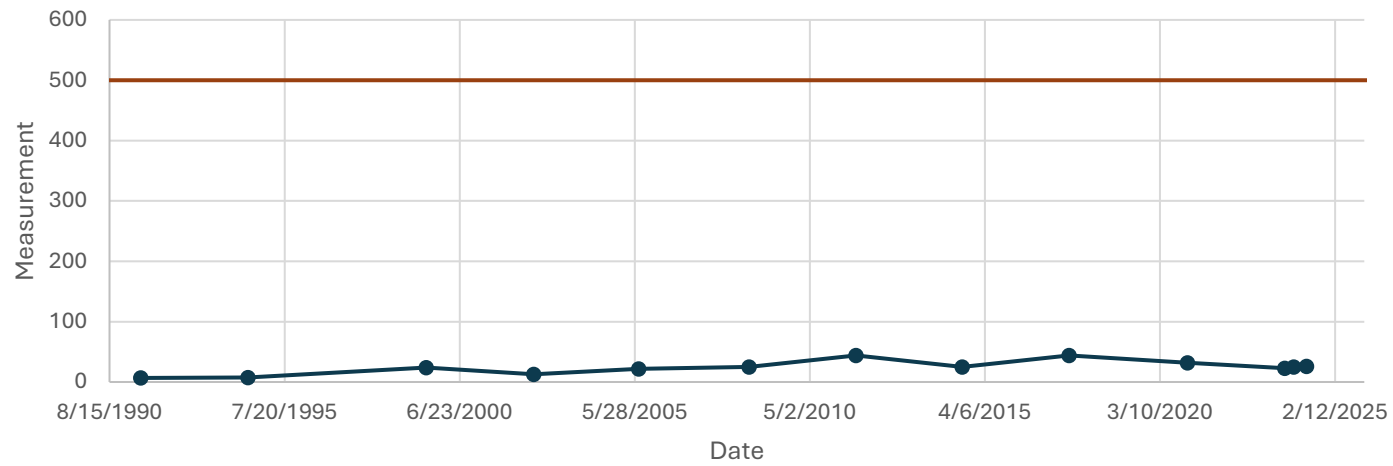
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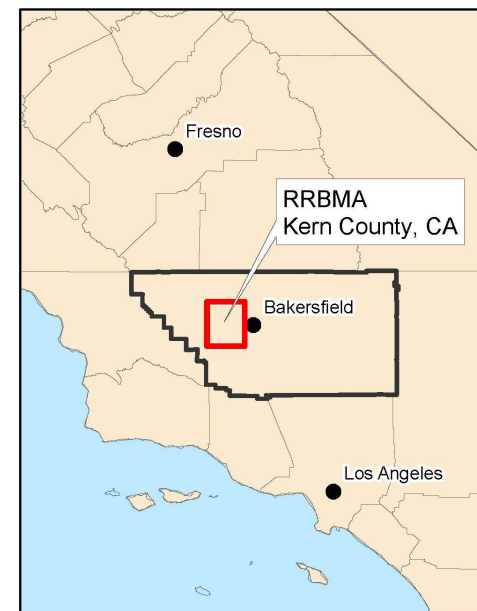
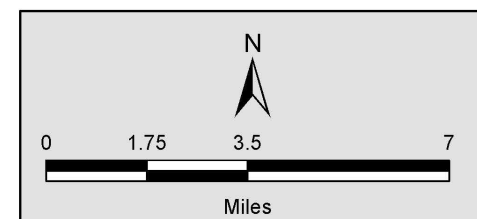
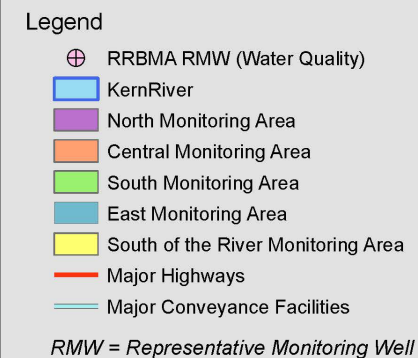
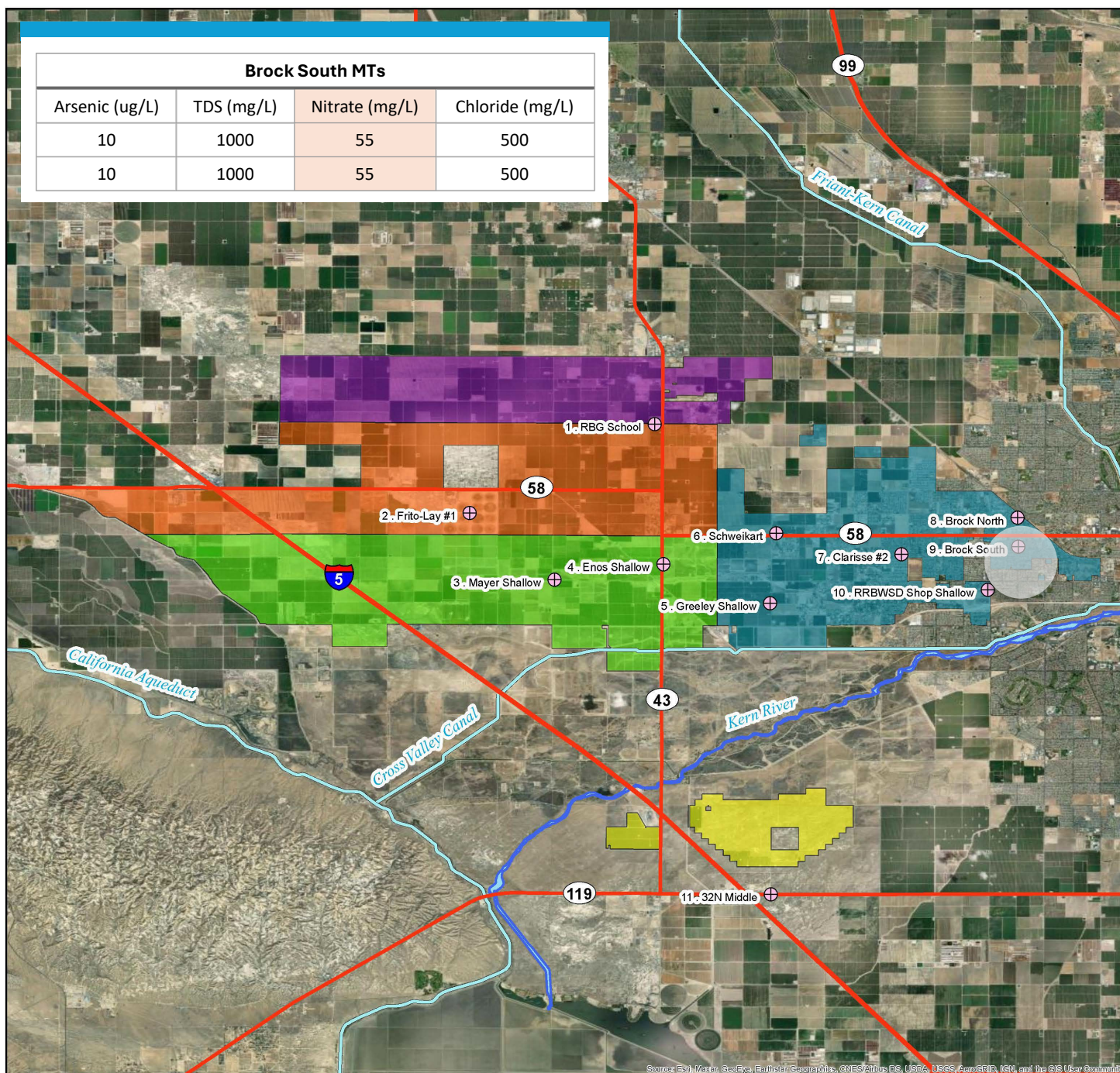
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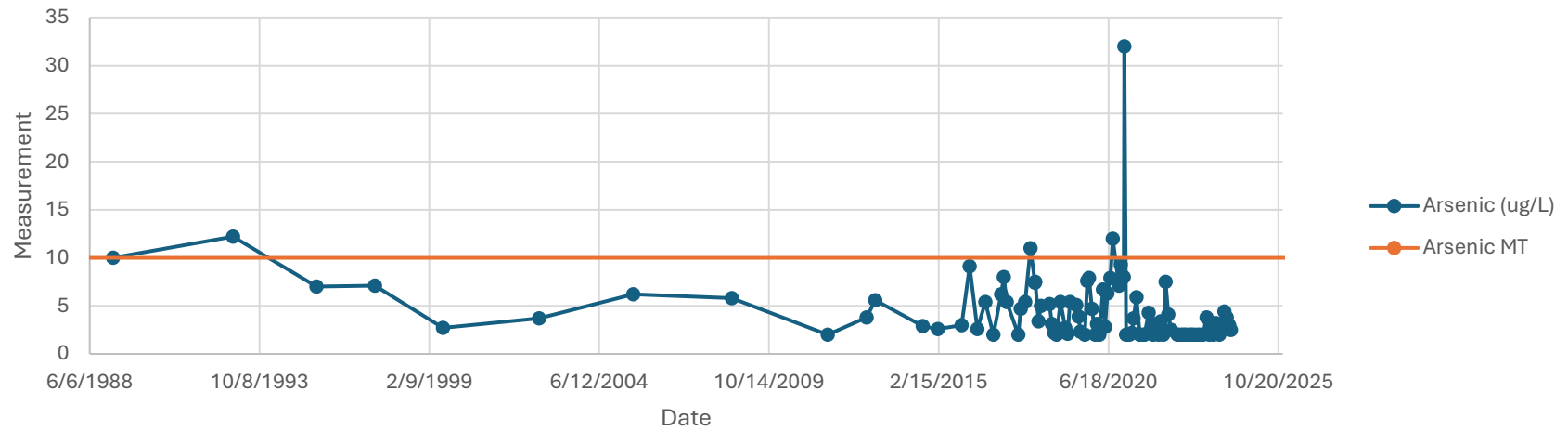
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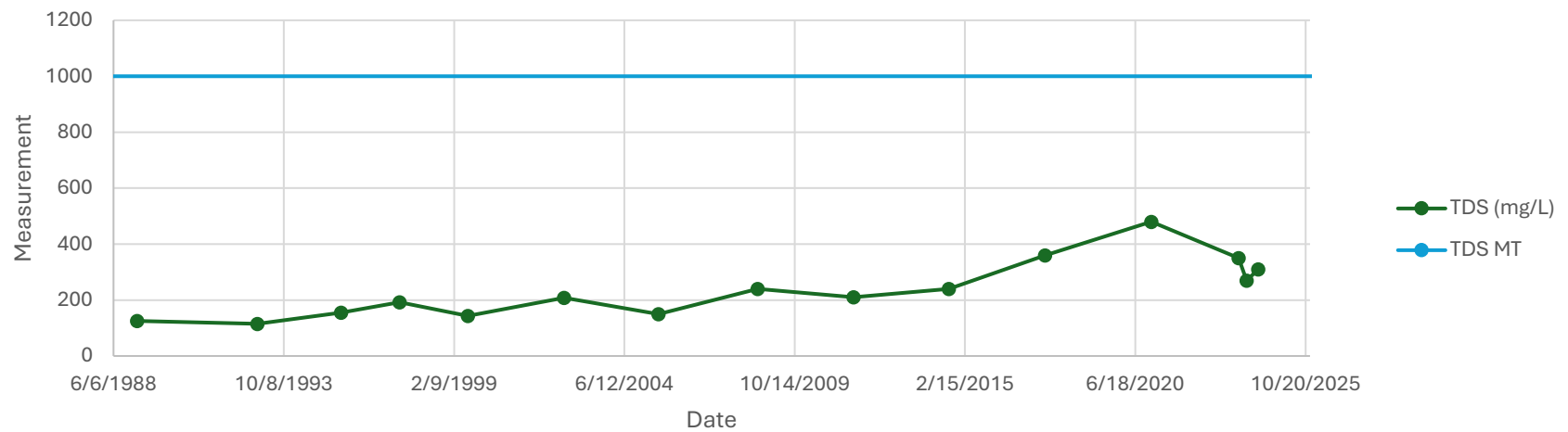
RRBMA Monitoring Areas - Water Quality Wells



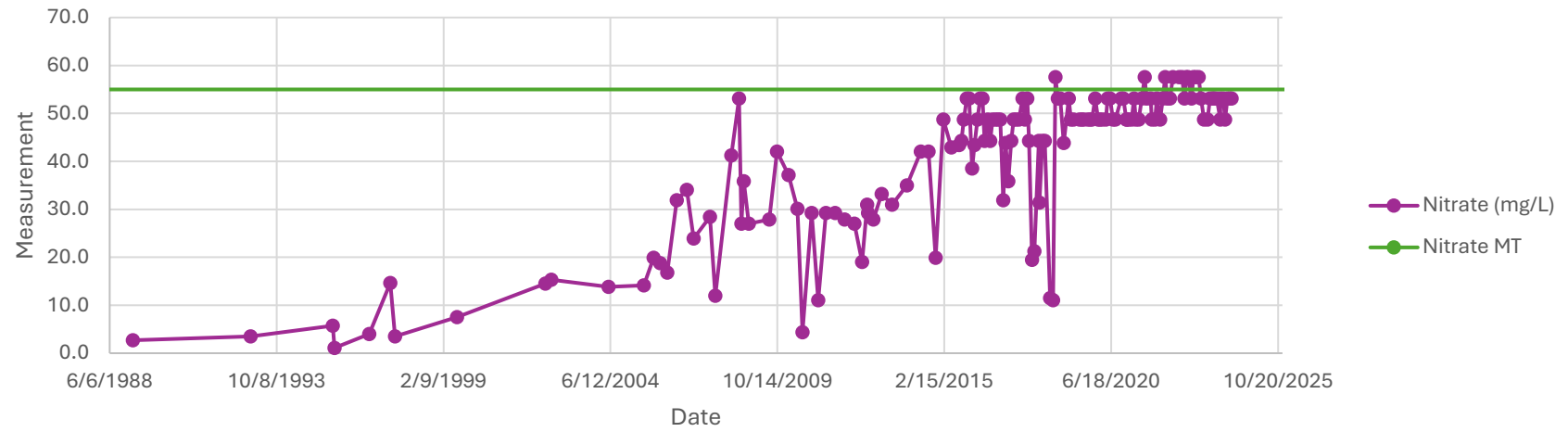
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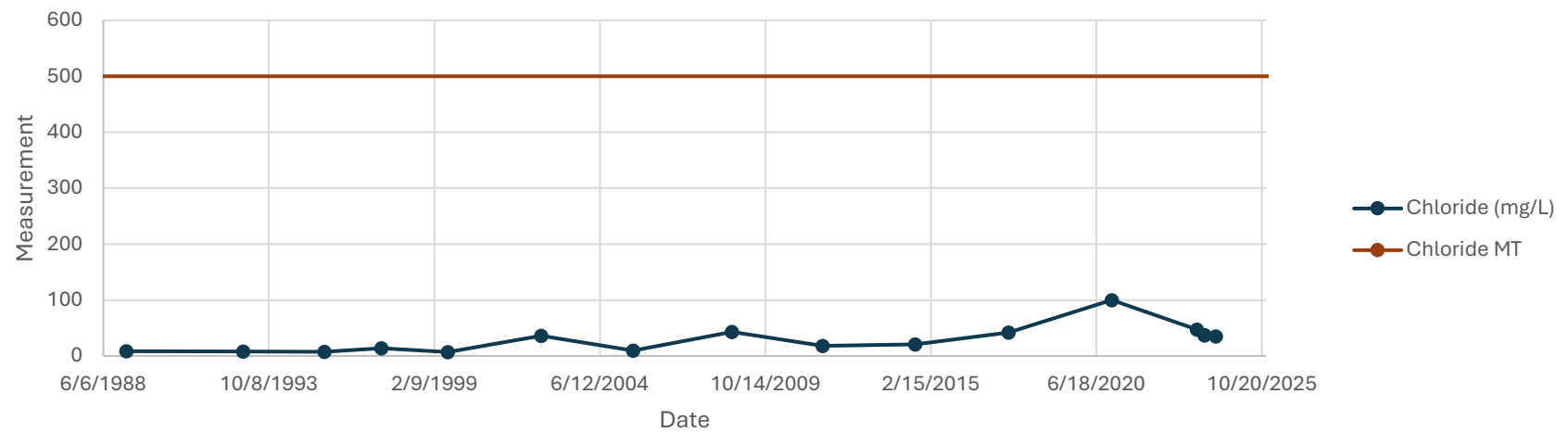
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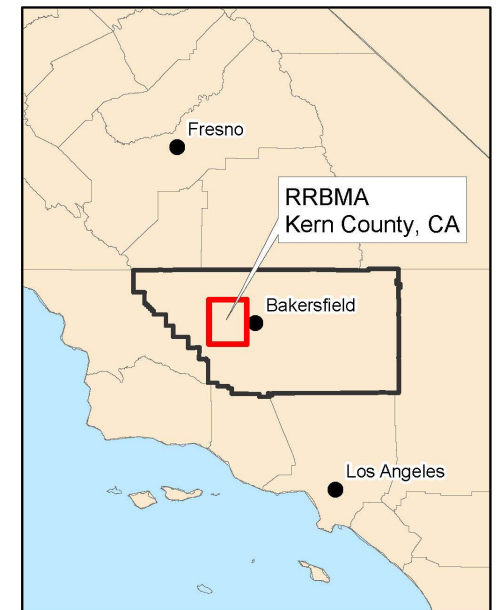
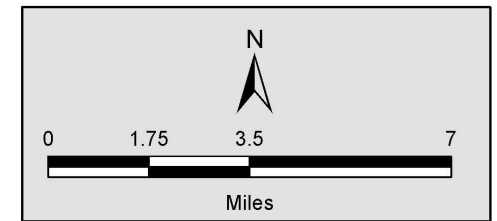
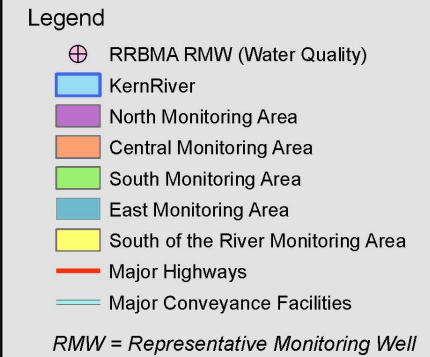
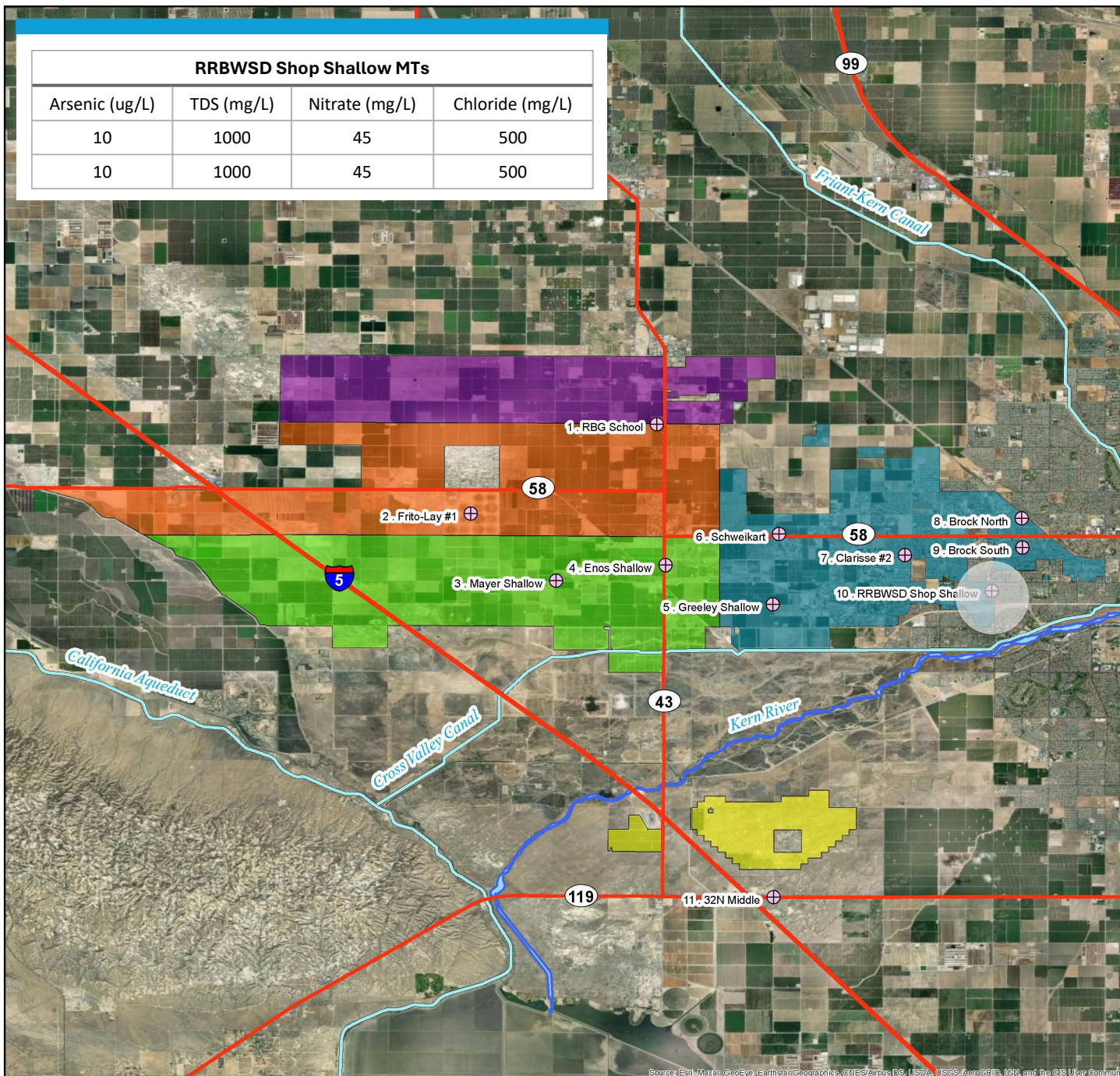
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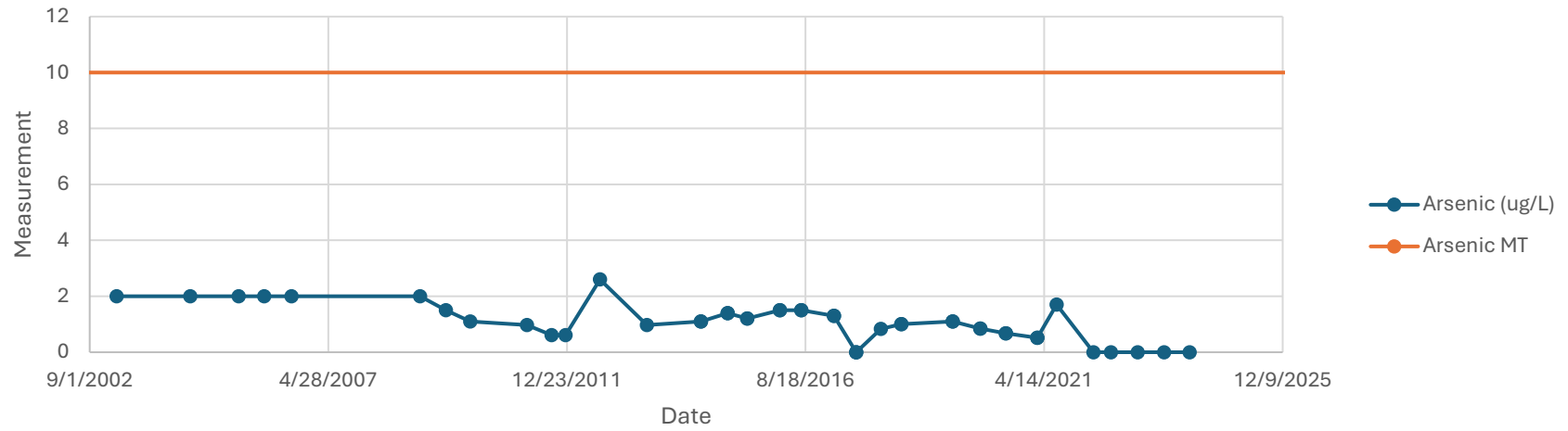
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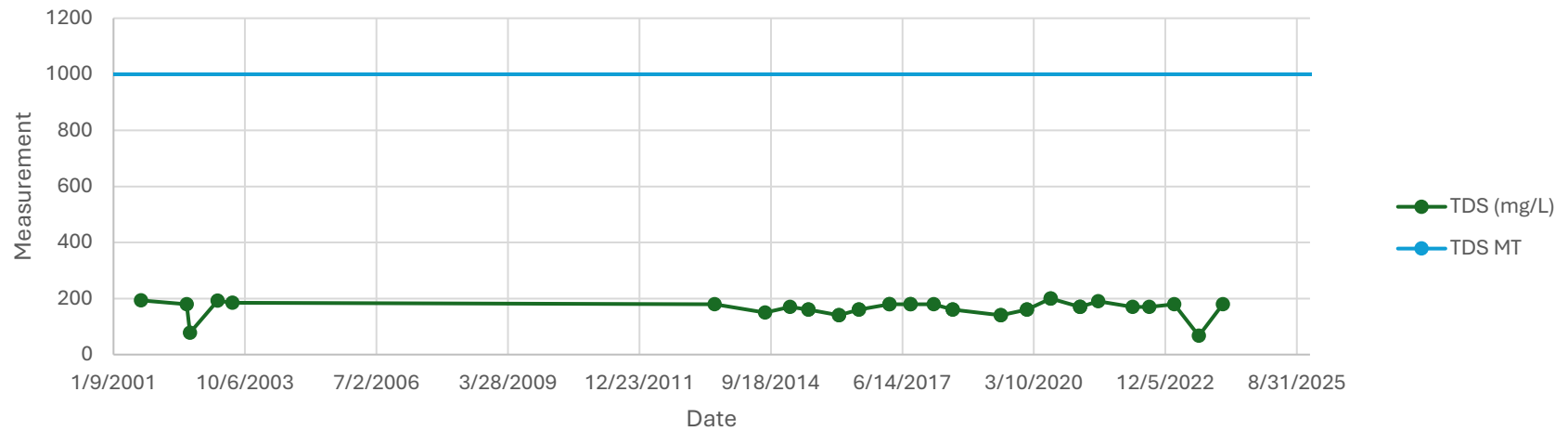
RRBMA Monitoring Areas - Water Quality Wells



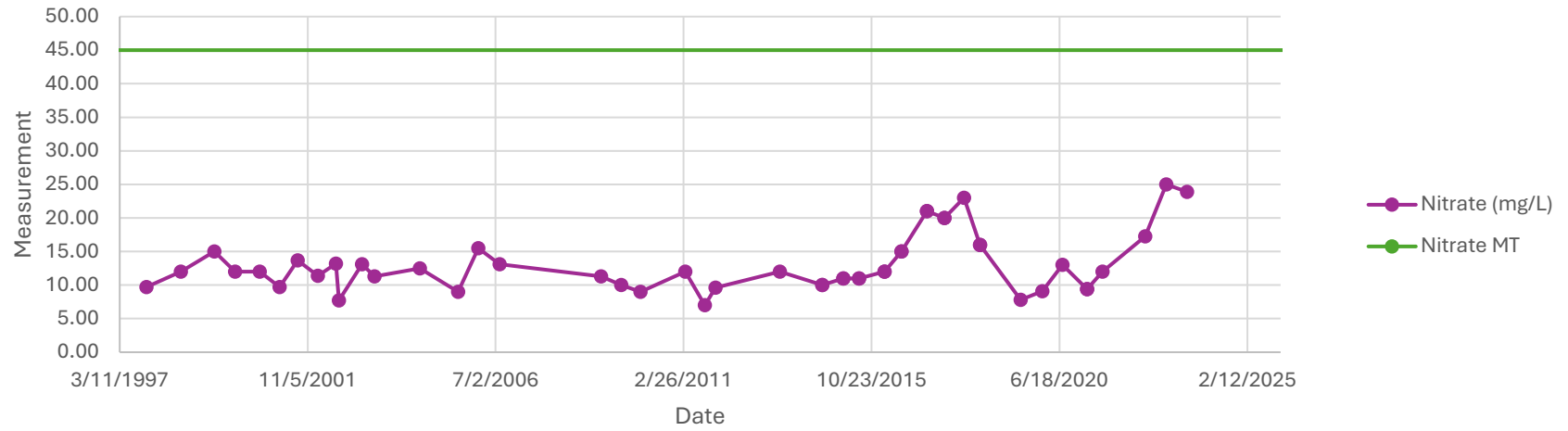
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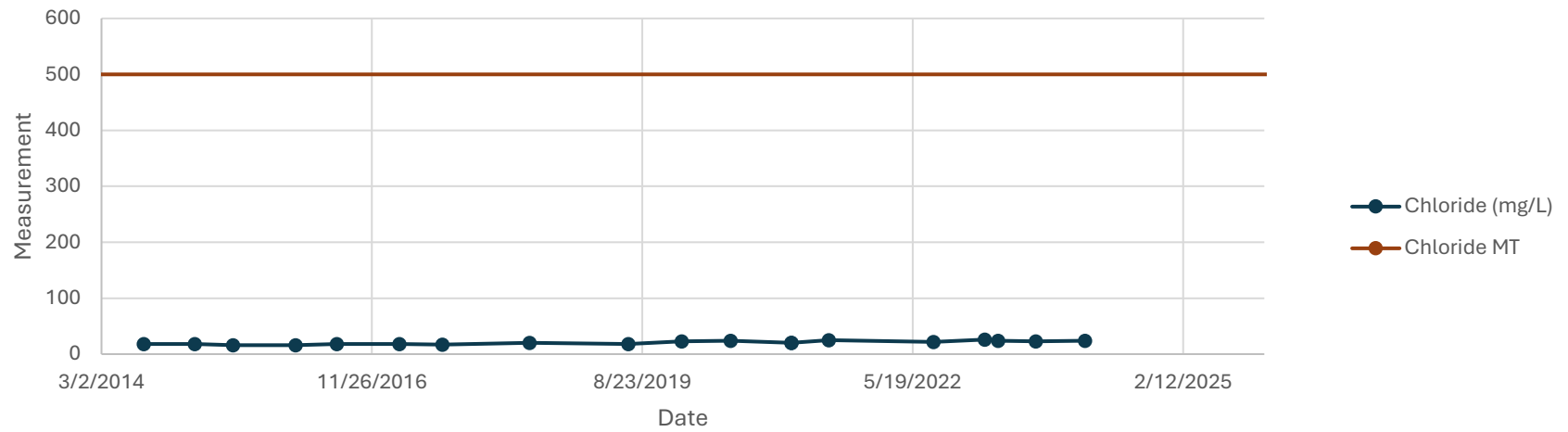
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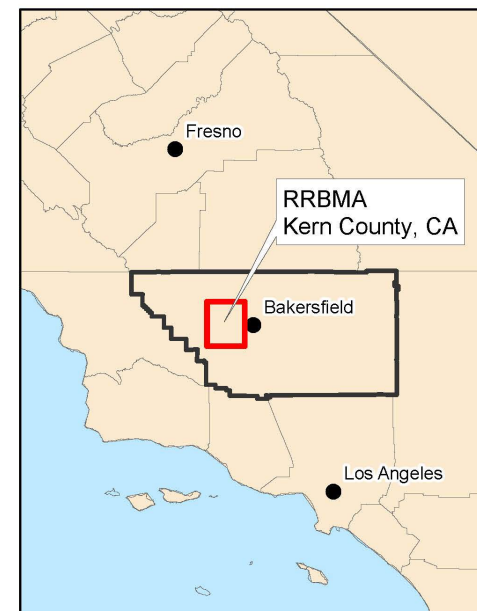
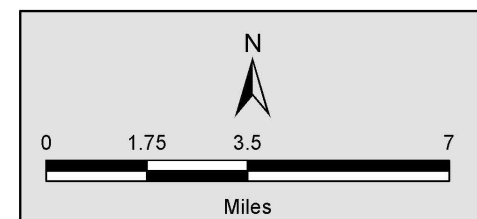
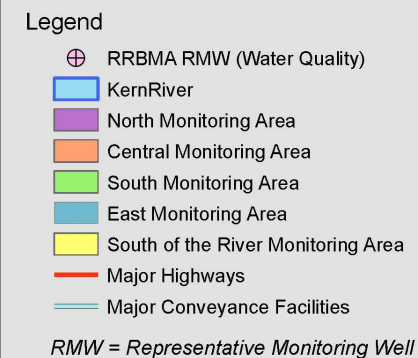
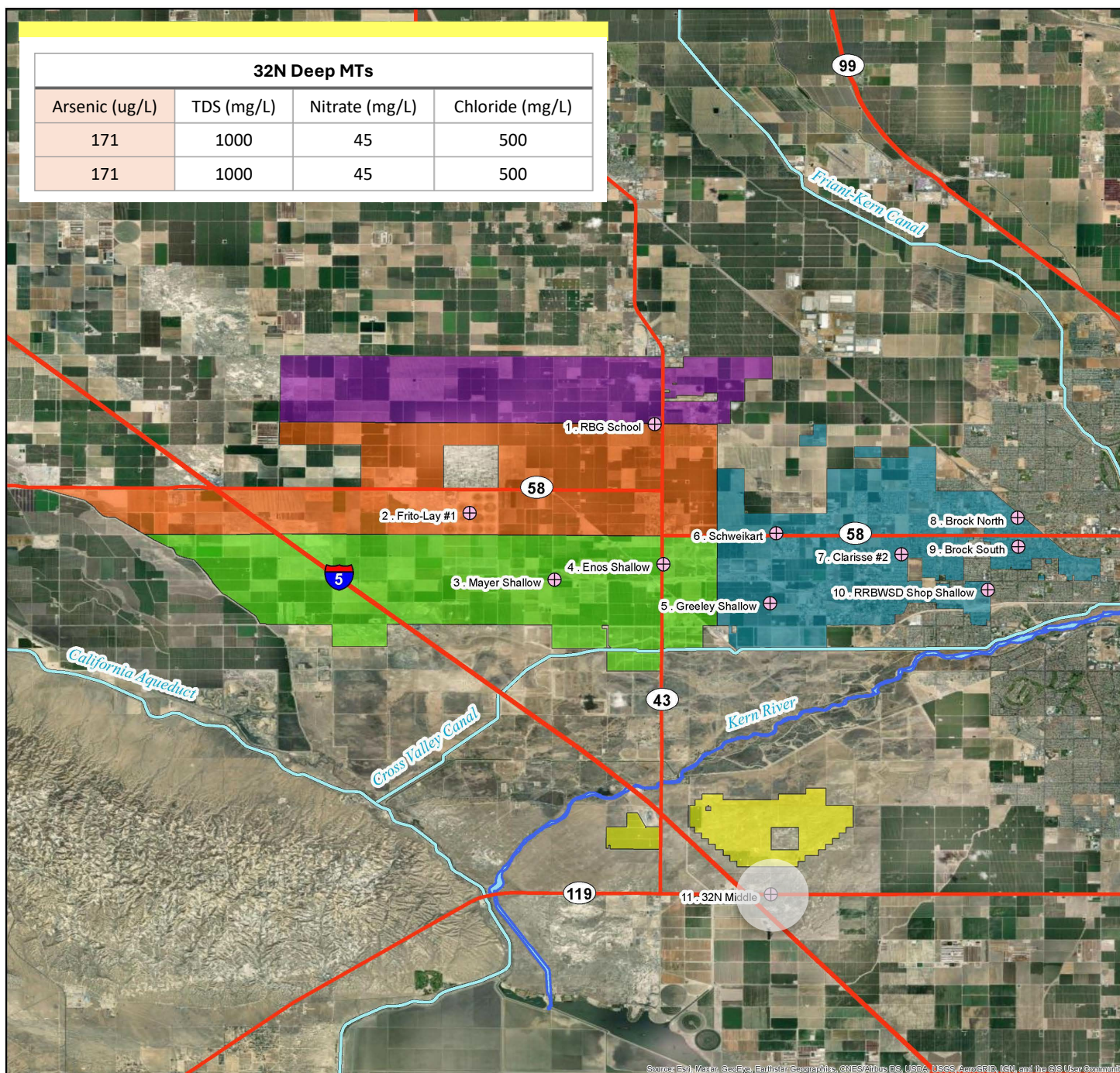
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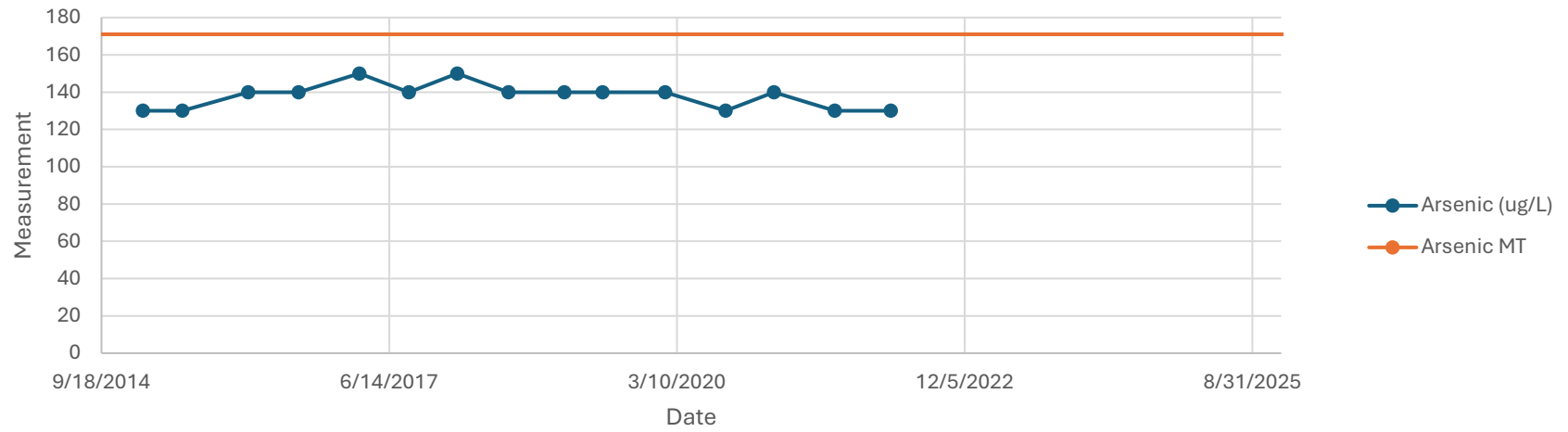
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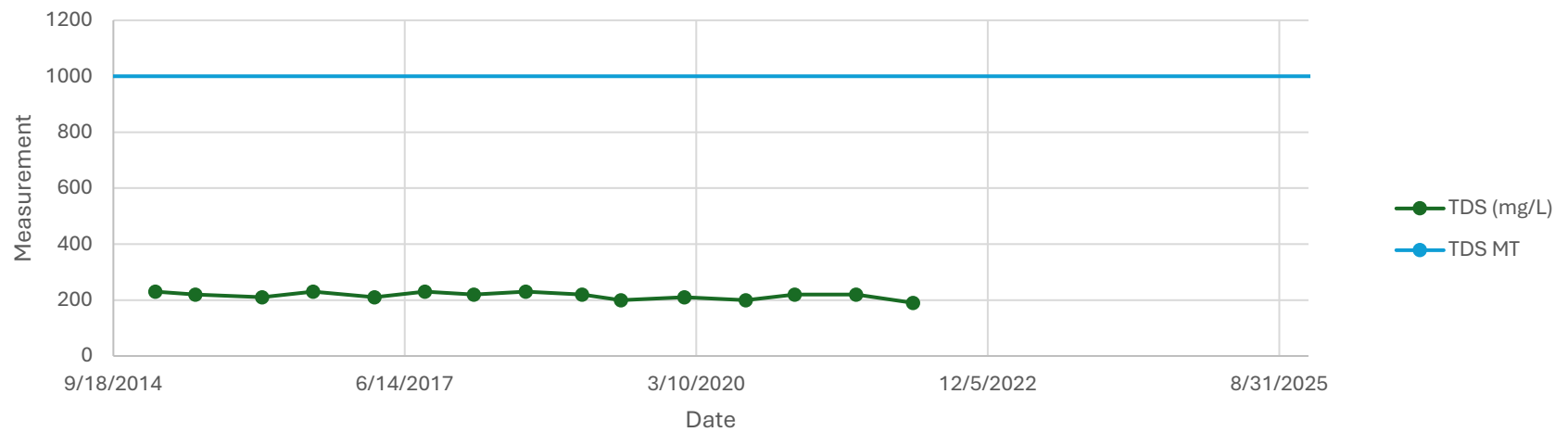
RRBMA Monitoring Areas - Water Quality Wells

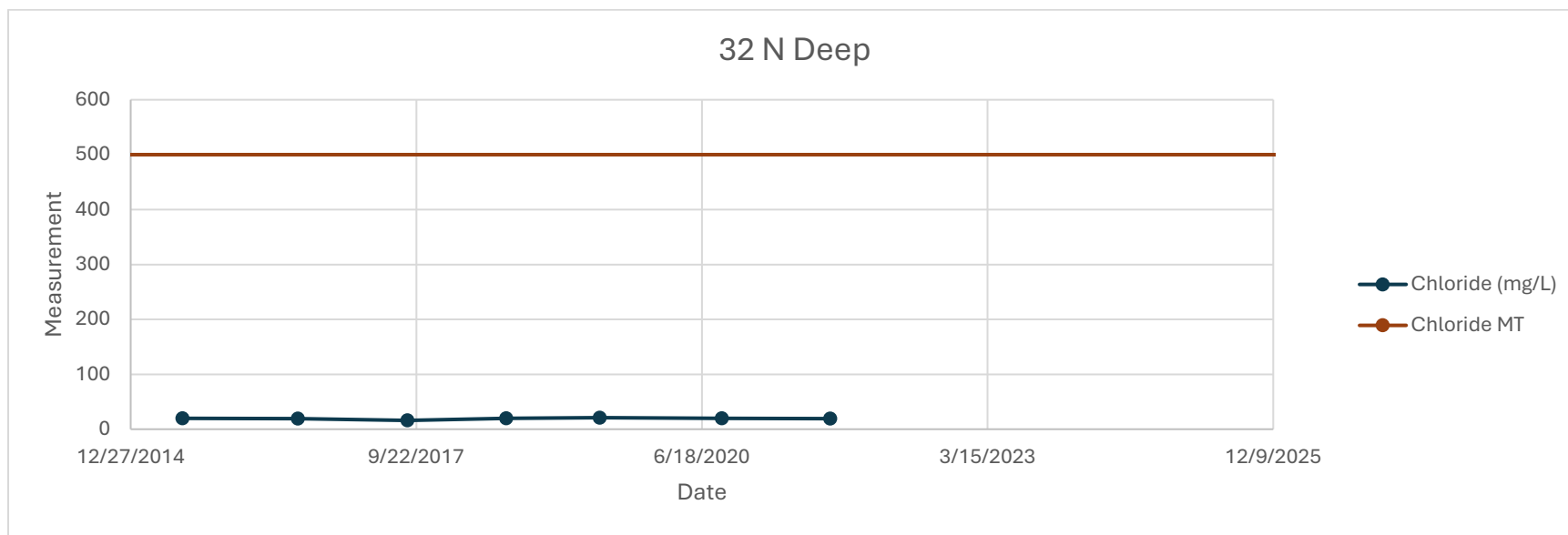
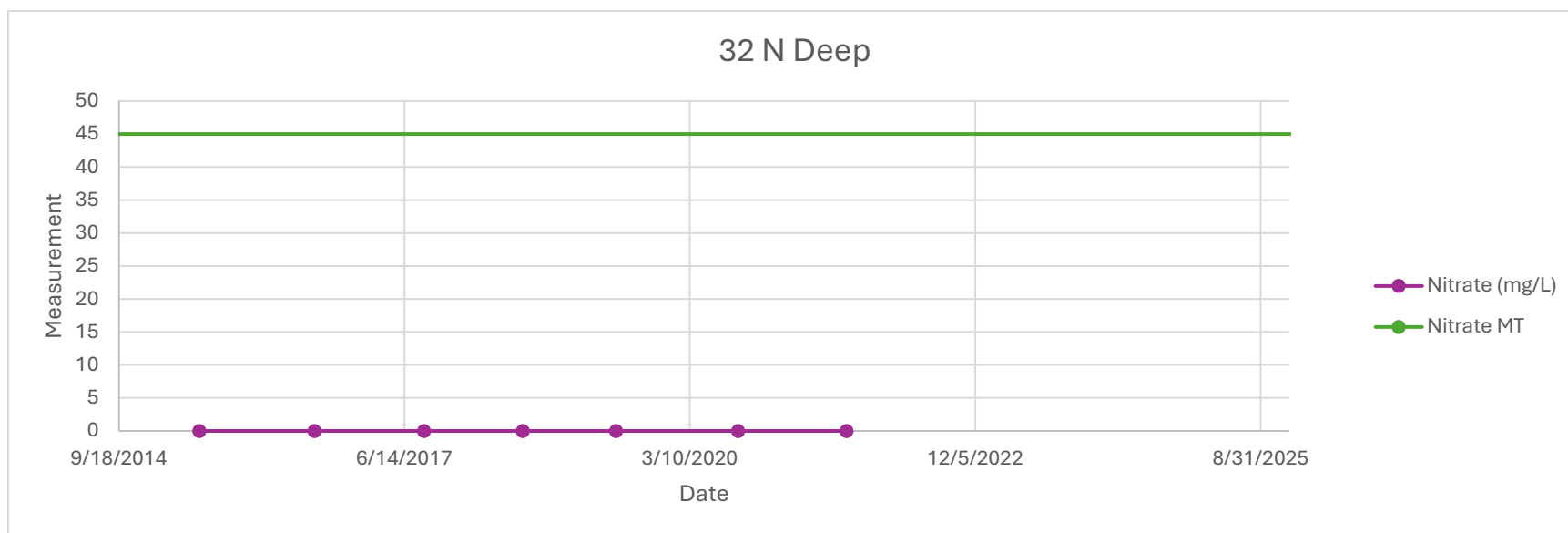


32 N Deep



32 N Deep





Appendix 4

RRBWSD Groundwater Program Operations 1995-2024

Table 1 - RRBWSD Water Supplies (Does not include banking for third parties)

Year	Kern River Contract Supply	Kern River Credited yet Undelivered Supply ⁴	Kern River Onyx Project Supply	SWP Table A Supply	SWP Article 21 Supply	SWP Pool Purchases	CVP Section 215 Purchases	Other Purchases and Exchanges	RRBWSD Gross Share of Program Supplies	Subtotal Water Supplies ³	CVP Flood Water	KR Flood Water	Subtotal Flood Water	Effective Precipitation ¹	Estimated Safe Yield ²	Subtotal Natural Inflow	Total RRBWSD Supplies
1995	87,383	-	-	29,900	7,858	-	693	(4,908)	9,838	130,764	2,992	-	2,992	27,522	12,683	40,205	173,962
1996	56,305	-	-	29,900	-	-	-	(6,690)	17,265	96,780	-	-	-	22,146	12,683	34,829	131,610
1997	59,226	-	-	29,900	-	-	-	(8,894)	9,193	89,425	6,612	14,181	20,793	16,317	12,607	28,923	139,141
1998	74,383	-	-	29,900	-	-	2,361	12,368	230	119,242	2,747	36,318	39,065	38,380	12,607	50,987	209,294
1999	14,787	-	-	29,900	3,790	30,000	-	219	-	78,696	-	-	-	16,948	12,607	29,555	108,251
2000	10,758	-	-	7,874	3,254	16,872	-	(8,071)	16,093	46,780	-	-	-	13,979	12,604	26,583	73,363
2001	3,972	-	-	2,943	691	122	-	17,848	1,808	27,384	-	-	-	20,784	12,601	33,385	60,769
2002	5,135	-	-	20,648	968	631	-	148	-	27,530	-	-	-	12,374	12,552	24,925	52,455
2003	7,576	-	-	27,077	838	255	-	-	3,333	39,079	-	-	-	14,736	12,552	27,288	66,367
2004	3,342	-	-	19,550	3,034	157	-	100,223	-	126,306	-	-	-	17,105	12,550	29,656	155,962
2005	56,017	-	-	26,475	3,807	587	-	9,957	67,897	164,740	-	-	-	24,599	12,529	37,128	201,868
2006	27,643	-	-	30,335	1,868	-	3,949	3,993	5,000	72,788	1,121	20,688	21,809	18,920	12,518	31,438	126,035
2007	7,783	-	-	17,122	552	145	-	528	-	26,130	-	-	-	9,051	12,518	21,569	47,699
2008	-	-	-	10,695	-	28	-	-	-	10,723	-	-	-	9,658	12,518	22,176	32,899
2009	-	-	-	12,044	-	48	-	1,903	-	13,995	-	-	-	15,386	12,506	27,892	41,887
2010	14,965	-	-	13,906	-	100	-	6,679	37,850	73,500	-	-	-	38,338	12,555	50,893	124,392
2011	35,776	-	-	6,144	4,355	527	11,954	26,474	51,753	136,983	-	-	-	13,617	12,555	26,172	163,155
2012	7,328	-	-	19,418	-	67	-	(402)	14,029	40,440	-	-	-	13,400	12,555	25,955	66,395
2013	-	-	-	23,852	-	1,607	-	25,000	-	50,459	-	-	-	10,311	12,728	23,039	73,498
2014	-	-	-	6,460	-	191	-	-	-	6,651	-	-	-	12,182	12,728	24,910	31,561
2015	-	-	-	6,701	-	1	-	-	-	6,702	-	-	-	11,940	12,936	24,876	31,578
2016	-	-	-	17,678	-	277	-	(7,047)	4,149	15,057	-	-	-	21,600	12,936	34,536	49,593
2017	99,376	-	-	25,945	22,186	341	1,950	30,646	56,062	236,506	-	-	-	16,452	12,793	29,245	265,751
2018	10,122	-	-	9,086	-	294	-	11,451	20,417	51,370	-	-	-	15,823	12,793	28,616	79,986
2019	9,878	-	-	8,551	6,582	-	-	28,409	55,208	108,628	-	-	-	27,343	12,793	40,136	148,764
2020	10,000	-	-	18,161	-	91	-	5,062	3,263	36,577	-	-	-	15,924	12,793	28,717	65,293
2021	49,888	73,989	-	2,988	-	-	-	-	-	126,865	-	-	-	16,591	12,793	29,384	156,249
2022	15,337	4,663	1,115	3,074	-	-	-	-	738	24,927	-	-	-	12,338	12,794	25,132	50,059
2023	43,734	-	6,114	23,721	1,605	-	-	54,172	74,194	203,540	-	16,248	16,248	31,543	12,794	44,337	264,126
2024	-	-	-	8,242	-	-	-	-	20,280	28,522	-	-	-	23,564	12,871	36,435	64,958
Total	710,714	78,652	7,229	518,190	61,388	52,341	20,907	299,068	468,599	2,217,088	13,472	87,435	100,907	558,872	380,050	938,922	3,256,918
Average	23,690	2,622	241	17,273	2,046	1,745	697	9,969	15,620	73,903	449	2,915	3,364	18,629	12,668	31,297	108,564

Notes: 1. Effective precipitation calculated per method developed as a part of groundwater mediation process.
2. Safe yield calculated based on 0.3 acre-feet/acre for total District gross (assessed) acres less non-farmed District owned lands.
3. Supplies do not include water banked for 3rd parties.
4. Includes estimated Kern River water owed to RRB by the City of Bakersfield but not yet delivered (under terms of agreements between RRBWSD and City).

Table 2 - RRBWSD Water Demands and Balance

RRBWSD Water Demands											Total RRBWSD Supplies (Table 1)	Annual RRBWSD Balance (Sup-Dem)	Exportable Transfers			Cumulative Balances		
Year	Crop Use ^{1,8,9}	Urban Use ²	Subtotal District Use	District ODC Losses ³	Kern Fan Program Losses ⁴	RRB Share Program Losses ⁴	CVWD Sale Program Losses ⁵	Subtotal Losses	Groundwater Transfers ⁶	Total RRBWSD Demands			Account Transfers ^{7,8}	Return to CVWD	Subtotal Exportable Transfers	Cumulative ODC Balance	Cumulative Exportable Balance (GLC)	Cumulative District Balance
1995	84,252	6,497	90,749	3,838	93	1,181	-	5,112	-	95,861	173,962	78,101	-	-	-	78,101		78,101
1996	83,861	6,542	90,403	2,564	321	2,072	-	4,957	-	95,360	131,610	36,249	-	-	-	114,350		114,350
1997	87,179	6,587	93,766	2,481	411	1,103	-	3,995	-	97,761	139,141	41,380	-	-	-	155,730		155,730
1998	88,808	6,631	95,439	4,187	776	28	-	4,990	-	100,430	209,294	108,864	-	-	-	264,595		264,595
1999	89,842	6,874	96,716	1,468	-	-	-	1,468	-	98,184	108,251	10,066	-	-	-	274,661		274,661
2000	86,634	7,117	93,751	771	1,400	1,931	-	4,102	-	97,853	73,363	(24,490)	-	-	-	250,171		250,171
2001	83,575	7,360	90,935	96	47	50	-	194	-	91,129	60,769	(30,359)	-	-	-	219,811		219,811
2002	81,138	7,603	88,741	122	117	-	-	239	-	88,979	52,455	(36,524)	-	-	-	183,287		183,287
2003	81,916	7,725	89,641	376	10	400	-	786	-	90,427	66,367	(24,060)	-	-	-	159,228		159,228
2004	81,707	7,877	89,584	251	-	-	-	251	-	89,835	155,962	66,126	100,000	-	100,000	125,354	100,000	225,354
2005	82,486	8,308	90,794	2,382	2,179	7,171	-	11,732	-	102,526	201,868	99,342	-	-	-	224,695	100,000	324,695
2006	83,284	8,454	91,738	2,223	633	338	-	3,194	-	94,933	126,035	31,103	21,809	-	21,809	233,989	121,809	355,798
2007	76,112	8,797	84,909	271	269	-	-	540	-	85,450	47,699	(37,751)	-	-	-	196,238	121,809	318,047
2008	79,624	8,703	88,327	-	-	-	240	240	-	88,567	32,899	(55,668)	-	3,000	(3,000)	140,570	118,809	259,379
2009	84,177	8,809	92,986	-	-	-	240	240	-	93,226	41,887	(51,339)	-	3,000	(3,000)	89,231	115,809	205,040
2010	86,748	8,825	95,573	828	231	2,322	-	3,381	-	98,954	124,392	25,439	-	-	-	114,670	115,809	230,479
2011	83,319	8,518	91,837	2,021	1,537	3,739	-	7,296	5,728	104,861	163,155	58,293	18,353	-	18,353	154,610	134,162	288,772
2012	84,474	8,518	92,992	-	7	921	320	1,248	-	94,240	66,395	(27,845)	-	4,000	(4,000)	126,765	130,162	256,927
2013	85,441	8,539	93,980	-	-	-	1,320	1,320	-	95,300	73,498	(21,802)	(25,000)	16,500	(41,500)	129,963	88,662	218,625
2014	87,189	8,539	95,728	-	-	-	400	400	-	96,128	31,561	(64,566)	-	5,000	(5,000)	65,396	83,662	149,058
2015	85,569	9,044	94,613	-	-	-	760	760	-	95,373	31,578	(63,795)	-	9,500	(9,500)	1,601	74,162	75,763
2016	87,503	9,028	96,531	-	-	373	1,320	1,693	-	98,224	49,593	(48,631)	-	16,500	(16,500)	(47,030)	57,662	10,632
2017	87,580	9,089	96,669	3,757	2,827	2,431	432	9,446	-	106,115	265,751	159,635	5,387	5,397	(10)	107,219	57,652	164,871
2018	86,423	9,180	95,603	537	-	555	1,648	2,741	840	99,184	79,986	(19,198)	-	20,603	(20,603)	88,020	37,049	125,069
2019	86,928	9,192	96,120	880	694	4,189	-	5,763	21,542	123,425	148,764	25,339	-	-	-	113,359	37,049	150,408
2020	84,133	9,204	93,337	418	-	115	1,520	2,053	-	95,391	65,293	(30,097)	-	19,000	(19,000)	83,262	18,049	101,311
2021	82,386	9,302	91,688	-	-	-	760	760	4,500	96,948	156,249	59,301	-	9,500	(9,500)	142,563	8,549	151,112
2022			90,508	-	-	79	-	79	15,000	105,587	50,059	(55,528)	(25,000)	-	(25,000)	112,035	(16,451)	95,584
2023			93,242	2,873	1,736	5,330	800	10,739	-	103,981	264,126	160,145	16,248	10,000	6,248	255,932	(10,203)	245,729
2024			96,074	-	183	1,216	-	1,399	-	97,473	64,958	(32,515)	-	-	-	223,416	(10,203)	213,213
Total			2,782,974	32,344	13,471	35,545	9,760	91,120	47,610	2,921,705	3,256,918	335,213	111,797	122,000	(10,203)			
Average			92,766	1,078	449	1,185	325	3,037	1,587	97,390	108,564	11,174	3,855	4,067	(340)			

Notes: 1. Crop use calculated per method developed as a part of groundwater mediation process (Cal Poly method) through 2021.
2. Urban consumptive use estimated based on 1.2 acre-feet/net acre through 2021.
3. Losses are assessed at 3% per MOU on surface water deliveries for District recharge not a part of other programs.
4. Losses for banked water and for surface diversions for District use associated with banking programs are assessed per MOU. See Tables 3 and 4.
5. Additional losses for CVWD return water assessed per MOU.
6. Groundwater transfers from Kern Fan Project bank accounts per Table 4a less groundwater transfers as part of banking program returns.
7. 100,000 AF WKWD supply tranfered to exportable in 2004. 25,000 AF deleted from Exportable Balance per WK program and added to RRBWSD District Balance in 2013 and 2022.
8. RRBWSD supplies transferred to exportable account include floodwater from the Friant-Kern, qualified high flow Kern River water purchases, and Kern River Mandatory Release water.
9. District consumption estimated from IRTC Metric for 2022 - includes crop and urban use. Consumptive use estimate using previous methodology was approximately 1% less than METRIC data.
10. District consumption estimated from LandIQ for 2023 - includes crop and urban use.

Table 3a - Total Banking Programs (from 2004 on)

[illegible]

Table 3b - Total Program Balance - All Programs

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Year	AEWSD 2:1 Ac-Ft	DEID 2:1 Ac-Ft	KT&RG 2:1 Ac-Ft	SCVWA 2:1 Ac-Ft	TLBWSD 2:1 Ac-Ft	Westside 2:1 Ac-Ft	Homer 2:1 Ac-Ft	SJREC 2:1 Ac-Ft	Westside Programs Ac-Ft	IRWD Banking Ac-Ft	BVWSD Banking Ac-Ft	SCVWA Banking Ac-Ft	Sum Accounts Ac-Ft
2004	32,550	0	1,304	0	0	0	0	0	0	0	280	0	34,134
2005	71,630	0	24,685	0	0	0	0	0	0	0	53,220	17,146	166,680
2006	71,213	0	29,385	0	0	0	0	0	0	2,842	88,226	34,291	225,957
2007	64,162	0	17,083	0	0	0	0	0	0	2,842	63,476	63,614	211,176
2008	54,991	0	17,083	0	0	0	0	0	0	2,842	55,226	63,614	193,755
2009	53,005	0	16,670	0	0	0	0	0	0	2,842	46,976	63,614	183,107
2010	53,005	19,781	39,485	0	0	0	0	0	0	11,379	38,726	94,562	256,938
2011	81,669	27,549	46,554	7,663	0	0	0	0	0	29,709	93,600	95,443	382,186
2012	94,006	23,549	47,291	9,648	0	0	0	0	0	33,053	75,350	101,172	384,068
2013	84,006	13,549	38,291	9,648	0	0	0	0	0	26,106	67,100	101,172	339,871
2014	74,006	5,774	28,291	9,648	0	0	0	0	0	14,815	58,850	98,348	289,731
2015	67,143	69	17,921	9,648	0	0	0	0	0	10,061	50,600	95,350	250,791
2016	57,640	4,218	8,921	9,648	0	0	0	0	0	10,061	42,350	100,410	233,247
2017	63,097	18,161	25,683	9,648	0	0	1,485	4,250	0	27,680	105,540	100,410	355,954
2018	57,527	19,443	31,633	9,648	0	0	3,185	4,250	0	26,566	97,290	100,410	349,951
2019	74,461	44,775	36,185	14,570	0	0	3,185	5,375	0	39,321	127,804	100,410	446,085
2020	64,461	35,114	29,275	0	0	0	324	7,500	0	32,134	119,554	98,929	387,290
2021	54,461	25,114	20,885	0	0	0	0	3,485	0	15,225	111,304	78,929	309,402
2022	44,707	15,360	12,116	0	0	0	0	3,485	0	6,298	103,054	59,136	244,155
2023	52,983	30,007	29,007	5,301	1,875	13,274	0	11,985	0	40,723	118,120	76,282	379,554
2024	45,145	30,499	37,955	5,301	4,250	0	0	16,235	0	43,198	109,870	82,283	374,734

Table 4a - Total RRBWSD Kern Fan Bank Accounts

[illegible]

Table 4b Total Kern Fan ODC Accounts

Year	Water Source								Gross Recharge	6% Losses	Net Recharge	From Bank (4% Loss)	Transfer	Purchased Losses	Account Balance	Program Losses (Table 3)	Additional Losses to Table 2
	Friant-Kern				Kern River	SWP											
	AE/RRB	KT/RRB	DEID/RRB	215		Entl.	Article 21	SCV/RRB									
1995	-	-	-	-	1,545	-	-	-	1,545	93	1,452	239	-	-	1,691	-	93
1996	1,174	-	-	-	-	-	-	-	1,174	70	1,104	668	-	-	3,463	-	70
1997	-	-	-	2,323	2,275	-	-	-	4,598	276	4,322	86	-	-	7,871	-	276
1998	-	-	-	667	11,986	278	-	-	12,931	776	12,155	-	-	-	20,026	-	776
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20,026	-	-
2000	22,674	667	-	-	-	-	-	-	23,341	1,400	21,941	-	-	-	41,967	-	1,400
2001	-	-	-	-	-	-	-	-	-	-	-	77	-	9,130	51,174	-	-
2002	-	-	-	-	-	-	-	-	-	-	-	73	-	-	51,247	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	349	-	-	51,596	-	-
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51,596	-	-
2005	41,183	23,982	-	-	268	3,311	-	-	68,744	4,124	64,620	1,122	7,000	-	124,338	1,955	2,169
2006	-	-	-	4,274	3,917	3,105	466	-	11,762	706	11,056	37	-	-	135,431	-	574
2007	-	-	-	-	4,491	-	-	-	4,491	269	4,222	-	-	-	139,653	-	269
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	5,823	145,476	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	3,317	148,793	-	-
2010	-	3,803	3,889	-	-	-	-	-	7,692	462	7,230	-	-	-	156,024	231	231
2011	-	-	-	2,292	13,459	-	-	-	15,751	945	14,806	371	-	-	171,200	-	945
2012	-	-	-	-	-	-	-	-	-	-	-	79	-	-	171,280	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	458	171,738	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	2,313	174,051	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	169	174,220	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174,220	-	-
2017	234	2,536	-	929	31,274	1,662	6,157	-	42,792	2,568	40,225	210	-	-	214,655	76	2,491
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	214,655	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	684	-	140	215,478	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	6,871	222,349	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	132	222,481	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	4,214	226,695	-	-
2023	-	305	8,565	-	15,069	-	-	-	23,939	1,436	22,503	715	(13,274)	62	236,702	266	1,170
2024	-	-	-	-	-	-	-	-	-	-	-	115	-	-	236,816	-	-

Appendix 5
SGMA Timeline and RRBMA
Implementation Progress for Water Year 2024

Sustainable Groundwater Management Act Timeline

Sept, 16, 2014: Groundwater management legislation becomes law

Gov. Brown signs Senate Bill 1168, Assembly Bill 1739, and Senate Bill 1319, which made up the groundwater management legislation package.

Jan. 1, 2015: Legislation goes into effect

The Sustainable Groundwater Management Act becomes effective.

Jan. 31, 2015: DWR must establish initial groundwater basin priority

California Department of Water Resources (DWR) establishes the initial priority – high, medium, low or very low – for each groundwater basin in the state by the end of January 2015 (Water Code § 10722.4).

Jan. 1, 2016: DWR must set emergency regulations for basin boundary revisions

DWR adopts emergency regulations for groundwater basin boundary revisions by Jan. 1, 2016. The regulations must include the methodology and criteria used to evaluate proposed boundary revisions, including the establishment of new subbasins (Water Code § 10722.2).

June 1, 2016: DWR must establish emergency regulations for evaluating plans

DWR adopts emergency regulations for evaluating Groundwater Sustainability Plans (GSPs), their implementation and coordination agreements among local agencies for groundwater sustainability planning. The regulations must identify GSP components and information to assist plan and coordination agreement development and implementation (Water Code § 10733.2).

Dec. 31, 2016: DWR estimate of water available for groundwater replenishment due

DWR publishes its estimate of the water available for groundwater replenishment on its website (Water Code § 10729(c)).

Jan. 1, 2017: Basin deadline to submit alternative to a GSP

Medium- and high-priority basins choosing to meet sustainability objectives by ways other than groundwater sustainability planning (which includes not forming a Groundwater Sustainability Agency (GSA)) must submit their alternatives to DWR (and then again every 5 years). (Water Code § 10733.6).

Jan. 1, 2017: DWR will establish best management practices for sustainable management

DWR publishes best management practices for the sustainable management of groundwater on its website (Water Code § 10729(d)).

June 30, 2017: Deadline to form a GSA

A local agency or agencies in each high- or medium-priority groundwater basin must have officially formed one or more (GSAs) for the entire basin (Water Code §§ 10724, 10735.2(a)(1)).

June 30, 2017: State Water Board can begin to put basins on probation

The State Water Resources Control Board (State Water Board) can initiate probationary status to a medium- or high-priority basin if the basin lacks one or more GSA that covers the entire basin or no alternative has been approved (Water Code § 10735.2(a)(1)).

July 1, 2017: Those pumping in a probationary basin must report extractions

Pumping groundwater in a basin that either has been designated as a probationary basin or lies outside a GSA's management area must be reported to the State Water Board. These reporting requirements do not apply to those extracting for domestic purposes 2 acre-feet per year or less, and some others (Water Code §§ 5202, 10724).

Jan. 31, 2020: GSPs required for critically overdrafted basins

Basins designated as high- or medium-priority and subject to critical conditions of overdraft must be managed under a GSP or GSPs. The State Water Board can initiate probationary status for all or part of a basin if there is no GSP, if the GSP is inadequate, or the GSP implementation will not likely achieve sustainability (Water Code § 10720.7(a)(1), 10735.2(a)(2), 10735.2(a)(3)).

Jan. 31, 2022: GSPs required for all remaining high- and medium- priority groundwater basins

All remaining basins designated as high- or medium-priority must be managed under a GSP or GSPs. The State Water Board can initiate probationary status in 2022 for all or part of a basin if there is no GSP, if the GSP is inadequate, or the GSP implementation will not likely achieve sustainability except for basins where groundwater extractions result in significant depletion of interconnected surface waters (Water Code § 10720.7(a)(2), 10735.2(a)(4), and 10735.2(a)(5)(A)).

Jan 31, 2025: State Water Board actions where extractions impact surface waters

The State Water Board can initiate probationary status for those medium- or high-priority basin where the GSP is inadequate or implementation is not likely to achieve sustainability AND the basin is in a condition where groundwater extractions result in significant depletion of interconnected surface waters (Water Code § 10735(a)(5)(B))

Jan. 31, 2022 -2024: DWR completes evaluation of all GSPs

DWR must evaluate and issue an assessment of a GSP within two years of submission by a GSA. DWR may include recommendations for addressing any deficiencies in the GSP (Water Code § 10733.4(d)).

Jan. 31, 2040 - 2042: Basins must achieve sustainability

A GSP must include measurable objectives and milestones in increments of five years to achieve sustainability within 20 years of GSP adoption. (Water Code § 10727.2(b)(1))

10.3.8 Rosedale-Rio Bravo Water Storage District GSA

As a Kern Groundwater Authority (KGA) member, Rosedale-Rio Bravo Water Storage District (RRBWSD) prepared a Groundwater Sustainability Plan (GSP) Chapter for the KGA GSP covering the Rosedale-Rio Bravo Water Storage District). During 2023 Rosedale-Rio Bravo Water Storage District formed a RRBWSD GSA and expended much effort in preparing an updated Draft 2024 Plan with all the other GSA's. A Draft 2024 Plan was distributed to the public and SWRCB for comment in May 2024.

1) COMPLIANCE WITH GROUNDWATER LEVELS SUSTAINABLE MANAGEMENT CRITERIA (SMC)

The RRBWSD GSA maintains a comprehensive network of 19 representative monitor wells. The wells are a combination of agricultural, domestic, and dedicated monitor wells of known well construction and offer reliable long-term data.

a) COMPLIANCE WITH SMC

RRBWSD GSA groundwater levels trends sloped upwards as a result of a historical wet year. Water levels in the representative monitoring wells (RMWs) increased by an average of 25 feet from Fall 2023 to Fall 2024. No exceedances occurred in 2024 within the RRBWSD GSA. RRBWSD GSA will continue to monitor and report the RMWs in accordance with SGMA guidelines.

b) SMC MONITORING ACTIVITIES

Groundwater levels were monitored monthly at all 19 representative monitoring wells within the RRBWSD GSA. One representative monitoring well was replaced due to well failure and abandonment, this change occurred in 2016 but wasn't documented until recently. An adjacent new well was used as its replacement and monthly data has been collected on the new well for 8 years.

c) ASSESSMENT OF POTENTIAL IMPACTS TO BENEFICIAL USERS

The RRBWSD GSA received one report of a dry well in late 2023. Staff investigated the report and deduced that the issue was due to well failure and not water levels.

2) COMPLIANCE WITH ADDITIONAL SUSTAINABLE MANAGEMENT CRITERIA

The RRBWSD GSA also set SMCs for water quality, subsidence, and reduction in groundwater storage.

RRBWSD has no changes in the monitoring network for the Groundwater Storage Calculation. A Sustainable Yield for the Rosedale-Rio Bravo District Lands within the RRBWSD GSA is calculated as the sum of Native Yield, Precipitation, and Project Water. A 20-year average is used as a representative long-term average for Management Action implementation purposes. For the 2023-2024 period, Project Water supplies were approximately 69,148 AFY. District Assessed Acres total 39,468 acres, resulting in Project Water of 1.75 AF/acre/yr. The Shafter #5 CIMIS Station's annual average precipitation is 5.04 inches (0.42 ft) or 16,577 AFY. The KGA has allocated a value of 0.15 AF per acre to all developed lands, or 5,920 AFY. The total 20-year average Sustainable Yield for RRBWSD calculates to be about 91,645 or 2.32 AF/acre/yr. RRBWSD prepares an annual operations report including an updated checkbook groundwater balance. For the period of 1995-2023, RRBWSD has a cumulative storage balance of 301,157 AF. In 2023 the overall balance increased by about 255,563 AF due to wet hydrology.

a) WATER QUALITY

Groundwater quality was monitored annually at 11 representative wells within the RRBWSD GSA. To ensure comprehensive representation of all beneficial users in the area, the monitoring network includes domestic, agricultural, and municipal wells. The wells monitored in WY 2024 were:

1. RBG School
2. Frito-Lay #1
3. Mayer Shallow
4. Enos Shallow
5. Greeley Shallow
6. Schweikart
7. Clarisse #2
8. Brock North
9. Brock South
10. RRBWSD Shop Shallow
11. 32N

For WY 2024, the constituents of concern included Total Dissolved Solids (TDS), Chloride, Nitrate (as NO₃), and Arsenic. Minimum thresholds were defined as levels exceeding the current Maximum Contaminant Level (MCL) or a 10% increase over the 2015-2020 values for wells with historically high constituent concentrations (e.g., the RBG School and Brock South wells' Nitrate thresholds were set at 10% above their 2015-2020 averages).

The current network of monitoring wells provides reliable long-term water quality data. This data is sourced from:

1. Publicly available data from the Groundwater Ambient Monitoring and Assessment (GAMA) Program,
2. The Kern Fan Monitoring Committee's winter and summer sampling events, and
3. RRBWSD GSA's in-house monitoring efforts.

In 2024, no water quality exceedances were observed within the RRBWSD GSA. However, two monitoring wells (Schweikart and 32N) were unable to be sampled during WY 2024.

To improve data accessibility and streamline annual reporting, the Kern Groundwater Authority (KGA) has developed a web-based Data Management System (DMS). While water quality monitoring features are still under development within the DMS, future updates will enhance reporting capabilities.

Looking ahead, as part of the revised Subbasin Groundwater Sustainability Plan (GSP), the RRBWSD GSA will transition to a network of four representative monitoring wells: Enos Shallow, Greeley Shallow, RRBWSD Shop Shallow, and Frito-Lay #1. This revised network will expand the list of constituents of concern to include 1,2,3-TCP, Arsenic, Nitrate (as NO₃ and NO₂), TDS, and Uranium. Additional data will be incorporated as it becomes available.

b) SUBSIDENCE

Subsidence data was collected using publicly available InSAR data provided by the Department of Water Resources (DWR) for Groundwater Sustainability Plan (GSP) development and implementation. The data was analyzed at five designated monitoring locations situated near critical RRBWSD GSA infrastructure.

In 2024, no subsidence exceedances were observed within the RRBWSD GSA. The annual subsidence rates at the five locations between 2019 and 2024 ranged from -0.006 feet to 0.009 feet, with a total subsidence of -0.037 to 0.056 feet over the six-year period. These measurements are significantly below the Minimum Threshold of -0.6 feet for the same timeframe.

As of January 2025, InSAR subsidence data is available through October 2024. Additional data will be incorporated as it becomes available.

c) INTERCONNECTED SURFACE WATER

N/A

3) IMPLEMENTATION OF PROJECTS AND MANAGEMENT ACTIONS (P/MAs)

The RRBWSD GSA made progress towards implementing several of its planned GSP Projects in Water Year 2024 as summarized by the following:

Enns Basins Improvement Project (McCaslin Ponds): This project was added in 2019 as an adaptive management action and includes a 195-acre project west of Bakersfield to recharge, store, and recover water. RRBWSD completed relevant environmental analysis and applied for grant funding. Subsequent addenda to a previous conjunctive-use EIR were adopted. WaterSmart grants were awarded in 2020 and 2021 towards development and construction. Almond trees were removed from the property in 2021, construction of recharge ponds and intake was completed in 2022, and approximately 17,700 AF was spread in 2023 that otherwise would not have been stored. The construction of two Conjunctive-Use banking wells and recovery pipelines were under construction in 2024.

During 2024, two nearby properties of approximately 155 acres that are currently used for agricultural purposes came up for sale. RRBWSD acquired both properties and removed the crops and is developing the necessary environmental documents to convert them into groundwater recharge areas.

Onyx Ranch Project: This project is connected to RRBWSD-owned lands and water rights in the Kern River Valley. The project involves a change in the point of diversion that would bring water supplies to the Kern Subbasin. A Draft EIR was circulated, and the FEIR was certified in January 2021. During 2023 approximately 6,114 AF was delivered for groundwater storage in the Kern Subbasin. Unfortunately, in 2024 due to legal action the project was paused and irrigation resumed in the Kern River Valley.

James Groundwater Storage and Recovery Project: This project is a proposed 2,070-acre project in southwest Bakersfield designed to recharge, store, and recover water to provide cost effective and reliable water supply for landowners within RRBWSD. A conceptual design and feasibility analysis was completed in 2019 and awarded grant funding is tentative. The environmental analysis was re-initiated with the distribution of a DEIR in 2022, and certification of the FEIR expected in 2024. The design of an

intake from the Kern River to the James Project across the Pioneer Project stands at 90% status. In 2024 RRBWSD sold its stake in the project to BVWSD.

Kern Fan Groundwater Storage Project: This project would develop a regional water bank in the Kern Fan area to store State Water Project (SWP) Article 21 water when surface water is abundant. The Kern Fan Project's feasibility analysis was completed in March 2020 and a FEIR was certified in December 2020. RRBWSD has commenced permitting and design efforts, now having acquired 350 acres of property for new recharge and recovery. Recharge ponds and control structures were constructed on 200 of the 350 acres. The remaining recharge ponds are scheduled to be constructed in 2025.

Western Rosedale Lands In-Lieu Service Area Project: This project includes the construction and operation of up to ten miles of water conveyance pipelines, including appurtenant facilities, to provide surface water to agricultural users within a portion of RRBWSD's service area located west of Interstate 5. Project status is shovel ready; feasibility and environmental analysis are complete. No implementation date is known at this time.

Ten Section Project: This project is located in the South of the River Monitoring Area within the RRBWSD GSA. A feasibility study of 200+ acre groundwater recharge, storage, and recovery project is currently underway. No implementation date is known at this time.

The RRBWSD GSA made progress toward implementing several of its planned GSP Management Actions in Water Year 2024 as summarized by the following:

Water Charge Demand Reduction: This action imposes a water charge on District landowners for the use of water over Native Yield, precipitation, and Project Water supplies. A web-based 5 WY 2023 Annual Report KERN COUNTY SUBBASIN water budget platform was completed in 2020 and real-time evapotranspiration (ET) data incorporation commenced in 2021 allowing users the ability to track their water usage for background information. RRBWSD Board approved water charge implementation in late 2023 starting in the 2024 calendar year and assessed \$95/AF to incentivize water conservation and project financing. The Board set a rate at \$145/AF for 2025.

RRBWL (White Land) Water Supplies and Demand Imbalance Reduction: This action has been implemented for demand reduction on a linear basis over the planning period of 2020-2040. It is expected that Rosedale-Rio Bravo White Lands would seek to acquire water supplies for in lieu and direct groundwater recharge via banking agreements with RRBWSD, or others to offset demands. A web-based water budget platform was completed in 2020 to allow users to begin tracking water usage for initial 2020-2024 reduction requirements. Landowners are being regularly updated as to their demands and remaining balances requiring balance by the end of 2024. Eleven out of the thirteen landowners are within their allocated supply.

RRBWSD 3rd Party Recharge and Storage Program: This action will be developed by RRBWSD for 3rd-party recharge for use in the RRBWSD GSA or other downgradient areas in the Kern Subbasin. RRBWSD would offer existing conveyance and recharge facilities in exchange for a portion of the imported water supply and payments of yet-to-be-developed costs and/or fees. RRBWSD executed one such program in 2022 for up to 50,000 AF of groundwater recharge of which RRBWSD would retain 1 AF for every 2 AF stored.

4) COORDINATION WITH STAKEHOLDERS

RRBWSD/RRBWSD GSA held monthly Board meetings during all of 2024 which included briefing the Board on SGMA-related activities. Three special stakeholder meetings were also held in person at the District's office with a virtual option. RRBWSD GSA provided updates on groundwater monitoring results, plan revisions associated with DWR comments, and implementation of P/MAs.

5) SUMMARY OF OTHER GSP-RELATED SPECIAL STUDIES OR ACTIVITIES

RRBWSD GSA engaged in significant GSP-related studies in 2024, focused on the development of a Draft 2024 Plan that was submitted to the SWRCB in May 2024.