ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

BUILDING A SUSTAINABLE WATER SUPPLY TO HELP OUR COMMUNITY THRIVE

REGULAR MEETING OF THE BOARD OF DIRECTORS
ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
849 ALLEN ROAD, BAKERSFIELD, CA 93314

AGENDA

April 9, 2024
8:00 a.m.

1. CALL TO ORDER / ROLL CALL

2. APPROVAL OF MINUTES

a) Regular Board Meeting Minutes of February 13, 2024

3. FINANCIAL REPORT

a) Treasurer's Report (MM)
b) Accounts Payable (MM)
c) Revenue and Expenditures (MM)
d) Water Charge Update (TT)

4. OPERATIONS AND MAINTENANCE REPORT

a) District Groundwater Levels (MN)
b) Operations (ZS)
c) Maintenance (ZS)

5. WATER RESOURCES REPORT

a) State Water Project Operations (TT)
b) California Delta Conveyance Project (TT)
c) Kern County Water Agency Board Meeting Update (TT)

6. MANAGER'S REPORT

a) Strategic Plan Update (RE)
b) Rosedale Recap (RE)

7. ENGINEER'S REPORT

a) Onyx Ranch Project
   i. Operations (DB)

ii. FEMA Disaster Relief Application (RE)

b) Improvement Projects (MN)
   i. Consideration of Pay Estimate No.2 McCaslin/Bowling and Change Order No.1 (MN)
   ii. Consideration of Solar Services Agreement (DR/TT)

8. COMMITTEE/SPECIAL PROJECT ACTIVITIES

a) Groundwater Banking Joint Powers Authority (DB & TT)
b) James Groundwater Banking Authority (DB)
   i. Consideration of Purchase and Sale Agreement and Escrow Instructions (DR)
c) Sustainable Groundwater Management Act
   i. GSP Deficiency Update (DB)
   ii. Kern County Subbasin White Land Administration (DR)
   iii. Annual SGMA Report (DB)
d) Kern Fan Monitoring Committee (MN)
e) Cross Valley Canal Advisory Committee (DB)
f) Pioneer Project Committee (DB)
g) Kern River Watershed Coalition Authority (ZS)
h) Kern Fan Authority (DB)
i) Joint Operating Committee (DB & TT)
j) Committee for Delta Reliability (TT)
k) South Valley Water Resources Authority (TT)
l) Valley Ag Water Coalition (TT)
m) Kern Integrated Regional Water Management Plan (TT)
n) Sites Reservoir Project (TT)
o) Association of California Water Agencies (TT)

9. ATTORNEY'S REPORT

10. OLD OR NEW BUSINESS

11. CORRESPONDENCE

Verizon Tower Lease

12. PUBLIC COMMENT

13. CLOSED SESSION

a) Conference with legal counsel – Anticipated Litigation: Significant Exposure to Litigation – *Government Code Section 54956.9(d)(2):* Two (2) Matters

b) Conference with legal counsel – Anticipated Litigation: Initiation of Litigation – *Government Code Section 54956.9(d)(4):* One (1) Matter

c) Conference with legal counsel – Pending Litigation – *Government Code Section 54956.9 (d)(1):*
   i. State Water Resources Control Board – Applications to Appropriate Kern River Water
   ii. City of Bakersfield v. Rosedale-Rio Bravo Water Storage District (McAllister CEQA)
   iii. Department of Water Resources v. All Persons Interested (Validation Action)
   iv. Rosedale-Rio Bravo Water Storage District, et al. vs. Kern County Water Agency, et al.

(CVC Litigation)

v. Buena Vista Water Storage District, et al. v. Rosedale-Rio Bravo Water Storage District (Three Separate Suits) (Onyx Ranch CEQA Litigation)
vi. Rosedale-Rio Bravo Water Storage District v. Buena Vista Water Storage District, et al. (Onyx Ranch Declaratory Relief Litigation)
vii. Bring Back the Kern, et al v. Rosedale-Rio Bravo Water Storage District, et al. (Kern River Public Trust Litigation)

d) Conference with real property negotiator – *Government Code Section 54956.8* – Negotiators: Dan Bartel / Dan Raytis

i. Property: Water Supply (Delta Conveyance). Negotiating parties: Various parties and Rosedale-Rio Bravo Water Storage District. Under negotiation: Price & Terms of Payment
ii. Property: James / McCallister Ranch. Negotiating Parties: Various parties and Rosedale-Rio Bravo Water Storage District. Under negotiation: Price & Terms of Payment
iii. Property: Water Supply (2023 Supplies). Negotiating parties: Various parties and Rosedale-Rio Bravo Water Storage District. Under negotiation: Price & Terms of Payment
iv. Property: License / Easement for Canal Facility. Negotiating parties: Various parties and Rosedale-Rio Bravo Water Storage District. Under negotiation: Price & Terms of Payment
v. Property: Various Parcels – Potential District Projects. Negotiating parties: Various parties and Rosedale-Rio Bravo Water Storage District. Under negotiation: Price & Terms of Payment
vi. Property: APN 104-292-09. Negotiating Parties: Estate of Lonnie Dillard & Estate of Hassan Dawan / Rosedale-Rio Bravo Water Storage District. Under negotiations: Price & Terms of Payment.
vii. Property: APN 104-250-27. Negotiating Parties: Schweikart, Jack Rev. Trust & Rosedale-Rio Bravo Water Storage District. Under negotiations: Price & Terms of Payment.

14. ADJOURNMENT

DECLARATION OF POSTING: I, Rachelle Echeverria, declare under penalty of perjury, that I am employed by the Rosedale-Rio Bravo Water Storage District and I posted the foregoing Agenda at the District Office and on the District's website (www.rrbwsd.com) on or before April 5, 2024. ***Requests for disability related modifications or accommodations, including auxiliary aids or services may be made by telephoning or contacting Megan Misuraca at mmisuraca@rrbwsd.com. Please attempt to make such requests known at least 24 hours before the scheduled meeting.***

BOARD OF DIRECTORS
ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT
MINUTES OF THE REGULAR BOARD MEETING
March 12, 2024
8:00 a.m.

DIRECTORS PRESENT

Roy Pierucci, Jason Selvidge, Mitch Millwee, Gary Unruh and Barry Watts

DIRECTORS ABSENT

None

OTHERS PRESENT

District Staff / Consultants – Dan Bartel, Trent Taylor, Megan Misuraca, Markus Nygren, Dan Raytis, Zach Smith, Rachelle Echeverria and Jennifer Spaletta
Public – Sonia Lemus

CALL TO ORDER

President Pierucci called the meeting to order at approximately 8:00 a.m.

APPROVAL OF MINUTES

a) Regular Board Meeting Minutes – February 13, 2024
A motion was made by Director Unruh with a second by Director Millwee to approve the Board of Directors regular meeting minutes of February 13, 2024. The motion unanimously passed.
AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None
ABSTAINED: None

FINANCIAL REPORT

a) Treasurer's Report – Ms. Misuraca reviewed the treasurer's report as of February 29, 2024.
b) Accounts Payable/ February 10, 2024 through March 8, 2024 — Ms. Misuraca reviewed the accounts payable report with the Board. A motion was made by Director Watts and seconded by Director Selvidge to ratify and approve payment of the accounts payable in the total amount of $1,999,134.15. The motion unanimously passed.
AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None
ABSTAINED: None
c) Revenue and Expenditures Report – Ms. Misuraca reviewed the current Revenue and Expenditures Report through February 29, 2024, including the budget vs. actual.

OPERATIONS AND MAINTENANCE REPORT

a) District Groundwater Levels – Mr. Nygren advised the Board of current groundwater levels with reference to the District's minimum thresholds under SGMA and reviewed the compiled list of various changes in groundwater levels throughout the District.

b) Operations Report – Mr. Smith reviewed water conveyance and recharge operations and estimated balances with the Board.

c) Maintenance Report – Mr. Smith reviewed the maintenance projects that have taken place over the last month and reported field staff attended the World Ag Expo in Tulare.

d) Consideration of Annual Basin Seeding Plan – Mr. Smith reviewed the benefits of planting rye grain in the basins and the basin in the district that would benefit most from planting. A motion was made by Director Unruh with a second by Director Watts to approve a budget not to exceed $60,000 to plant a cover crop in 2024. The motion unanimously passed.

AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None
ABSTAINED: None

WATER RESOURCES REPORT

a) State Water Project Operations – Mr. Taylor gave a detailed report on current state water project operations in addition to reviewing the 8-station index graph and reservoir conditions with the Board.

b) California Delta Conveyance Project – Mr. Taylor gave a brief report on the status of the Delta Conveyance Project.

c) Kern County Water Agency Board Meeting Update – Mr. Taylor gave a brief report on recent Kern County Water Agency meetings, noting that dialogue and transparency appearing to be improving.

d) Consideration of Resolution No. 540 for Temporary Water Service with USBR – Mr. Taylor reviewed Resolution 540 with the Board regarding temporary water service contracts (for "Article 215" supplies). A motion was made by Director Selvidge with a second by Director Unruh to adopt Resolution No. 540 Consenting to Sign a Contract for Temporary Water Service Between the United States and Rosedale-Rio Bravo Water Storage District. A roll call vote was taken and the motion unanimously passed.

AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None
ABSTAINED: None

MANAGER'S REPORT

a) Strategic Plan Update – Ms. Echeverria reviewed the status of Strategic Plan Goal #2 with the Board and updated the Board on staff's current efforts acquire other water supplies.

b) Rosedale Recap – Ms. Echeverria reviewed the latest Rosedale-Recap and the email distribution analytics.

c) Consideration of Technical Services Agreement – Mr. Bartel reported general services are provided to the District by AECOM and GEI throughout the year. A motion was made by Director Millwee with a second by Director Watts to authorize staff to execute technical service agreements with AECOM and GEI with a budget not to exceed $25,000 each. The motion unanimously passed.

AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None.
ABSTAINED: None.

ENGINEERS / PROJECTS REPORT

a) Onyx Ranch
   i. Operations Report – Mr. Bartel briefed the Board on the status of the Onyx Ranch operations.
   ii. FEMA Disaster Relief Application – Ms. Echeverria reported the application is in EHP review.

b) Improvement Projects – Mr. Nygren reported on the status of the Bowling and McCaslin Recovery Well project.
   i. Consideration of Pay Estimate No. 1 McCaslin / Bowling Recovery – Mr. Nygren reviewed Bakersfield Well and Pump's Pay Estimate No. 1 with the Board. A motion was made by Director Selvidge with a second by Director Millwee to approve Pay Estimate No.1 for $307,544 and to withhold $15,377.20 in retention. The motion was unanimously passed.

AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None
ABSTAINED: None

COMMITTEE REPORTS

a) Groundwater Banking Joint Powers Authority – Mr. Bartel reported GBJPA staff would be meeting with Kern County Water Agency and DWR to discuss the Kern Fan Project. Mr. Bartel also reviewed the weekly construction management report for West Enos Recharge Facilities.

b) James Groundwater Banking Authority – Mr. Bartel briefly reported on James Water Bank status.

c) Sustainable Groundwater Management Act
   i. GSP Deficiency Update – Mr. Bartel reviewed the Letter of Intent from Self Help Enterprises for a proposed partnership between Self Help Enterprises and Kern County Subbasin for a GSP Well Mitigation Program.
   ii. Kern County Subbasin White Land Administration – Mr. Raytis reported on the latest efforts regarding White Land Administration under SGMA.
   iii. Consideration Participation in Friant-Kern Canal Subsidence Study – Mr. Bartel briefed the Board of the Friant-Kern Canal subsidence study in anticipation of the development of a mitigation plan. A motion was made by Director Watts with a second by Director

Selvidge to approve the cost share of the Friant-Kern Canal Subsidence Study with a budget not to exceed $6,000. The motion unanimously passed.

AYES: Directors Pierucci, Selvidge, Unruh, Millwee and Watts
NOES: None.
ABSTAINED: None.

d) Kern Fan Monitoring Committee – No report.
e) Cross Valley Canal Advisory Committee – Mr. Bartel briefed the Board on CVC activities.
f) Pioneer Project Committee – No report.
g) Kern River Watershed Coalition Authority (KRWCA) – Mr. Smith reported on the formation of the 501(c)(3) of the Kern Water Collaborative and noted Nicole Bell will be the Executive Director.
h) Kern Fan Authority – No report.
i) Joint Operating Committee (JOC) – No report.
j) Committee for Delta Reliability –Mr. Taylor briefly reported on the latest activities.
k) South Valley Water Resources Authority – No report.
l) Valley Ag Water Coalition – Mr. Taylor briefed the Board on the latest activities in the coalition.
m) Kern Integrated Regional Water Management Plan – No report.
n) Sites Reservoir Project – Mr. Taylor reported on the last Sites Reservoir Board meeting and briefed the Board on the progress of the project.
o) Association of California Water Agencies – Mr. Taylor reported on the Region 6 & 7 Board meeting that took place in February.

ATTORNEY'S REPORT

Mr. Raytis reviewed Irvine Ranch Water District's proposed request for support for proposed state policy legislation.

OLD OR NEW BUSINESS

No report.

CORRESPONDENCE

None.

PUBLIC COMMENT

None.

CLOSED SESSION

During the meeting, the Board met in closed session, as follows: At 10:38 a.m. President Pierucci announced the Board would meet in closed session. Director Milwee left the closed session at 12:08 p.m. At 12:47 p.m. the Board reconvened to open session. Mr. Raytis announced there were no reportable actions taken in closed session.

ADJOURNMENT

At 12:47 p.m. President Pierucci adjourned the meeting.

Monthly Financial Report

Rosedale-Rio Bravo Water Storage District
March 2024

Prepared on
April 5, 2024

Rosedale-Rio Bravo Water Storage District
RRB Cash Balance
March 2024

	Date	Credit	Debit	Balance
10006 Tri-Counties Bank-Operations				
	Beginning Balance			1,190,322.44
Total for 10006 Tri-Counties Bank-Operations		$ 10,087,793.63	$ 2,054,434.71	**$ 9,223,681.36**
10007 Tri-Counties Bank-Payroll				
	Beginning Balance			119,975.94
Total for 10007 Tri-Counties Bank-Payroll		$ 160,647.95	$ 125,588.38	**$ 155,035.51**
10100 General County Fund # 60510				
	Beginning Balance			4,053,998.73
Total for 10100 General County Fund # 60510		$ 365,899.59	$ 4,000,000.00	**$ 419,898.32**
10101 Operations County Fund # 60520				
	Beginning Balance			49,295.74
Total for 10101 Operations County Fund # 60520		$ 199.52		**$ 49,495.26**
10102 Bond Debt County Fund # 60526				
	Beginning Balance			5,225.70
Total for 10102 Bond Debt County Fund # 60526		$ 21.16		**$ 5,246.86**
10103 Bond Reserve County Fund #60527				
	Beginning Balance			955.53
Total for 10103 Bond Reserve County Fund #60527		$ 3.87		**$ 959.40**
10503 2018 COP Reserve Fund Account				
	Beginning Balance			1,108,770.86
Total for 10503 2018 COP Reserve Fund Account				**$ 1,108,770.86**
10504 2020 COP W.F. Trust Funds M.M.				
	Beginning Balance			5,132.38
Total for 10504 2020 COP W.F. Trust Funds M.M.		$ 21.14		**$ 5,153.52**
10551 Goldman Sachs Money Market				
	Beginning Balance			3,299,443.25
Total for 10551 Goldman Sachs Money Market		$ 13,877.66		**$ 3,313,320.91**
TOTAL		**$ 10,649,708.42**	**$ 6,180,023.09**	**$ 14,281,562.00**

Rosedale-Rio Bravo Water Storage District
RRB Investment / Cash Equivalent
March 2024

	Date	Credit	Debit	Balance
10550 Investment AMG - Wells Fargo				
	Beginning Balance			12,409,658.08
Total for 10550 Investment AMG - Wells Fargo		$ 21,243.90		
TOTAL Investment / Cash Equivalent				**$ 12,430,901.98**
		Total Cash and Cash Equivalent		**$ 26,712,463.98**

Friday, Apr 05, 2024 11:22:47 AM GMT-7

Bills and Applied Payments For Ratification

March 9 - April 4, 2024

Transaction Type	Num	Date	Amount	Split
3G Rebar				
Bill Payment (Check)	3224	03/27/2024	-3,500.00	10006 Tri-Counties Bank-Operations
Bill	0123	03/27/2024	3,500.00	70001 Capital Building
ACE HARDWARE				
Bill Payment (Check)	3238	03/27/2024	-47.58	10006 Tri-Counties Bank-Operations
Bill	64240	03/12/2024	47.58	61650 Operating Supplies
Advanced Data Storage, Inc.				
Bill Payment (Check)	3234	03/27/2024	-41.40	10006 Tri-Counties Bank-Operations
Bill	0180572	03/16/2024	41.40	62000 General Office
Amerigas				
Bill Payment (Check)	3230	03/27/2024	-257.41	10006 Tri-Counties Bank-Operations
Bill	202363298 Notice No.	03/18/2024	257.41	-Split-
ASM Affiliates				
Bill Payment (Check)	3237	03/27/2024	-2,206.40	10006 Tri-Counties Bank-Operations
Bill	27653	03/14/2024	2,206.40	70201 Capital Environmental Services
Bakersfield Well & Pump Inc.				
Bill Payment (Check)	3235	03/27/2024	-292,166.80	10006 Tri-Counties Bank-Operations
Bill	23640 Progress Billin	03/15/2024	292,166.80	-Split-
Benjamin P. Ruiz				
Bill Payment (Check)	3231	03/27/2024	-2,880.00	10006 Tri-Counties Bank-Operations
Bill	3006	03/18/2024	2,880.00	70201 Capital Environmental Services
BSK Associates Inc				

Transaction Type	Num	Date	Amount	Split
Bill Payment (Check)	3227	03/27/2024	-5,177.55	10006 Tri-Counties Bank-Operations
Bill	AG21570	03/01/2024	1,236.00	-Split-
Bill	AH06685	03/18/2024	1,042.89	61655 Water Quality Testing
Bill	AG30594	03/18/2024	486.00	61655 Water Quality Testing
Bill	AH07072	03/21/2024	1,176.66	61655 Water Quality Testing
Bill	AG21580	03/01/2024	1,236.00	-Split-
Christensen, Inc.				
Bill Payment (Check)	3220	03/27/2024	-4,359.73	10006 Tri-Counties Bank-Operations
Bill	304135CT	03/15/2024	4,359.73	-Split-
Esparza Enterprises, Inc				
Bill Payment (Check)	3228	03/27/2024	-8,506.82	10006 Tri-Counties Bank-Operations
Bill	121733	03/20/2024	4,684.56	63007 Other Contracted Services
Bill	121603	03/13/2024	3,822.26	63007 Other Contracted Services
Frank Russell Inc.				
Bill Payment (Check)	3218	03/27/2024	-73.75	10006 Tri-Counties Bank-Operations
Bill	777576	03/06/2024	73.75	61650 Operating Supplies
Glendale Oil, LLC				
Bill Payment (Check)	3243	03/27/2024	-4,988.77	10006 Tri-Counties Bank-Operations
Bill	8168Reimb.	03/27/2024	4,988.77	63007 Other Contracted Services
Green Rubber Kennedy Ag				
Bill Payment (Check)	3242	03/27/2024	-98.73	10006 Tri-Counties Bank-Operations
Bill	BF-102291	03/05/2024	98.73	65001 Equipment Maintenance & Repair
Hafenfeld Ranch, LLC				

Transaction Type	Num	Date	Amount	Split
Bill Payment (Check)	3241	03/27/2024	-1,479.51	10006 Tri-Counties Bank-Operations
Bill	RRB Fuel	03/06/2024	1,479.51	61800 Fuel
Kern County Public Works				
Bill Payment (Check)	3239	03/27/2024	-308.88	10006 Tri-Counties Bank-Operations
Bill	40460	03/08/2024	308.88	63007 Other Contracted Services
Maria Anzaldo				
Bill Payment (Check)	3229	03/27/2024	-250.00	10006 Tri-Counties Bank-Operations
Bill	100	03/20/2024	250.00	63500 Janitorial
Megan Misuraca-Expense Acct				
Bill Payment (Check)	3232	03/27/2024	-191.49	10006 Tri-Counties Bank-Operations
Bill	2024-03-18	03/18/2024	191.49	65002 Mileage Reimbursement
Mission Uniform Service				
Bill Payment (Check)	3226	03/27/2024	-276.54	10006 Tri-Counties Bank-Operations
Bill	521180847	03/08/2024	99.42	63500 Janitorial
Bill	521219334	03/22/2024	77.70	63500 Janitorial
Bill	521256728	03/22/2024	99.42	63500 Janitorial
PG&E (1091941045-5)				
Bill Payment (Check)	3221	03/27/2024	-10,341.86	10006 Tri-Counties Bank-Operations
Bill	1091941045-5 Mar 24	03/15/2024	10,341.86	Inventory Asset-1
PG&E (3387844223-6)				
Bill Payment (Check)	3222	03/27/2024	-2,694.73	10006 Tri-Counties Bank-Operations
Bill	3387844223-6 Mar 24	03/15/2024	2,694.73	61301 Groundwater Pumping
Purchase Power				

Transaction Type	Num	Date	Amount	Split
Bill Payment (Check)	ACH	03/25/2024	-50.00	10006 Tri-Counties Bank-Operations
Bill	68224044	03/21/2024	50.00	62009 Postage and Delivery
San Joaquin Valley Air Pollution				
Bill Payment (Check)	3216	03/27/2024	-400.00	10006 Tri-Counties Bank-Operations
Bill	359525	03/11/2024	400.00	60200 Licenses, Permits and Fees
SoCalGas				
Bill Payment (Check)	3217	03/27/2024	-45.01	10006 Tri-Counties Bank-Operations
Bill	11021673006 Mar 24	03/19/2024	45.01	66000 Utilities
Southern California Edison (700122257127)				
Bill Payment (Check)	3225	03/27/2024	-528.63	10006 Tri-Counties Bank-Operations
Bill	700122257127 Mar 24	03/06/2024	528.63	-Split-
Standard Insurance				
Bill Payment (Check)	3223	03/27/2024	-721.14	10006 Tri-Counties Bank-Operations
Bill	006492990038 April24	03/22/2024	721.14	-Split-
Thomas Harder & Co., Inc.				
Bill Payment (Check)	3240	03/27/2024	-31,455.00	10006 Tri-Counties Bank-Operations
Bill	24-054-135.2	03/08/2024	4,605.00	63006 Hydrogeology Services
Bill	23-094-104.2	02/29/2024	9,092.50	63006 Hydrogeology Services
Bill	23-094-104.4	03/08/2024	6,850.00	63006 Hydrogeology Services
Bill	24-054-136.1	03/08/2024	10,907.50	63006 Hydrogeology Services
Tri Counties Bank				
Bill Payment (Check)	ACH	03/11/2024	-3,994.01	10006 Tri-Counties Bank-Operations
Bill		03/08/2024	3,994.01	Tri-Counites CC

Transaction Type	Num	Date	Amount	Split
Verizon Wireless				
Bill Payment (Check)	3219	03/27/2024	-569.49	10006 Tri-Counties Bank-Operations
Bill	9958444161	03/06/2024	569.49	66001 Phone / Internet
WSI Internet Consulting, LLC				
Bill Payment (Check)	3236	03/27/2024	-500.00	10006 Tri-Counties Bank-Operations
Bill	7627	03/15/2024	500.00	66011 Technology Fees & Subscriptions
Zeiders Consulting				
Bill Payment (Check)	3233	03/27/2024	-44,468.89	10006 Tri-Counties Bank-Operations
Bill	NV-July 2023-Dec-2023	03/17/2024	44,468.89	70200 Capital Engineering Services

Total AP to be ratified $422,580.12

Bills and Applied Payments Board AP

April 5, 2024

Transaction Type	Num	Date	Amount	Split
ACE HARDWARE				
Bill Payment (Check)	3263	04/05/2024	-23.35	10006 Tri-Counties Bank-Operations
Bill	64313	03/28/2024	23.35	61650 Operating Supplies
ACWA				
Bill Payment (Check)	3246	04/05/2024	-17,028.84	10006 Tri-Counties Bank-Operations
Bill	0702376	04/02/2024	17,028.84	60005 Staff Benefits
AE-COM Engineering Inc				
Bill Payment (Check)	3247	04/05/2024	-1,061.77	10006 Tri-Counties Bank-Operations
Bill	2000873578	04/01/2024	1,061.77	63004 Engineering Services
Avid Water				
Bill Payment (Check)	3280	04/05/2024	-62.97	10006 Tri-Counties Bank-Operations
Bill	0458285-IN	03/22/2024	62.97	61650 Operating Supplies
Barnes Welding Supply				
Bill Payment (Check)	3276	04/05/2024	-45.58	10006 Tri-Counties Bank-Operations
Bill	0091652075	03/31/2024	45.58	65001 Equipment Maintenance & Repair
Barry Watts				
Bill Payment (Check)	3284	04/05/2024	-100.67	10006 Tri-Counties Bank-Operations
Bill	March 2024	03/12/2024	100.67	62007 Directors' Fees
Belden Blaine Raytis, LLP				
Bill Payment (Check)	3248	04/05/2024	-30,473.09	10006 Tri-Counties Bank-Operations
Bill	22815	04/01/2024	1,627.50	63000 Legal Services
Bill	22813	04/01/2024	14,182.50	-Split-
Bill	22812	04/01/2024	13,732.00	63000 Legal Services

Transaction Type	Num	Date	Amount	Split
Bill	22814	04/01/2024	931.09	63000 Legal Services
Benjamin P. Ruiz				
Bill Payment (Check)	3244	04/05/2024	-1,920.00	10006 Tri-Counties Bank-Operations
Bill	3012	04/05/2026	1,920.00	70201 Capital Environmental Services
Buena Vista GSA				
Bill Payment (Check)	3271	04/05/2024	-2,695.30	10006 Tri-Counties Bank-Operations
Bill		04/02/2024	2,695.30	61450 Regulatory Programs
Carroll's Tire Warehouse				
Bill Payment (Check)	3267	04/05/2024	-131.14	10006 Tri-Counties Bank-Operations
Bill	94509	03/28/2024	131.14	65000 Auto Maintenance & Repair
Christensen, Inc.				
Bill Payment (Check)	3260	04/05/2024	-3,645.78	10006 Tri-Counties Bank-Operations
Bill	306496CT	03/31/2024	3,645.78	-Split-
Comptel Services				
Bill Payment (Check)	3249	04/05/2024	-513.00	10006 Tri-Counties Bank-Operations
Bill	122323	04/01/2024	419.00	-Split-
Bill	112322	03/11/2024	94.00	66011 Technology Fees & Subscriptions
David Janes Company				
Bill Payment (Check)	3251	04/05/2024	-44.35	10006 Tri-Counties Bank-Operations
Bill	0429579-IN	03/26/2024	44.35	61650 Operating Supplies
Esparza Enterprises, Inc				
Bill Payment (Check)	3269	04/05/2024	-8,204.98	10006 Tri-Counties Bank-Operations

Transaction Type	Num	Date	Amount	Split
Bill	122119	04/03/2024	3,871.20	63007 Other Contracted Services
Bill	121926	03/27/2024	4,213.78	63007 Other Contracted Services
Bill	121927	03/27/2024	120.00	63007 Other Contracted Services
Gary Unruh				
Bill Payment (Check)	3282	04/05/2024	-1,084.15	10006 Tri-Counties Bank-Operations
Bill	March 2024	03/18/2024	1,084.15	62007 Directors' Fees
Hafenfeld Ranch, LLC				
Bill Payment (Check)	3283	04/05/2024	-525.23	10006 Tri-Counties Bank-Operations
Bill	3000-RRB	03/18/2024	525.23	61800 Fuel
Jason Selvidge				
Bill Payment (Check)	3285	04/05/2024	-126.00	10006 Tri-Counties Bank-Operations
Bill	March 2024	03/12/2024	126.00	62007 Directors' Fees
Kern Auto Parts				
Bill Payment (Check)	3272	04/05/2024	-483.03	10006 Tri-Counties Bank-Operations
Bill	061623	04/02/2024	483.03	65000 Auto Maintenance & Repair
Kern County Water Agency				
Bill Payment (Check)	3245	04/05/2024	-222,036.00	10006 Tri-Counties Bank-Operations
Bill	40642	03/29/2024	47,672.00	Third Party Project Operations:Pioneer Project
Bill	41182	03/29/2024	168,364.00	61300 Surface Water Pumping
Bill	41075	03/28/2024	3,000.00	64000 Water Transaction Fees
Bill	41074	03/28/2024	3,000.00	64000 Water Transaction Fees
Kern Machinery				

Transaction Type	Num	Date	Amount	Split
Bill Payment (Check)	3265	04/05/2024	-4,669.18	10006 Tri-Counties Bank-Operations
Bill	103-1143629	03/28/2024	611.03	65001 Equipment Maintenance & Repair
Bill	103-1144343	03/30/2024	146.73	65001 Equipment Maintenance & Repair
Bill	103-1138737	03/11/2024	1,078.15	65001 Equipment Maintenance & Repair
Bill	103-1137304	03/31/2024	905.63	65001 Equipment Maintenance & Repair
Bill	103-1143630	03/28/2024	1,927.64	65001 Equipment Maintenance & Repair
Markus Nygren- Expense Acct				
Bill Payment (Check)	3270	04/05/2024	-14.07	10006 Tri-Counties Bank-Operations
Bill	2024-04-03	04/03/2024	14.07	65002 Mileage Reimbursement
Martinez Gardening Service				
Bill Payment (Check)	3279	04/05/2024	-3,800.00	10006 Tri-Counties Bank-Operations
Bill	148787	03/25/2024	3,800.00	65100 Building Maintenance
Mission Uniform Service				
Bill Payment (Check)	3266	04/05/2024	-99.42	10006 Tri-Counties Bank-Operations
Bill	521376323	04/05/2024	99.42	63500 Janitorial
Mitch Millwee				
Bill Payment (Check)	3287	04/05/2024	-220.23	10006 Tri-Counties Bank-Operations
Bill	March 2024	03/07/2024	220.23	62007 Directors' Fees
Performance Truck & Diesel				
Bill Payment (Check)	3281	04/05/2024	-1,011.02	10006 Tri-Counties Bank-Operations
Bill	28845	03/22/2024	1,011.02	65000 Auto Maintenance & Repair
PG&E (0439653883-9)				

Transaction Type	Num	Date	Amount	Split
Bill Payment (Check)	3255	04/05/2024	-302.83	10006 Tri-Counties Bank-Operations
Bill	0439653883-9 Apr 24	04/02/2024	302.83	61300 Surface Water Pumping
PG&E (1338232537-4)				
Bill Payment (Check)	3256	04/05/2024	-721.21	10006 Tri-Counties Bank-Operations
Bill	1338232537-4 Apr 24	04/02/2024	721.21	61301 Groundwater Pumping
PG&E (3923107207-3)				
Bill Payment (Check)	3257	04/05/2024	-900.95	10006 Tri-Counties Bank-Operations
Bill	3923107207-3 Apr 24	04/02/2024	900.95	61301 Groundwater Pumping
PG&E (7649745985-9)				
Bill Payment (Check)	3252	04/05/2024	-450.92	10006 Tri-Counties Bank-Operations
Bill	7649745985-9 Apr 24	04/03/2024	450.92	66000 Utilities
Quinn Company				
Bill Payment (Check)	3258	04/05/2024	-1,034.88	10006 Tri-Counties Bank-Operations
Bill	FINA0367425	03/31/2024	2.99	80002 Interest Paid
Bill	25820708	03/19/2024	1,031.89	61500 Equipment Rental
Rachelle Echeverria - Reimbursement				
Bill Payment (Check)	3268	04/05/2024	-21.04	10006 Tri-Counties Bank-Operations
Bill	2024-04-04	04/04/2024	21.04	-Split-
Roy Pierucci				
Bill Payment (Check)	3277	04/05/2024	-970.75	10006 Tri-Counties Bank-Operations
Bill	March 2024	03/28/2024	970.75	62007 Directors' Fees
Southern California Edison (700102049704)				
Bill Payment (Check)	3253	04/05/2024	-347.46	10006 Tri-Counties Bank-Operations

Transaction Type	Num	Date	Amount	Split
Bill	700102049704 Apr 24	04/01/2024	347.46	-Split-
Southern California Edison (700511405161)				
Bill Payment (Check)	3254	04/05/2024	-115.92	10006 Tri-Counties Bank-Operations
Bill	700511405161 Apr 24	04/01/2024	115.92	66000 Utilities
Spectrum Business				
Bill Payment (Check)	3259	04/05/2024	-154.98	10006 Tri-Counties Bank-Operations
Bill	1355119040124	04/01/2024	154.98	66001 Phone / Internet
SUPERIOR SANITATION				
Bill Payment (Check)	3275	04/05/2024	-231.68	10006 Tri-Counties Bank-Operations
Bill	44100333	04/01/2024	231.68	66000 Utilities
TARGET SPECIALTY PRODUCTS				
Bill Payment (Check)	3261	04/05/2024	-8,123.91	10006 Tri-Counties Bank-Operations
Bill	INVP501422969	03/12/2024	8,123.91	65500 Weed Contol/Chemicals
Thomas Refuse Service, Inc				
Bill Payment (Check)	3250	04/05/2024	-407.48	10006 Tri-Counties Bank-Operations
Bill	44104540	04/01/2024	170.81	66000 Utilities
Bill	44104439	04/01/2024	236.67	66000 Utilities
Tyack's Tire Inc				
Bill Payment (Check)	3264	04/05/2024	-2,461.85	10006 Tri-Counties Bank-Operations
Bill	231628	03/22/2024	1,575.44	65000 Auto Maintenance & Repair
Bill	231679	03/25/2024	886.41	65001 Equipment Maintenance & Repair
United Rentals				
Bill Payment (Check)	3273	04/05/2024	-1,536.07	10006 Tri-Counties Bank-Operations

Transaction Type	Num	Date	Amount	Split
Bill	220648729-012	04/02/2024	1,536.07	61500 Equipment Rental
Water Education Foundation				
Bill Payment (Check)	3274	04/05/2024	-2,997.00	10006 Tri-Counties Bank-Operations
Bill	TBDT2403KS	04/02/2024	2,997.00	62008 Educational Fees
Workforce go!				
Bill Payment (Check)	3262	04/05/2024	-52.74	10006 Tri-Counties Bank-Operations
Bill	INV-0032551	04/01/2024	52.74	60001 Payroll Taxes and Fees
WSI Internet Consulting, LLC				
Bill Payment (Check)	3286	04/05/2024	-112.50	10006 Tri-Counties Bank-Operations
Bill	7618	03/12/2024	112.50	66011 Technology Fees & Subscriptions
Zeiders Consulting				
Bill Payment (Check)	3278	04/05/2024	-31,367.00	10006 Tri-Counties Bank-Operations
Bill	Jan-Feb-2024-McCaslin	03/26/2024	31,367.00	70200 Capital Engineering Services

Total AP Current $352,330.32

Total AP Current + Ratified $774,910.44

Rosedale-Rio Bravo Water Storage District
Budget vs. Actuals: FYE December 31, 2024
January - March, 2024

	Mar 2024	Total		
		Actual	Budget	% of Budget
Income				
40000 Assesments	356,214.32	3,294,245.51	5,809,040.00	56.71%
40010 Prior Year Assesments	2,308.49	36,061.49	25,000.00	144.25%
40500 Water Charge		0.00	1,824,000.00	0.00%
40501 Water Sales		0.00	0.00	
40503 SW Pumping Reimbursement		0.00	320,000.00	0.00%
40506 Groundwater Mitigation		0.00	32,000.00	0.00%
40507 O & M Reimbursement		0.00	180,000.00	0.00%
40508 Groundwater Banking		2,801,667.00	5,600,000.00	50.03%
40509 Lease	1,260.00	40,967.75	65,000.00	63.03%
40510 GW Recovery Reimursement		0.00	24,000.00	0.00%
40600 Interest	79,417.37	137,079.33	600,000.00	22.85%
41000 Other		0.00	5,000.00	0.00%
41001 Refunds and Credits		463.79	50,000.00	0.93%
41005 Income from Sale of Asset		0.00	12,618,250.00	0.00%
41010 Grant		0.00	1,950,000.00	0.00%
41050 Resource Management	58,517.17	60,672.73	175,000.00	34.67%
Total Income	**$ 497,717.35**	**$ 6,371,157.60**	**$ 29,277,290.00**	**21.76%**
Gross Profit	**$ 497,717.35**	**$ 6,371,157.60**	**$ 29,277,290.00**	**21.76%**
Expenses				
60000 Wages and Salaries	115,831.22	349,957.12	1,573,040.00	22.25%
60001 Payroll Taxes and Fees	2,339.70	8,844.16	34,650.00	25.52%
60005 Staff Benefits	29,412.98	71,555.10	194,400.00	36.81%
60006 Staff Retirement	11,698.24	71,164.72	222,600.00	31.97%
60007 Workers Compensation Insurance	2,312.25	7,047.43	34,650.00	20.34%
60100 Bank Charges	167.86	519.42	4,200.00	12.37%
60110 Assesment Reimbursement		0.00	80,000.00	0.00%
60200 Licenses, Permits and Fees	400.00	4,454.62	20,000.00	22.27%
61000 KCWA SWP		2,728,279.00	4,662,105.00	58.52%
61001 COB Basic Contract		0.00	2,494,400.00	0.00%
61050 Other Water Purchase		17,576.86	1,000,000.00	1.76%
61300 Surface Water Pumping	168,772.04	191,587.90	400,000.00	47.90%
61301 Groundwater Pumping	6,132.56	17,732.57	30,000.00	59.11%
61350 Well Mitigation		0.00	5,000.00	0.00%
Total 61400 Third Party Project Operations	**$ 114,477.58**	**$ 819,731.58**	**$ 1,880,000.00**	**43.60%**
61401 Delta Conveyance Project		500,095.00	833,492.00	60.00%
61450 Regulatory Programs	11,818.18	41,968.54	60,000.00	69.95%
61500 Equipment Rental	2,567.96	16,706.94	50,000.00	33.41%
61650 Operating Supplies	447.99	5,214.14	35,000.00	14.90%
61655 Water Quality Testing	8,800.71	8,800.71	15,000.00	58.67%
61660 Property Lease		35,802.00	75,000.00	47.74%
61800 Fuel	10,411.73	26,231.31	100,000.00	26.23%

62000 General Office	1,126.30	5,187.21	26,000.00	19.95%
62001 Printing & Reproduction	175.27	531.48	3,000.00	17.72%
62003 Publications and Notices		0.00	1,500.00	0.00%
Total 62005 Dues and Membership	**$ 263.33**	**$ 33,203.33**	**$ 83,030.00**	**39.99%**
62007 Directors' Fees	2,501.80	9,211.11	37,000.00	24.89%
62008 Educational Fees	175.00	1,230.57	8,000.00	15.38%
62009 Postage and Delivery	59.50	342.03	2,500.00	13.68%
63000 Legal Services	52,381.42	121,388.18	500,000.00	24.28%
63002 Audit and Accounting Services		250.00	46,000.00	0.54%
63004 Engineering Services	1,119.34	1,119.34	150,000.00	0.75%
63005 Environmental Services	4,040.00	17,445.00	50,000.00	34.89%
63006 Hydrogeology Services	22,362.50	48,432.50	120,000.00	40.36%
63007 Other Contracted Services	28,906.27	70,590.42	200,000.00	35.30%
63010 Insurance		50,727.20	90,000.00	56.36%
63500 Janitorial	526.54	1,780.68	9,180.00	19.40%
64000 Water Transaction Fees	6,000.00	6,000.00	50,000.00	12.00%
65000 Auto Maintenance & Repair	3,633.09	10,616.85	27,000.00	39.32%
65001 Equipment Maintenance & Repair	8,185.74	18,455.50	52,000.00	35.49%
65002 Mileage Reimbursement	191.49	191.49	500.00	38.30%
65100 Building Maintenance	5,258.23	6,630.50	17,000.00	39.00%
65101 Water Structure Maintenance		0.00	22,000.00	0.00%
65200 Booster Pump Maintenance		0.00	22,000.00	0.00%
65201 Well Maintenance		0.00	50,000.00	0.00%
65500 Weed Contol/Chemicals	8,123.91	8,123.91	100,000.00	8.12%
66000 Utilities	1,007.28	3,424.99	17,500.00	19.57%
66001 Phone / Internet	963.59	4,194.67	16,000.00	26.22%
66011 Technology Fees & Subscriptions	1,073.90	11,776.89	50,000.00	23.55%
67000 Travel	813.94	2,071.14	10,500.00	19.73%
68000 Property Taxes		60,095.62	190,000.00	31.63%
70000 Capital Water Structure		0.00	1,725,000.00	0.00%
70001 Capital Building	4,258.33	4,258.33	75,000.00	5.68%
70100 Capital Booster Pump		0.00	50,000.00	0.00%
70101 Capital Well	307,544.00	371,864.44	3,200,000.00	11.62%
70200 Capital Engineering Services	75,835.89	75,835.89	350,000.00	21.67%
70201 Capital Environmental Services	7,966.40	16,006.40	50,000.00	32.01%
70500 Capital Auto		0.00	50,000.00	0.00%
70501 Capital Equipment		0.00	50,000.00	0.00%
70600 Capital Office Equipment	2,995.66	2,995.66	12,000.00	24.96%
70602 Capital Land		0.00	2,000,000.00	0.00%
Total 70700 Third Party Projects- Capital	**$ 0.00**	**$ 0.00**	**$ 1,755,000.00**	**0.00%**
80002 Interest Paid	110.99	137.53	0.00	
88004 2020 COP- Debt Service	113,783.96	2,861,351.88	3,928,054.18	72.84%
88100 COP Administration		0.00	9,000.00	0.00%
Total Expenses	**$ 1,146,974.67**	**$ 8,748,739.86**	**$ 29,008,301.18**	**30.16%**
Net Income	**-$ 649,257.32**	**-$ 2,377,582.26**	**$ 268,988.82**	

THIS IS NOT AN INVOICE; FOR DISCUSSION PURPOSES ONLY

Rosedale-Rio Bravo Water Storage District
EXAMPLE Water Charge Calculation

The following is an example invoice for a practice run for a 2023 water charge calculation assuming the adopted 2024 water charge rate of $95.00.

LANDOWNER :

JOHN DOE
849 ALLEN ROAD
BAKERSFIELD CA 93314

PARCELS / WATER USE:

APN	Assessed Acres (1)	Total Water Use in Acre Feet from 2023 (2)	Water Use on Parcel in Comparison to Supply in Acre Feet (3)
400-000-01	40.00	160.00	(75.20)
400-000-02	55.00	192.50	(75.90)
400-000-03	20.00	82.00	(39.60)
400-000-04	10.00	35.00	(13.80)
400-000-05	10.00	15.00	6.20
400-000-06	25.00	100.00	(47.00)
TOTAL WATER USE IN COMPARISON TO SUPPLY (4) =			**(245.30)**

EXAMPLE WATER CHARGE FOR 2023 (5) =	**$ 23,303.50**

(1) Assessed Acres per Kern County Assessor.

(2) Water Use is from the RRBWSD Water Accounting Platform utilizing 2023 data.

(3) Parcel water use in comparison of supply calculated as Available Supplies (2.12 total supply available for 2023) multiplied by Assessed Acres less 2023 Total Water Use.

(4) If Total Landowner Water Use in Comparison to Supply is positive, no water charge will be imposed for the associated landowner / farming unit.

(5) Example water charge invoice is based on adopted 2024 water charge rate of $95 multiplied by water use on parcel in compasion to supply in acre-feet.

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

ABOUT RESOURCES WATER PROJECTS SGMA CONTACT US

WELCOME TO ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

Rosedale-Rio Bravo Water Storage District was formed in 1959 to replenish the groundwater pumped by its overlying users. This important task is accomplished through the importation and recharge of surface water into the groundwater aquifer. To recharge groundwater, Rosedale utilizes a series of canals, wells, pipelines, and ponds to provide sustainable groundwater access for its landowners.

BOARD MEETING

Next Meeting Agenda

NEWS & UPDATES

Notice of Proposed Water Charge

Water Charge Rate Study

August 9, 2023 - Notice of Intent to Prepare GSP

VIDEO: How to find Depth to Water Data

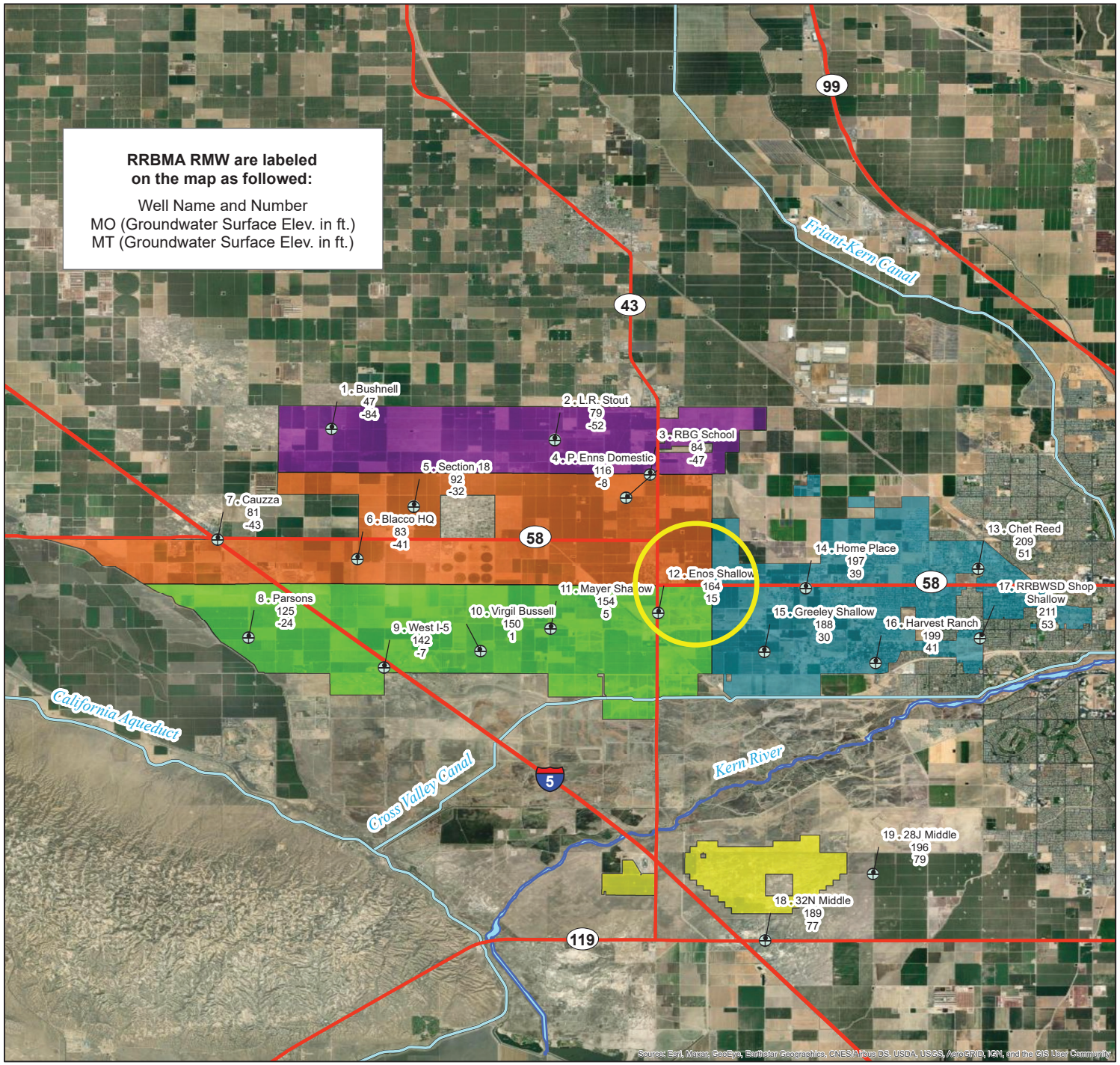
Groundwater Level Measurements (2023 vs. 2024) Comparison

State Well No.	Well Name	March 2023 Measurement Date	Depth to Water	March 2024 Measurement Date	Depth to Water	Difference
29S/26E-17R	Unruh	2/27/2023	266.1	2/29/2024	254	12.1
29S/25E-25M01	25M Enos Deep	2/28/2023	268.6	2/28/2024	183.4	85.2
29S/25E-25M02	25M Enos	2/27/2023	259.2	2/28/2024	137.3	121.9
29S/26E-31H02	31H Greeley	2/27/2023	261.5	2/28/2024	159	102.5
29S/26E-31H01	31H Greeley Deep	2/27/2023	266	2/28/2024	171.1	94.9
29S/26E-35H03	35H RRBWSD Shop Deep	2/27/2023	224.9	2/28/2024	191.4	33.5
29S/26E-35H04	35H RRBWSD Shop	2/27/2023	224	2/28/2024	192	32.0
29S/24E-36R01	West I-5	2/28/2023	247.9	2/27/2024	221.5	26.4
29S/25E-27N02	27N Mayer	2/28/2023	256.7	2/29/2024	192	64.7
29S/25E-27N01	27N Mayer Deep	2/28/2023	263.6	2/29/2024	191.7	71.9
29S/25E-36E01	Virgil Bussell	2/28/2023	252.2	2/29/2024	224.8	27.4
29S/26E-34M01	Harvest Ranch	2/27/2023	248.5	2/28/2024	201.9	46.6
29S/26E-29B	Home Place	2/27/2023	263.4	2/28/2024	238	25.4
29S/24E-24F	Blacco HQ	2/28/2023	268.2	2/28/2024	264.8	3.4
29S/24E-28L	Parsons	2/28/2023	237	2/28/2024	221.4	15.6
29S/24E-02J01	Bushnell	2/28/2023	330.1	2/29/2024	327.2	2.9
29S/25E-03N01	L.R. Stout	2/28/2023	314.8	2/28/2024	318	(3.2)
29S/25E-11H	RBG School	2/28/2023	299.5	2/28/2024	300.6	(1.1)
29S/25E-14C01	P. Enns Domestic	2/28/2023	295.5	2/28/2024	304	(8.5)
29S/26E-23J01	Chet Reed	2/27/2023	216.2	2/28/2024	215.4	0.8
29S/25E-18B01	Section 18	2/28/2023	286	2/28/2024	286.8	(0.8)
29S/24E-21A01	Cauzza	2/28/2023	277.7	2/28/2024	273.2	4.5
29S/26E-19G	Gardiner New	2/28/2023	274	2/28/2024	240.8	33.2
29S/26E-24L	Brock North	2/27/2023	223.3	2/28/2024	214.2	9.1
29S/26E-25G	Brock South	2/27/2023	227.1	2/28/2024	209.8	17.3
29S/26E-28E	Ron Bartel	2/27/2023	251.1	2/28/2024	239.5	11.6
29S/26E-29E	Wyer	2/27/2023	257.9	2/28/2024	183.5	74.4
29S/25E-27A	McCaslin Home	2/28/2023	268.9	2/29/2024	226.2	42.7
29S/25E-28L	Blacco Well	2/28/2023	261.8	2/29/2024	158.7	103.1
29S/25E-34C	Fast Domestic	2/28/2023	255.1	2/29/2024	185.5	69.6
29S/25E-34R	Richard Enns	2/28/2023	245.8	2/29/2024	105.8	140.0
29S/25E-24N	Golden Bull	2/28/2023	269.2	2/28/2024	150.5	118.7
29S/26E-33F	Dave Williams	2/27/2023	259	2/28/2024	206.8	52.2
29S/26E-33D	Duhn	2/27/2023	248	2/28/2024	203.5	44.5
29S/26E-33B	4D Ranch	2/27/2023	259.2	2/28/2024	222	37.2
29S/26E-35R01	Stockdale Ranchos	2/27/2023	227.4	2/28/2024	178.2	49.2
30S/25E-02J03	Strand Ranch	2/28/2023	236.9	2/28/2024	51.9	185.0
29S/25E-34A	Enns-01	2/28/2023	258.9	2/29/2024	166.2	92.7
29S/25E-34A2	Enns-02	2/28/2023	260.1	2/29/2024	158.7	101.4
29S/25E-34H	Enns-03	2/28/2023	253.8	2/29/2024	139	114.8
29S/25E-29Q	WB-1	2/28/2023	263.7	2/29/2024	232.9	30.8
29S/25E-28N	WB-2	2/28/2023	262.2	2/29/2024	225.1	37.1
29S/25E-28P	WB-3	2/28/2023	263.1	2/29/2024	211.3	51.8
30S/25E-03C	SWEX-1	2/28/2023	257.7	2/29/2024	124.1	133.6
30S/25E-03G	SWEX-2	2/28/2023	254	2/29/2024	113.3	140.7
30S/25E-03A	SWEX-3	2/28/2023	252.3	2/29/2024	111.9	140.4
30S/25E-02D	SREX-2	2/28/2023	254	2/29/2024	108.1	145.9
30S/25E-02E	SREX-1	2/28/2023	254	2/29/2024	103.3	150.7
30S/25E-02G	SREX-3	2/28/2023	251.9	2/28/2024	98.9	153.0
30S/25E-02A	SREX-4	2/28/2023	252.2	2/28/2024	91.3	160.9
30S/25E-02L	SREX-5	2/28/2023	251.7	2/28/2024	91.2	160.5
30S/25E-02J04	SREX-7	2/28/2023	248.4	2/28/2024	81.3	167.1

Groundwater Level Measurements (2023 vs. 2024) Comparison

	Sup-1	2/27/2023	271.6	2/28/2024	183.4	88.2
	Sup-2	2/27/2023	271.5	2/28/2024	175	96.5
	Sup-4	2/27/2023	275.4	2/28/2024	189.2	86.2
	Sup-5	2/27/2023	273.4	2/28/2024	184.9	88.5
	Sup-6	2/27/2023	274.1	2/28/2024	197.7	76.4
	M-1	2/27/2023	256	2/28/2024	111	145.0
	SE-2	10/04/2023	222	2/29/2024	89.1	132.9
	SROW-1 Shallow	2/28/2023	233.7	2/28/2024	46.8	186.9
	SROW-1 Middle	2/28/2023	241	2/28/2024	67.1	173.9
	SROW-1 Deep	2/28/2023	247.2	2/28/2024	90.8	156.4
	SROW-3 Shallow	2/28/2023	242.7	2/28/2024	61.8	180.9
	SROW-3 Middle	2/28/2023	245	2/28/2024	73.6	171.4
	SROW-3 Deep	2/28/2023	254.1	2/28/2024	102.6	151.5
	SROW-4 Shallow	2/28/2023	245.1	2/29/2024	79.9	165.2
	SROW-4 Middle	2/28/2023	247.9	2/29/2024	88.2	159.7
	SROW-4 Deep	2/28/2023	257.2	2/29/2024	119.4	137.8
				Maximum Increase	Strand Ranch Observation Well -1	186.9
				Minimum Increase	P. Enns Domestic	(8.5)
				Average RMW Wells		27.1
				Average of all RRB Wells		84.2

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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- East Monitoring Area
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MT = Minimum Threshold

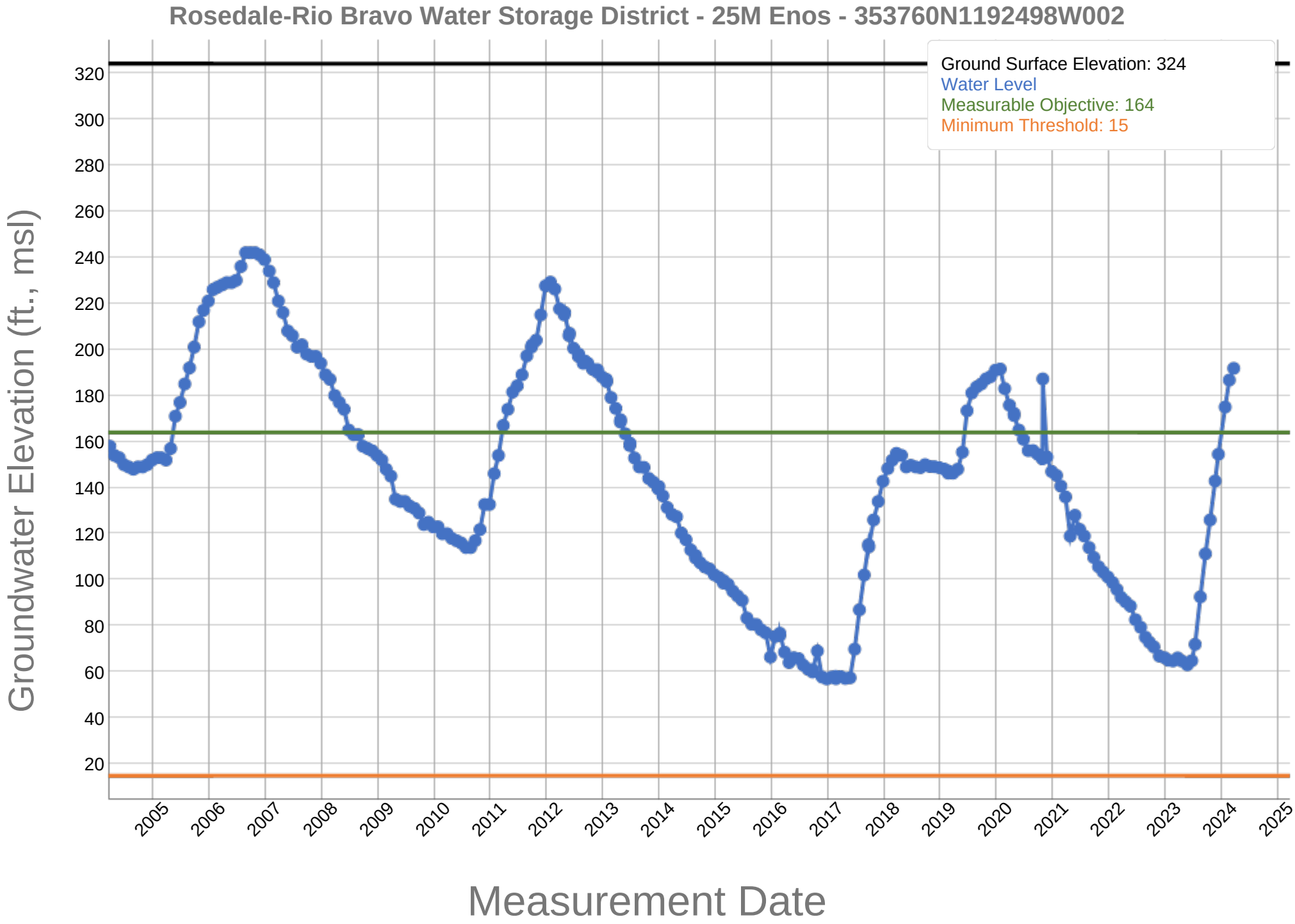
N

0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

Z:\000-OldZDrive\jpa. JPA's\SGMA\RRBMA\RRBMA SGMA Docs\Maps\Figures (RE) 2022-06-22


Rosedale-Rio Bravo Water Storage District - 25M Enos - 353760N1192498W002
Ground Surface Elevation: 324
Water Level
Measurable Objective: 164
Minimum Threshold: 15
Groundwater Elevation (ft., msl)
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
2005
2006
2007
2008
2009
2010
2011
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2013
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2021
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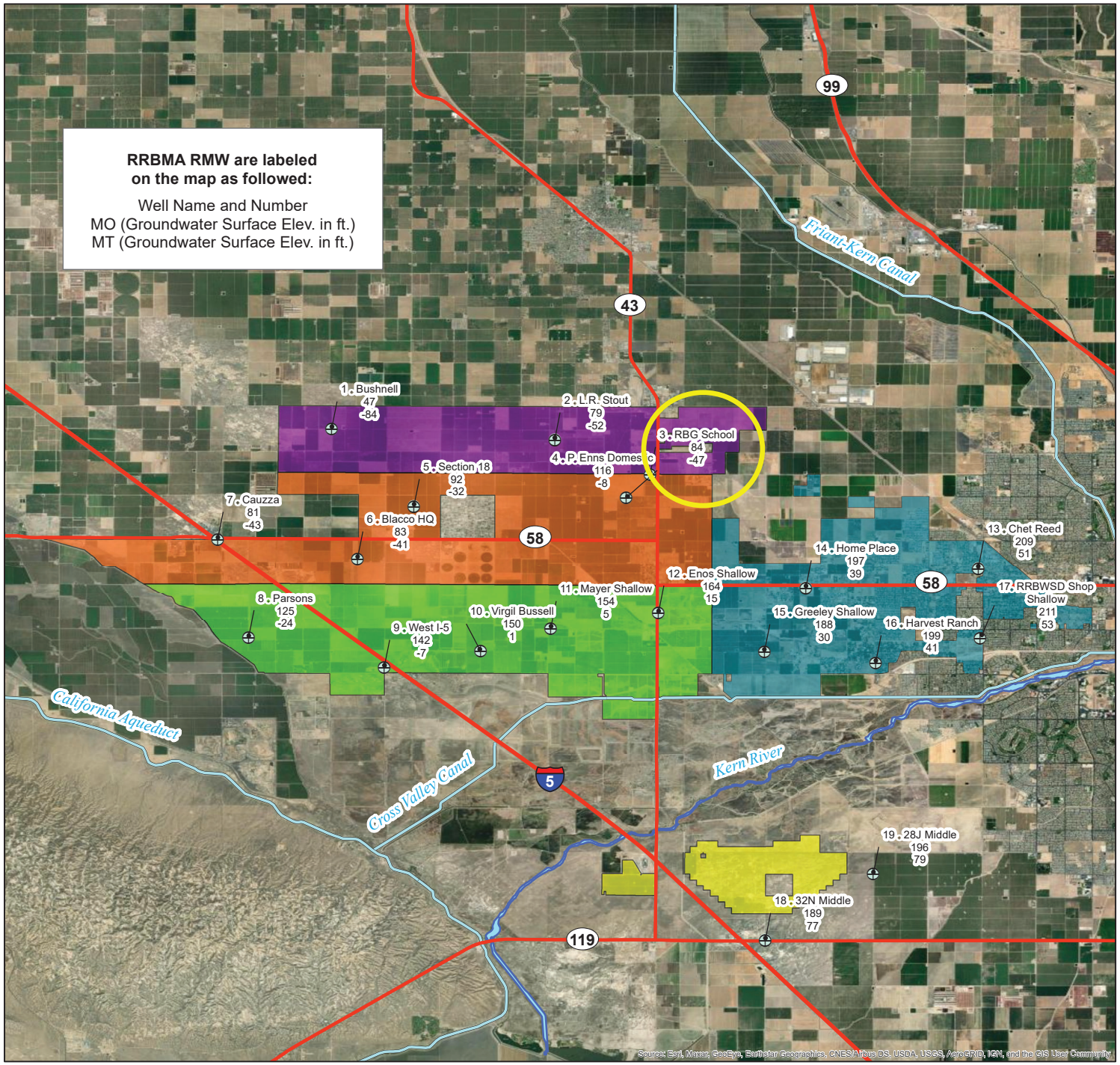
2023
2024
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



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ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

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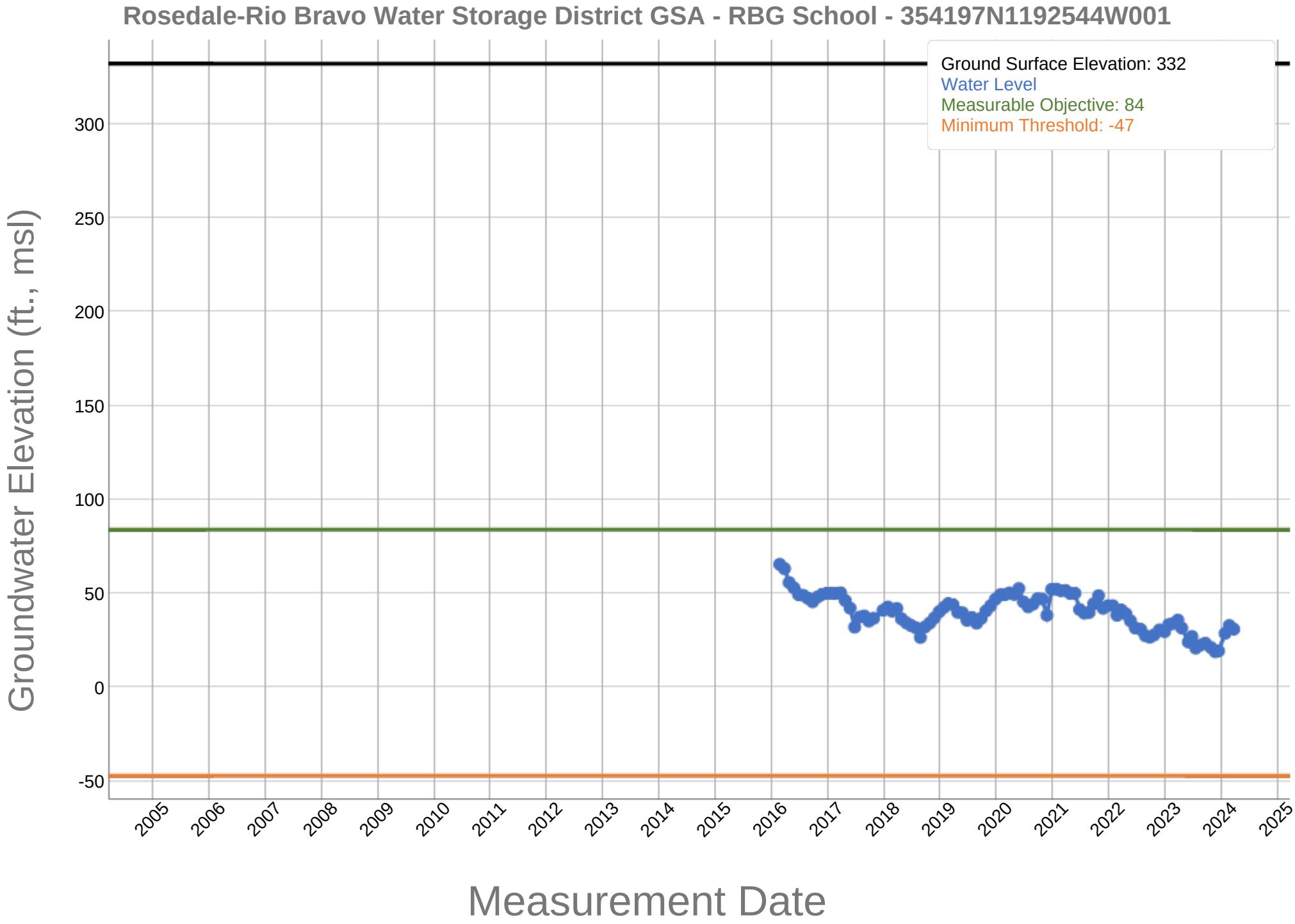
Rosedale-Rio Bravo Water Storage District GSA - RBG School - 354197N1192544W001
Ground Surface Elevation: 332
Water Level
Measurable Objective: 84
Minimum Threshold: -47
Groundwater Elevation (ft., msl)
300
250
200
150
100
50
0
-50
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
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2019
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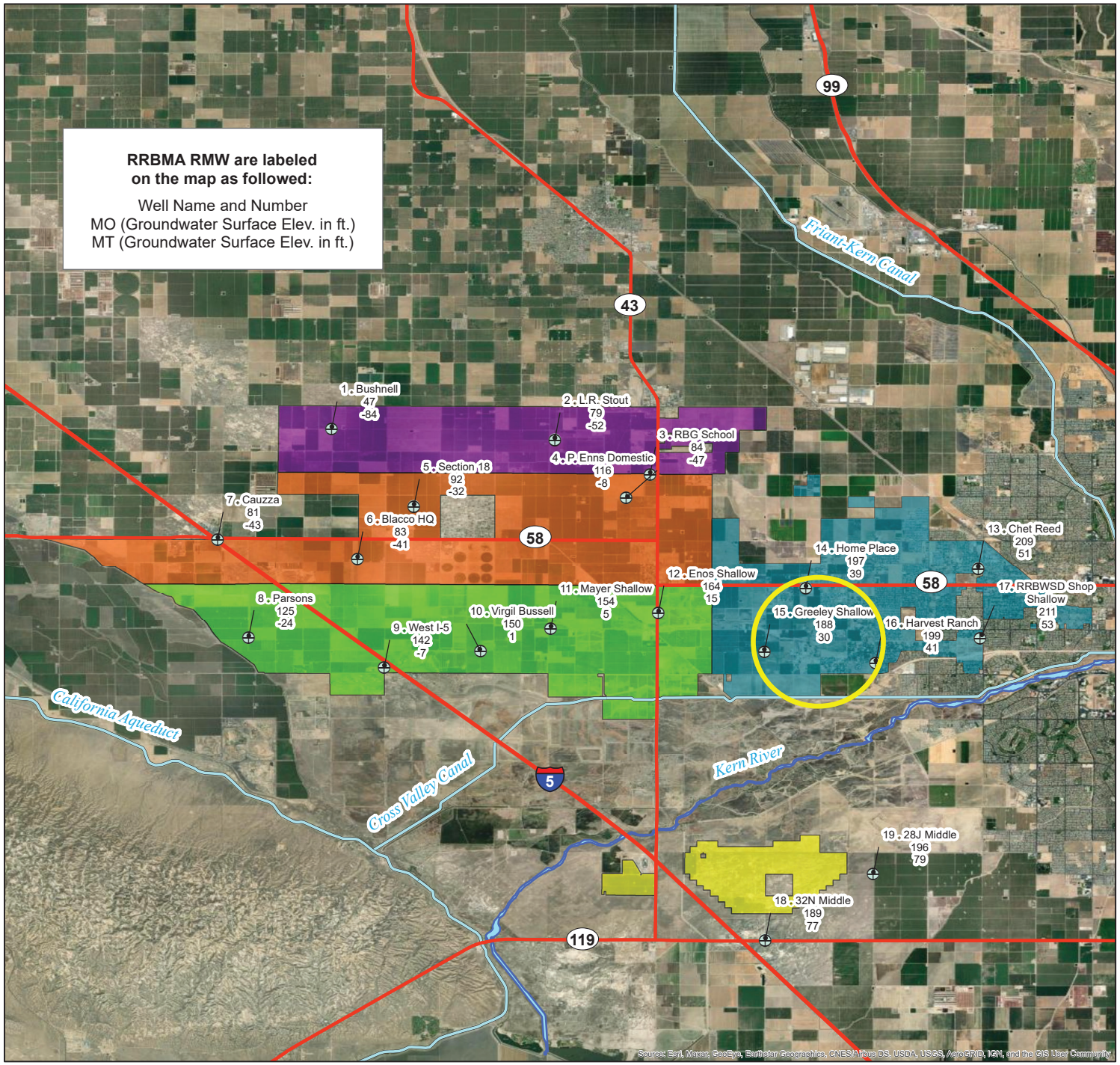
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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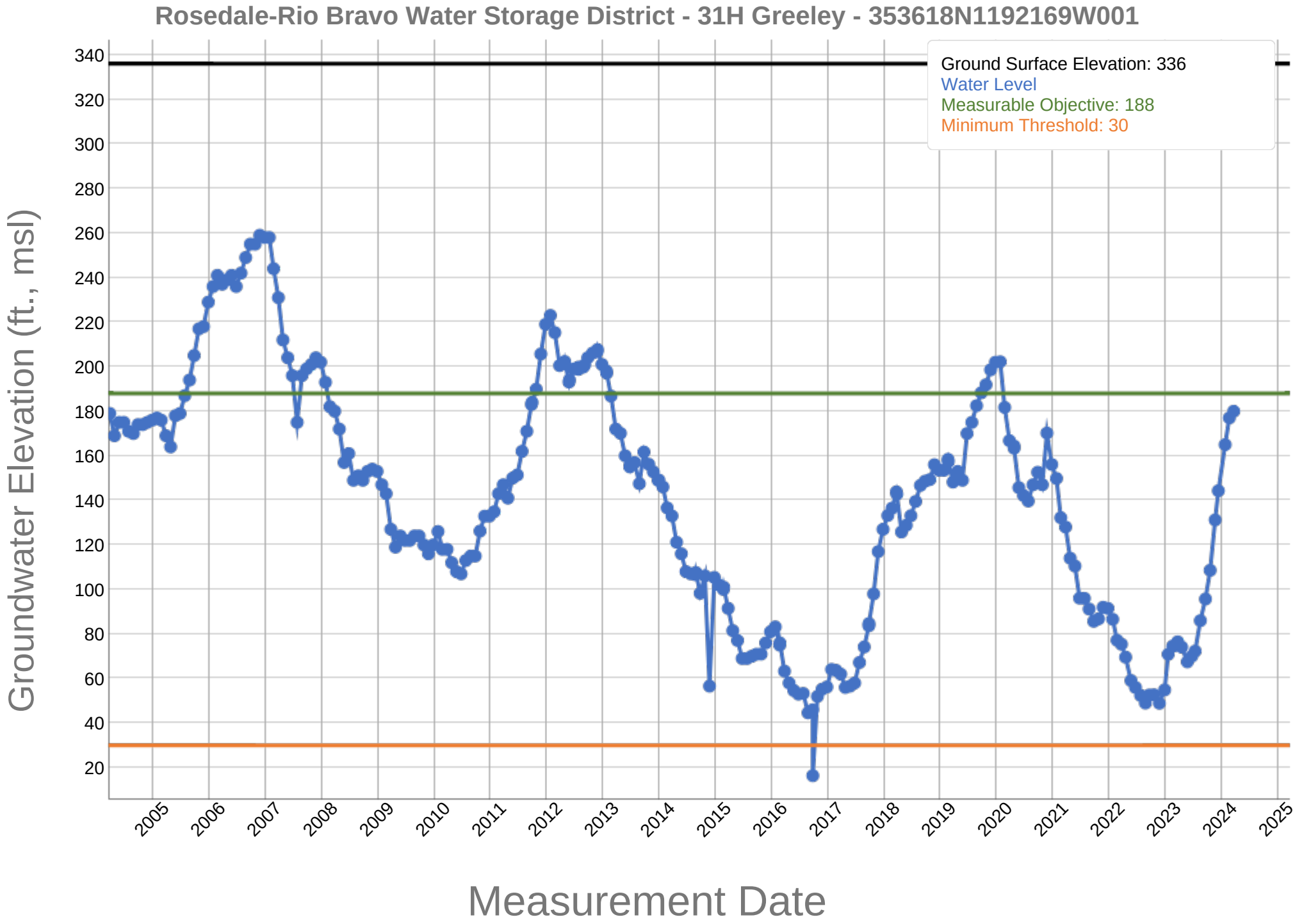
Rosedale-Rio Bravo Water Storage District - 31H Greeley - 353618N1192169W001
Ground Surface Elevation: 336
Water Level
Measurable Objective: 188
Minimum Threshold: 30
Groundwater Elevation (ft., msl)
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
2005
2006
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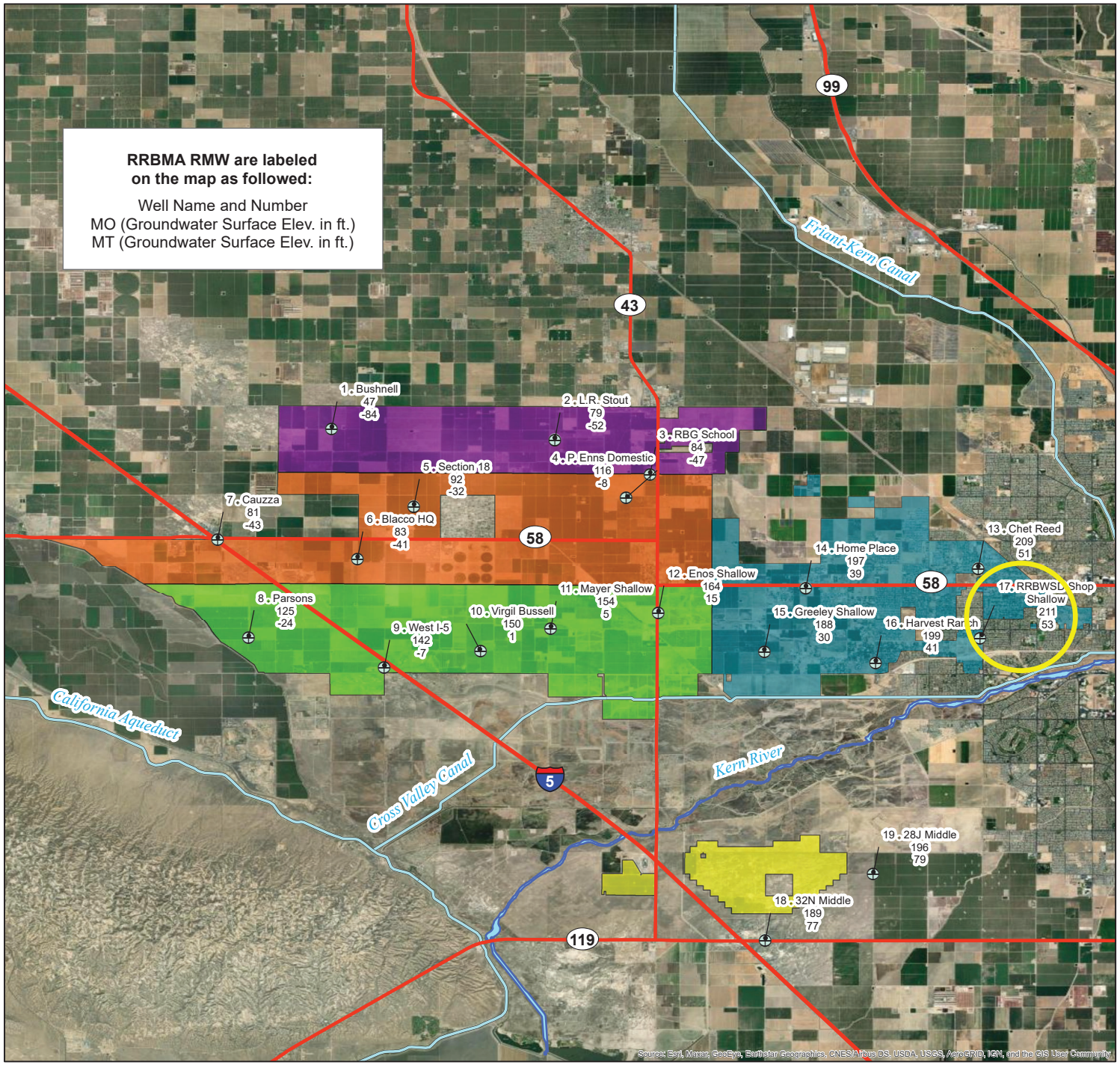
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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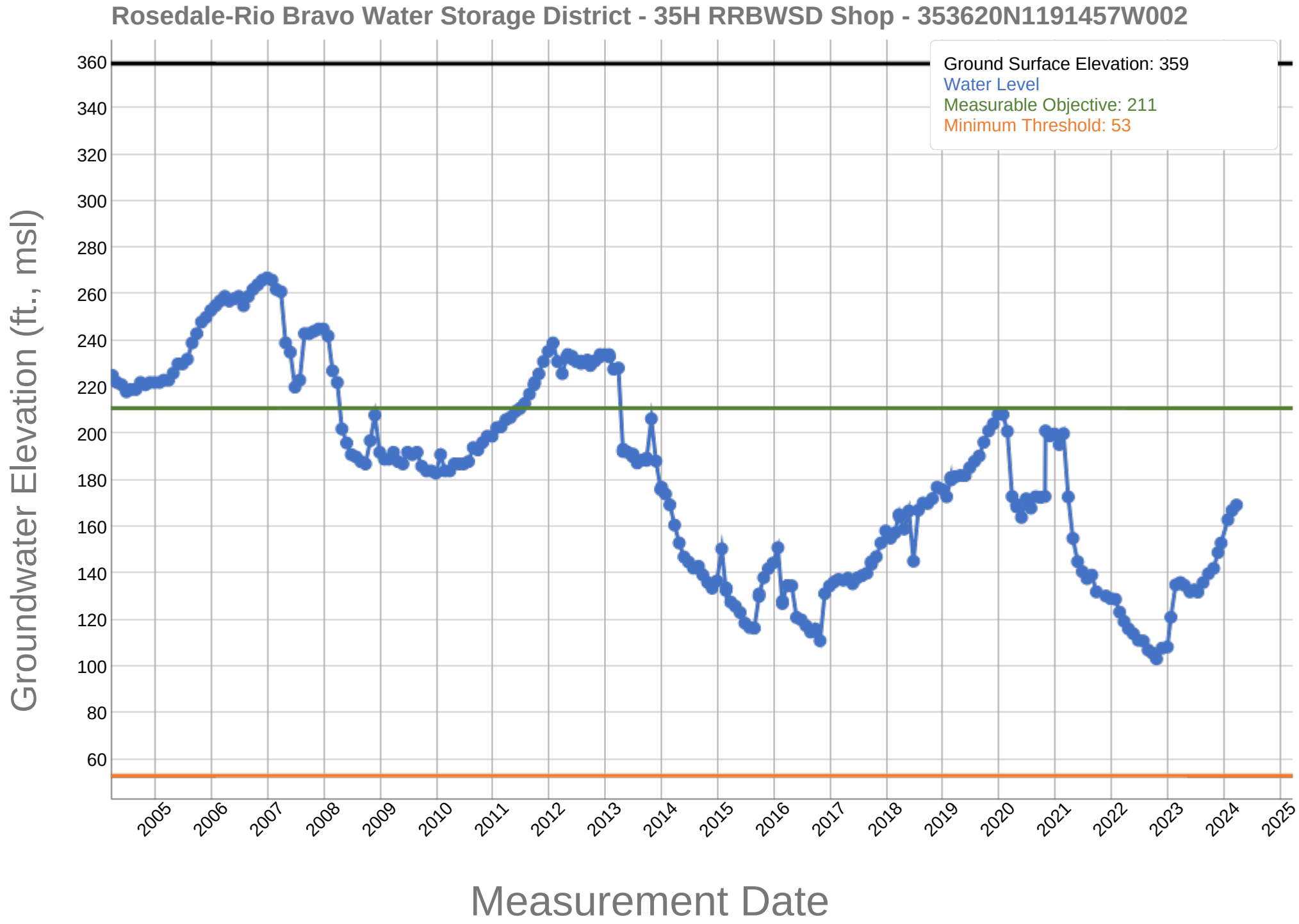
Rosedale-Rio Bravo Water Storage District - 35H RRBWSD Shop - 353620N1191457W002
Ground Surface Elevation: 359
Water Level
Measurable Objective: 211
Minimum Threshold: 53
Groundwater Elevation (ft., msl)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
2005
2006
2007
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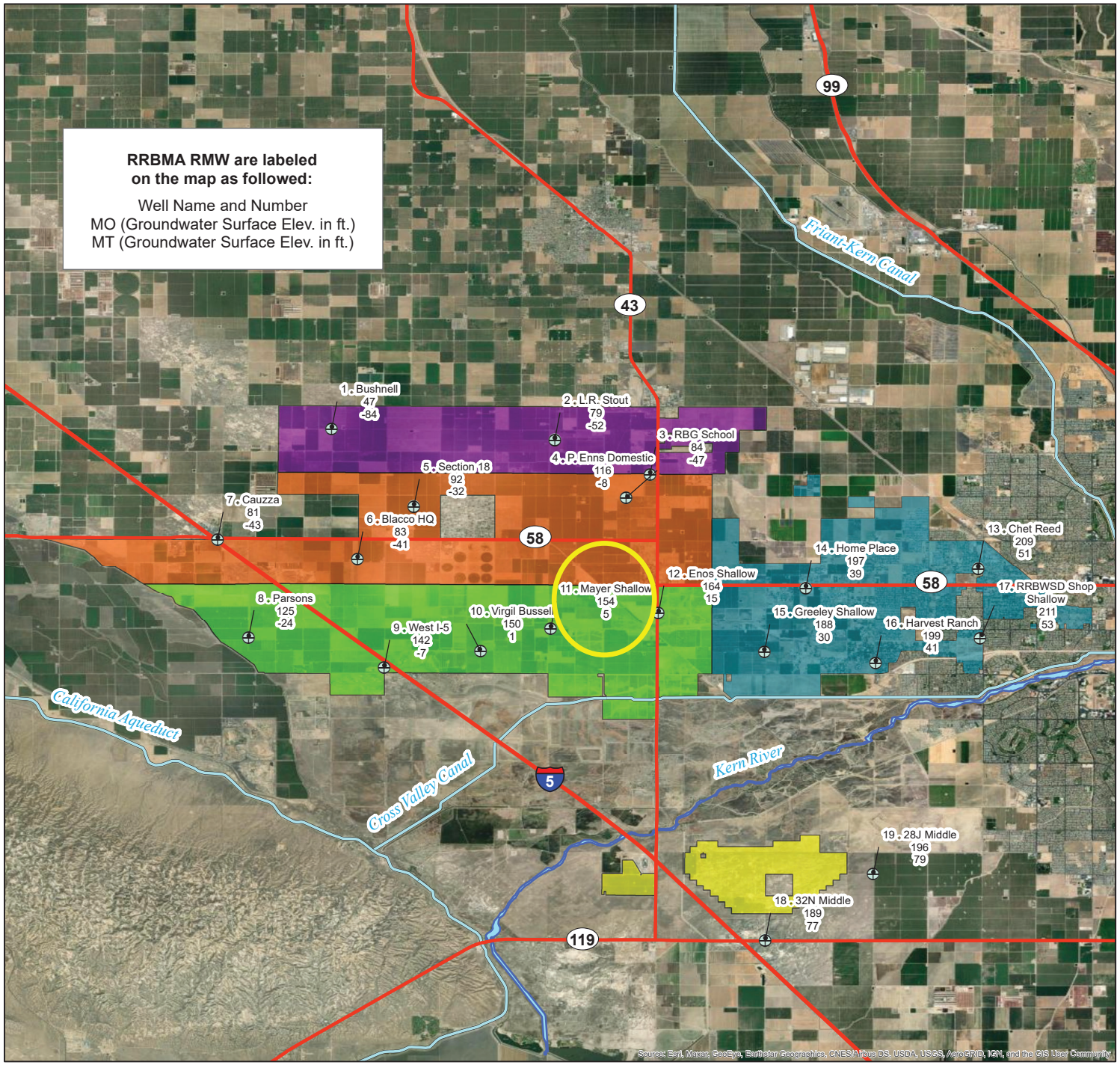
2024
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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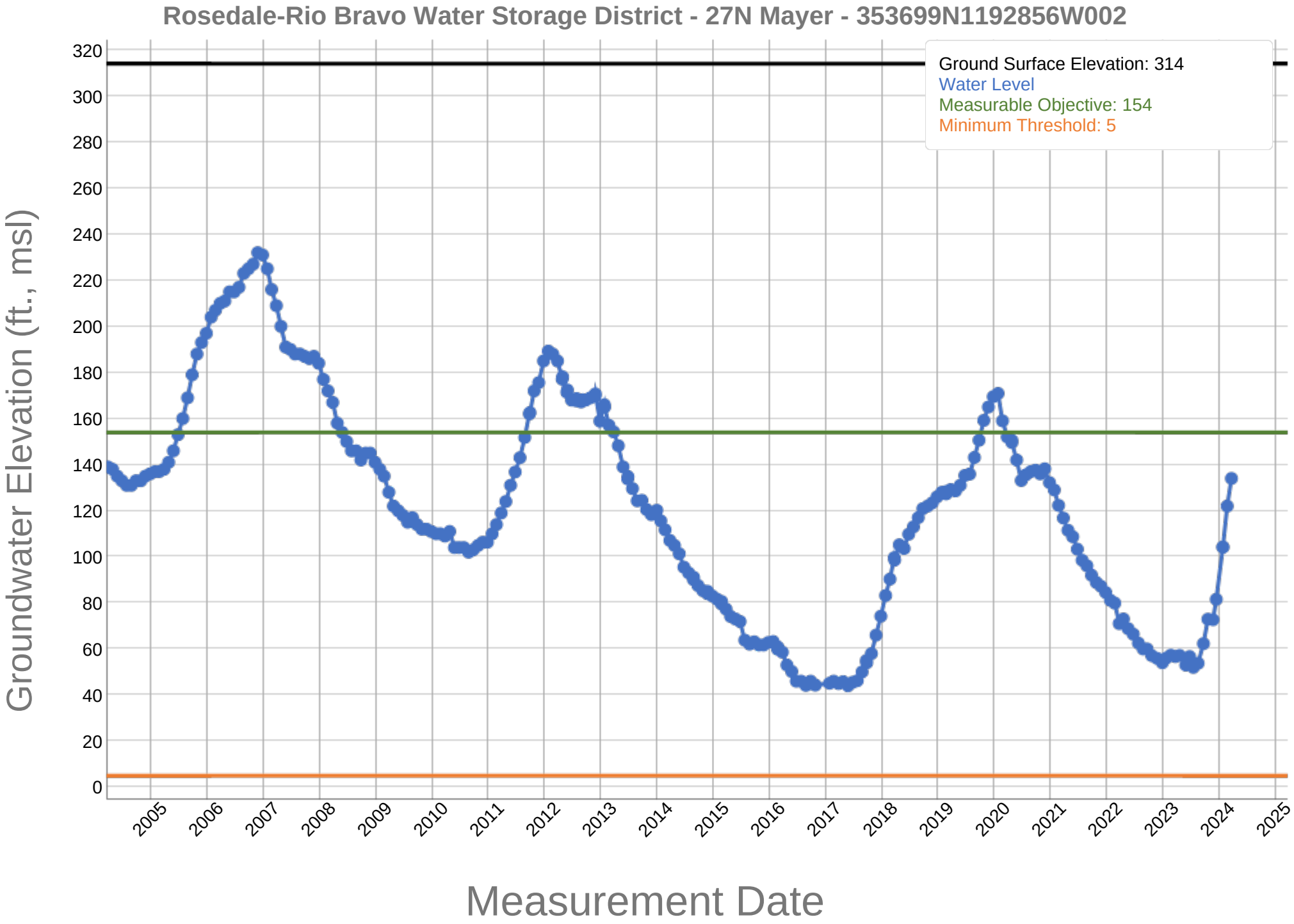
Rosedale-Rio Bravo Water Storage District - 27N Mayer - 353699N1192856W002
Ground Surface Elevation: 314
Water Level
Measurable Objective: 154
Minimum Threshold: 5
Groundwater Elevation (ft., msl)
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
2005
2006
2007
2008
2009
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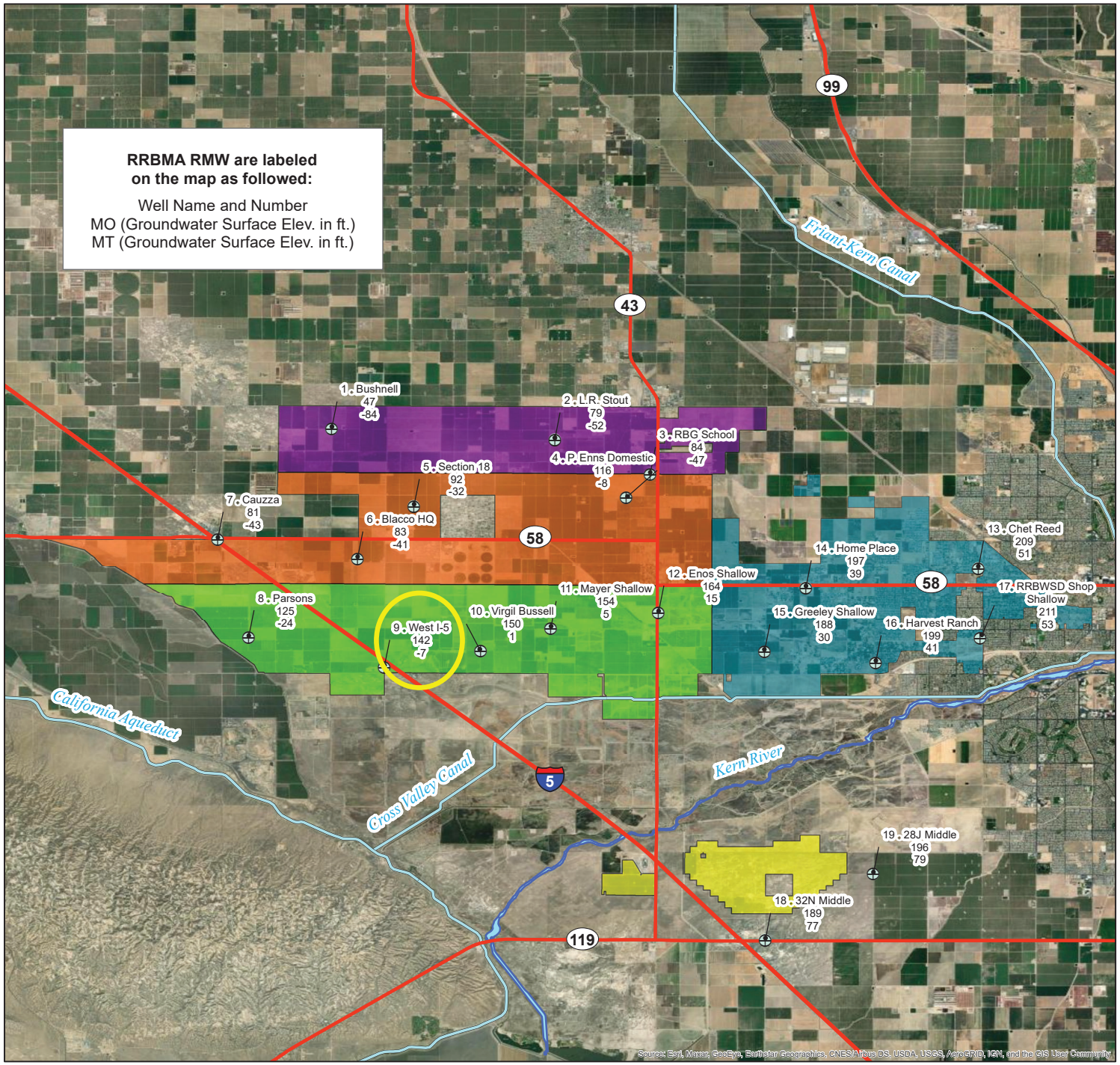
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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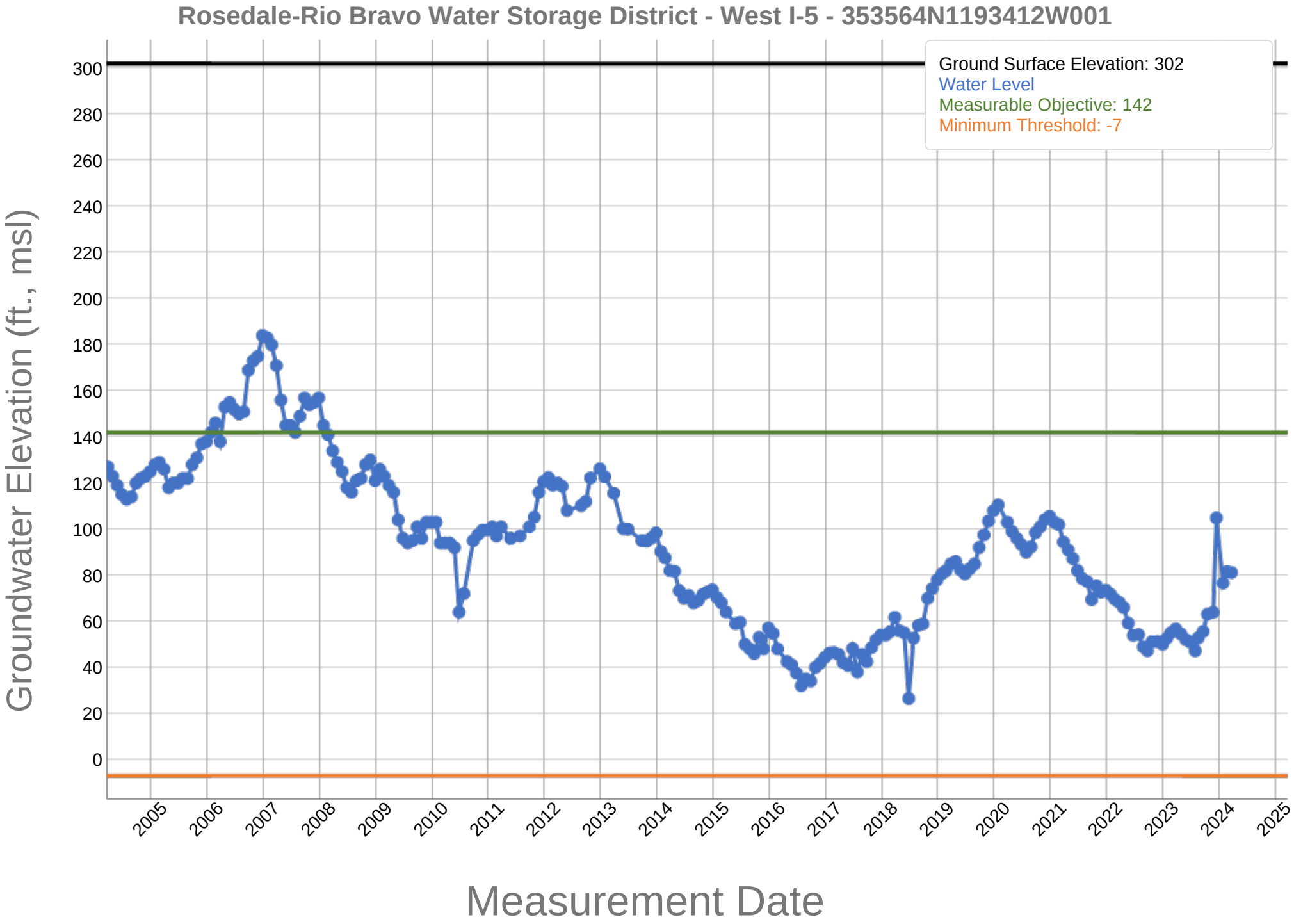
Rosedale-Rio Bravo Water Storage District - West I-5 - 353564N1193412W001
Ground Surface Elevation: 302
Water Level
Measurable Objective: 142
Minimum Threshold: -7
Groundwater Elevation (ft., msl)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
2005
2006
2007
2008
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2011
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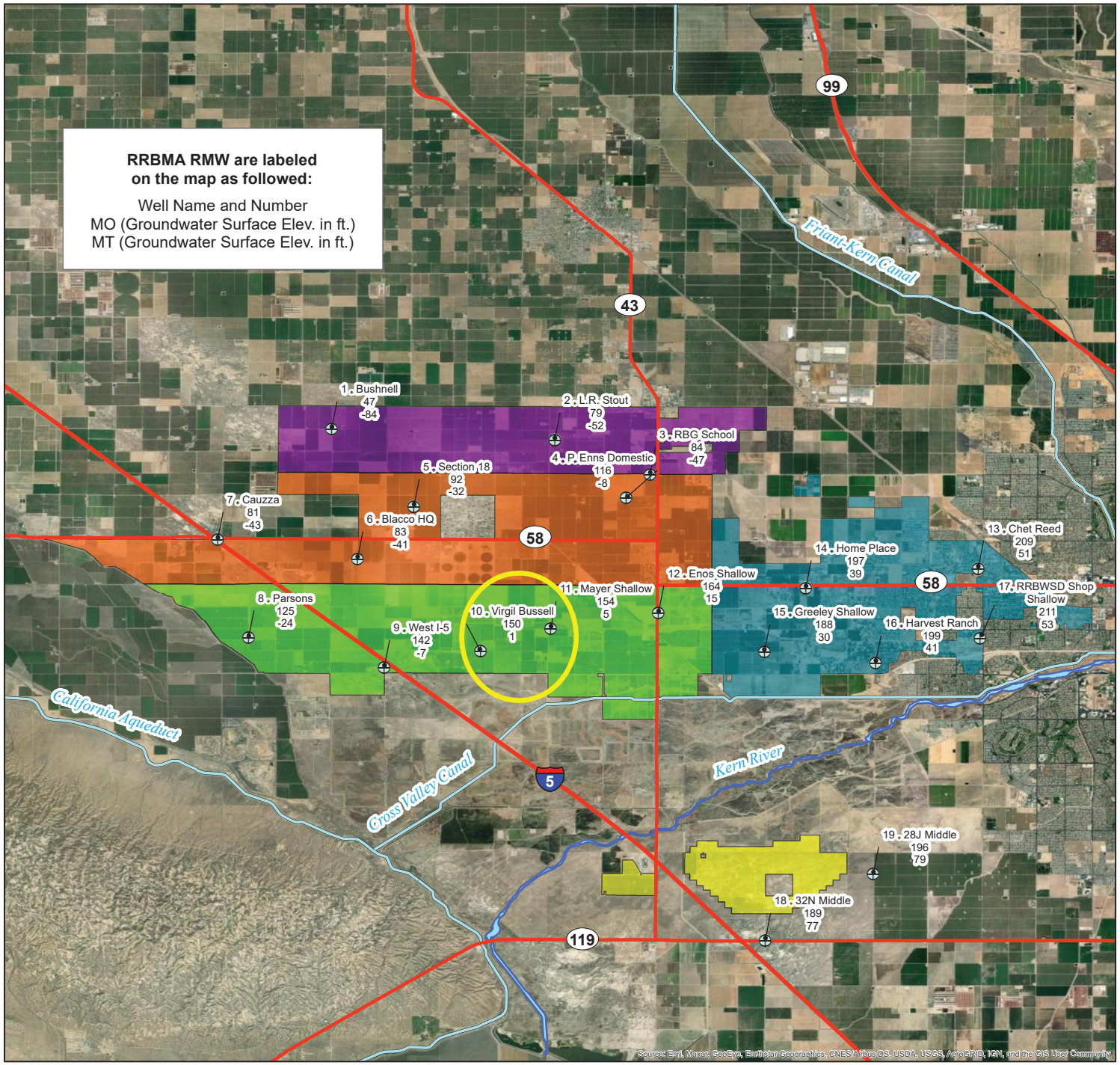
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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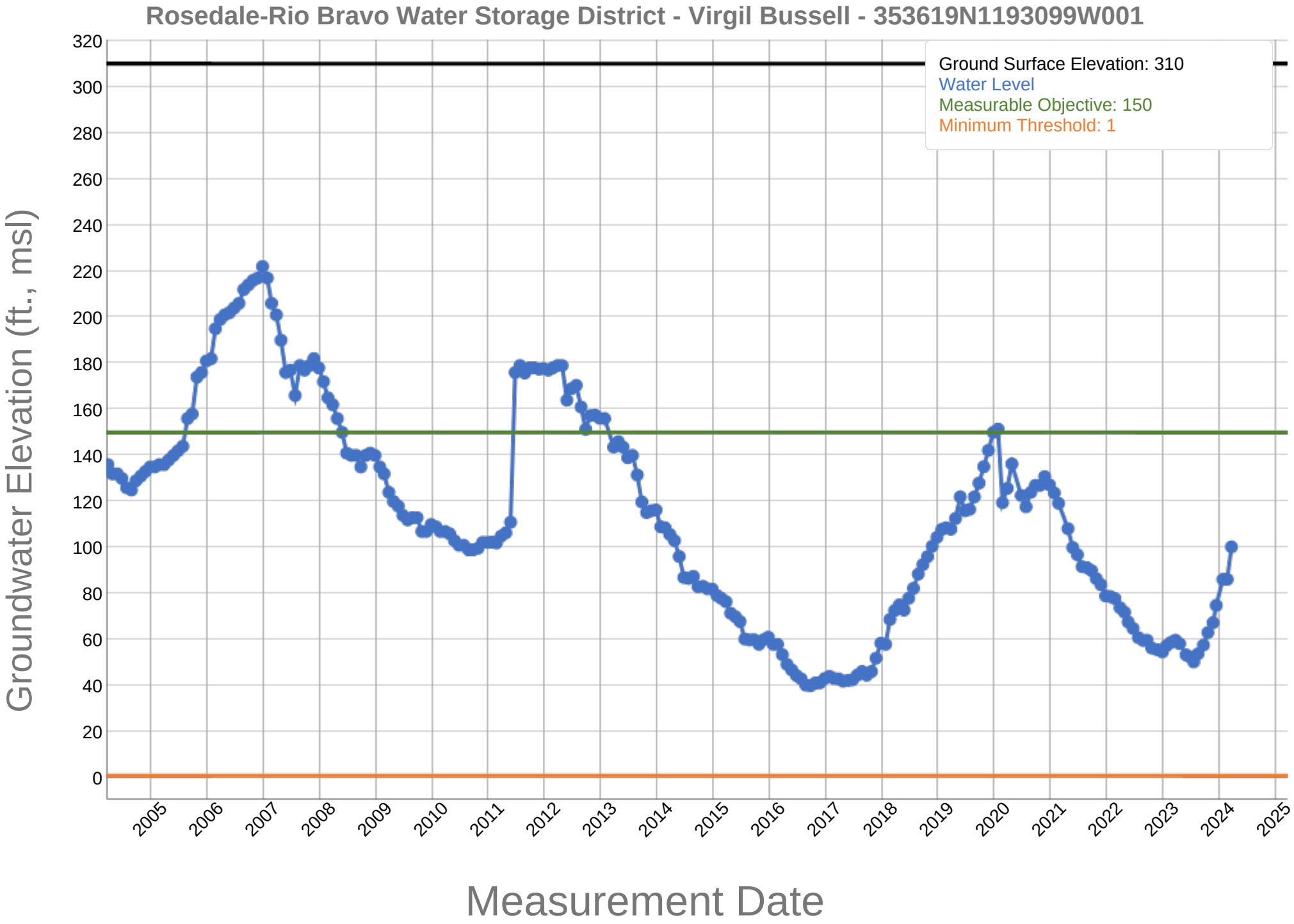
Rosedale-Rio Bravo Water Storage District - Virgil Bussell - 353619N1193099W001
Ground Surface Elevation: 310
Water Level
Measurable Objective: 150
Minimum Threshold: 1
Groundwater Elevation (ft., msl)
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
2005
2006
2007
2008
2009
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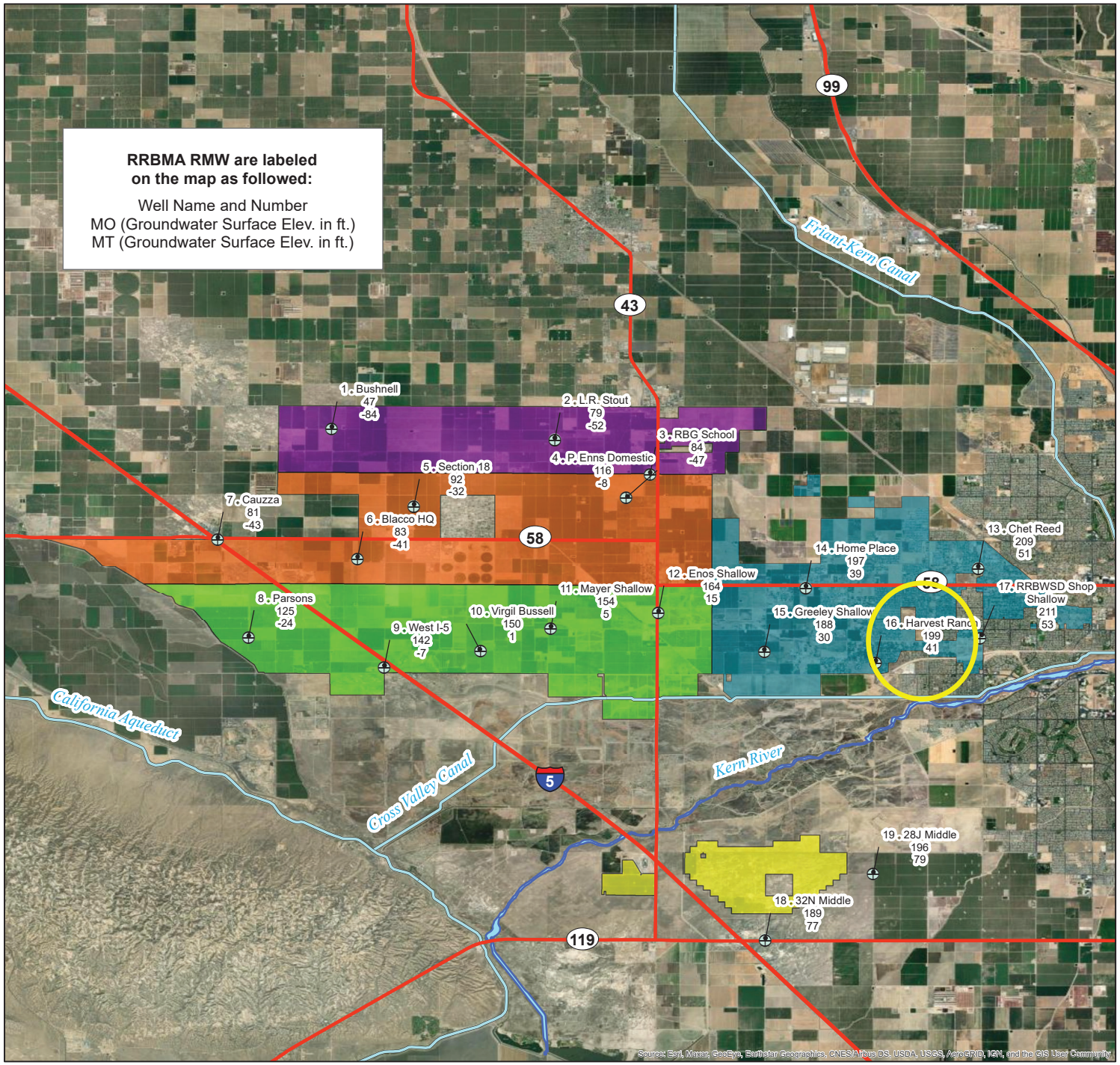
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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Miles

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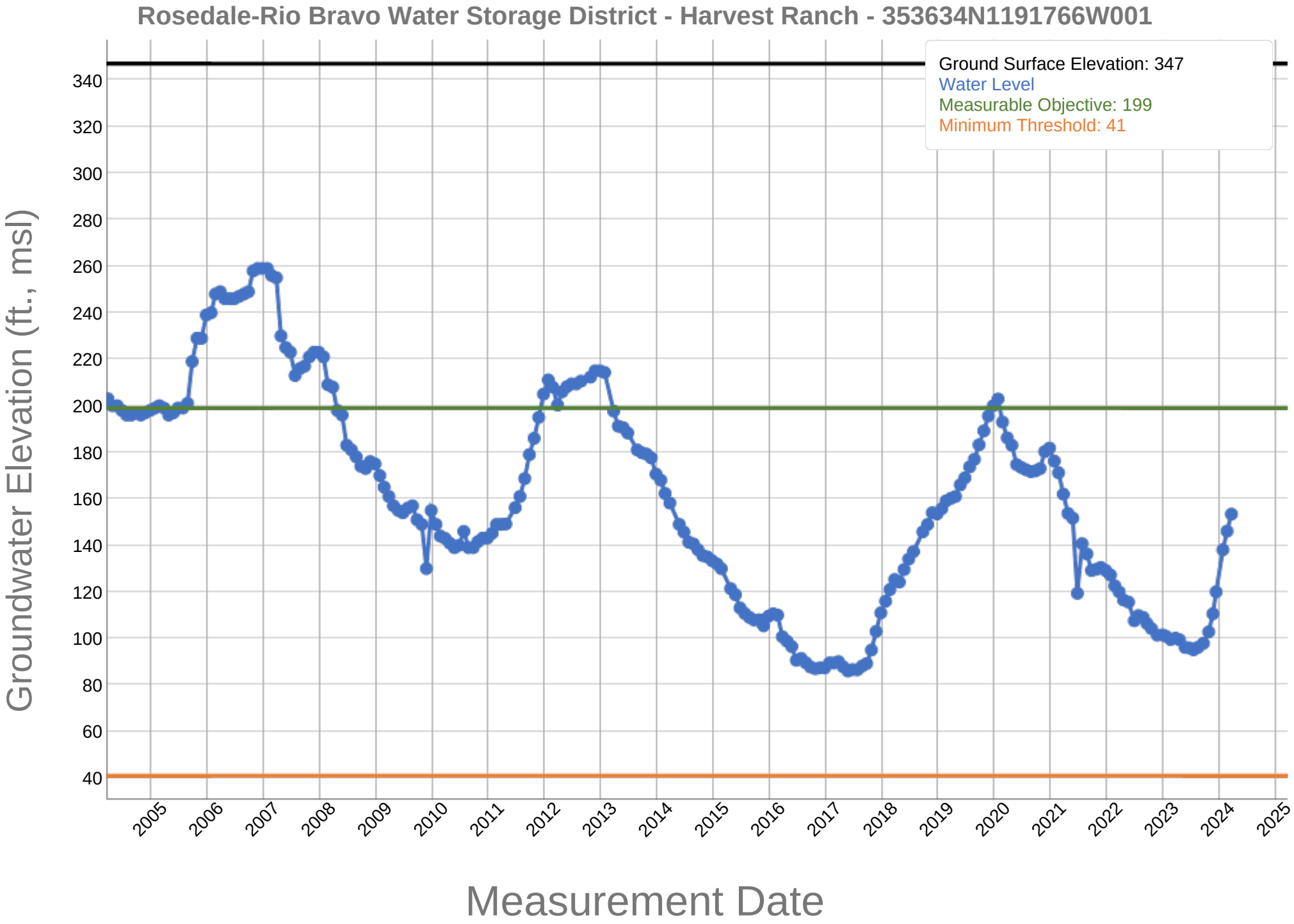
Rosedale-Rio Bravo Water Storage District - Harvest Ranch - 353634N1191766W001
Ground Surface Elevation: 347
Water Level
Measurable Objective: 199
Minimum Threshold: 41
Groundwater Elevation (ft., msl)
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
2005
2006
2007
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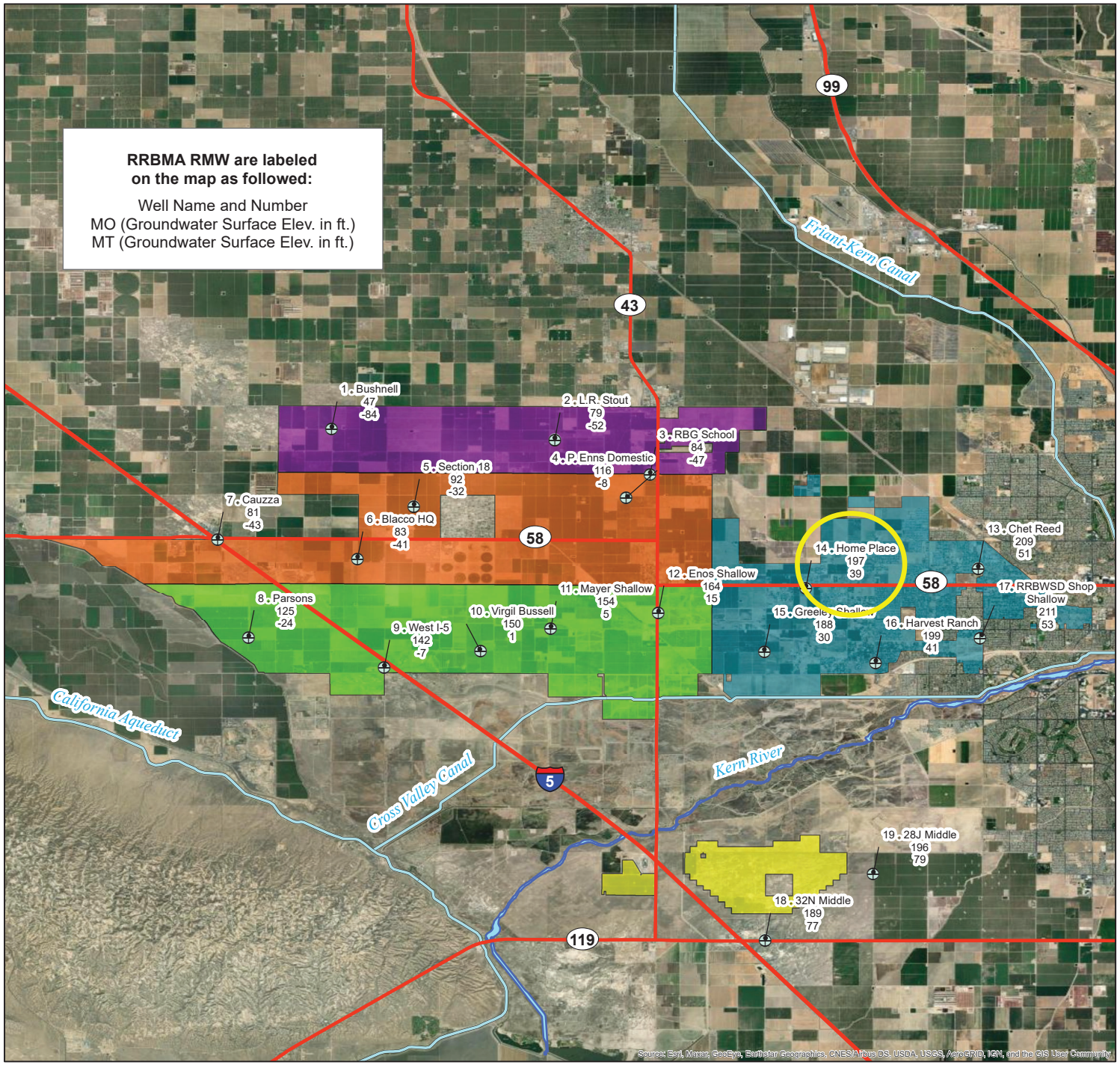
2024
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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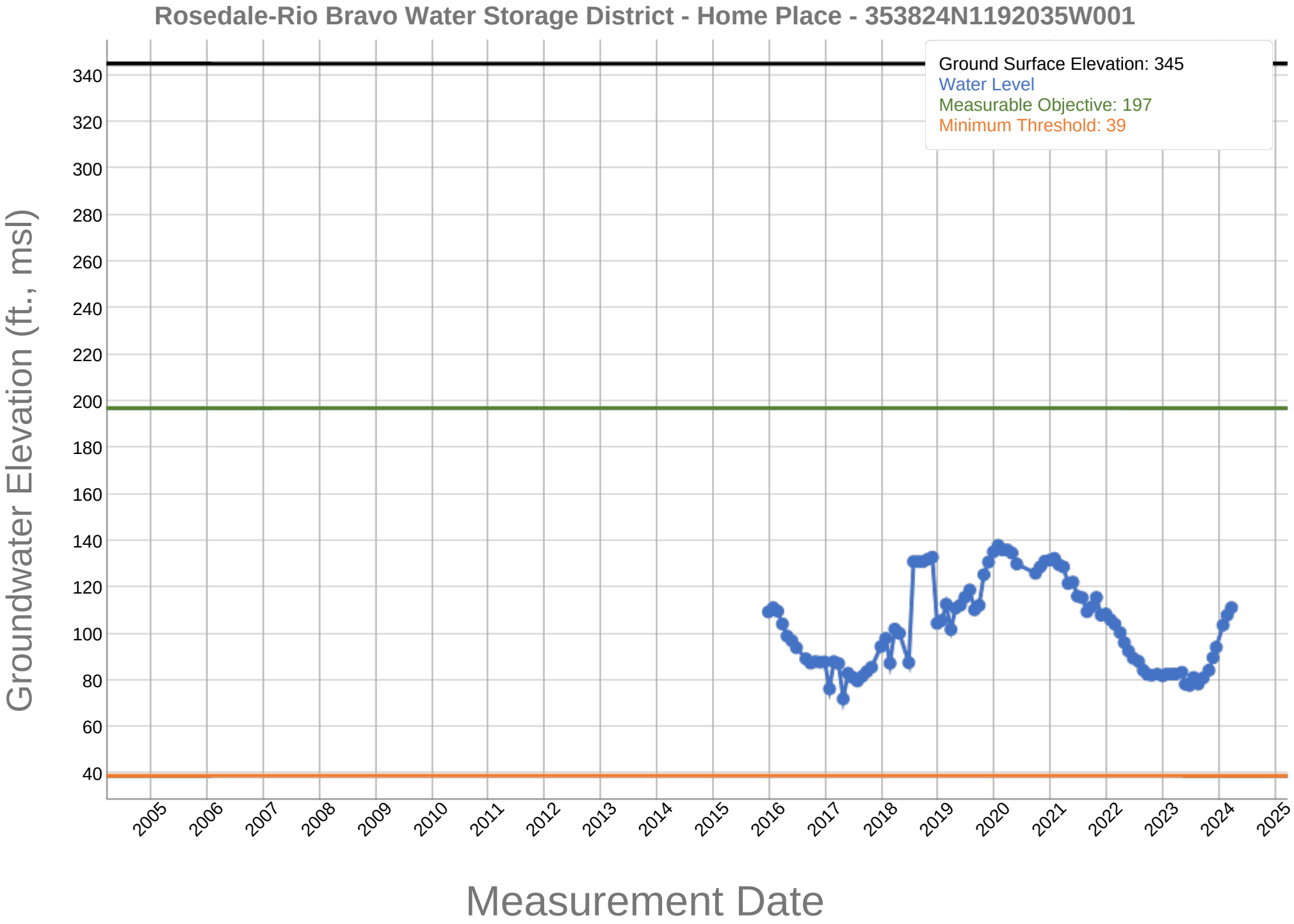
Rosedale-Rio Bravo Water Storage District - Home Place - 353824N1192035W001
Ground Surface Elevation: 345
Water Level
Measurable Objective: 197
Minimum Threshold: 39
Groundwater Elevation (ft., msl)
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
2005
2006
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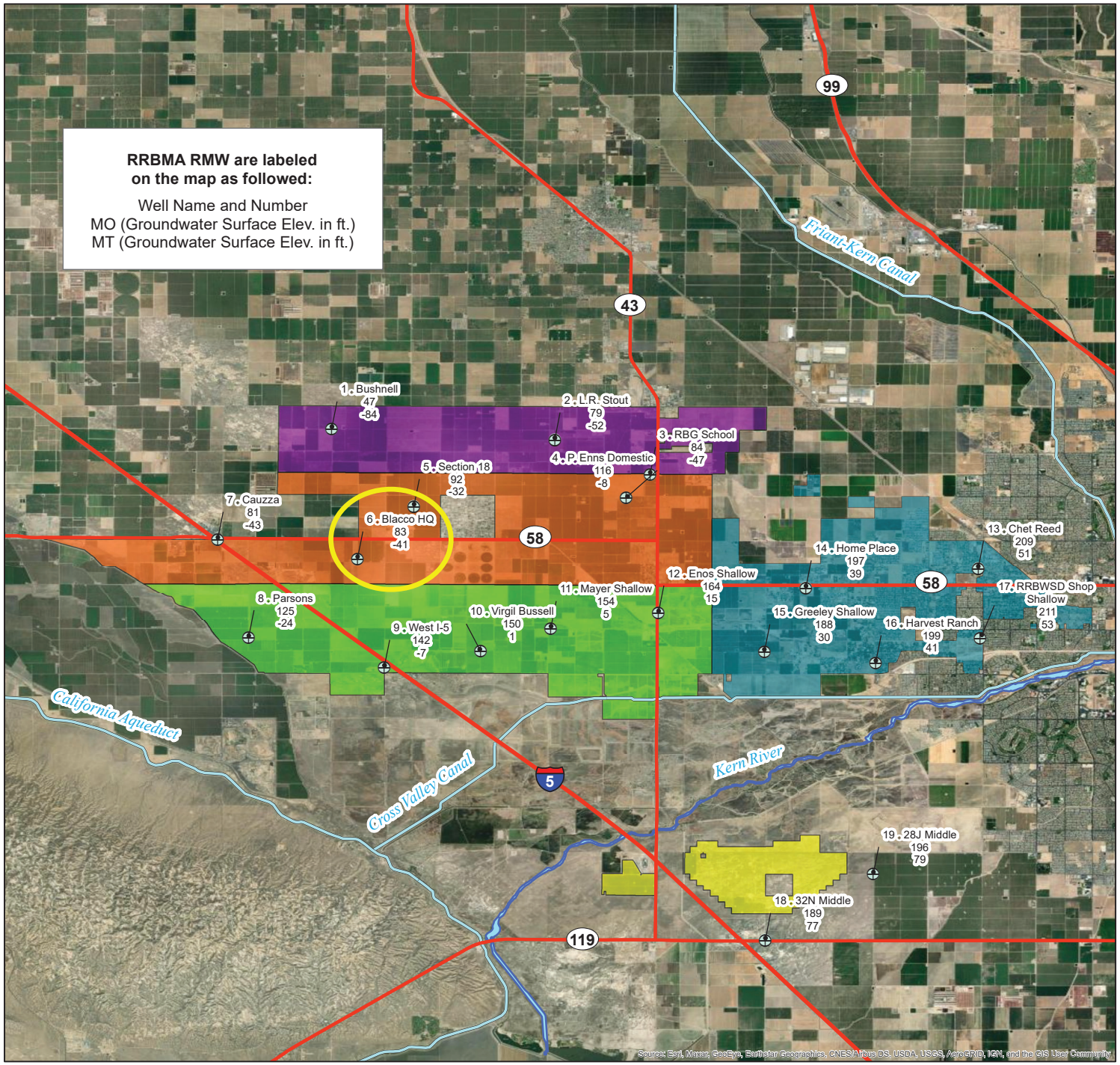
RRBMA Monitoring Areas - RMW Water Level MOs and MTs



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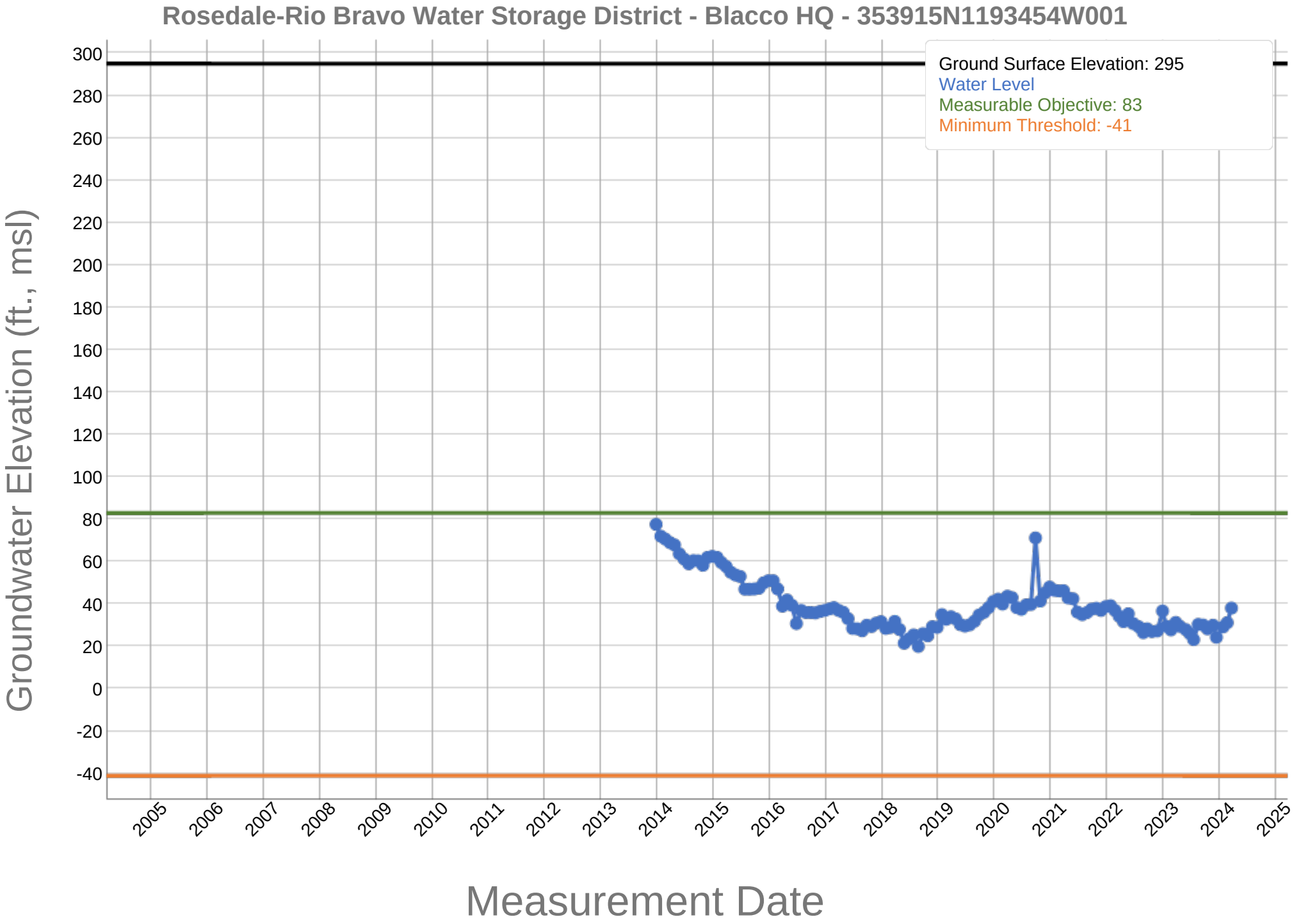
Rosedale-Rio Bravo Water Storage District - Blacco HQ - 353915N1193454W001
Ground Surface Elevation: 295
Water Level
Measurable Objective: 83
Minimum Threshold: -41
Groundwater Elevation (ft., msl)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
2005
2006
2007
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2023
2024
2025
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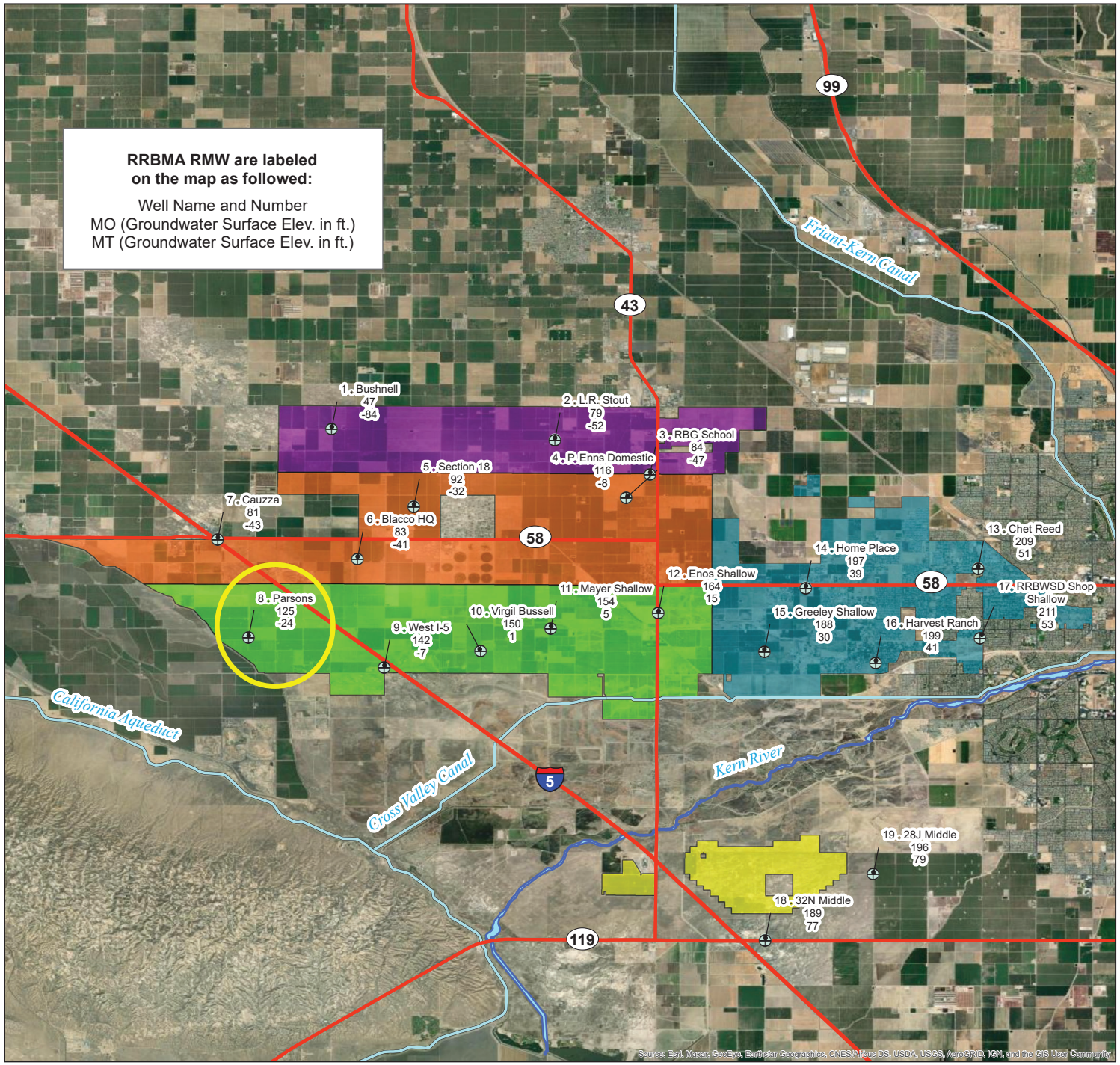
RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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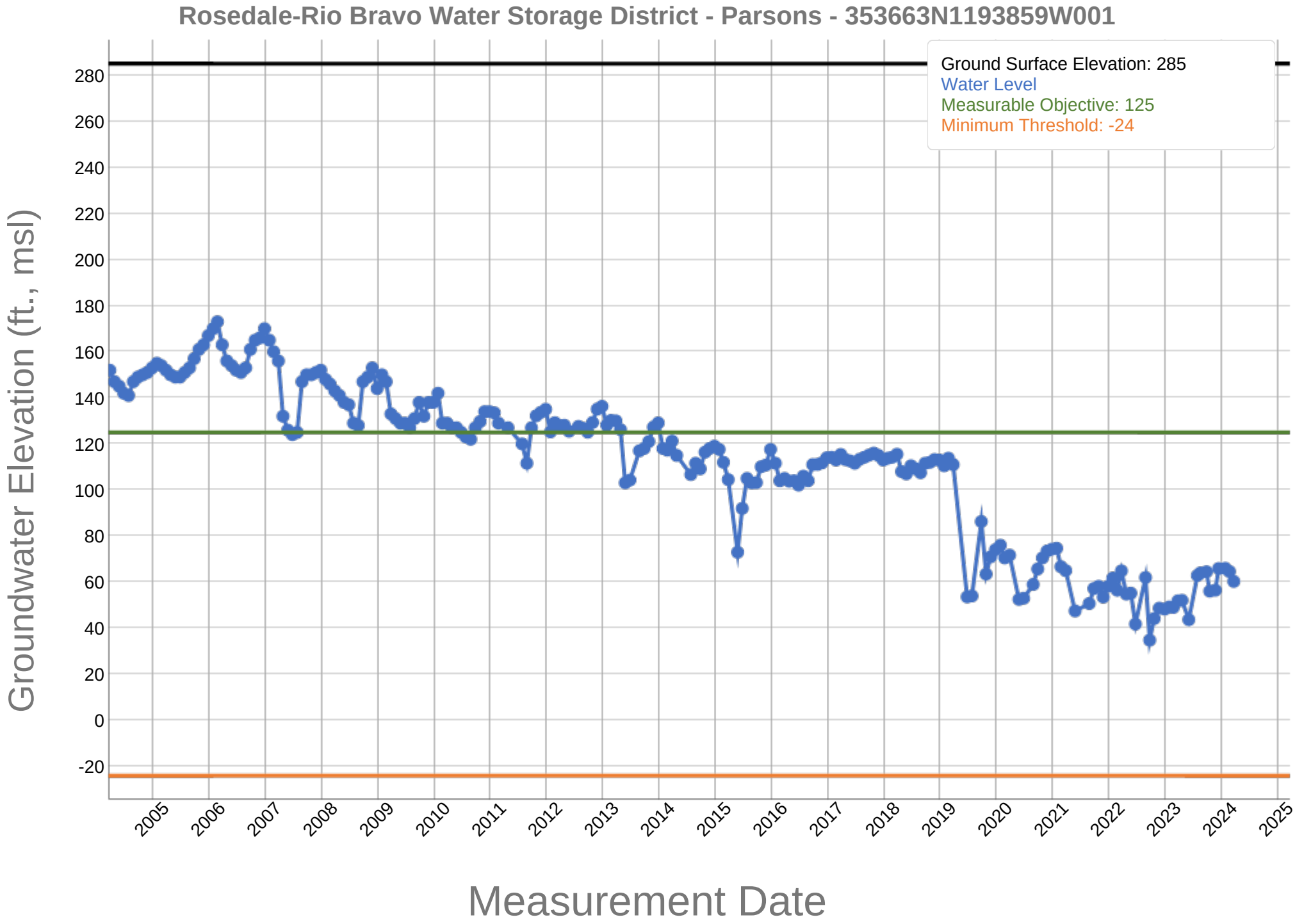
Rosedale-Rio Bravo Water Storage District - Parsons - 353663N1193859W001
Ground Surface Elevation: 285
Water Level
Measurable Objective: 125
Minimum Threshold: -24
Groundwater Elevation (ft., msl)
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
2005
2006
2007
2008
2009
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2022
2023
2024
2025
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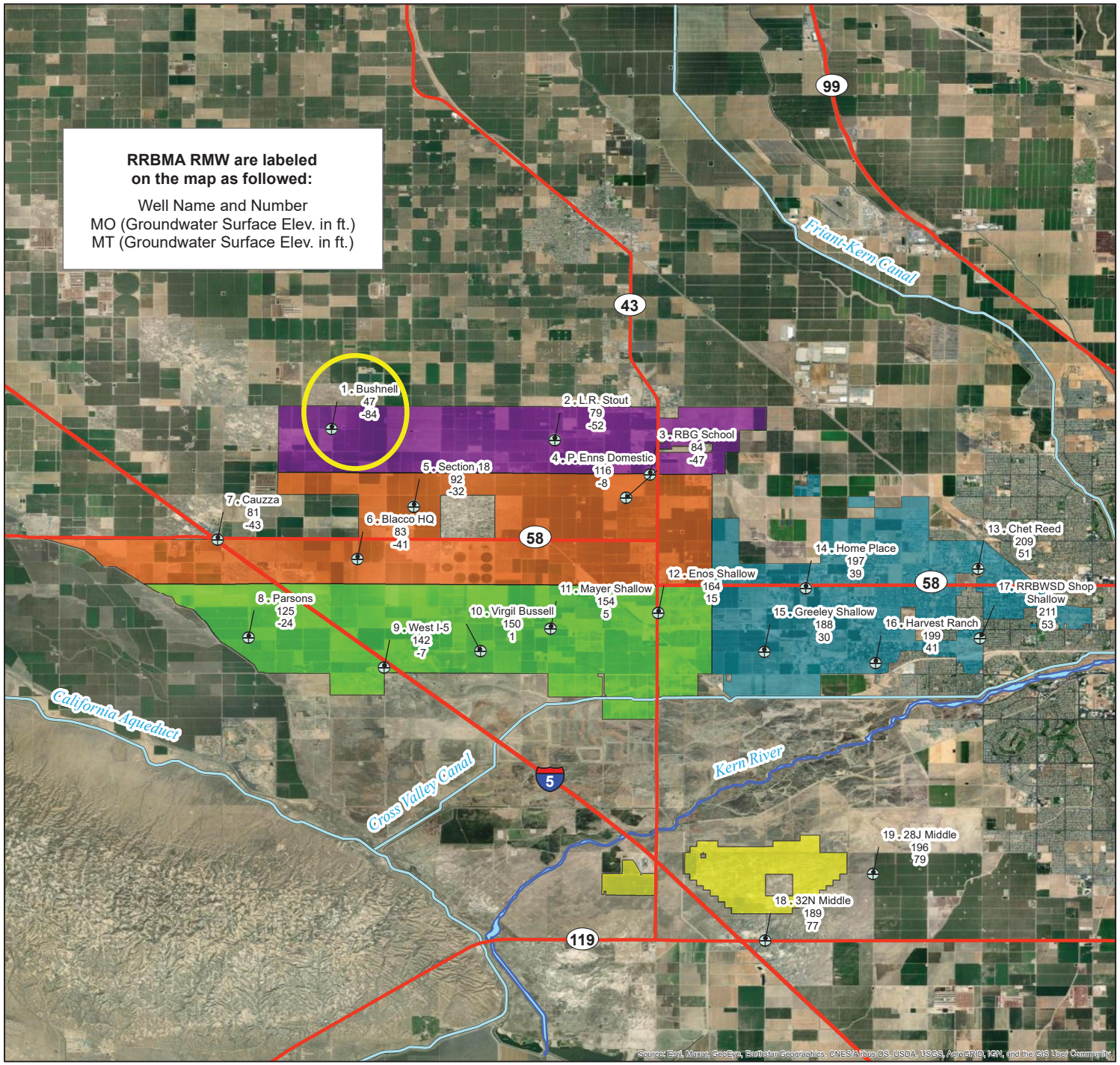
RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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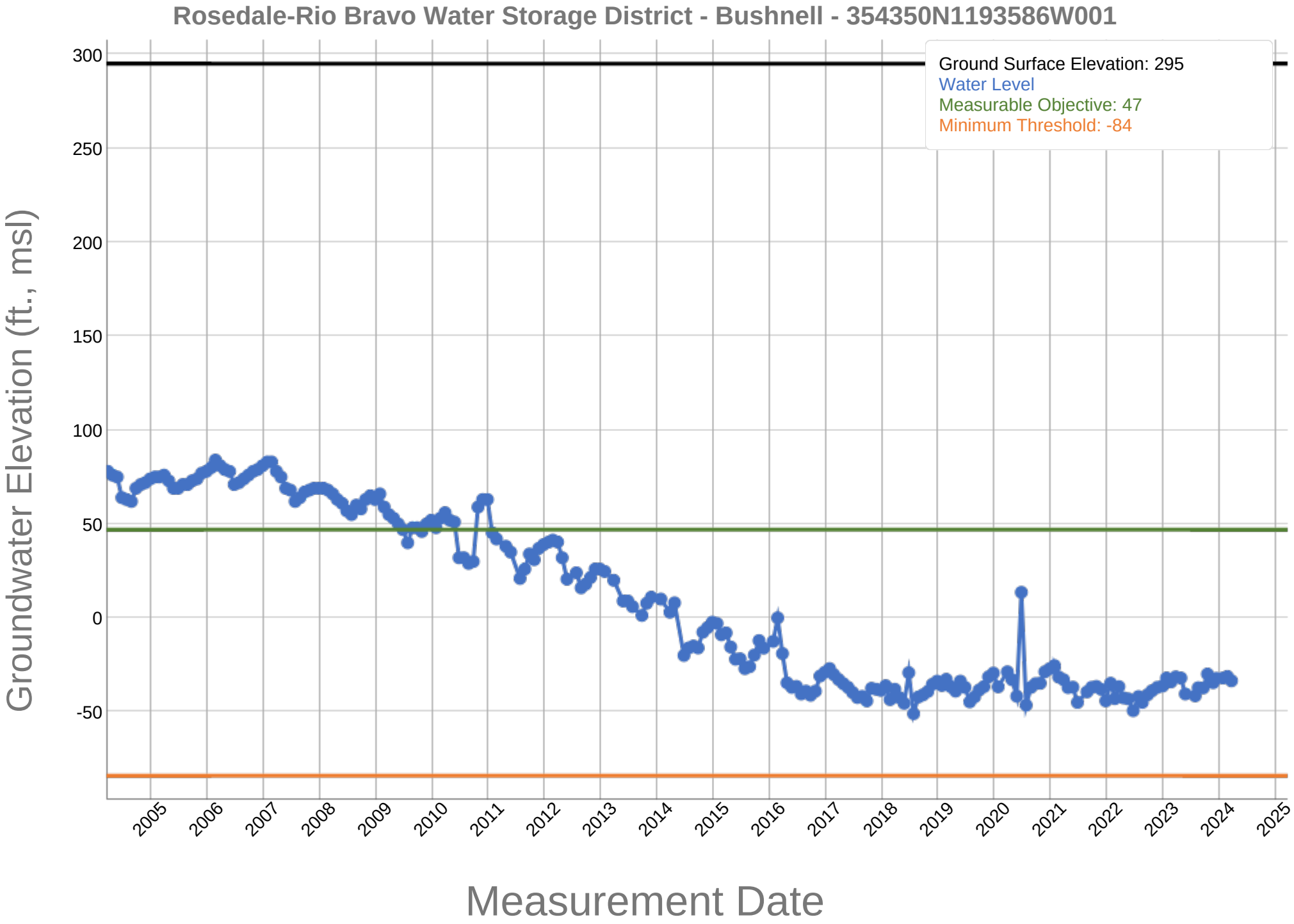
Rosedale-Rio Bravo Water Storage District - Bushnell - 354350N1193586W001
Ground Surface Elevation: 295
Water Level
Measurable Objective: 47
Minimum Threshold: -84
Groundwater Elevation (ft., msl)
300
250
200
150
100
50
0
-50
2005
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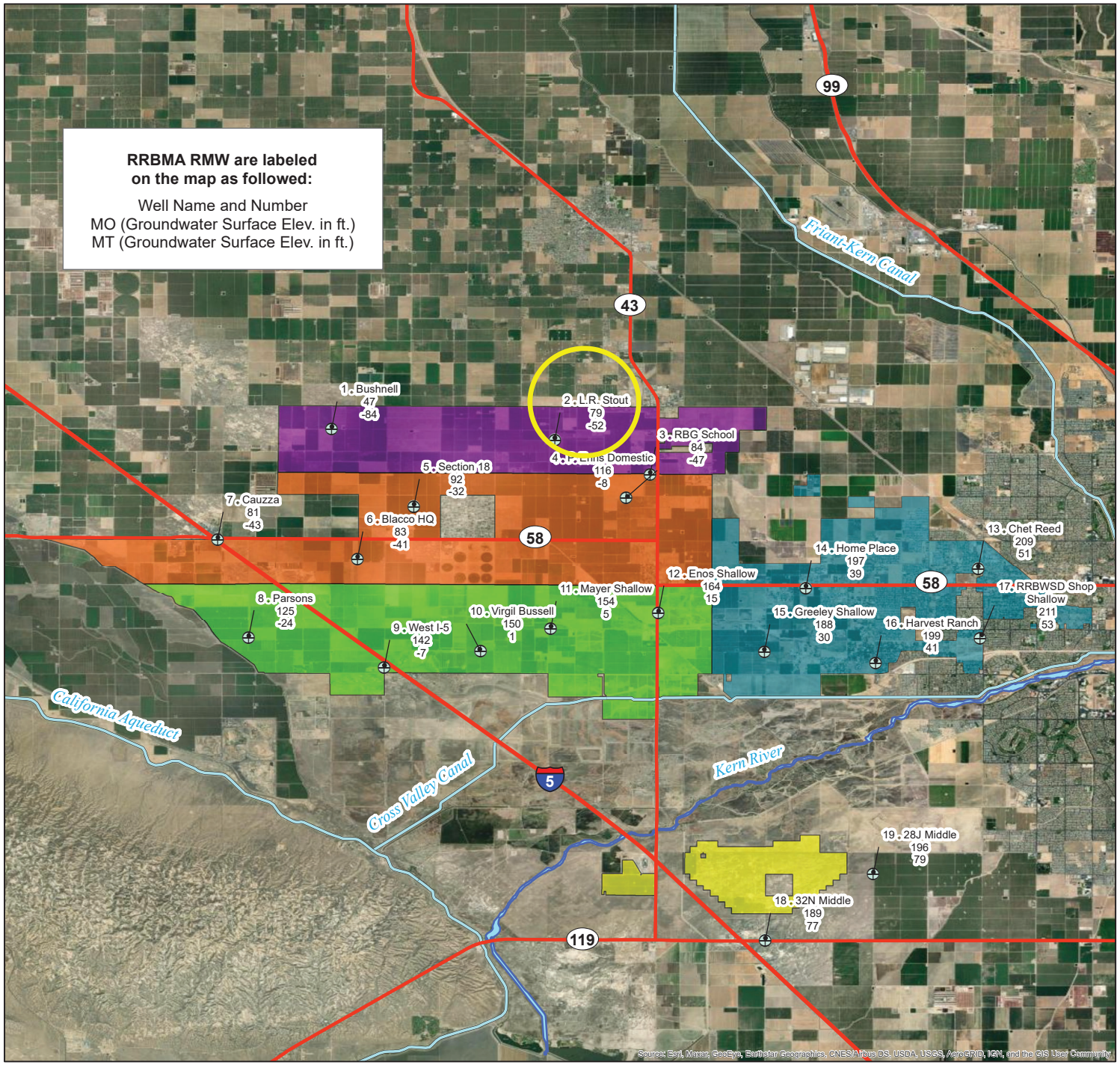
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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- South Monitoring Area
- East Monitoring Area
- South of the River Monitoring Area

RMW = Representative Monitoring Well
MO = Measurable Objective
MT = Minimum Threshold

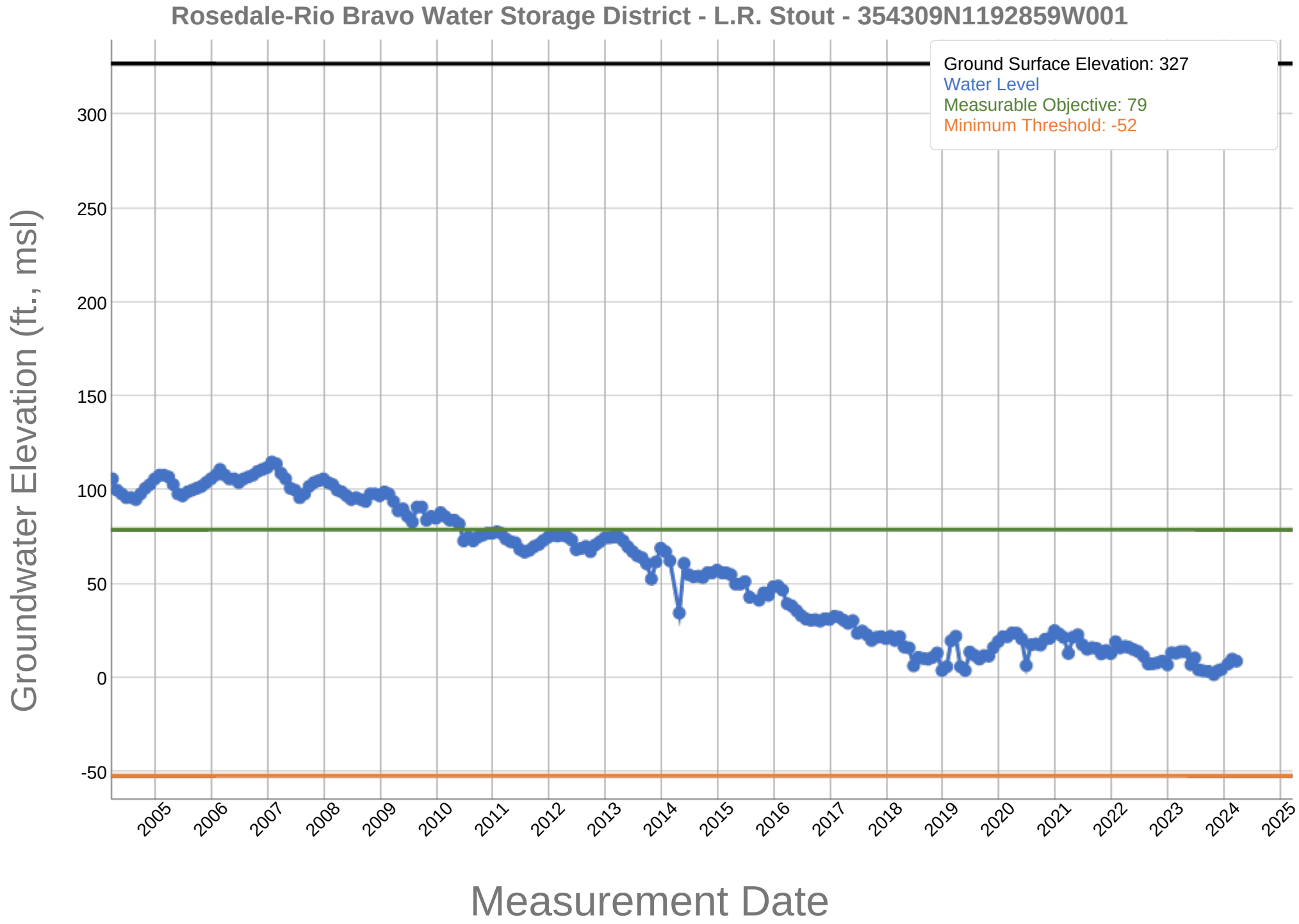
N

0 1.75 3.5 7

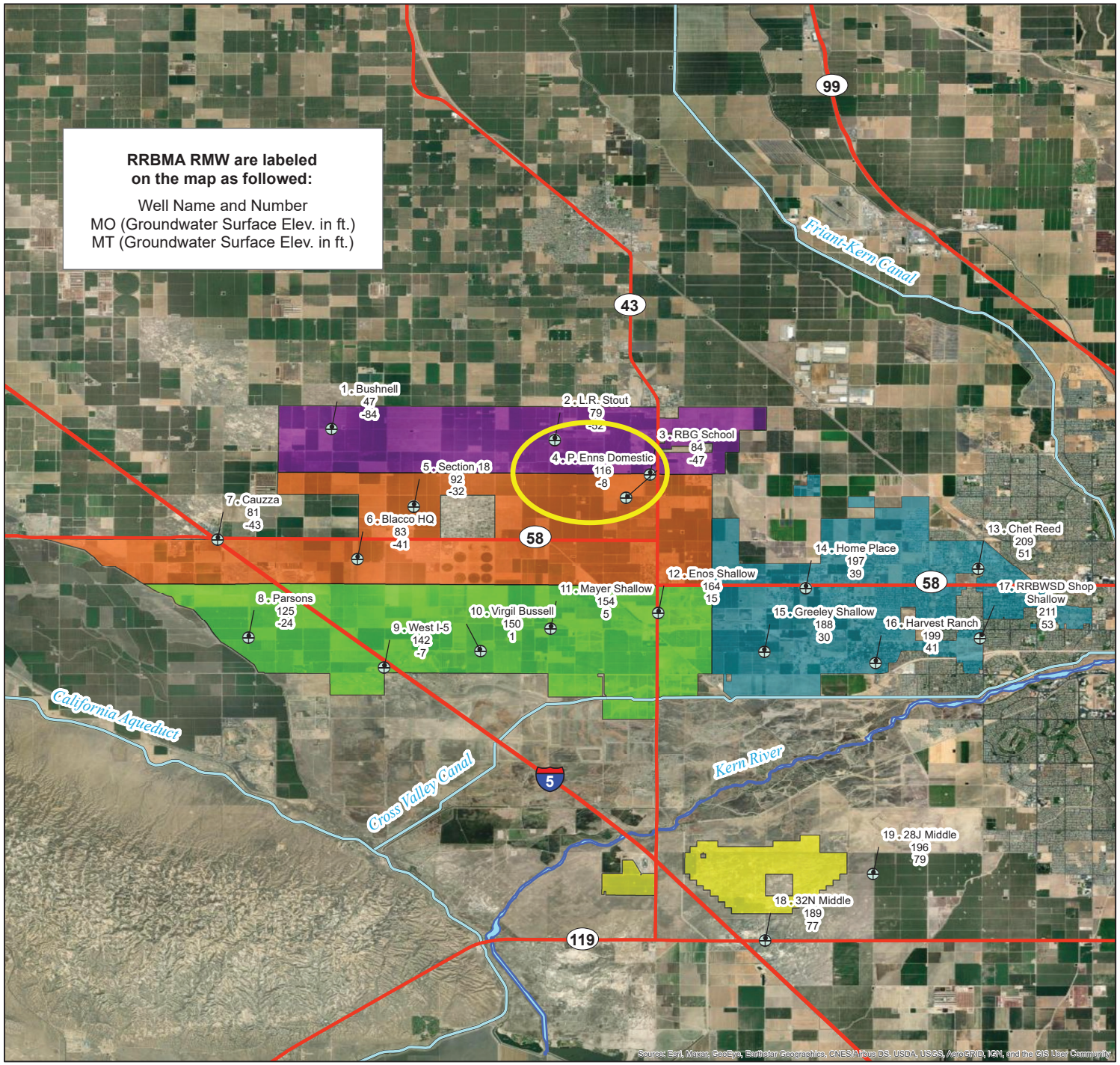
Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

Z:\000-OldZDrive\jpa. JPA's\SGMA\RRBMA\RRBMA SGMA Docs\Maps\Figures (RE) 2022-06-22


Rosedale-Rio Bravo Water Storage District - L.R. Stout - 354309N1192859W001
Ground Surface Elevation: 327
Water Level
Measurable Objective: 79
Minimum Threshold: -52
Groundwater Elevation (ft., msl)
300
250
200
150
100
50
0
-50
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

- RRBMA RMW (Water Level)
- Major Highways
- Major Conveyance Facilities
- KernRiver
- North Monitoring Area
- Central Monitoring Area
- South Monitoring Area
- East Monitoring Area
- South of the River Monitoring Area

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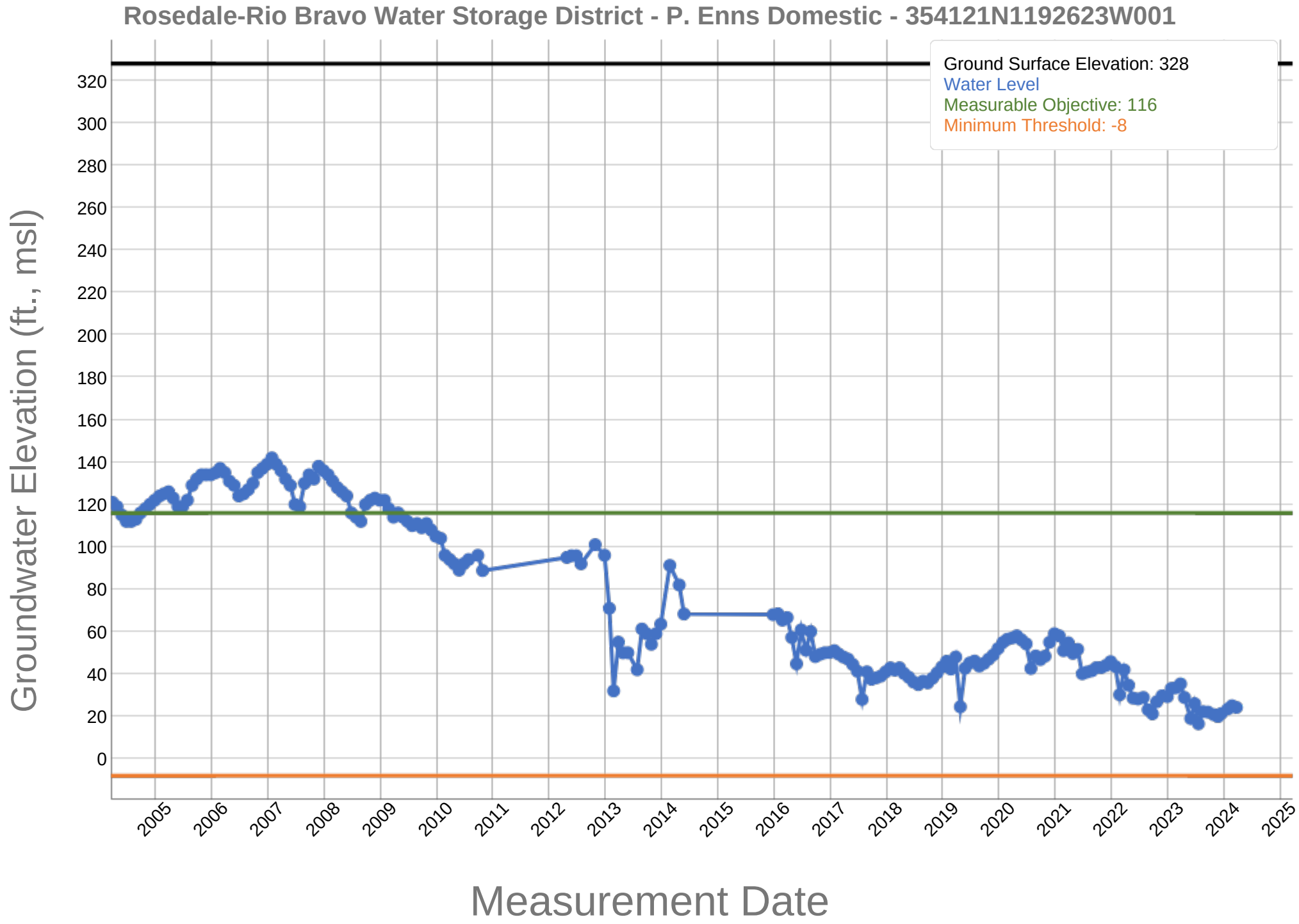
N

0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

Z:\000-OldZDrive\jpa. JPA's\SGMA\RRBMA\RRBMA SGMA Docs\Maps\Figures (RE) 2022-06-22


Rosedale-Rio Bravo Water Storage District - P. Enns Domestic - 354121N1192623W001
Ground Surface Elevation: 328
Water Level
Measurable Objective: 116
Minimum Threshold: -8
Groundwater Elevation (ft., msl)
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
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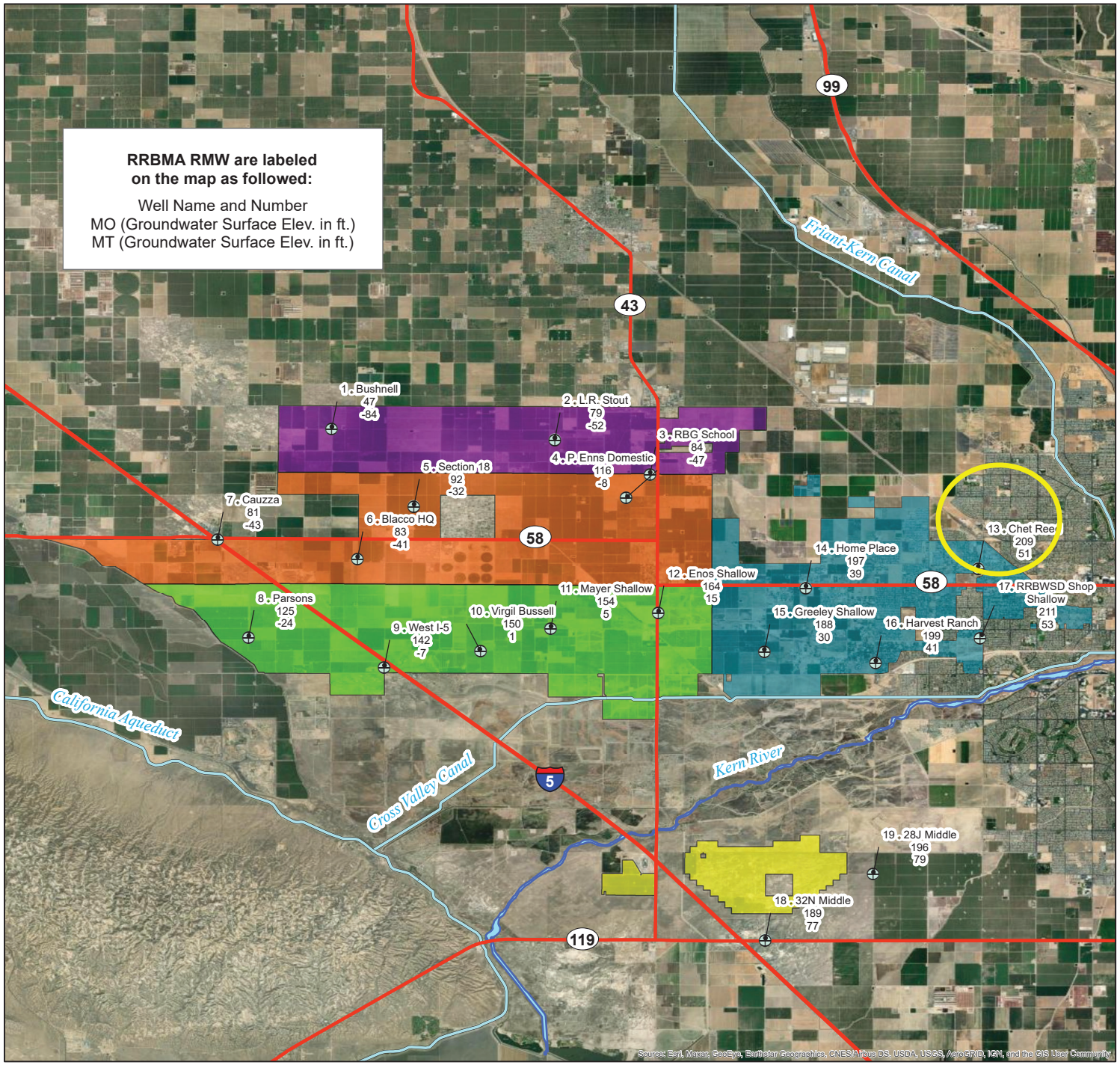
2024
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

- RRBMA RMW (Water Level)
- Major Highways
- Major Conveyance Facilities
- KernRiver
- North Monitoring Area
- Central Monitoring Area
- South Monitoring Area
- East Monitoring Area
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0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

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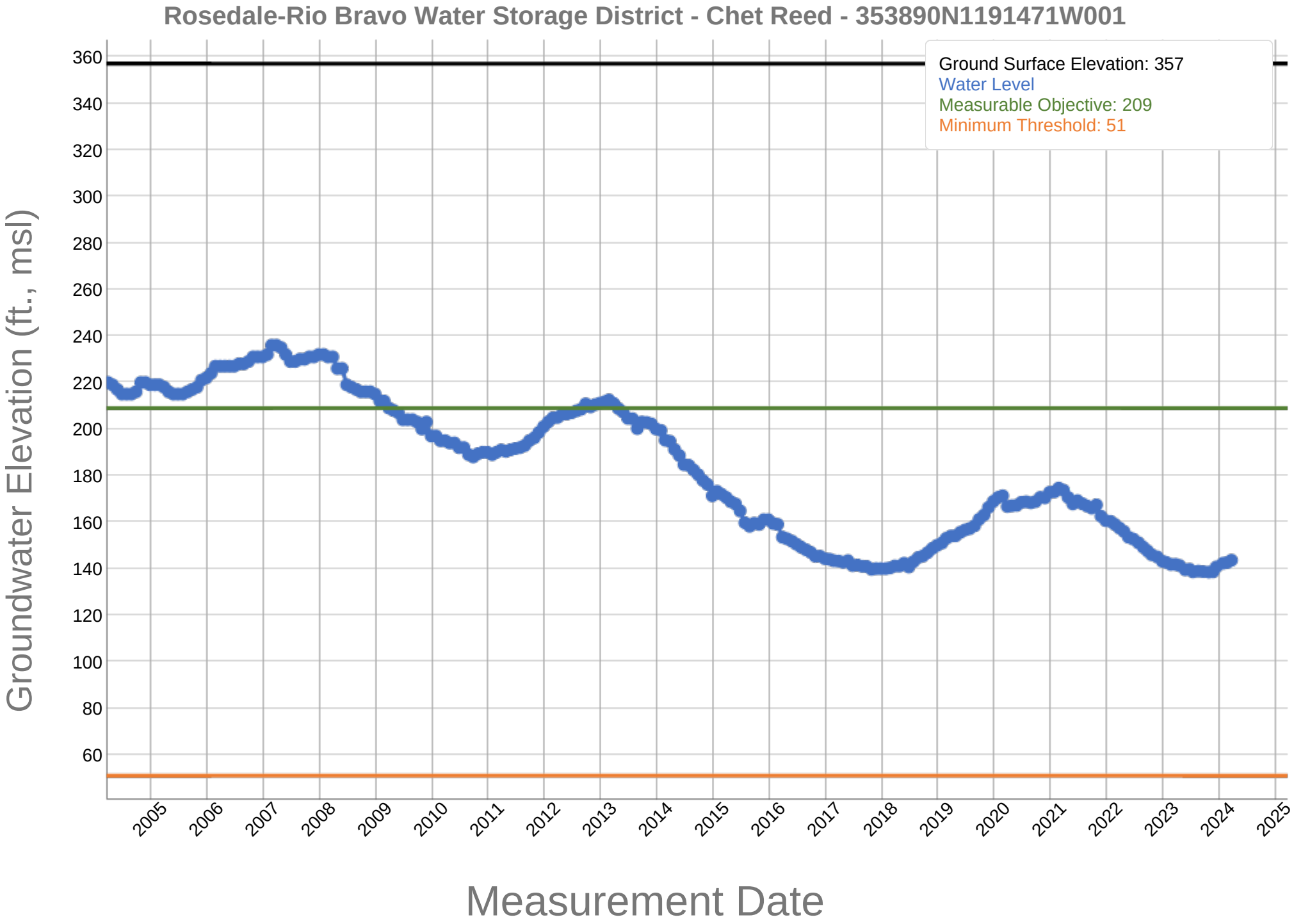
Rosedale-Rio Bravo Water Storage District - Chet Reed - 353890N1191471W001
Ground Surface Elevation: 357
Water Level
Measurable Objective: 209
Minimum Threshold: 51
Groundwater Elevation (ft., msl)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
2005
2006
2007
2008
2009
2010
2011
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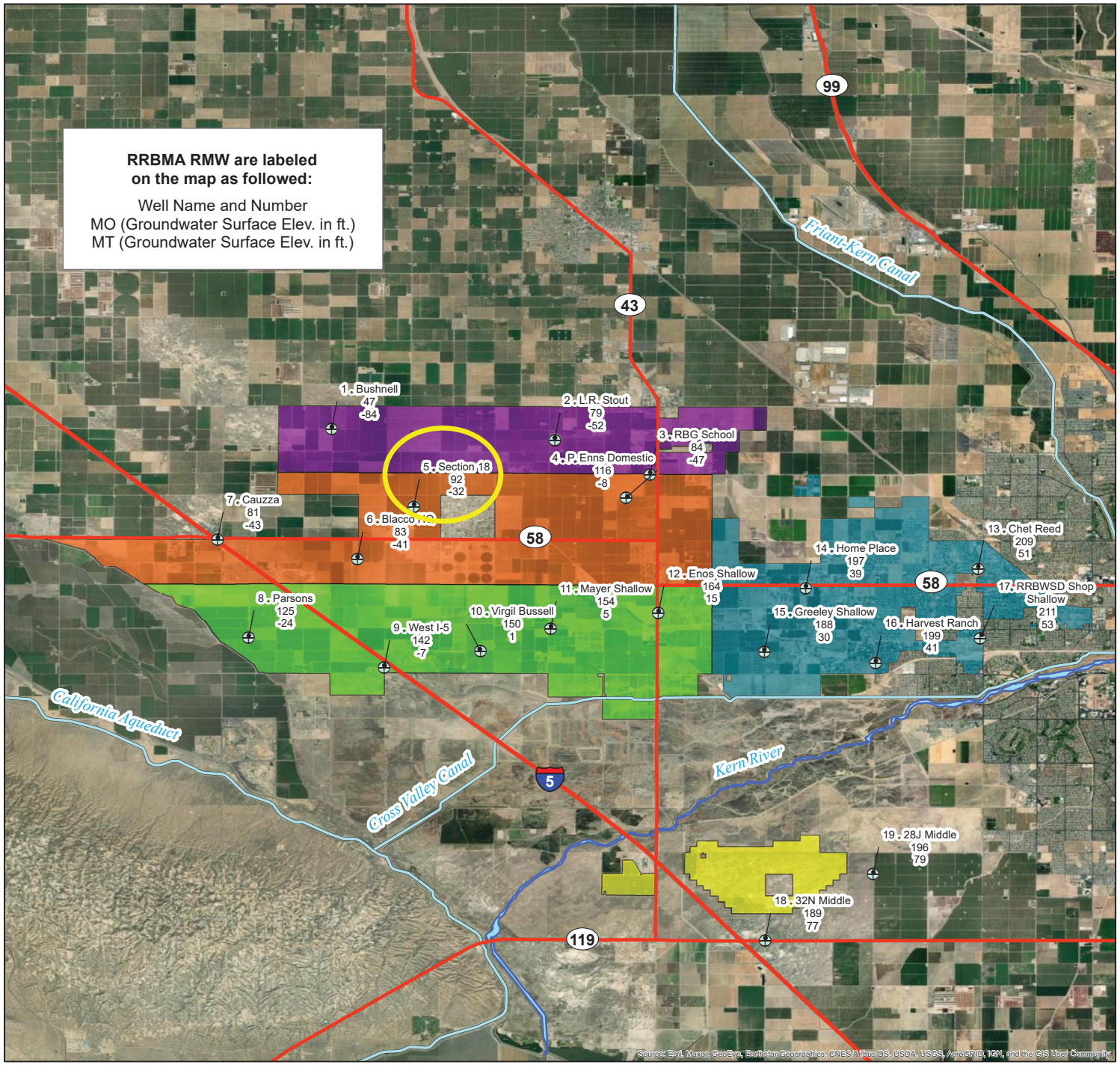
2023
2024
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

- RRBMA RMW (Water Level)
- Major Highways
- Major Conveyance Facilities
- KernRiver
- North Monitoring Area
- Central Monitoring Area
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N

0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

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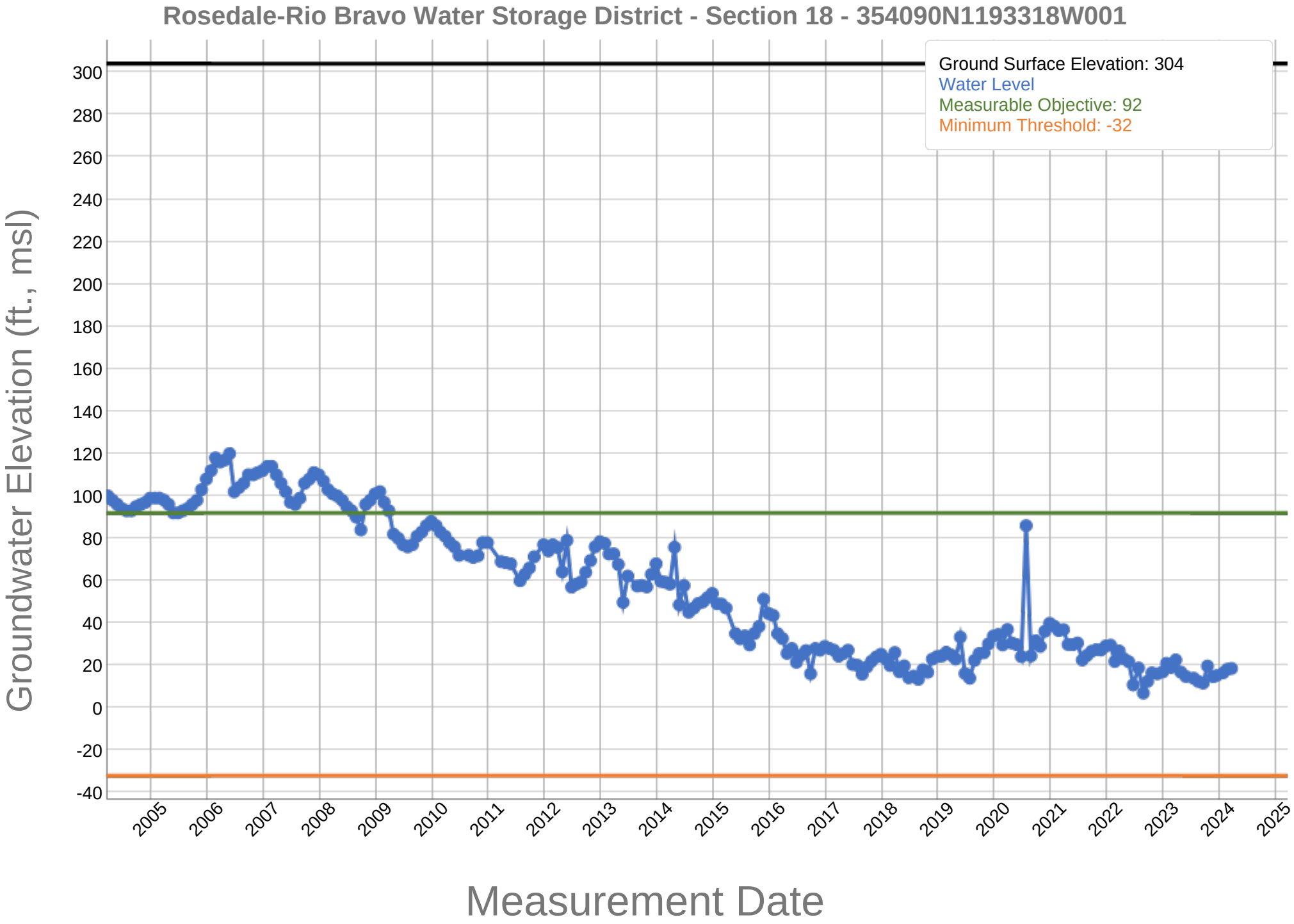
Rosedale-Rio Bravo Water Storage District - Section 18 - 354090N1193318W001
Ground Surface Elevation: 304
Water Level
Measurable Objective: 92
Minimum Threshold: -32
Groundwater Elevation (ft., msl)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
2005
2006
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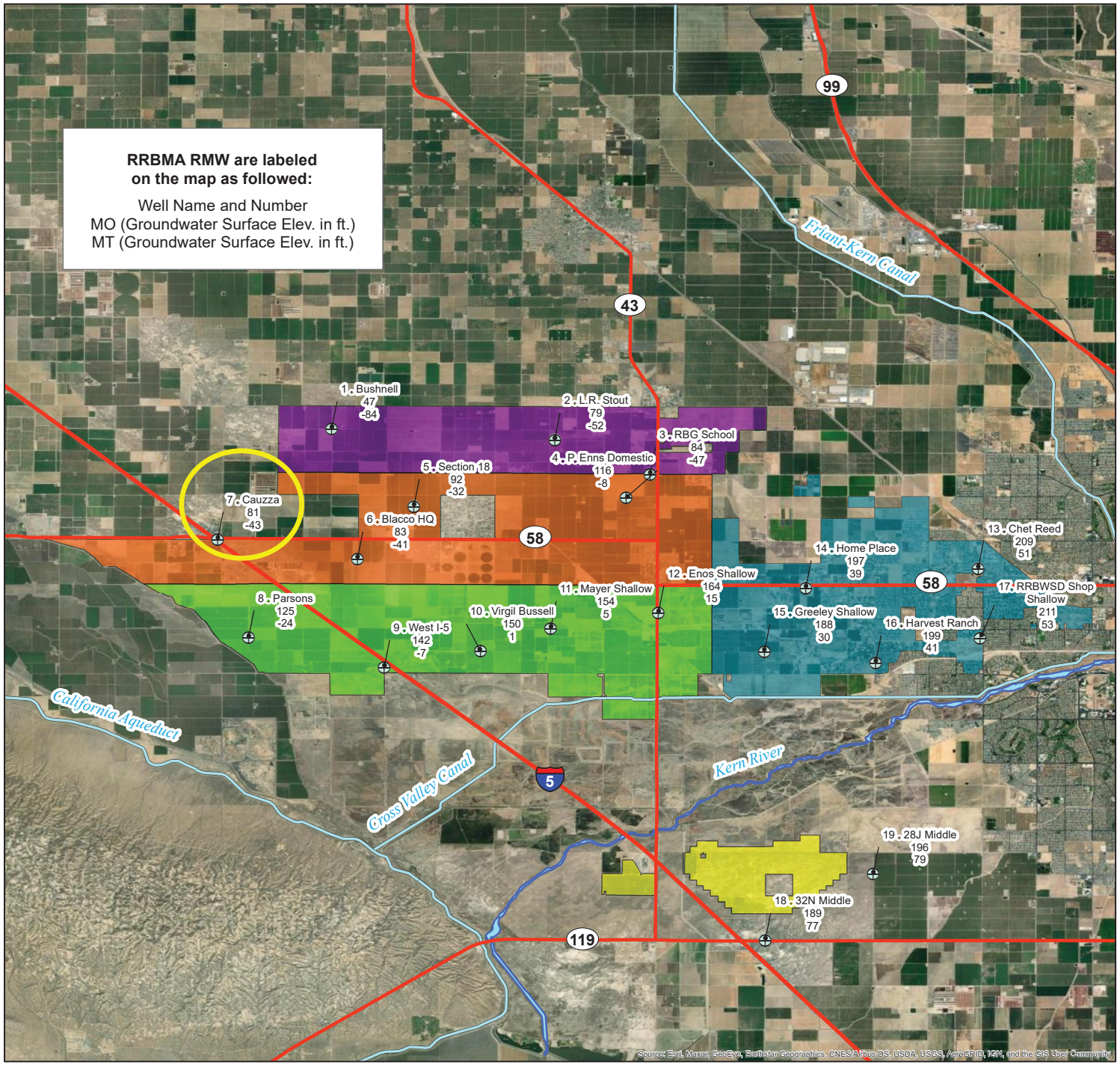
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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- Major Highways
- Major Conveyance Facilities
- KernRiver
- North Monitoring Area
- Central Monitoring Area
- South Monitoring Area
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N

0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

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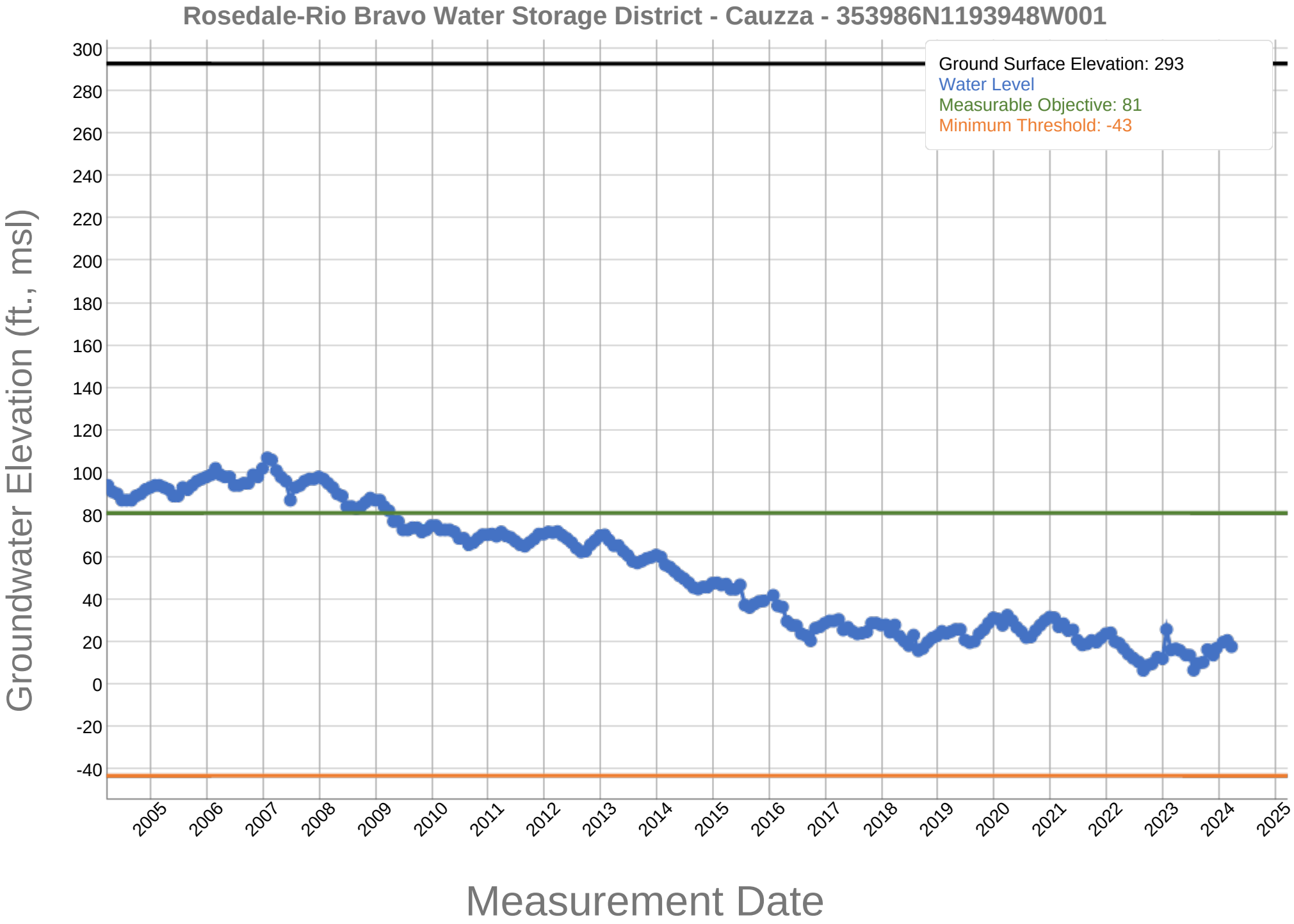
Rosedale-Rio Bravo Water Storage District - Cauzza - 353986N1193948W001
Ground Surface Elevation: 293
Water Level
Measurable Objective: 81
Minimum Threshold: -43
Groundwater Elevation (ft., msl)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
2005
2006
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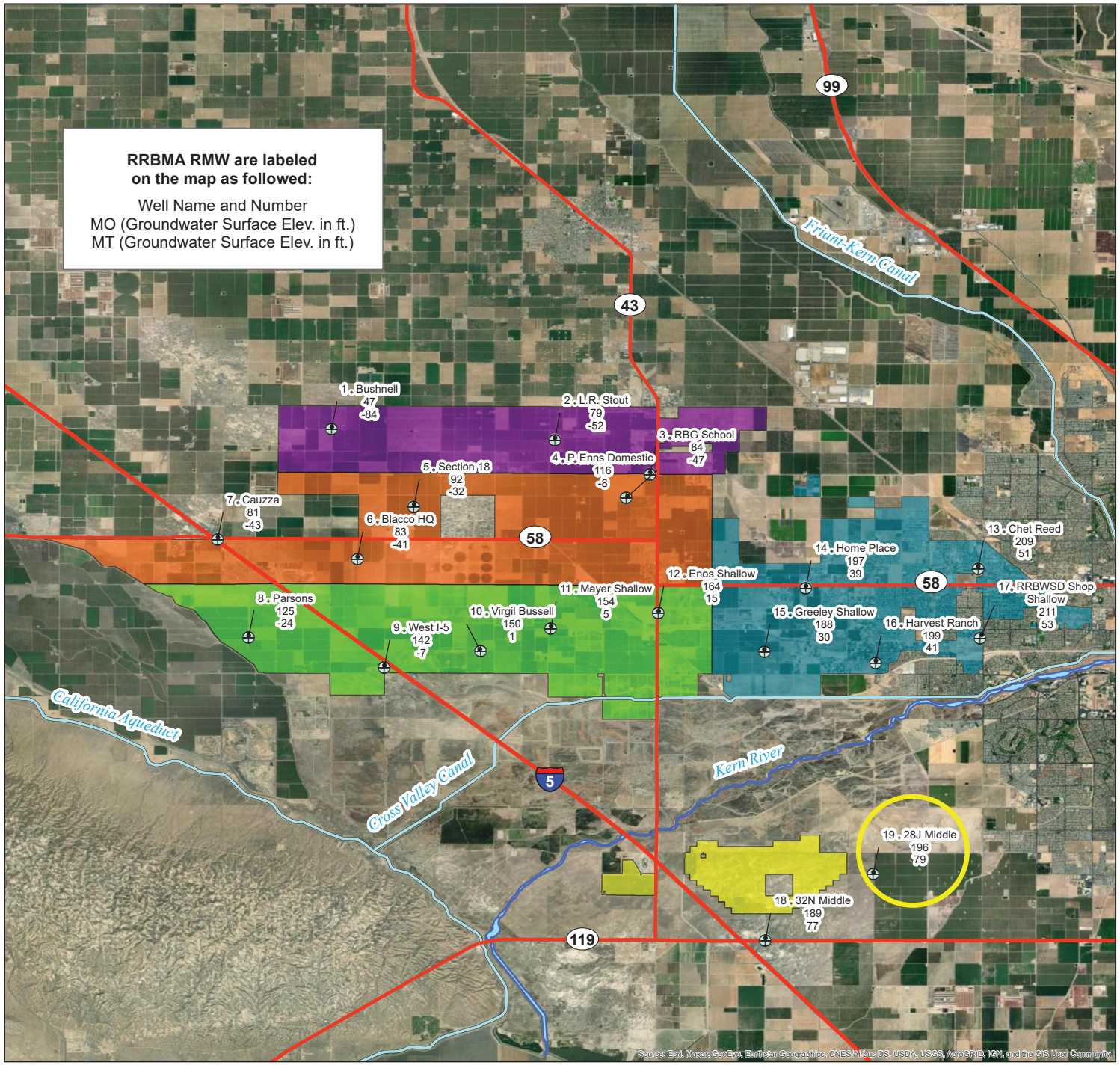
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

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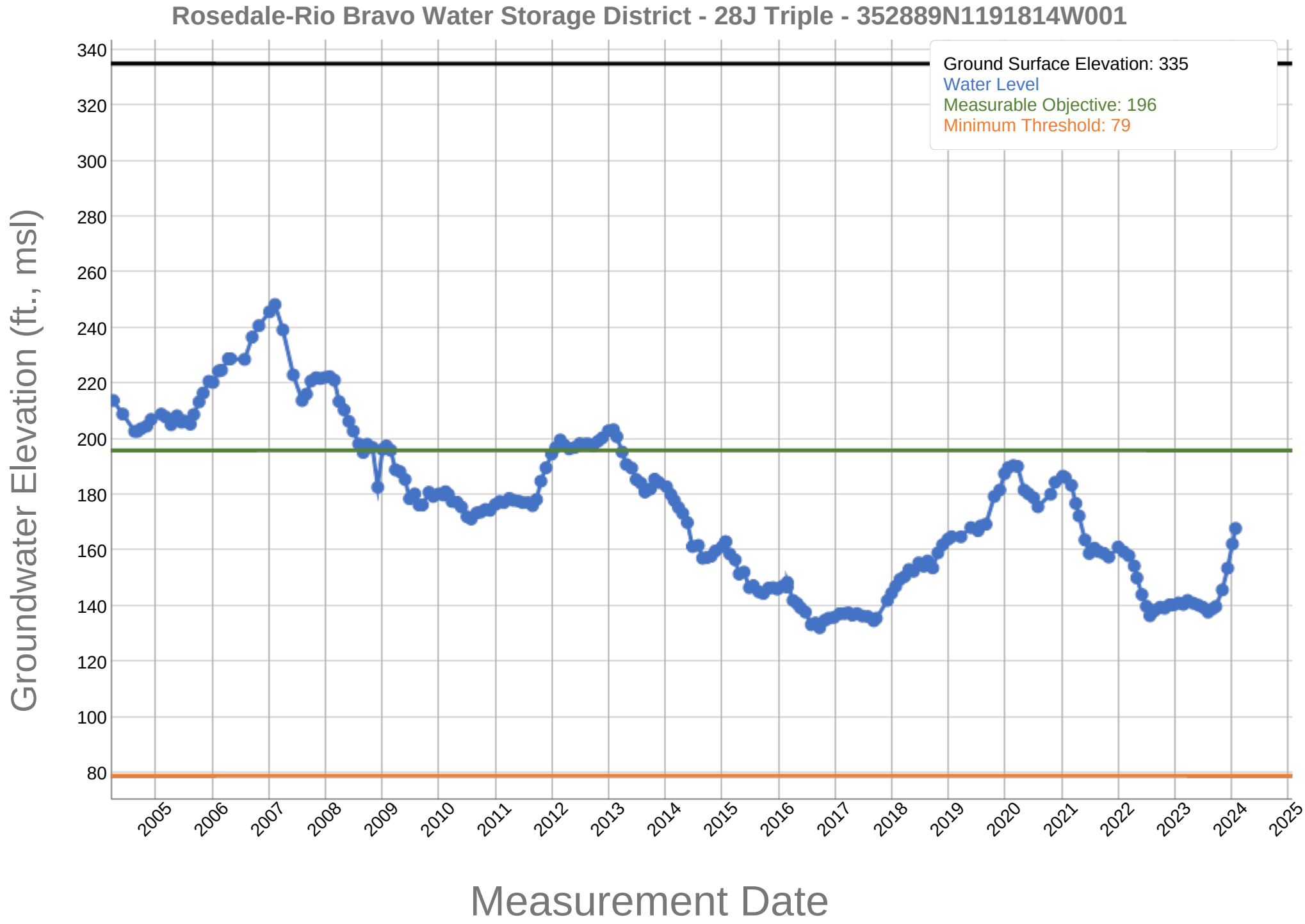
0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

Z:\000-OldZDrive\jpa. JPA's\SGMA\RRBMA\RRBMA SGMA Docs\Maps\Figures (RE) 2022-06-22


Rosedale-Rio Bravo Water Storage District - 28J Triple - 352889N1191814W001
Ground Surface Elevation: 335
Water Level
Measurable Objective: 196
Minimum Threshold: 79
Groundwater Elevation (ft., msl)
340
320
300
280
260
240
220
200
180
160
140
120
100
80
2005
2006
2007
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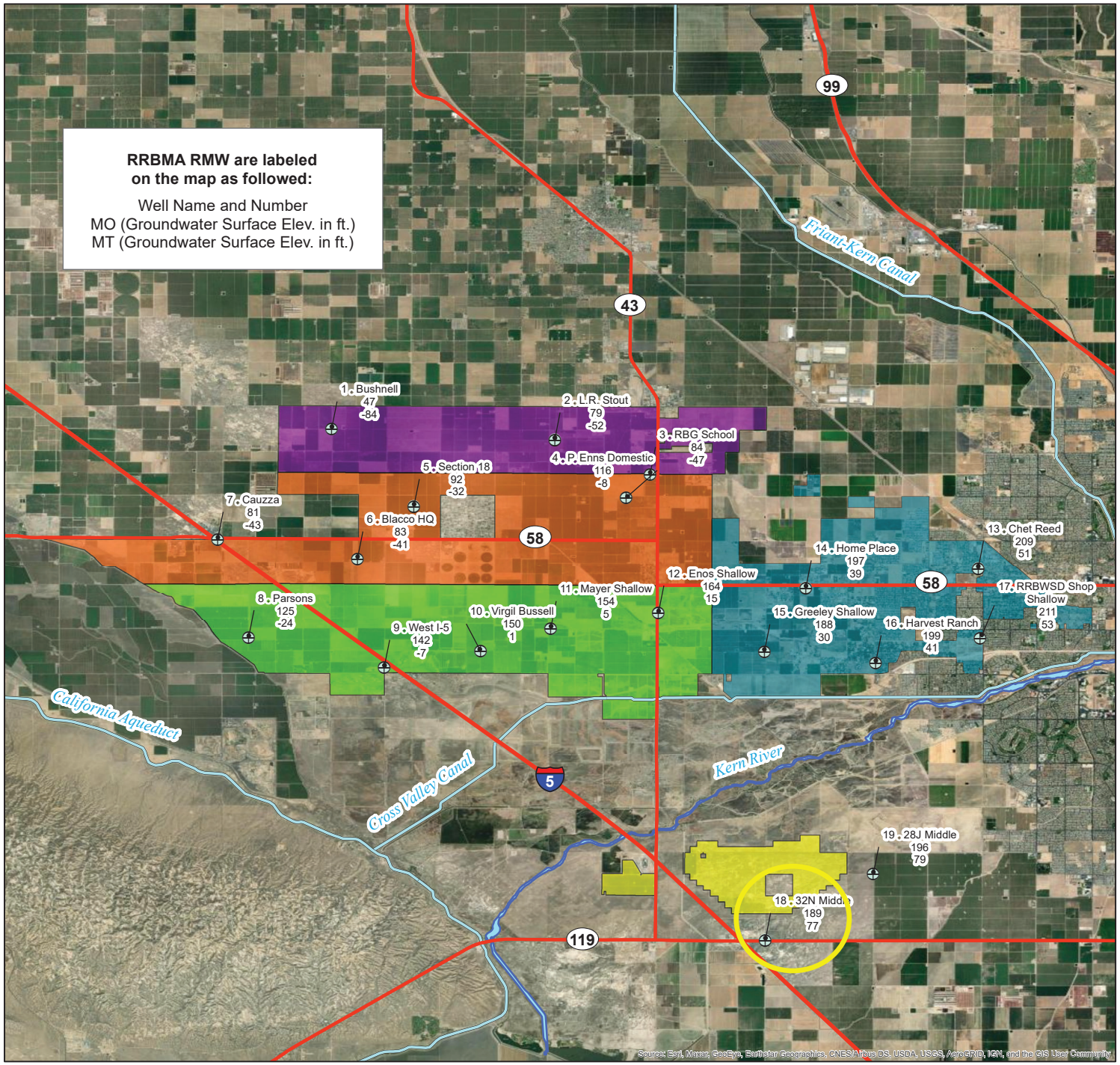
2025
Measurement Date

RRBMA Monitoring Areas - RMW Water Level MOs and MTs



Legend

- RRBMA RMW (Water Level)
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- North Monitoring Area
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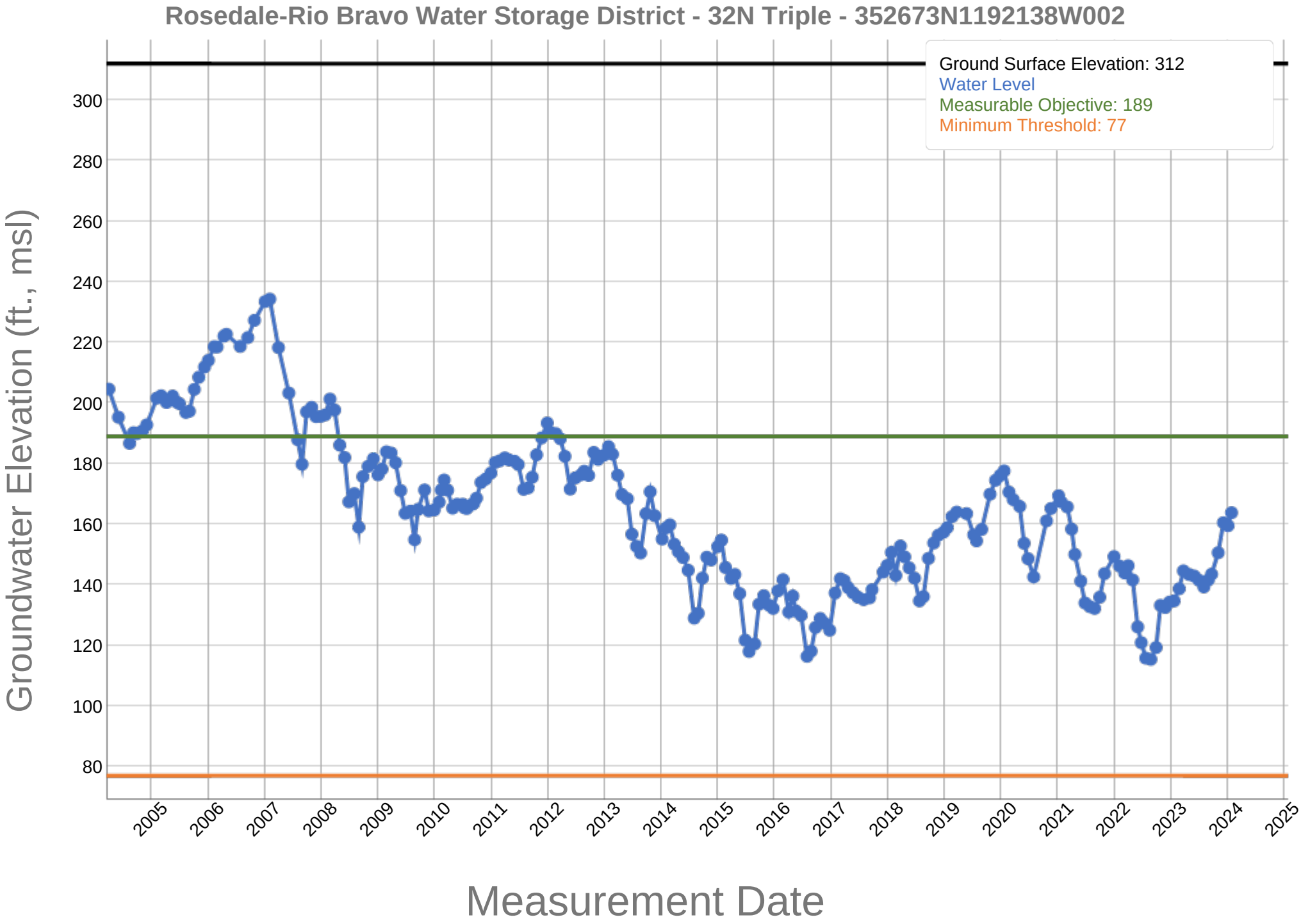
N

0 1.75 3.5 7

Miles

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

Z:\000-OldZDrive\jpa. JPA's\SGMA\RRBMA\RRBMA SGMA Docs\Maps\Figures (RE) 2022-06-22


Rosedale-Rio Bravo Water Storage District - 32N Triple - 352673N1192138W002
Ground Surface Elevation: 312
Water Level
Measurable Objective: 189
Minimum Threshold: 77
Groundwater Elevation (ft., msl)
300
280
260
240
220
200
180
160
140
120
100
80
2005
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2023
2024
2025
Measurement Date

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

DRAFT RECHARGE DELIVERIES

2023

Delivery Point	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Kern River Intake	556	159	8,180	19,259	20,906	16,052	11,706	10,235	10,108	12,962	3,328	0	113,451
RRB Turnout No. 2	458	5,895	10,243	2,547	3,860	3,773	599	1,424	6,031	6,088	11,524	8,033	60,474
Central Intake	0	0	660	5,219	2,471	2,081	5,361	6,766	2,253	0	0	1,448	26,259
RRB Turnout No. 1	0	1,312	2,922	4,516	547	2,836	6,210	5,486	4,963	5,399	5,199	3,937	43,329
North Strand	0	0	4,165	4,501	4,195	4,036	3,987	2,958	2,904	2,539	1,065	1,160	31,510
South Strand	0	0	2,803	3,060	2,120	1,486	1,569	1,371	1,307	1,020	506	536	15,778
Stockdale West	0	0	3,719	4,505	2,707	1,904	1,587	2,020	1,521	1,579	1,398	1,240	22,181
RRB Westside In-Lieu	0	0	69	144	406	711	620	604	95	112	0	0	2,761
Grimmway Pilot	0	0	0	0	89	2,138	2,104	24	0	0	0	0	4,355
Pioneer Project	2,588	1,228	4,622	3,092	5,510	5,042	4,330	3,800	4,263	3,500	3,370	200	41,545
ID4 Exchange	0	0	1,187	979	0	0	0	0	0	0	0	0	2,166
TOTALS >	**3,602**	**8,594**	**38,570**	**47,822**	**42,812**	**40,058**	**38,073**	**34,688**	**33,444**	**33,199**	**26,390**	**16,554**	**363,808**

ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT

DRAFT RECHARGE DELIVERIES

2024

Delivery Point	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Kern River Intake	0	869	0										869
RRB Turnout No. 2	0	5,207	0										5,207
Central Intake	2,777	2,281	0										5,058
RRB Turnout No. 1	2,800	2,281	0										5,081
North Strand	1,527	0	0										1,527
South Strand	694	0	0										694
Stockdale West	853	0	0										853
RRB Westside In-Lieu	0	0	0										0
Grimmway Pilot	0	0	0										0
Pioneer Project	0	2,088	0										2,088
ID4 Exchange	0	0	0										0
TOTALS >	**8,651**	**12,726**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21,377**

TO: Rosedale-Rio Bravo Water Storage District Board of Directors
Agenda Item 4.c

FROM: Zach Smith

DATE: April 9, 2024

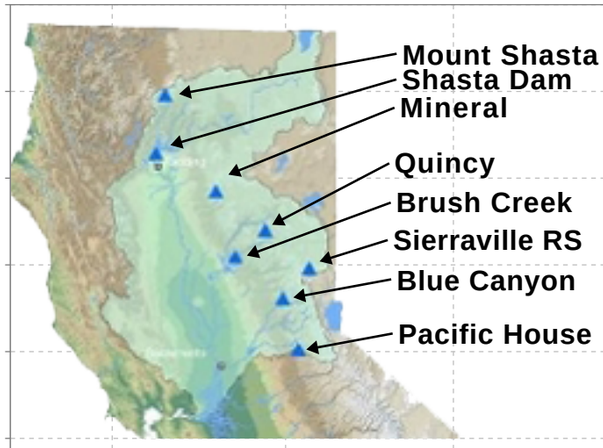
RE: Maintenance Report

Discussion:
Staff worked on various maintenance items throughout the District in March. Specifically:

- Tractor with scraper used to smooth levee roads in Strand and Stockdale West.
- Tractor with flail used to clean areas around Strand, West Basins, and West Superior.
- Herbicide applied along channel from Allen Road to Enos Lane.
- Backhoe used to reshape levees in Superior Area.
- Staff completed monthly cleaning of electrical panels on recovery wells.
- Minor fence repairs completed throughout District.

Recharge Basin Seeding – McCaslin Ponds

Northern Sierra Precipitation: 8-Station Index, April 04, 2024



Percent of Average for this Date: 99%

2016-2017 Daily Precip (wettest) 94.7

1982-1983 Daily Precip (2nd wettest) 88.5

2022 - 2023 Daily Precip 66.6

Average (1991-2020) 53.2

Current: 44.5

2021 - 2022 Daily Precip 43.0

2020-2021 Daily Precip (3rd driest) 24.0

1923-1924 (driest) 19.0

1976-1977 (2nd driest) 17.1

Cumulative Daily/Monthly Precipitation (inches)

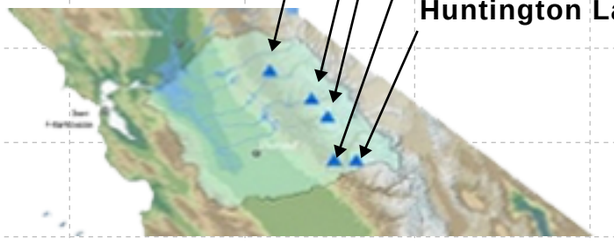
Total Water Year Precipitation

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1

Water Year (October 1 - September 30)

San Joaquin Precipitation: 5-Station Index, April 04, 2024



Percent of Average for this Date: 86%

1982-1983 (wettest) 77.4

72.7 2016-2017 Daily Precip (2nd wettest)

2022 - 2023 Daily Precip 64.5

Average (1991-2020) 39.9

Current: 28.7

2021 - 2022 Daily Precip 25.3

2020-2021 Daily Precip (3rd driest) 18.8

15.4 1976-1977 (2nd driest)

Cumulative Daily/Monthly Precipitation (inches)

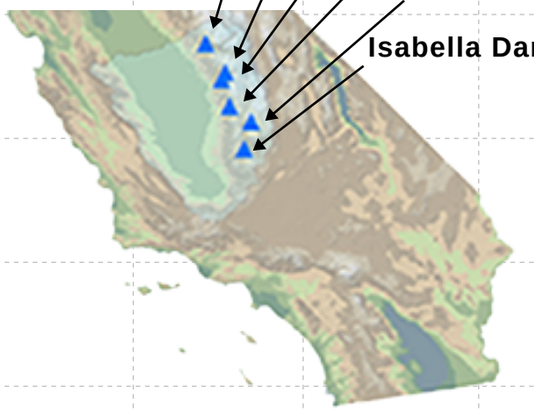
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1

Water Year (October 1 - September 30)

Total Water Year Precipitation

Tulare Basin Precipitation: 6-Station Index, April 04, 2024



Percent of Average for this Date: 85%

1968-1969 Daily Precip (wettest) — 56.3

2022-2023 Daily Precip — 56.2

1982-1983 Daly Precip (2nd wettest) — 54.4

Average (1991-2020) — 28.3

Current: 20.1

2019-2020 Daily Precip — 18.6

2021-2022 Daily Precip — 17.0

1976-1977 Daily Precip (2nd driest) — 10.9

2020-2021 Daily Precip (driest) — 9.9

Cumulative Daily/Monthly Precipitation (inches)

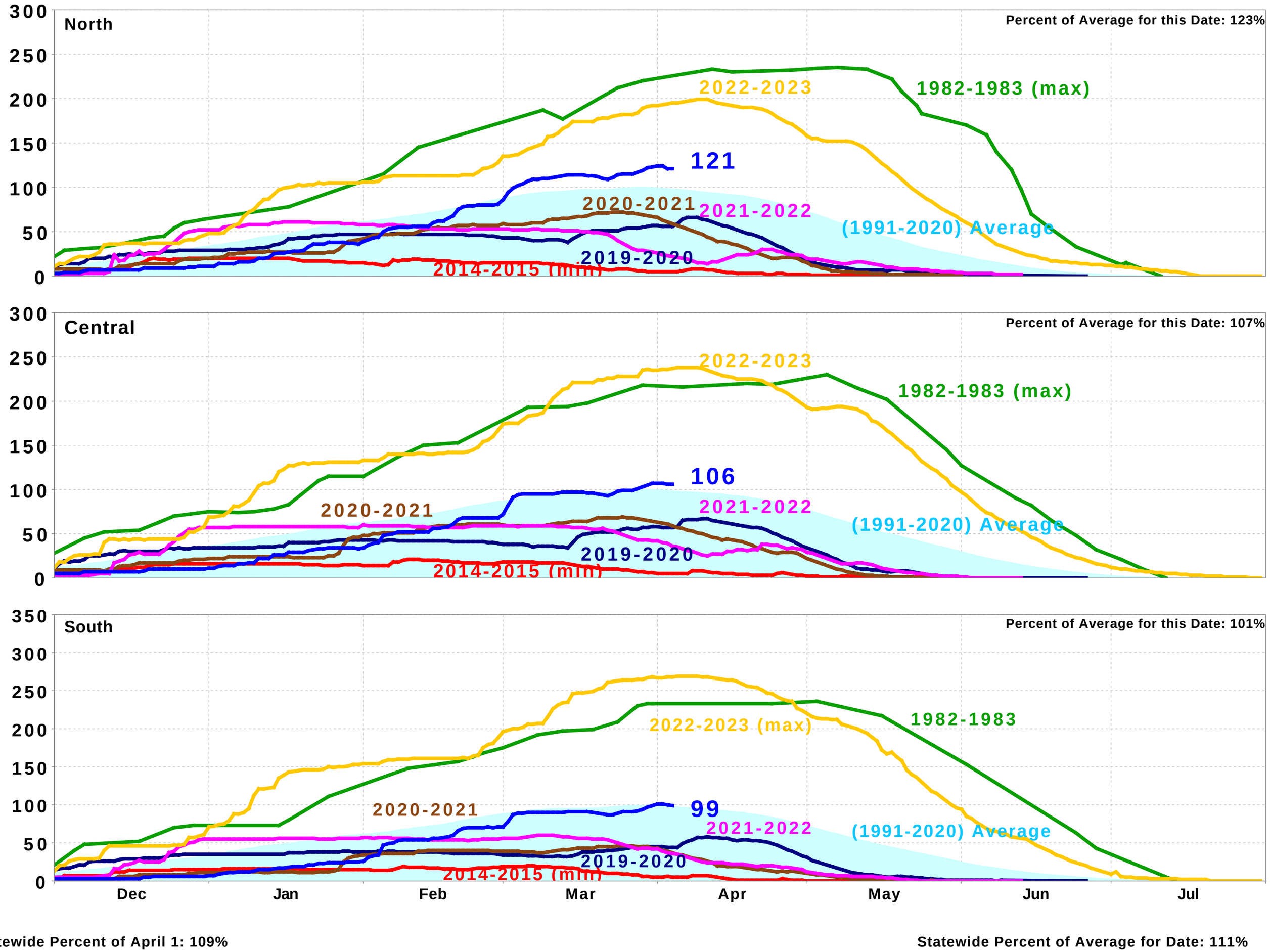
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1

Water Year (October 1 - September 30)

Total Water Year Precipitation

California Snow Water Content, April 4, 2024, Percent of April 1 Average



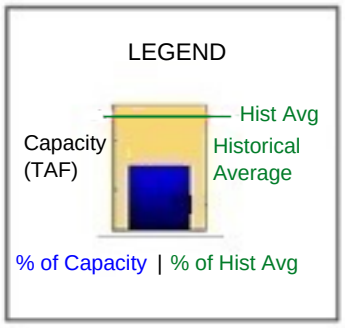
Statewide Percent of April 1: 109%

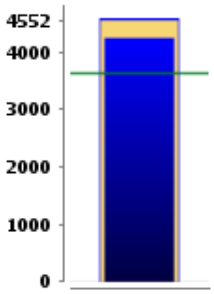
Statewide Percent of Average for Date: 111%

CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

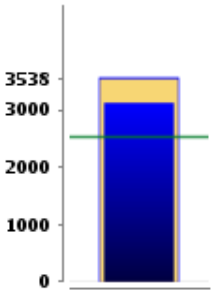
Midnight - April 3, 2024

CURRENT CONDITIONS

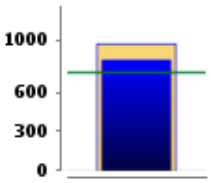




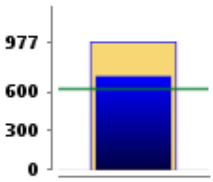
93% | 117%
Shasta



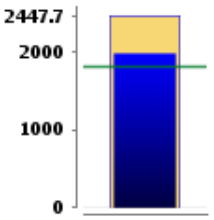
88% | 123%
Oroville



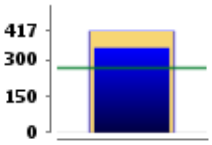
88% | 113%
New Bullards Bar



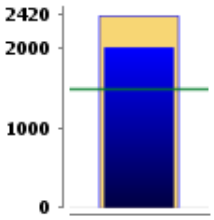
74% | 115%
Folsom



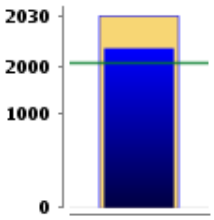
81% | 109%
Trinity



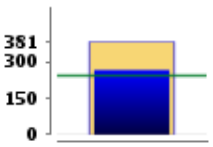
84% | 132%
Camanche



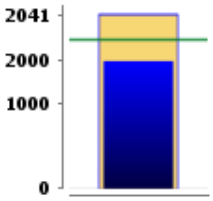
84% | 135%
New Melones



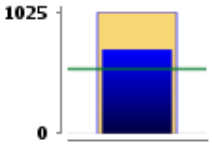
83% | 111%
Don Pedro



70% | 111%
Sonoma

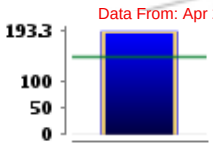


74% | 85%
San Luis

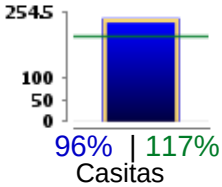


70% | 129%
McClure

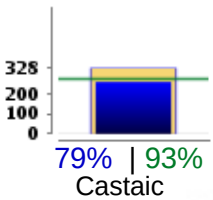
Data From: Apr 2



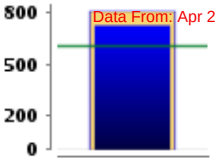
98% | 129%
Cachuma



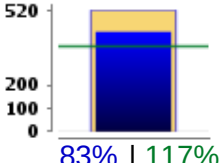
96% | 117%
Casitas



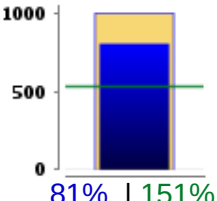
79% | 93%
Castaic



90% | 120%
Diamond Valley



83% | 117%
Millerton



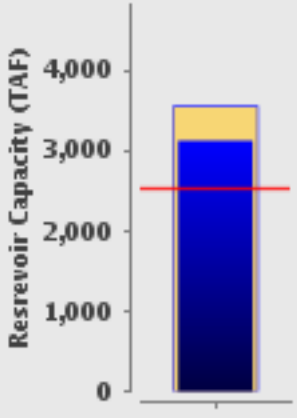
81% | 151%
Pine Flat

Updated 04/04/2024 03:48 PM

CURRENT RESERVOIR CONDITONS

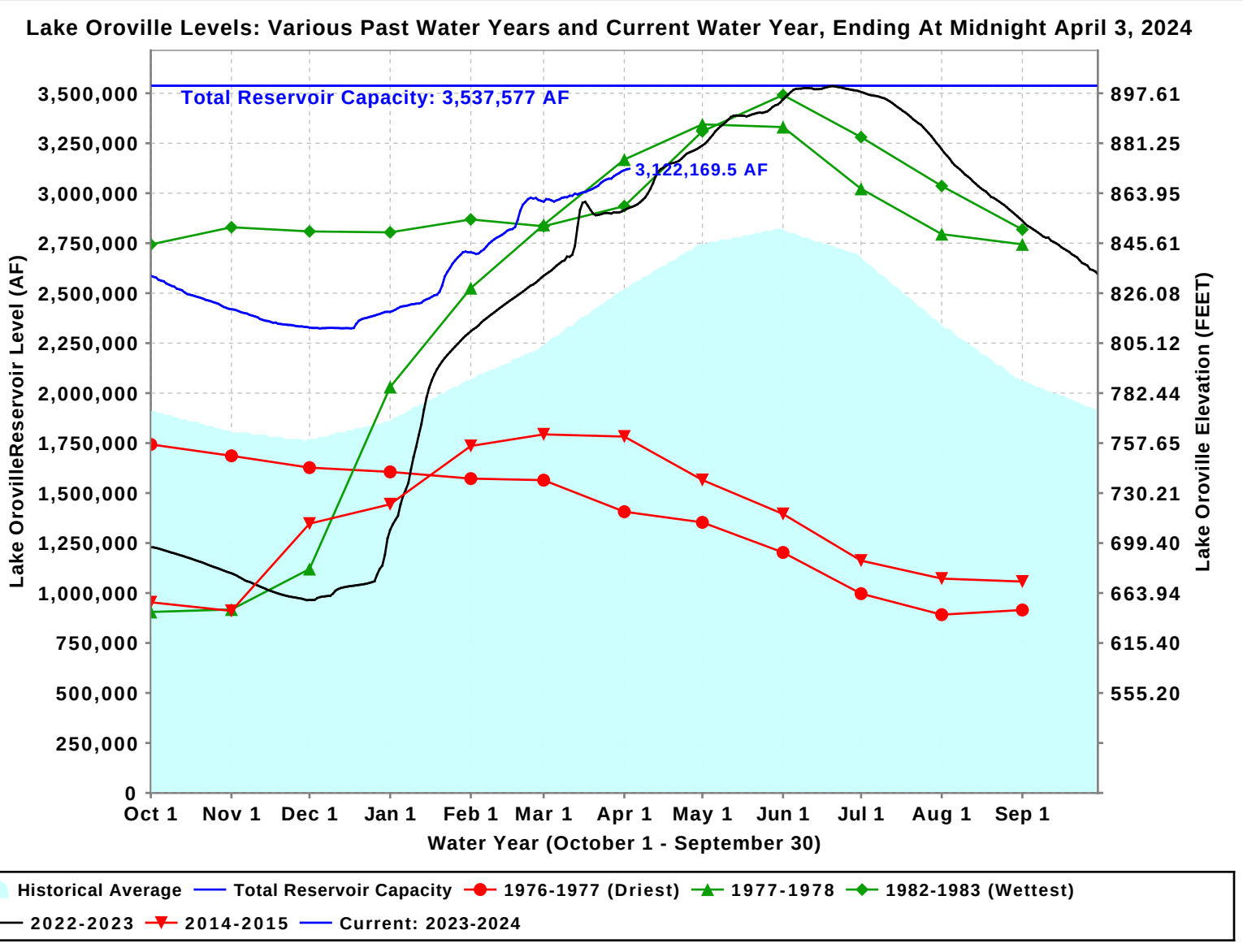
Lake Oroville Conditions

(as of Midnight - April 3, 2024)



Current Level: 3,122,169.5 AF

88% (Total Capacity) | 123% (Historical Avg.)

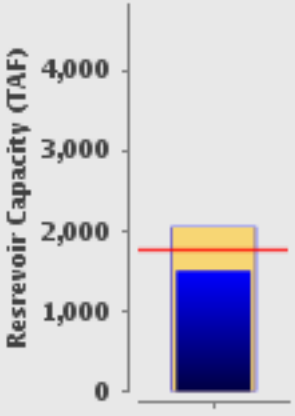


Data Updated 04/04/2024 03:48 PM

CURRENT RESERVOIR CONDITONS

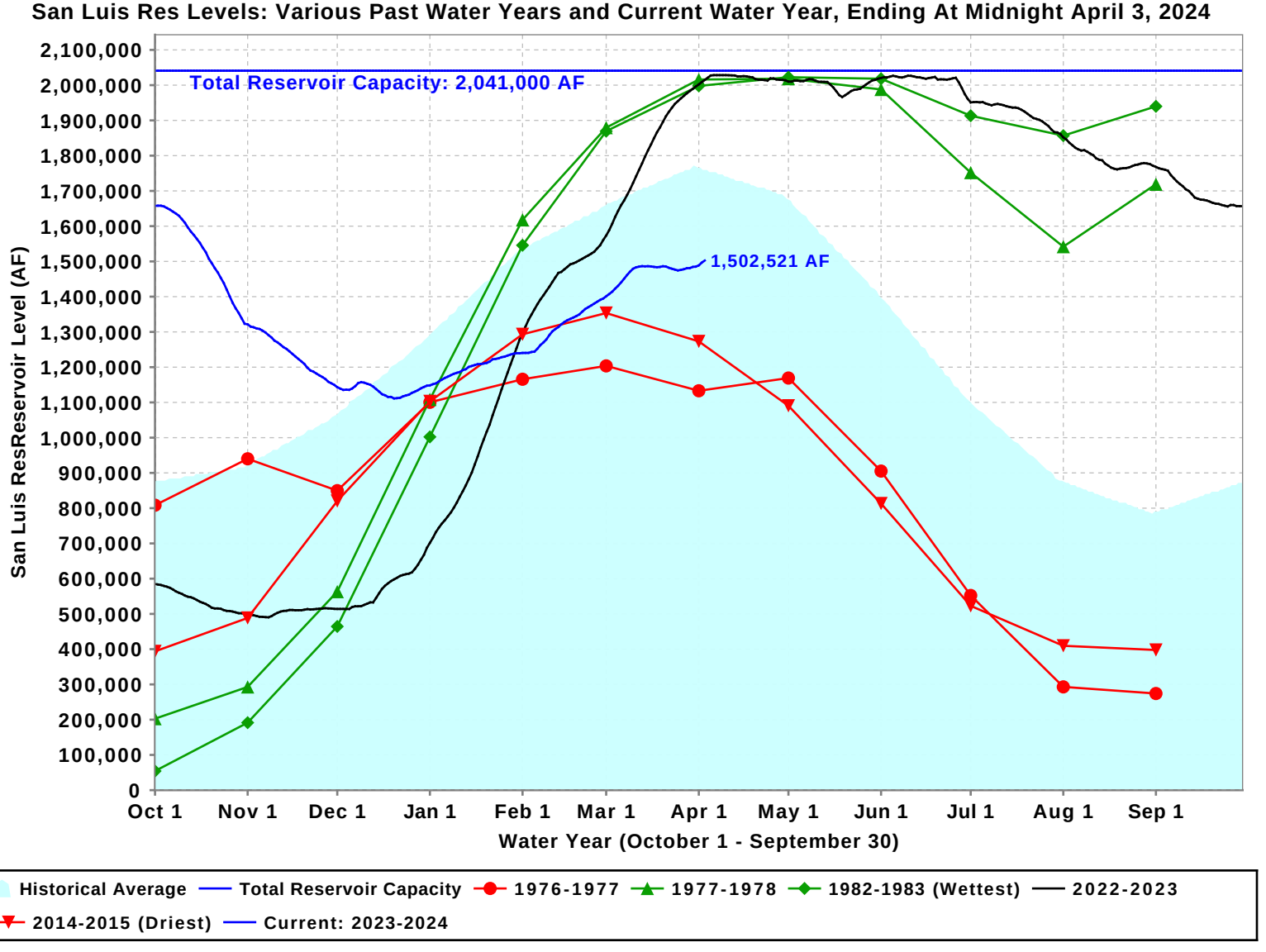
San Luis Res Conditions

(as of Midnight - April 3, 2024)



Current Level: 1,502,521 AF

74% (Total Capacity) | 85% (Historical Avg.)



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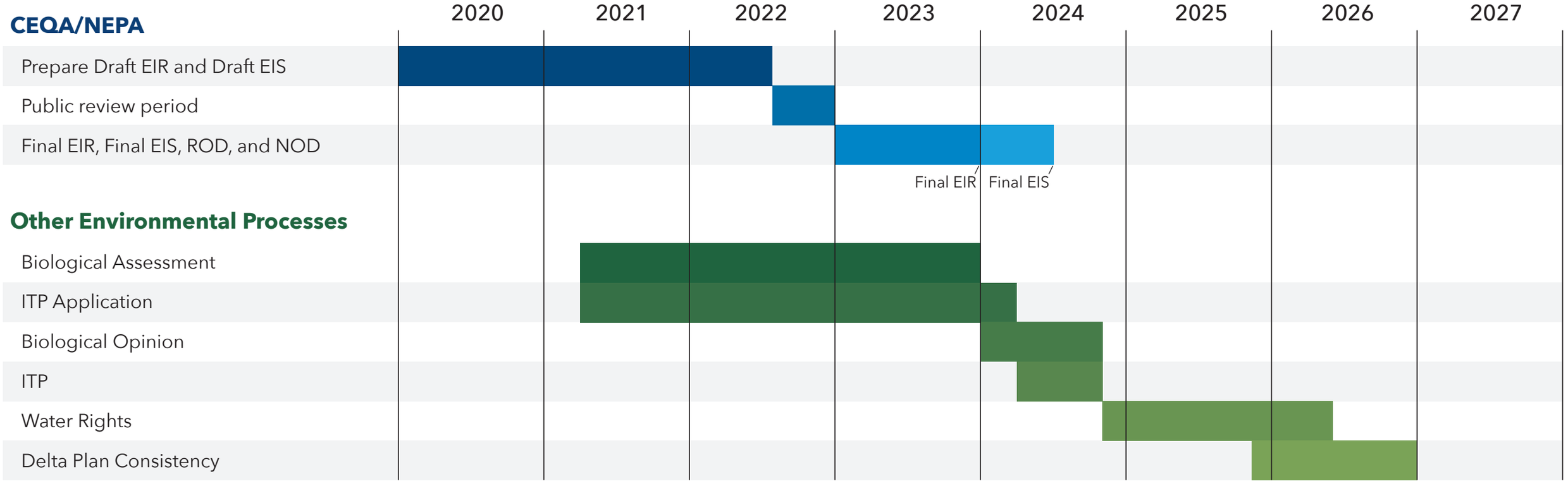
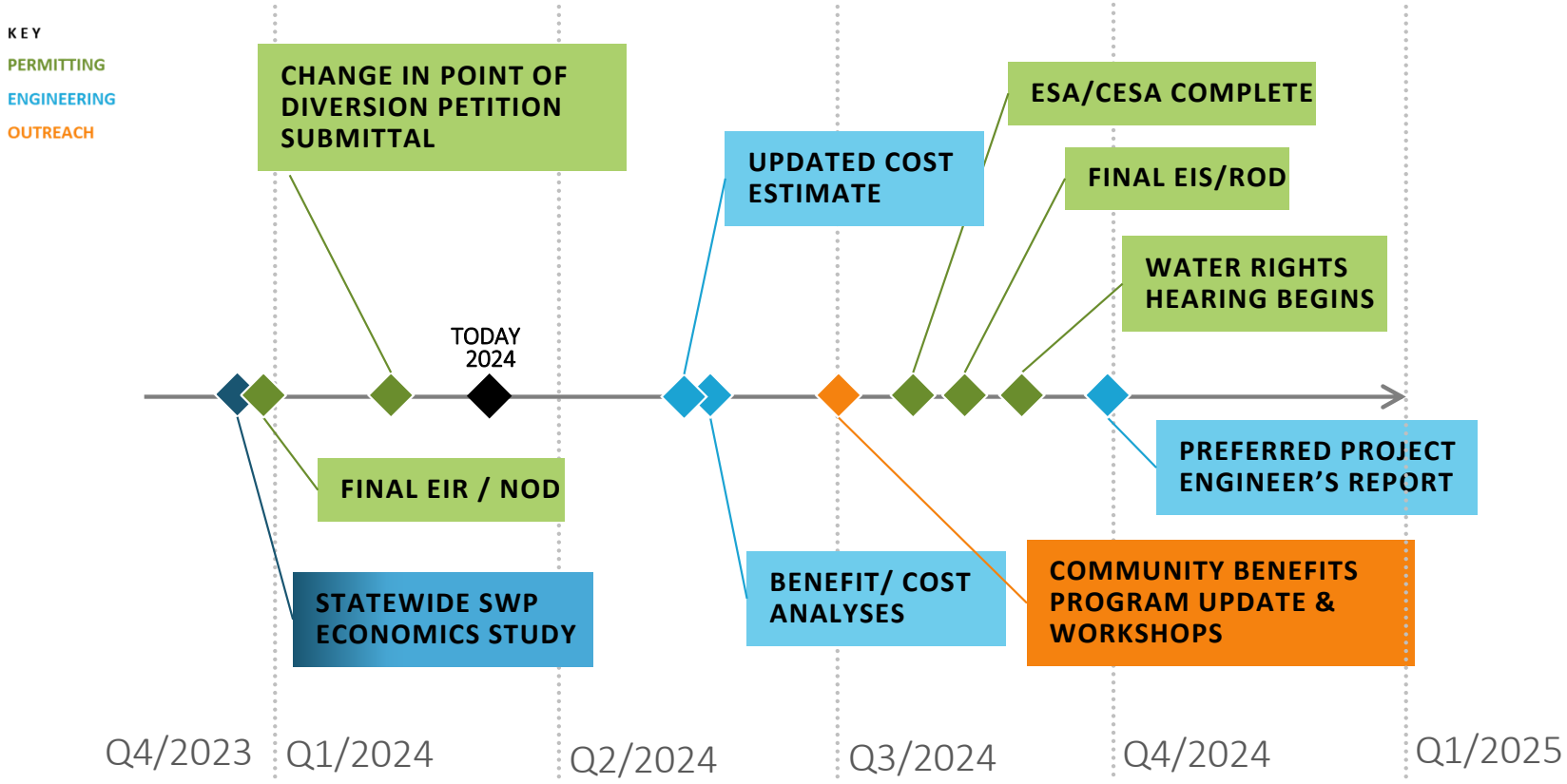
Attachment 1

Delta Conveyance Project Planned Schedule



DCP 2024 Milestones



KERN COUNTY WATER AGENCY

Stuart T. Pyle Water Resources Center
3200 Rio Mirada Drive
Bakersfield, California

Notice of
Special Board Meeting

March 11, 2024

AGENDA

I. Call to Order – 1:00 p.m.

II. Directors' Forum

III. Public Comment
Anyone may comment on any subject within Agency jurisdiction whether or not it is on the agenda. Time for such comment may be limited.

IV. Report of the General Manager

V. Report of the General Counsel

A. Authorization for Closed Session regarding:

1. Public Employee Discipline/Dismissal/Release: (Government Code section 54957)

2. Public Employee Appointment/Employment: General Counsel: (Government Code section 54957)

3. Conference with Legal Counsel – Anticipated Litigation: Significant exposure to litigation: (Government Code section 54956.9, subdivision (d)(2)):

a. One potential suit

VI. Adjournment

DECLARATION OF POSTING: I declare under penalty of perjury that I am employed by the Kern County Water Agency and that I posted the foregoing Agenda at the Agency Office on March 8, 2024.

Thomas D. McCarthy, General Manager

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

KERN COUNTY WATER AGENCY

Stuart T. Pyle Water Resources Center
3200 Rio Mirada Drive
Bakersfield, California

Notice of
Special Board Meeting

March 28, 2024

Conference Line: +1 (571) 317-3122
Access Code: 863-465-805#
https://global.gotomeeting.com/join/863465805

AGENDA

I. Call to Order – 11:30 a.m.

II. Directors' Forum

III. Public Comment
Anyone may comment on any subject within Agency jurisdiction whether or not it is on the agenda. Time for such comment may be limited.

IV. Report of the General Manager

V. Review of the Kern County Water Agency General Fund and State Contract Payment Fund Budgets and Cash Flow Projections

VI. Adjournment

DECLARATION OF POSTING: I declare under penalty of perjury, that I am employed by the Kern County Water Agency and that I posted the foregoing Agenda at the Agency Office on March 22, 2024.

Stephanie N. Prince, Board Secretary

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

KERN COUNTY WATER AGENCY

Stuart T. Pyle Water Resources Center
3200 Rio Mirada Drive
Bakersfield, California 93308

Notice of
BOARD OF DIRECTORS MEETING

March 28, 2024

Conference Line: +1 (571) 317-3122
Access Code: 863-465-805#
https://global.gotomeeting.com/join/863465805

AGENDA

I. Call to order – 12:00 p.m.

II. Report of the General Counsel

A. Authorization for Closed Session regarding:

1. Conference with Legal Counsel – Existing Litigation
(Government Code section 54956.9, subdivision (a)):

a. Applications Filed for Kern River Water

b. California Department of Water Resources v. All Persons Interested in the Matter of the Contract Extension Amendments

c. North Coast Rivers Alliance, et al. v. California Department of Water Resources (COA CEQA)

d. California Department of Water Resources v. All Persons Interested in the Matter of the Authorization of Delta Program Revenue Bonds

e. Rosedale-Rio Bravo Water Storage District, *et al.* v. Kern County Water Agency, *et al.* (CVC Issues)

f. Kern Delta Water District, *et al.* v. Rosedale-Rio Bravo Water Storage District (Onyx CEQA)

g. Rosedale-Rio Bravo Water Storage District v. Buena Vista Water Storage District, *et al.* (Onyx Water Rights)

h. California Sportfishing Protection Alliance, *et al*. v. California State Water Resources Control Board, *et al*., Sacramento County Superior Court, Case No. 34-2021-80003761 (2021 Order Re Temporary Urgency Change Petition)

i. California Sportfishing Protection Alliance, *et al*. v. State Water Resources Control Board, *et al*., Sacramento County Superior Court, Case No. 34-2021-80003763 (2021 Order Re Shasta Temporary Management Plan)

j. California Water Impact Network v. Department of Water Resources, Sacramento County Superior Court Case No. 34-2020-80003492; North Coast Rivers Alliance v. Department of Water Resources, Sacramento County Superior Court Case No. 34-2020-80003491 (Water Management Tools)

k. Pacific Coast Federation of Fishermen's Associations, *et al*. v. Ross,., E.D. Cal., Case No. 1:20-cv-00431 & California Natural Resources Agency, *et al*. v. Ross, *et al*., E.D. Cal., Case No. 1:20-cv-00426 (Long-term Operations)

l. State Water Board Cases, Sacramento County Superior Court Case No. JCCP 5013 (Water Quality Control Plan Phase 1 Litigation)

m. Oroville Dam Cases, Sacramento County Superior Court Case No. JCCP 4974

n. Long-term State Water Project Operations Cases, Sacramento County Superior Court Case No. JCCP 5117

o. Temporary Applications Filed for Kern River Water

p. Bring Back the Kern, *et al.* v. City of Bakersfield, *et al.*, Kern County Superior Court Case No. BCV-22-103220

2. Conference with Legal Counsel – Initiation of Litigation (Government Code section 54956.9, subdivision (d)(2)):

a. Two potential suits

3. Conference with Legal Counsel – Anticipated Litigation: Significant exposure to litigation: (Government Code section 54956.9, subdivision (d)(2)):

a. Two potential suits

4. Conference with Real Property Negotiator (Government Code section 54956.8):

a. Negotiator: Water Resources Manager
Property: State Water Project Water
Parties: California Department of Water Resources and State Water Project Contractors
Under Negotiation: Price & Terms

III. Directors' Forum

IV. Public Comment
Anyone may comment on any subject within Agency jurisdiction whether or not it is on the agenda. Time for such comment may be limited.

V. Minutes of Board Meetings and Committee Meetings –

Special Board Meeting	February 22, 2024
Regular Board Meeting	February 22, 2024
Special Board Meeting	March 11, 2024
Special Board Meeting	March 18, 2024

VI. Report of the General Manager

VII. Advisory Committee Reports

A. Cross Valley Canal Advisory Committee

B. Improvement District No. 3 Advisory Committee

C. Urban Bakersfield Advisory Committee

VIII. Board Committee Reports
The following items will be discussed in detail at the meeting and may result in appropriate action being taken relating to the subject matter (such action may or may not conform to any staff recommended action):

A. **ADMINISTRATIVE COMMITTEE** – Director Cattani, Chair

1. Report of the Administrative Operations Manager

2. Payment of the Bills

3. Financial Report

4. Authorization to Order the Deposit or Withdrawal of Money in the Local Agency Investment Fund

5. Consideration of the Kern County Water Agency Investment Policy

6. Appointment of Association of California Water Agencies Joint Powers Insurance Authority Director and Alternate Directors

7. Authorization to Sell Kern County Water Agency Surplus Equipment

8. Authorization to Execute Amendment No. 3 to the Kern County Water Agency Agreement for the Stuart T. Pyle Water Resources Center Security Modifications Project

B. **POLICY COMMITTEE** – Director Milobar, Chair

1. Update on Delta Conveyance Activities

2. Update on Legislative Activities

3. Update on Agreements to Support Healthy Rivers and Landscapes

C. **WATER RESOURCES COMMITTEE** – Director Fast, Chair

1. Report of the Water Resources Manager

2. Report on the State Water Contractors Board Meeting

3. Report on 2024 State Water Project and Central Valley Project Allocations and Operations

4. Water Delivery Operations

    a. Report on Kern County Water Agency California Aqueduct Deliveries

    b. Update on Water Transfers, Exchanges and Purchases

5. Report on the Kern Groundwater Authority Meetings

6. Report on the Kern River

D. **WATER MANAGEMENT COMMITTEE** – Director Averett, Chair

1. Report of the Engineering and Groundwater Services Manager

    a. Update on Groundwater Banking Construction/Maintenance Projects

    b. Update on Pioneer Project Recharge Facilities – Basin 11

2. Report on 2024 Water Operations

3. Report on Kern Water Bank Activities

E. **CROSS VALLEY CANAL COMMITTEE** – Director Lundquist, Chair

1. Report of the Water Resources Manager

    a. Update on Cross Valley Canal Construction/Maintenance Projects

2. Report on Cross Valley Canal Operations and Deliveries

3. Authorization to Execute Amendment No. 2 to the Kern County Water Agency Agreement for a Construction Management Services Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05

4. Authorization to Execute Amendment No. 2 to the Kern County Water Agency Agreement for a Geotechnical Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05

5. Authorization to Execute a Contract for the Cross Valley Canal Pools 1 through 6 Sediment Removal

6. Authorization to Execute an Agreement for Construction of Pacific Gas and Electric Company Pipeline L-300B Replacement Crossing of the Cross Valley Canal

F. **URBAN BAKERSFIELD COMMITTEE** – Director Wulff, Chair

1. Report of the Improvement District No. 4 Manager

    a. Update on Improvement District No. 4 Construction/Maintenance Projects

b. Report on the Kern River Groundwater Sustainability Agency Meeting

c. Update on the Improvement District No. 4 Water Education Program

2. Authorization to Set Groundwater Charges Within Improvement District No. 4 for Fiscal Year 2024-25

3. Report on the Improvement District No. 4 2024 Water Supply and Management Plan

4. Report on the Henry C. Garnett Water Purification Plant

a. Authorization to Request Bids for Chemicals Used in the Water Treatment Process

b. Authorization to Execute Amendment No. 1 to the Kern County Water Agency Contract for the Sediment Removal for the Temperature Equalization Pond and Calloway Canal Extension

IX. Correspondence

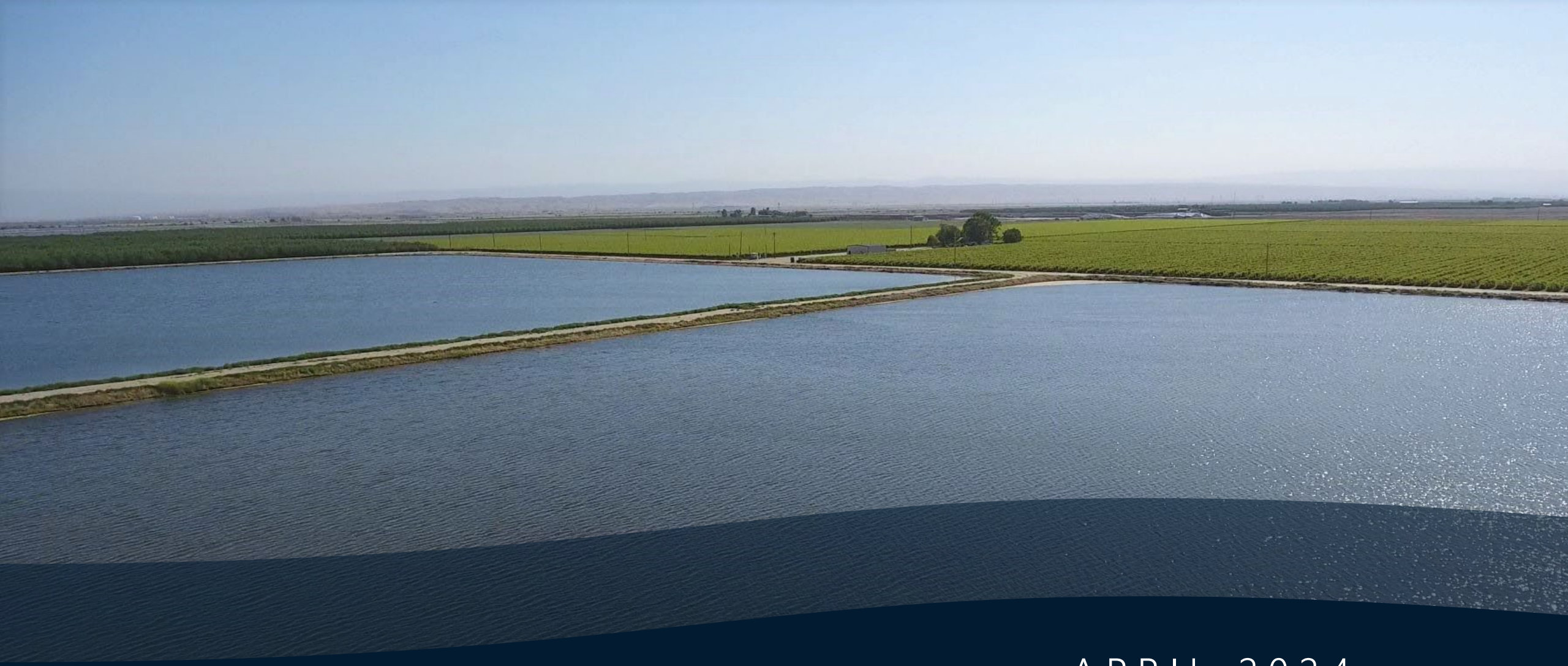
X. Brief Report on Potential New Business

XI. Adjournment

DECLARATION OF POSTING: I declare under penalty of perjury, that I am employed by the Kern County Water Agency and that I posted the foregoing Agenda at the Agency Office on March 22, 2024.

Stephanie N. Prince, Board Secretary

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Secretary in advance of the meeting to ensure availability of the requested service or accommodation.



APRIL 2024

ROSEDALE-RIO BRAVO
WATER STORAGE DISTRICT

STRATEGIC PLAN MONTHLY UPDATE

PURPOSE

TO BE RESPONSIBLE STEWARDS OF WATER, A VALUED RESOURCE

MISSION

BUILDING A SUSTAINABLE WATER SUPPLY TO HELP OUR COMMUNITY THRIVE

VALUES

SUSTAINABILITY
INNOVATION
GRACIOUS
HARD-WORKING
TRUSTWORTHY

STRATEGIC PRIORITIES

SUSTAINABILITY/RESILIENCY, LONG-TERM HEALTHY PARTNERSHIPS, FINANCIAL STRENGTH, TEAMWORK, INNOVATION/CREATIVITY

1. GOAL #1: DEVELOP AND IMPROVE LONG-TERM PARTNERSHIPS
2. GOAL #2: ACQUIRE OTHER WATER SUPPLIES
3. GOAL #3: DEVELOP A WATER CHARGE TO SUPPORT SGMA IMPLEMENTATION
4. GOAL #4: LIVE OUT AN INTENTIONAL AND FOCUSED PROJECT PLAN FOR MAJOR INITIATIVES
5. GOAL #5: ENSURE THAT KEY RESPONSIBILITIES WITHIN THE AGENCY ARE SUSTAINABLE AND EFFICIENT

GOAL # 3 OBJECTIVES	PRIORITY	STATUS	OWNER
Develop an Implementation Plan By 8/31	HIGH	COMPLETE	Trent Taylor
Develop a Communication Plan By 6/30	HIGH	COMPLETE	Trent Taylor Dan Raytis
Develop a Policy List By 6/30	MEDIUM	COMPLETE	Trent Taylor Dan Raytis
Develop a Rate Study/Engineers Report By 5/31	MEDIUM	COMPLETE	Trent Taylor Dan Raytis
Implement a Water Charge for Water Usage in 2024 By 12/31	MEDIUM	IN PROGRESS	Trent Taylor Dan Raytis

TO: Rosedale-Rio Bravo Water Storage District Board of Directors
Agenda Item 7.a.i

FROM: Dan W. Bartel

DATE: April 9, 2024

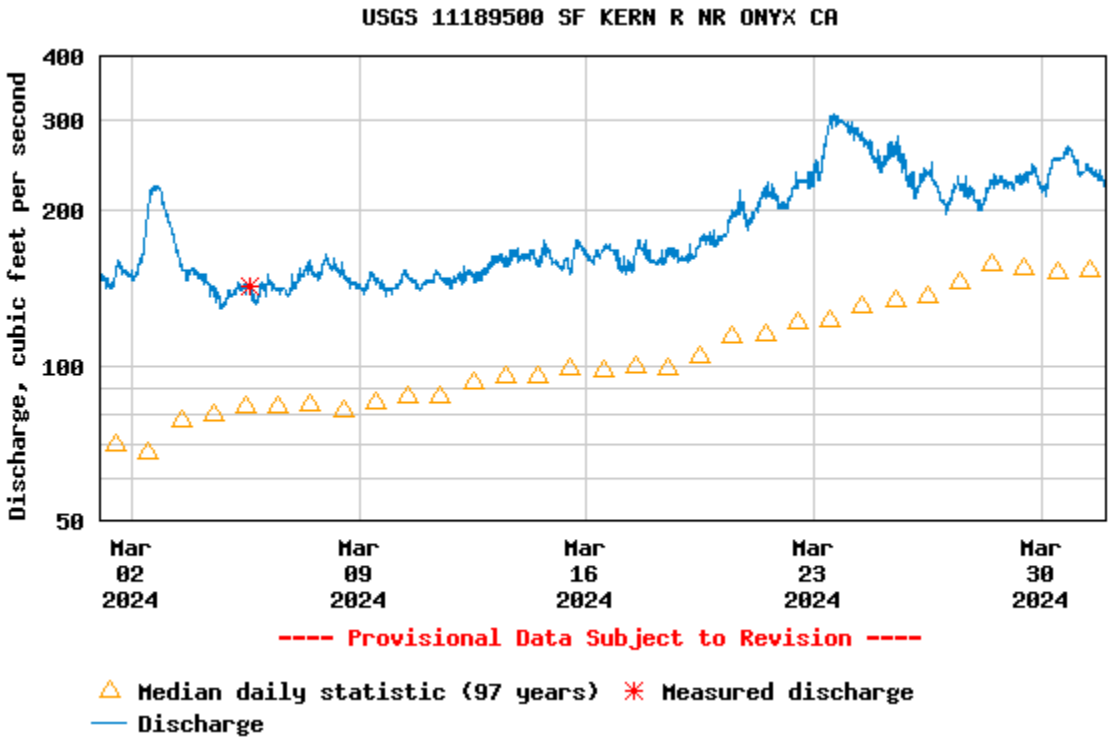
RE: Onyx Ranch Operations Report

Discussion:

Staff has:

- Continued operation of conveyance facilities
- Irrigation activities resumed March 11 after precipitation subsided.
- USGS verified the South Fork station on March 5.
- Staff did not stream gage during the month due to high flows.
- Staff completed ditch cleaning activities on the Smith Ditch.
- Staff demolished old shop in preparation for replacement.
- Staff began construction of the slab for the new shop building.

South Fork flows downstream of Bloomfield averaged 176 cfs plus calculated accretions of 8 cfs, for a total average flow of about 184 cfs.



ROSEDALE-RIO BRAVO WATER STORAGE DISTRICT - ONYX RANCH

MONTHLY GROUNDWATER MONITORING RUN

MAR

2024

Well Name	DATE	Depth to Water (ft)	Notes
Onyx Store - Domestic	3/28/2024	39.7	
Ranch HQ - Domestic	3/28/2024	14.4	
Landers Sand - Old Ag Well	3/28/2024	16.4	
Onyx Store - Old Ag Well	3/28/2024	16.2	
Mack Well	3/28/2024	21.8	
Nicoll Field - Old Ag Well	3/28/2024	12.7	
Mack Field West - Domestic	3/28/2024	11.9	
Gibboney-2 Piezo	3/28/2024	4.7	
Gibboney-3 Piezo	3/28/2024	5.4	
Boone Piezo	3/28/2024	3.5	
Lieb Piezo	3/28/2024	7	
Pruitt Piezo	3/28/2024	9.3	
Scodie Well	3/28/2024	20.2	
Pruitt Well	3/28/2024	12.4	
Nicoll Well	3/28/2024	13.2	
Mack Piezo	3/28/2024	16.6	
West Onyx Piezo (Top of pipe to the concrete 1.9ft)	3/28/2024	12.7	
East Onyx Piezo (Top of pipe to the concrete 1.4ft)	3/28/2024	19.8	
Smith Piezo #1	3/28/2024	15.3	
Smith Piezo #2	3/28/2024	19	
Smith Piezo #3	3/28/2024	16.8	

TO: Rosedale-Rio Bravo Water Storage District Board of Directors
Agenda Item 7.b.i.

FROM: Dan Bartel, Markus Nygren

DATE: April 09, 2024

RE: Improvement Projects

Discussion:

Bowling and McCaslin Recovery Well Project

Background:
Three additional recovery wells to be drilled and completed, two at the McCaslin recharge site, and one well at the Bowling recharge site in East Superior. The District has received two million dollars as part of the WaterSMART Drought Resiliency 2021 award to help supplement the costs.

Progress:

McCaslin 2:

-Zone sampling complete 03/08 (see attached)
-Well Design complete 03/18 – 03/22 (see attached)
-Casing inspection complete 04/02
-Ream to 32" hole to 810' 04/01 – 04/04
-Casing installed 04/04

Bowling:

-Reaming/completion of hole opening to 735' 03/04 – 03-08
-Casing installation 03/16
-Gravel pack installation 03/17 - 03/18
-Cement Seal poured 03/18 & 03/20
-Swab and airlifting 03/25 – 03/29
-Development pump set 04/03, beginning of surging/development process

McCaslin 1:

-Pilot hole drilled to 820 feet, samples collected and delivered to hydrogeologist 04/04

Recommendation:

1. Approve Change Order 1 $28,000 for the additional zone sampling costs
2. Approve Pay Estimate No. 2 of $417,393.90 to BWP and $21,968.10 to a retention account.

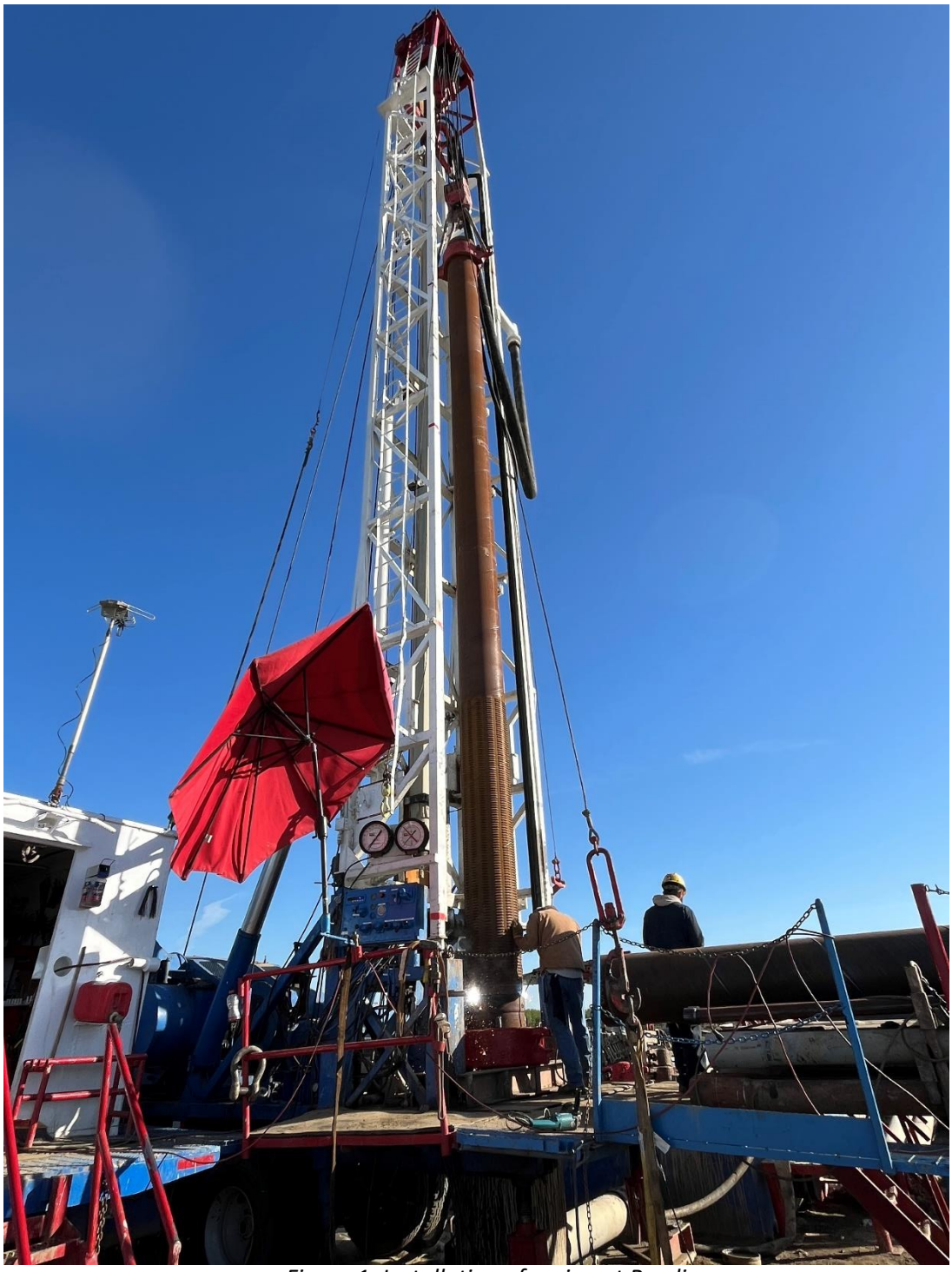


Figure 1: Installation of casing at Bowling

Figure 2: Drilling mud test during final construction/opening of hole

Bakersfield Well & Pump Co.
7212 Fruitvale Avenue
Bakersfield, CA 93308

To: Rosedale-Rio Bravo Water Storage District
849 Allen Rd.
Bakersfield, CA 93314
Attn: Markus Nygren
Ph: 661-589-6045

Change Oder #1
Billing Date 3-31-2024
JOB # 23640
PO #

Change Order #1

Job Description: Drill 20" x 790' Well# MC-1 & MC-2, 710' Well# B1 - Equip 350 HP Pumps @ Enos Ln & Brimhall Rd

Item #	Bid Item Description	Qty	Units	Unit Bid Price	Qty This Period	Period Total	Qty to Date	Total to Date
1	Zone #1 - Pumping / 760' - 780' - 4 hours	21	Hrs	$ 350.00	17	$ 5,950.00	17	$ 5,950.00
2	Zone #2 - Pumping / 700' - 725' - 4 Hours	26	Hrs	$ 350.00	22	$ 7,700.00	22	$ 7,700.00
3	Zone #3 - Pumping / 620' - 640' - 4 Hours	42	Hrs	$ 350.00	38	$ 13,300.00	38	$ 13,300.00
4	Zone #4 - Pumping / 540' - 560' -4 Hours	7	Hrs	$ 350.00	3	$ 1,050.00	3	$ 1,050.00

Change Order No. 1 Total	**$ 28,000.00**		**$**	**28,000.00**

Prepared By: Oscar Macias _____ Date

Signed By: John C. Zimmerer _____ Date 3-31-24

Approved By: _____ Date

Bakersfield Well & Pump Co.
7212 Fruitvale Avenue
Bakersfield, CA 93308

#18307

To: Rosedale-Rio Bravo Water Storage District
849 Allen Rd.
Bakersfield, CA 93314
Attn: Markus Nygren
Ph: 661-589-6045

Progress Billing #2
Billing Date 3-31-2024
JOB # 23640
PO #

INVOICE

Job Description: Drill 20" x 790' Well# MC-1 & MC-2, 710' Well# B1 - Equip 350 HP Pumps @ Enos Ln & Brimhall Rd

Item #	Bid Item Description	Qty	Units	Unit Bid Price	Qty This Period	Period Total	Qty to Date	Total to Date
1	Mobilization	1	LS	$ 25,000.00	0	$ -	1	$ 25,000.00
2	Demobilization	1	LS	$ 25,000.00	0	$ -	0	$ -
3	Develop and Provide Water Supply	1	LS	$ 5,000.00	0	$ -	1	$ 5,000.00
4	Environmental Compliance and Permitting Prepare, Maintain and Restore Access	1	LS	$ 2,500.00	0	$ -	0.5	$ 1,250.00
5	Prepare, Maintain and Restore Access Routes	1	LS	$ 2,500.00	0	$ -	0.5	$ 1,250.00
(A-1)					**General**	**$ -**		**$ 32,500.00**
	McCaslin / Bowling - New Wells (MC-1)							
6	Well Move-In, Move-Out, and Clean-up	1	Ea	$ 25,000.00	0	$ -	0	$ -
7	Drill Hole to 42-inch min. Diameter for Conductor Pipe	50	LF	$ 200.00	0	$ -	50	$ 10,000.00
8	Furnish, Install and Grout 36-inch Diameter Conductor Pipe	50	LF	$ 300.00	0	$ -	50	$ 15,000.00
9	Drill Pilot Hole to 18-inch max. Diameter	740	LF	$ 80.00	0	$ -	0	$ -
10	Perform E-log of Well	1	Ea	$ 6,122.00	0	$ -	0	$ -
11	Perform Caliper Log of Well	1	Ea	$ 1,850.00	0	$ -	0	$ -
12	Ream Pilot Hole to 32-inch min. Diameter (for 20" casing)	740	LF	$ 80.00	0	$ -	0	$ -
13	Furnish and Install 20-inch Diameter HSLA – Corten Unperforated Well Casing	425	LF	$ 300.00	0	$ -	0	$ -
14	Furnish and Install 20-inch Diameter HSLA – Corten Perforated Well Casing, Roscoe Moss Fulflo, 0.090"ı	345	LF	$ 434.00	0	$ -	0	$ -
15	Furnish and Install Gravel Envelope	680	LF	$ 50.00	0	$ -	0	$ -
16	Placement of Cement Grout Annular Seal	100	LF	$ 70.00	0	$ -	0	$ -
17	Furnish and Install 3" Gravel Tube	115	LF	$ 26.00	0	$ -	0	$ -
18	Furnish and Install 3" Air Vent Pipe	5	LF	$ 100.00	0	$ -	0	$ -
19	Furnish and Install 3" Sounding Tube/Camera Port	538	LF	$ 55.00	0	$ -	0	$ -
20	Swab and Airlift Well	48	Hrs	$ 350.00	0	$ -	0	$ -
21	Develop Well – Pumping and Surging	60	Hrs	$ 300.00	0	$ -	0	$ -
22	Test Pump of Well – Step-Drawdown and Continuous	36	Hrs	$ 300.00	0	$ -	0	$ -
23	Video Log of Well	1	Ea	$ 1,679.00	0	$ -	0	$ -
24	Alignment/Deviation Survey	1	Ea	$ 2,000.00	0	$ -	0	$ -
25	Gyroscopic Survey	1	Ea	$ 2,000.00	0	$ -	0	$ -
26	Dynamic Flow Meter Survey	1	Ea	$ 4,222.00	0	$ -	0	$ -
27	Chemical Development	345	LF	$ 5.00	0	$ -	0	$ -
28	Well Disinfection and Capping	1	Ea	$ 1,000.00	0	$ -	0	$ -
					Single Well Subtotal	**$ -**		**$ 25,000.00**
	McCaslin / Bowling - New Wells (MC-2)							
6	Well Move-In, Move-Out, and Clean-up	1	Ea	$ 25,000.00	0	$ -	0.5	$ 12,500.00

Bakersfield Well & Pump Co.
7212 Fruitvale Avenue
Bakersfield, CA 93308

Item #	Bid Item Description	Qty	Units	Unit Bid Price	Qty This Period	Period Total	Qty to Date	Total to Date
7	Drill Hole to 42-inch min. Diameter for Conductor Pipe	50	LF	$ 200.00	0	$ -	50	$ 10,000.00
8	Furnish, Install and Grout 36-inch Diameter Conductor Pipe	50	LF	$ 300.00	0	$ -	50	$ 15,000.00
9	Drill Pilot Hole to 18-inch max. Diameter	740	LF	$ 80.00	0	$ -	750	$ 60,000.00
10	Perform E-log of Well	1	Ea	$ 6,122.00	0	$ -	1	$ 6,122.00
11	Perform Caliper Log of Well	1	Ea	$ 1,850.00	0	$ -	0	$ -
12	Ream Pilot Hole to 32-inch min. Diameter (for 20" casing)	740	LF	$ 80.00	0	$ -	0	$ -
13	Furnish and Install 20-inch Diameter HSLA – Corten Unperforated Well Casing	425	LF	$ 300.00	0	$ -	0	$ -
14	Furnish and Install 20-inch Diameter HSLA – Corten Perforated Well Casing, Roscoe Moss Fulflo, 0.090"1	345	LF	$ 434.00	0	$ -	0	$ -
15	Furnish and Install Gravel Envelope	680	LF	$ 50.00	0	$ -	0	$ -
16	Placement of Cement Grout Annular Seal	100	LF	$ 70.00	0	$ -	0	$ -
17	Furnish and Install 3" Gravel Tube	115	LF	$ 26.00	0	$ -	0	$ -
18	Furnish and Install 3" Air Vent Pipe	5	LF	$ 100.00	0	$ -	0	$ -
19	Furnish and Install 3" Sounding Tube/Camera Port	538	LF	$ 55.00	0	$ -	0	$ -
20	Swab and Airlift Well	48	Hrs	$ 350.00	0	$ -	0	$ -
21	Develop Well – Pumping and Surging	60	Hrs	$ 300.00	0	$ -	0	$ -
22	Test Pump of Well – Step-Drawdown and Continuous	36	Hrs	$ 300.00	0	$ -	0	$ -
23	Video Log of Well	1	Ea	$ 1,679.00	0	$ -	0	$ -
24	Alignment/Deviation Survey	1	Ea	$ 2,000.00	0	$ -	0	$ -
25	Gyroscopic Survey	1	Ea	$ 2,000.00	0	$ -	0	$ -
26	Dynamic Flow Meter Survey	1	Ea	$ 4,222.00	0	$ -	0	$ -
27	Chemical Development	345	LF	$ 5.00	0	$ -	0	$ -
28	Well Disinfection and Capping	1	Ea	$ 1,000.00	0	$ -	0	$ -
					Single Well Subtotal	**$ -**		**$ 103,622.00**
29	Zone Testing for One Well - Per Zone (Up to 4 Total - See Item Description)	4	Ea	$ 15,000.00	2	$ 30,000.00	4	$ 60,000.00
Sub-1	**"Two Well Subtotal" plus the cost of the Item**					**$ 30,000.00**		**$ 163,622.00**

	McCaslin / Bowling - New Well (B1)							
30	Well Move-In, Move-Out, and Clean-up	1	Ea	$ 25,000.00	0.5	$ 12,500.00	1	$ 25,000.00
31	Drill Hole to 42-inch min. Diameter for Conductor Pipe	50	LF	$ 200.00	0	$ -	50	$ 10,000.00
32	Furnish, Install and Grout 36-inch Diameter Conductor Pipe	50	LF	$ 300.00	0	$ -	50	$ 15,000.00
33	Drill Pilot Hole to 18-inch max. Diameter	660	LF	$ 80.00	25	$ 2,000.00	685	$ 54,800.00
34	Perform E-log of Well	1	Ea	$ 6,122.00	0	$ -	1	$ 6,122.00
35	Perform Caliper Log of Well	1	Ea	$ 1,850.00	1	$ 1,850.00	1	$ 1,850.00
36	Ream Pilot Hole to 32-inch min. Diameter (for 20" casing)	660	LF	$ 80.00	685	$ 54,800.00	685	$ 54,800.00
37	Furnish and Install 20-inch Diameter HSLA – Corten Unperforated Well Casing	430	LF	$ 300.00	502	$ 150,600.00	502	$ 150,600.00
38	Furnish and Install 20-inch Diameter HSLA – Corten Perforated Well Casing, Roscoe Moss Fulflo, 0.080" 2	260	LF	$ 434.00	215	$ 93,310.00	215	$ 93,310.00

717 total ft well casing → 215 ft perfs
→ 502 ft blank

Bakersfield Well & Pump Co.
7212 Fruitvale Avenue
Bakersfield, CA 93308

Item #	Bid Item Description	Qty	Units	Unit Bid Price	Qty This Period	Period Total	Qty to Date	Total to Date
39	Furnish and Install Gravel Envelope	410	LF	$ 50.00	435	$ 21,750.00	435	$ 21,750.00
40	Placement of Cement Grout Annular Seal	300	LF	$ 70.00	300	$ 21,000.00	300	$ 21,000.00
41	Furnish and Install 3" Gravel Tube	315	LF	$ 26.00	317	$ 8,242.00	317	$ 8,242.00
42	Furnish and Install 3" Air Vent Pipe	5	LF	$ 100.00	0	$ -	0	$ -
43	Furnish and Install 3" Sounding Tube/Camera Port	600	LF	$ 55.00	482	$ 26,510.00	482	$ 26,510.00
44	Swab and Airlift Well	48	Hrs	$ 350.00	48	$ 16,800.00	48	$ 16,800.00
45	Develop Well - Pumping and Surging	60	Hrs	$ 300.00	0	$ -	0	$ -
46	Test Pump of Well - Step-Drawdown and Continous	36	Hrs	$ 300.00	0	$ -	0	$ -
47	Video Log of Well	1	Ea	$ 1,679.00	0	$ -	0	$ -
48	Alignment/Deviation Survey	1	Ea	$ 2,000.00	0	$ -	0	$ -
49	Gyroscopic Survey	1	Ea	$ 2,000.00	0	$ -	0	$ -
50	Dynamic Flow Meter Survey	1	Ea	$ 4,222.00	0	$ -	0	$ -
51	Chemical Development	260	LF	$ 5.00	0	$ -	0	$ -
52	Well Disinfection and Capping	1	Ea	$ 1,000.00	0	$ -	0	$ -
Sub-2	**Single Well (B1) Subtotal plus the cost of item**					**$ 409,362.00**		**$ 505,784.00**
53	Existing Well Abandonment	400	LF	$ 50.00	0	$ -	400	$ 20,000.00
Sub-2	**Single Well (B1) Subtotal plus the cost of item**					**$ 409,362.00**		**$ 525,784.00**
	Total Amount For Schedule "A-1" (Base Contract)							

Optional Items and Add/Deducts (Not Incliuded In Bid Totals)

Item #	Bid Item Description	Qty	Units	Unit Bid Price	Qty This Period	Period Total	Qty to Date	Total to Date
53	Furnish and Install 20" Diameter Well Compression Section	1	Ea	$ 14,582.00	0	$ -	0	$ -
54	Well Borehole Abandonment		LF	$ 12,750.00	0	$ -	0	$ -
55	Idle Time (for additional hours not included in the bid per the specifications		Hrs	$ 350.00	0	$ -	0	$ -
56	12'x12' Pedestal-Style Concrete Pump Foundation	3	Ea	$ 7,500.00	0	$ -	0	$ -
57	Furnish and Install 350 HP Well Pumping Unit With Electric Motor	3	Ea	$ 42,794.00	0	$ -	0	$ -
58	Furnish and Install 12-Inch Steel Column Tube and Shaft	1620	LF	$ 190.00	0	$ -	0	$ -
59	Furnish and Install Vertical Turbine Pumping Unit	3	Ea	$ 63,654.00	0	$ -	0	$ -
60	Furnish and Install Suction Extension	3	Ea	$ 1,500.00	0	$ -	0	$ -

Bakersfield Well & Pump Co.
7212 Fruitvale Avenue
Bakersfield, CA 93308

Item #	Bid Item Description	Qty	Units	Unit Bid Price	Qty This Period	Period Total	Qty to Date	Total to Date
61	Furnish and Install 12-Inch Steel Discharge Piping Assembly, Complete With Valves, Flowmeter, Airvents, Couplings, & All Other Appurtenances at Well Site (Details A-19 and B-19)	3	Ea	$ 27,405.00	0	$ -	0	$ -
62	Furnish and Install Panel Shade Structure	3	Ea	$ 8,500.00	0	$ -	0	$ -
63	Furnish and Install Panel Security Structure	3	Ea	$ 1,500.00	0	$ -	0	$ -
64	Furnish and Install Well Enclosure - Painted by BWP	3	Ea	$ 25,972.00	0	$ -	0	$ -
65	Furnish and Install Electrical Service (via Pad Mount Transformer), Metering Panel, VFD Control Panel, Instrumentation & Monitoring Panel, All Wiring & Controls, and All Other Electrical Appurtenances at Well Site	3	Ea	$ 256,000.00	0	$ -	0	$ -
66	Security Pole & Light (Detail C-33)	1	Ea	$ 5,000.00	0	$ -	0	$ -
					Sub-3 - New Wells Equipping Subtotal	**$ -**		**$ -**
					TOTALS	**$ 439,362.00**		**$ 746,906.00**

Prepared By: _____ Date

Signed By: _____ 3-31-24
John C. Zimmerer Date

Approved By: _____
Markus Nygren Date

	Total To Date
Amount Earned	$ 746,906.00
Amount Retained @ 5%	$ (37,345.30)
Previous Billing(s)	$ (292,166.80)
Total Due	**$ 417,393.90**

Thomas Harder & Co.
Groundwater Consulting

March 21, 2024

Mr. Dan Bartel
Rosedale-Rio Bravo Water Storage District
P.O. Box 20820
Bakersfield, CA 93390

Re: Recommended Casing, Screen and Filter Pack Design – McCaslin Well 2

Dear Mr. Bartel,

This letter summarizes the recommended casing, screen and filter pack design for Rosedale-Rio Bravo Water Storage District's (the District's) McCaslin Well 2. The recommended design of McCaslin Well 2 is based on a review of the lithologic log from the pilot borehole, geophysical logs, isolated aquifer zone testing groundwater quality, and sieve analysis of selected soil sampling intervals.

The lithologic log and geophysical log for the McCaslin Well 2 pilot borehole shows the formation consists of silty and clayey sand from ground surface to 75 feet (ft) below ground surface (bgs); predominately poorly graded sand with few layers of clayey sand from 75 ft bgs to 120 ft bgs; interbedded clay and clayey sand from 120 ft bgs to 180 ft bgs; mostly clay with some clayey sand from 180 ft bgs to 250 ft bgs; interbedded clayey sand and poorly graded sands from 250 ft bgs to 290 ft bgs; poorly graded sand from 290 ft bgs to 370 ft bgs; clayey sand from 370 ft bgs to 380 ft bgs; poorly graded sand from 380 ft bgs to 410 ft bgs; mostly poorly graded sand with some fine layers from 410 ft bgs to 460 ft bgs; interbedded silts and clays with some clayey sands from 460 ft bgs to 520 ft bgs; interbedded clayey sands and poorly graded sands from 520 ft bgs to 590 ft bgs; mostly fine grained material with few sandy layers from 590 ft bgs to 630 ft bgs; poorly graded sand from 630 ft bgs to 640 ft bgs; interbedded clay and clayey sand from 640 ft bgs to 690 ft bgs; poorly graded sand from 690 ft bgs to 730 ft bgs; sandy clay from 730 ft bgs to 760 ft bgs; poorly graded sand 760 ft bgs 780 ft bgs; and interbedded clay and clayey sand from 780 ft bgs to 800 ft bgs (the total borehole depth).

Isolated aquifer zone testing was conducted in four zones between 26-Feb-24 and 8-Mar-24, the results of which are listed in Table 1 and summarized in relative terms as follows:

- Zone 1 (760 – 780 ft bgs): moderate yield, poor water quality (elevated arsenic);
- Zone 2 (705-725): moderate yield, poor water quality (elevated arsenic);

- Zone 3 (620 - 640): moderate yield, good water quality (low arsenic);
- Zone 4 (540 - 560): moderate yield, good water quality (low arsenic).

The recommended McCaslin Well 2 perforation interval was developed based on analysis of the lithologic log, geophysical logs and isolated aquifer zone test results in an effort to maximize yield and produce the best blended discharge water quality possible. The final well design avoids known elevated arsenic concentration zones. It is noted that significant variation in arsenic concentration has been observed with depth in the McCaslin Well 2 pilot borehole as well as other boreholes in the area. Accordingly, it is not possible to predict the arsenic concentrations in the aquifer zones adjacent to zone test intervals and which are included in the well perforation intervals. As such, it is possible that the arsenic concentration in the completed well will be higher than expected and may exceed the MCL of 10 micrograms per liter (ug/L).

Recommended Filter Pack and Slot Size

Results of sieve analyses of formation samples selected from sample intervals between 300 and 640 ft bgs are shown on Figure 1. It is noted that a total of seven formation samples were analyzed. Based on the results of these sieve analyses, the recommended filter pack is a SRI Supreme 2:1 custom blend as shown on Figure 1 and summarized in Table 2. The recommended slot size for the perforated interval is 0.09 inches, which will allow approximately 16 percent of the filter pack to pass through the slots.

Recommended Well Design

The recommended well design for McCaslin Well 2 is summarized in Table 3 and shown on Figure 2. It is proposed to construct the well to a total depth of 800 ft bgs. The reamed borehole shall be drilled to a total depth of 810 ft bgs. Perforations consisting of horizontal louvers are recommended from 320 to 530 ft bgs, 545 to 640 ft bgs, and 750 to 780 ft bgs (total of 335 ft of perforation length). It is recommended that the well casing and louvered screen be constructed of High Strength Low Alloy (HSLA) steel. The orientation of the sounding tube, gravel feed tube, and air vent tube is as shown on Figure 3. The Contractor shall extend the well casing two feet above the ground surface and accessory tubing one foot above the ground surface upon completion.

All well construction materials shall be inspected by Zeiders Consulting upon delivery to the site and prior to installation in the enlarged borehole. A sieve analysis test report of the recommended filter pack from the filter pack supplier shall be submitted to Thomas Harder & Co. and shall be approved for use prior to delivery to the site. Additionally, once the filter pack is delivered to the site, Thomas Harder & Co. will test a representative amount from each load to verify the gradation. All filter pack shall be delivered to the site at least 24 hours prior to installation of the casing and screen.

If you have any questions, please do not hesitate to contact me at (714) 779-3875.

Sincerely,

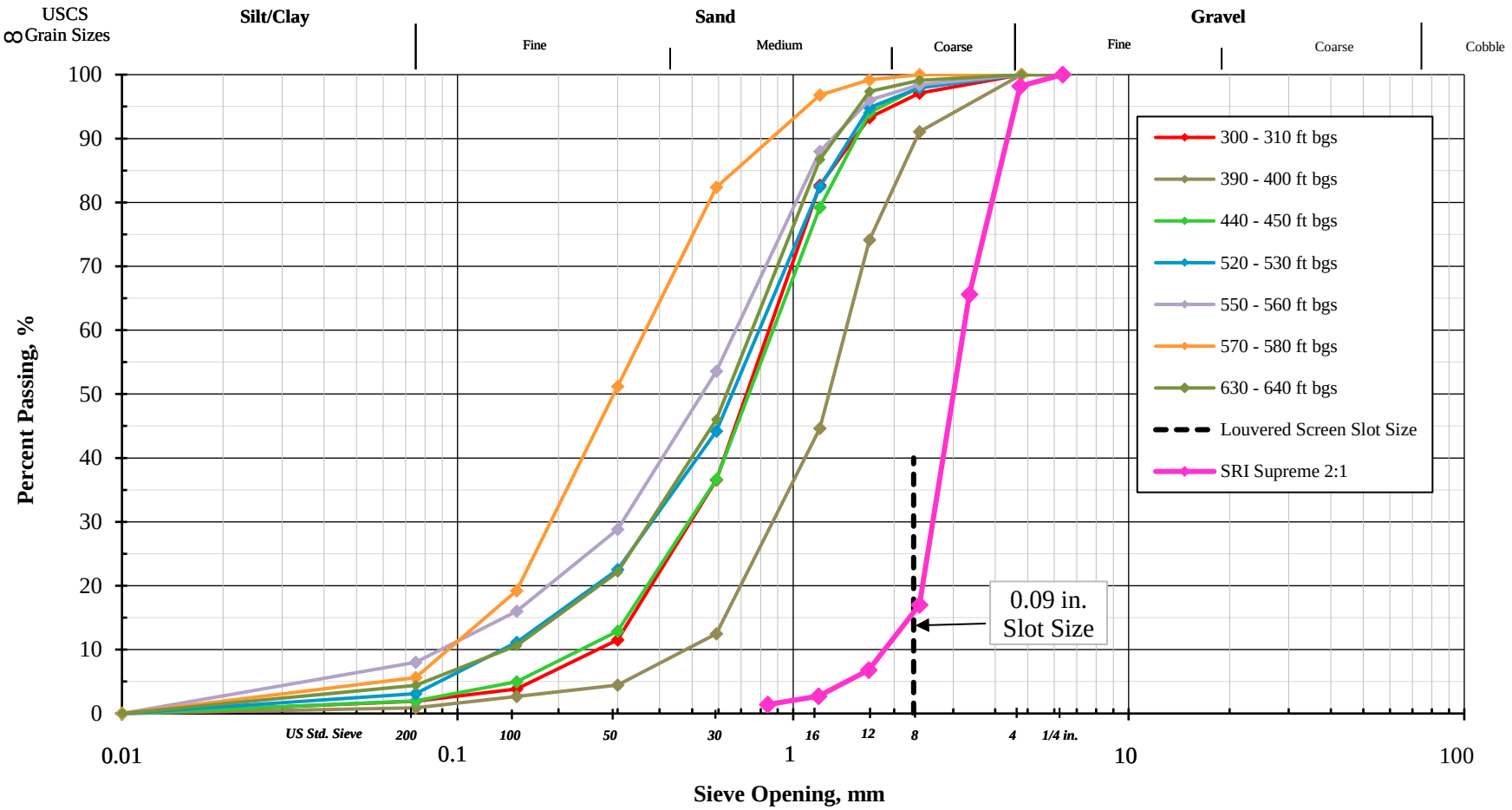
Thomas Harder

Thomas Harder, P.G., C.HG.
Principal Hydrogeologist

Rosedale Rio Bravo WSD
Recommended Casing, Screen and Filter Pack Design
McCaslin Well 2

Figure 1

Sieve Analysis with Recommended Filter Pack and Slot Size
McCaslin Well 2



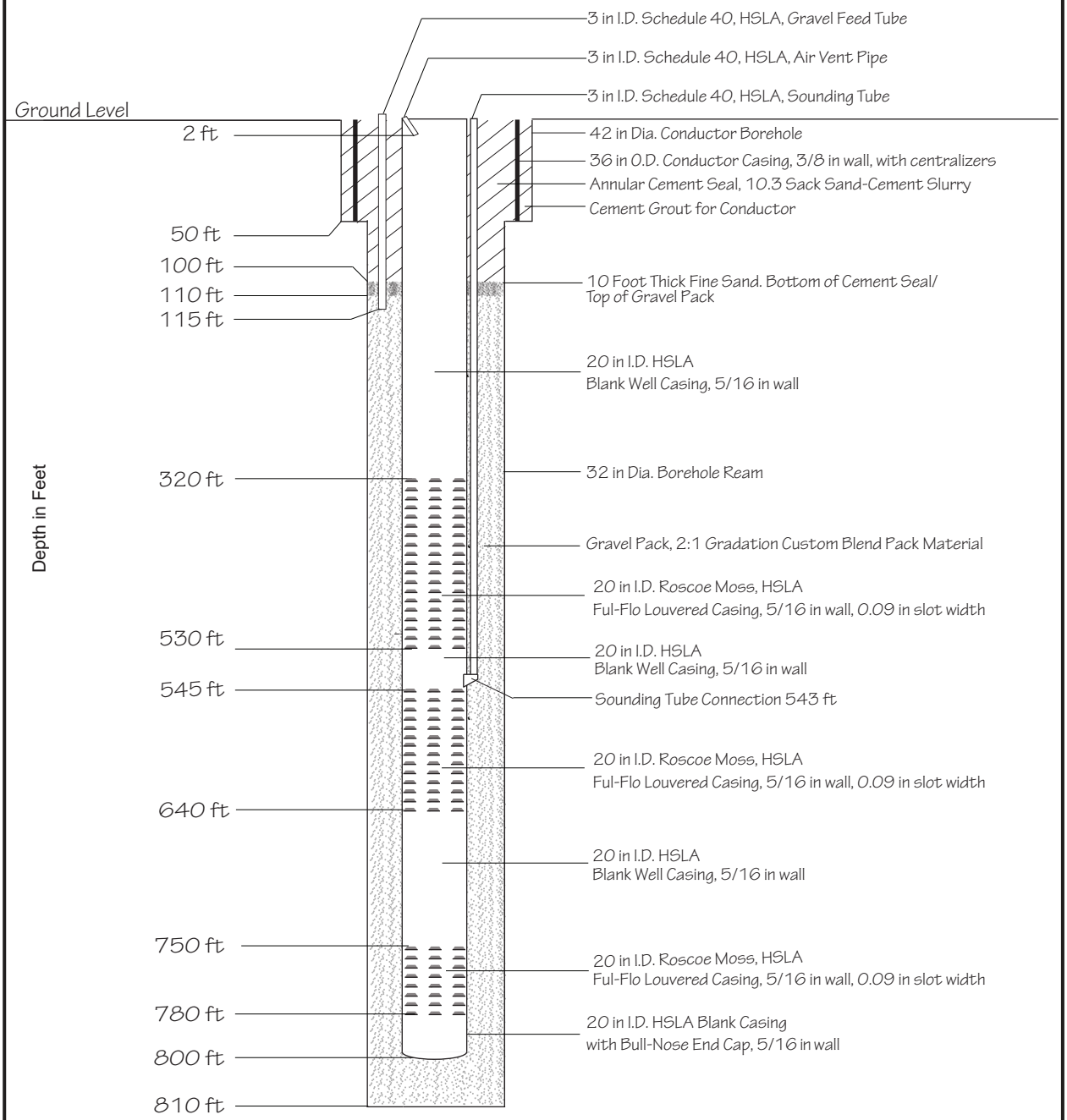
Thomas Harder & Co.
Groundwater Consulting

March 2024

Recommended Casing, Screen, and Filter Pack Design
McCaslin Well 2

Rosedale-Rio Bravo Water Storage District

March 2024

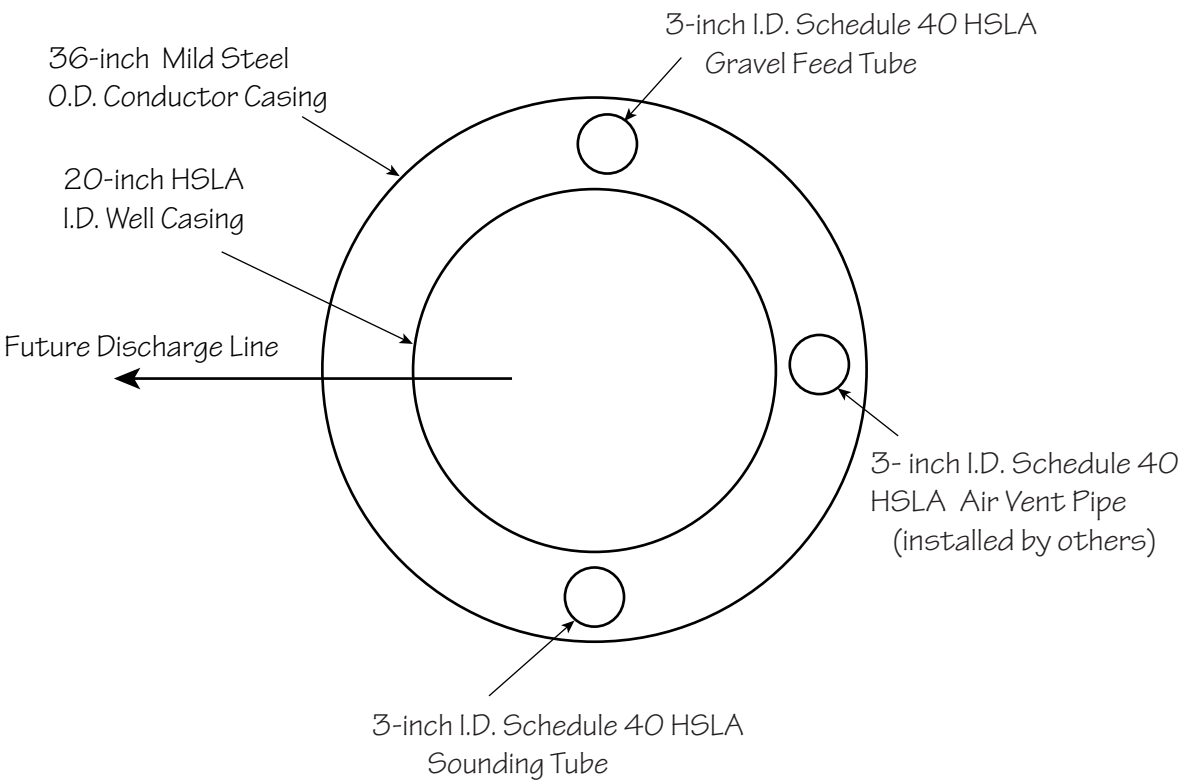


Notes:
1. Not to Scale.
2. Casing centralizers installed every 120 ft (not shown).

Thomas Harder & Co.
Groundwater Consulting

Conceptual Well Design
Figure 2

Rosedale-Rio Bravo Water Storage District



WELL CASING AND TUBE PLAN

NOT TO SCALE

Notes:

Sounding tubes, gravel feed tube, air vent tube, and all connections shall be constructed of HSLA Steel.

Recommended Filter Pack
SRI SUPREME 2:1

U.S. Standard Sieve Size	Opening (in.)	Opening (mm)	Cumulative % Retained	Cumulative % Passing
1/4	0.250	6.35	0.00	100.00
4	0.187	4.75	1.80	98.20
6	0.132	3.3528	34.40	65.60
8	0.094	2.38	83.00	17.00
12	0.066	1.68	93.20	6.80
16	0.047	1.19	97.30	2.70
20	0.033	0.84	98.60	1.40

Recommended Casing and Screen Schedule
McCaslin Well 2

Interval (ft bgs)[1]	Borehole Diameter (in.)	Casing Diameter (in.)	Wall Thickness (in.)	Screen Slot Size (in.)	Material Type
0 - 50	42	36 OD	3/8	-	Conductor Casing (ASTM A139 Grade B Steel)
+2 - 115	Annulus	3	SCH 40	-	Gravel Feed Pipe (HSLA)
+2 - 2	Annulus	3	SCH 40	-	Air Vent Pipe (HSLA)
+2 - 543	32	3	SCH 40	-	Sounding Tube (HSLA)
0 - 100	Annulus	-	-	-	Annular Seal (10.3 Sack Sand-Cement Slurry)
100 - 110	Annulus	-	-	-	Fine Sand Layer
110 - 810	32	-	-	-	SRI Supreme 2:1 Custom Blend Filter Pack Material
+2 - 320	32	20 ID	5/16	-	Blank Casing (HSLA)
320 - 530	32	20 ID	5/16	0.09	Ful-Flo Louvered Screen (HSLA)
530 - 545	32	20 ID	5/16	-	Blank Casing (HSLA)
545 - 640	32	20 ID	5/16	0.09	Ful-Flo Louvered Screen (HSLA)
640 - 750	32	20 ID	5/16	-	Blank Casing (HSLA)
750 - 780	32	20 ID	5/16	0.09	Ful-Flo Louvered Screen (HSLA)
780 - 800	32	20 ID	5/16	-	Blank Casing with Bull-Nose End Plate (HSLA)
800 - 810	32	-	-	-	Gravel-filled Borehole Below Casing and End Plate

Notes:

[1] ft bgs = Feet below ground surface.

The total screen length is 335 ft, and the total length of the blank casing is 467 ft, for a total length of 802 ft.

United States Department of the Interior
BUREAU OF RECLAMATION
P.O. Box 25007
Denver, CO 80225-0007

IN REPLY REFER TO:
84-27133
1.3.11

March, 27 2024

VIA ELECTRONIC MAIL ONLY

Groundwater Banking Joint Power Authority
Attn: Mr. Dan Bartel
849 Allen Road
Patterson, CA 93314-9402

Subject: Notice of Funding Opportunity No. R24AS00010 – Small Storage Program: Small Surface Water and Groundwater Storage Projects Funding Opportunity for Fiscal Year 2023 Your Application Titled, "Phase I - Kern Fan Groundwater Storage Project"

Dear Mr. Bartel:

The Bureau of Reclamation (Reclamation) is pleased to inform you that your application for Small Storage Program funding is now being considered for award with funding available under the Bipartisan Infrastructure Law (BIL), P.L. 117-58 (as amended). Reclamation anticipates awarding Federal funds in the amount of $3,906,425 for your project. The success of the Small Storage Program depends on collaboration with partners to enhance water storage opportunities for future generations.

In working with you to develop your financial assistance agreement, Reclamation will closely review the activities outlined in your proposal to ensure that all activities are eligible for funding and that the proposed costs are allowable under financial assistance regulations. If some costs or activities are determined to be ineligible or unallowable, Reclamation will work with you to refine the scope of work and budget for the project.

All new financial assistance awards for infrastructure projects must meet Buy America requirements. Office of Management and Budget (OMB) implementing guidance states that the Buy America provisions apply to projects carried out through BIL funding and annual appropriations. See OMB Memorandum M-22-11 for further details. Please note that a Department of the Interior (DOI) waiver was approved through February 20, 2028, which allows up to 5% (capped at $1,000,000) of infrastructure project purchases otherwise required to comply with the Buy America preference to be exempt from that preference. See DOI De Minimus Waiver for further details.

In addition, Section 41101 of the BIL requires that all laborers and mechanics employed by contractors or subcontractors in the performance of construction, alteration, or repair work on a project assisted in whole or in part by funding made available under the BIL shall be paid wages at rates not less than those prevailing on similar projects in the locality, as determined by the

Subject: Notice of Funding Opportunity No. R24AS00010 – Small Storage Program: Small Surface Water and Groundwater Storage Projects Funding Opportunity for Fiscal Year 2023 Your Application Titled, "Phase I - Kern Fan Groundwater Storage Project"

Secretary of Labor in accordance with Subchapter IV of Chapter 31 of Title 40, United States Code (commonly referred to as the Davis-Bacon Act).

Please note that this letter is not a final commitment of funding. A financial assistance agreement will not be executed until further information about your project is developed and all statutory and regulatory requirements have been met, as described in Section E.2.5 of the Notice of Funding Opportunity (NOFO). Compliance with the National Environmental Policy Act and other Federal environmental and cultural resource laws and other regulations is included within these requirements. In addition, Reclamation must have sufficient evidence prior to award that non-Federal cost share will be available. The final funding amount may be adjusted if necessary.

A portion of the anticipated award will be set aside for Reclamation to ensure the Federal regulatory and statutory compliance of the project, and to otherwise oversee project implementation. Reclamation may also adjust the award amount in order to ensure that the project remains in compliance with statutory requirements as further information about your project is developed.

Funding will not be released until Reclamation finalizes a determination of financial capability for the project. Reclamation staff will provide further instruction on this requirement. In addition, National Environmental Policy Act and other associated environmental and cultural compliance analyses must be completed before construction or any other ground disturbing activities can begin. If project activities that require environmental and cultural compliance approval begin prior to receipt of a written notice from Reclamation that all such clearances have been obtained, the costs of such activities will not be eligible for reimbursement or application as non-Federal cost share.

If this is a second award under the Small Storage Program, the financial capability requirement and environmental and cultural compliance analyses may have already been completed. If so, Reclamation staff will provide additional information in the coming weeks about the appropriate next steps.

Please note that in order for costs, including pre-award costs, to be eligible for inclusion in the agreement, the cost must meet the applicable administrative and cost principles criteria established in 2 Code of Federal Regulations (CFR) Part 200. In particular, the procurement of goods and/or services must be compliant with the Procurement Standards (2 CFR §200.317 through §200.327) and contract costs must be compliant with 2 CFR §200.324 – Contract Cost and Price. The Federal financial assistance regulations can be found online at www.ecfr.gov.

In addition, Reclamation reserves the right to post copies of successful Small Storage Program applications as examples on Reclamation's website. While this generally does not raise any issues, it is prudent to provide successful grant applicants with an opportunity to redact any sensitive information from their proposals prior to posting them on Reclamation's website. As a rule, the SF-424s are removed; however, if there are any other items you would like redacted, please email Austin Olah, Small Storage Program Manager, at aolah@usbr.gov by

Subject: Notice of Funding Opportunity No. R24AS00010 – Small Storage Program: Small Surface Water and Groundwater Storage Projects Funding Opportunity for Fiscal Year 2023 Your Application Titled, "Phase I - Kern Fan Groundwater Storage Project"

April 15, 2024. If we do not hear from you by this date we will assume that there are no objections to posting the full application.

The appropriate Reclamation staff that will be responsible for awarding and administering your agreement will contact you to discuss the process for development of financial assistance agreements, associated requirements, and next steps. If you have questions concerning the next steps in awarding this agreement, please contact Austin Olah at (303) 445-3240 or aolah@usbr.gov. In the meantime, if you have any questions regarding the process or your agreement, please contact Mr. Glen Josephson, Supervisory Grants Management Specialist, at (303) 445-2662 or gjosephson@usbr.gov. To receive information and announcements regarding upcoming activities under this program, please send an email with your name and email address to bor-sha-smallstorage@usbr.gov.

Thank you for your interest and participation in the Small Storage Program. We look forward to working with you.

Sincerely,

Christina Munoz
Grants Officer

RRBWSD, IRWD, USBR, and Michael Brain (Deputy Secretary, Department of Interior) at West Enos Recharge Construction Site

Markus presenting to the group how the Central Intake Pumping Plant functions.

Dan talking to Michael Brain, Deputy Secretary, about the West Enos Project.

GBJPA
Groundwater Banking Joint Powers Authority

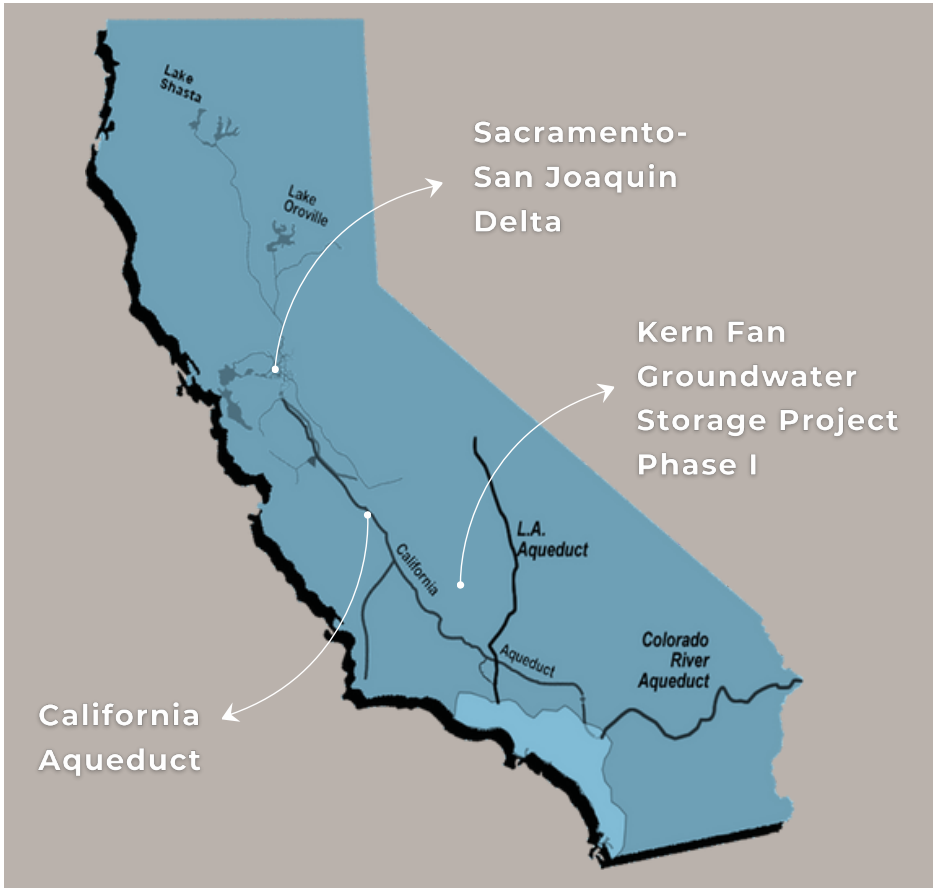
West Enos Pilot Project
August 2023 - Bakersfield, CA

Kern Fan Groundwater Storage Project Phase I

Implementation by the Groundwater Banking Joint Powers Authority, a joint effort between Rosedale-Rio Bravo Water Storage District and Irvine Ranch Water District.

Phase I Project Overview

- **Construction and operation of 350 acres of recharge basins, recovery wells, and water conveyance infrastructure in Kern County, California.**
- **Storage capacity of approximately 28,000 acre-feet of groundwater supplies.**
- **Annual Yield of 2,482 acre-feet.**
- **Drought Supply of 6,000 acre-feet.**

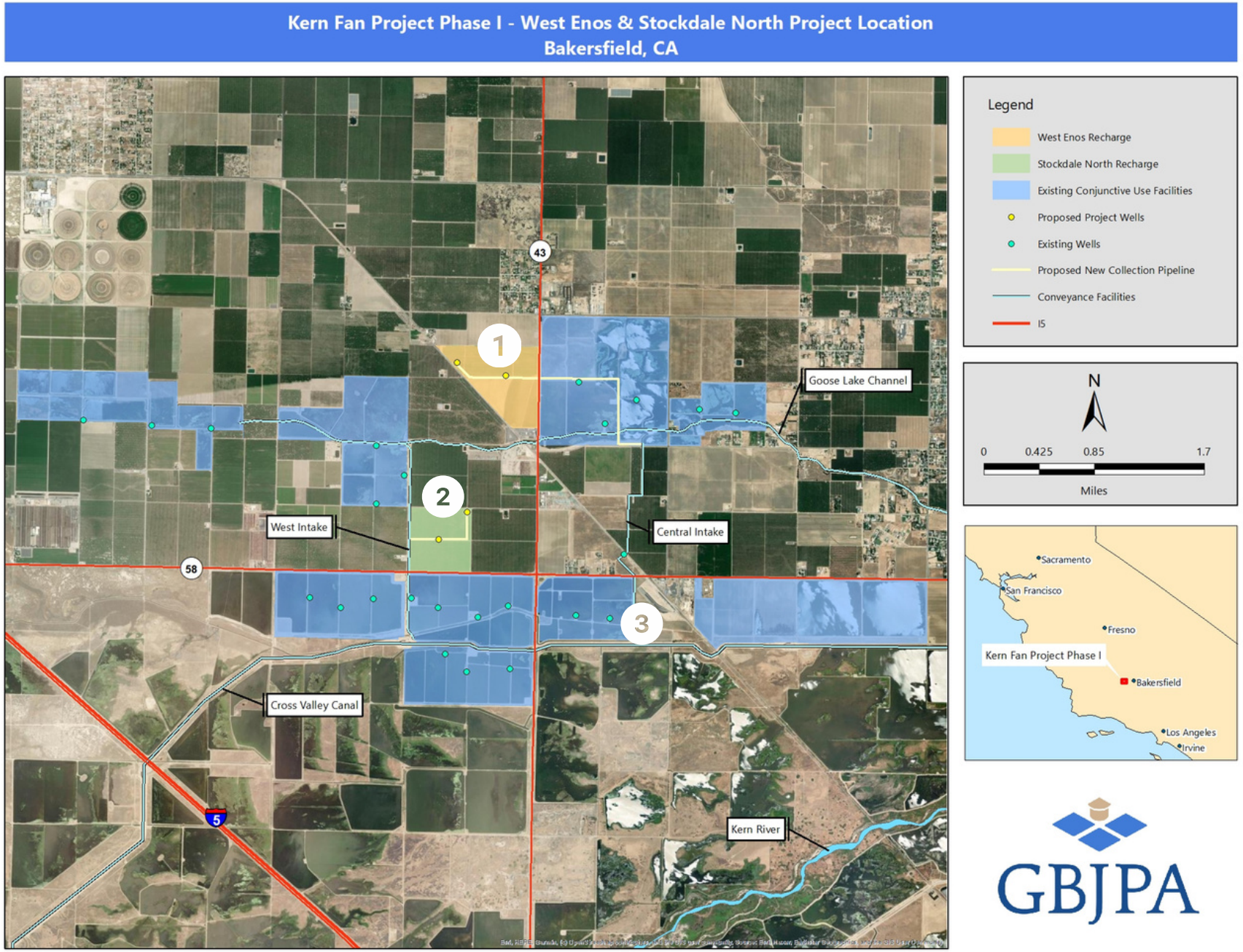


www.kernfanproject.com
(661)589-6045

1 West Enos Recharge and Recovery

2 Stockdale North Recharge and Recovery

3 Central Intake Pumping Plant



GBJPA

Kern Fan Groundwater Storage Project Phase I
Project Map

Technical Working Group
Project and Management Action Approach

Kern County Subbasin

April 1, 2024

PMA Subcommittee Members

- Dan Bartel – RRBWSD GSA
- Mike Maley - Todd
- David Miller - GEI
- Larry Rodriguez - GEI

Goals and Objectives of PMA's *§354.42*

Where does the concept of Glide Path come from?

§ 354.44. (b) (2) ***If overdraft conditions are identified*** *through the analysis required by Section 354.18, the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.*

Subbasin and each GSA <u>with</u> a deficiency will:

- Establish a Common Overdraft Correction Glide Path Goal to Sustainability with 5-year Milestones
- Create a PMA Implementation Schedule including <u>estimate</u> of Resultant Implementation Benefits **exceeding** that goal

Sensitivity Analysis = Safety Factor of 1.86/2.0

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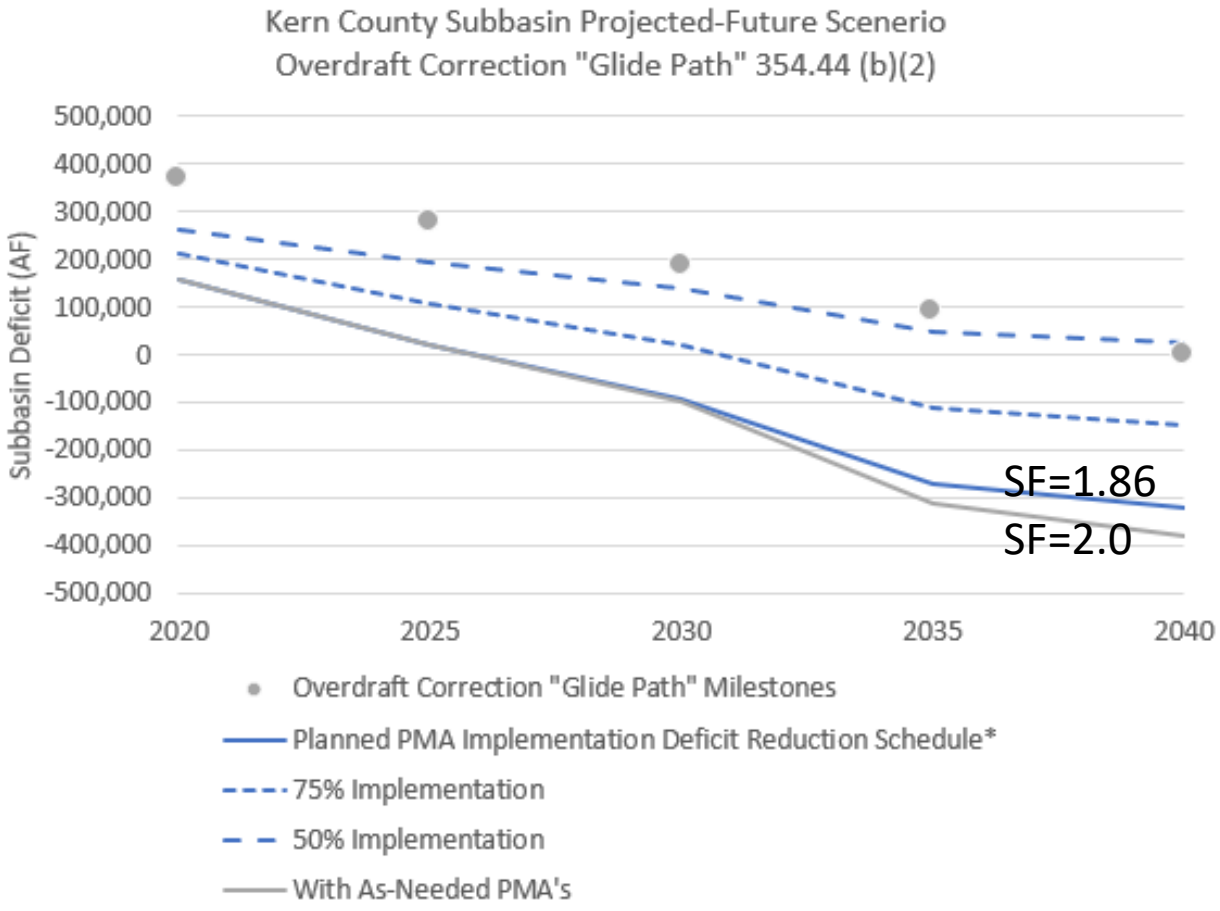

Goals and Objectives of PMA's §354.42

PMA Implementation Schedule vs. Milestones (**Subbasin & GSA**)

Project and Management Action Implementation Schedule (AFY)

Kern County Subbasin Projected-Future Scenerio Overdraft Correction "Glide Path" 354.44 (b)(2)		2020	2025	2030	2035	2040	Description
Projected Deficit			372,000				
Target Deficit Reduction (%)		0	25%	50%	75%	100%	
Projected Deficit – No PMA's		**372,000**	**372,000**	**372,000**	**372,000**	**372,000**	
Overdraft Correction "Glide Path" Milestones		**372,000**	**279,000**	**186,000**	**93,000**	**0**	
Project and Management Action, by Type (AFY)							**Description**
Planned Demand Reduction	Land Retirement	4,946	7,439	9,200	10,278	10,278	Permanent change from Irrigated to non-irrigated
	Demand Reduction	12,140	60,640	114,340	185,840	224,340	Program to reduce applied water
	Ag to Urban Conversion	389	9,800	17,200	24,600	32,000	Coversion of land from irrigated land to urban
	Water Conservation-Efficiency	25,099	28,690	28,690	28,690	28,690	Incentives to improve water use practices
	Subtotal	**42,574**	**106,569**	**169,430**	**249,408**	**295,308**	**Demand Reduction is > 80% of Required Deficit Reduction**
Planned Water Supply Augmentation	Supplemental Water Recharge	41,037	53,072	81,759	81,759	81,759	Increased recharge projects during wet years
	Supplemental Water Use	32,300	38,800	38,800	38,800	40,600	Purchase imported water for current year
	Third-Party Banking	9,483	23,243	23,243	23,243	23,243	Local benefit derived from 3rd Party Banking
	New Local Supply		20,000	34,407	119,407	119,407	Use of recycled water supplies
	Exercise of Rights	88,727	110,174	118,674	131,831	132,957	Improved utilization of existing water supplies/rights (banked or surface)
	Subtotal	**171,547**	**245,289**	**296,883**	**395,040**	**397,966**	
PMA Implementation Schedule*		**214,121**	**351,858**	**466,313**	**644,448**	**693,274**	
Total As-Needed PMA Deficit Benefits		*0*	*550*	*4,800*	*38,700*	*57,333*	
Planned PMA Implementation Deficit Reduction Schedule*		**157,879**	**20,142**	**-94,313**	**-272,448**	**-321,274**	

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Goals and Objectives of PMA's *§354.42*

Demand Reduction Reflects > 80% of Closing the Basin Deficit

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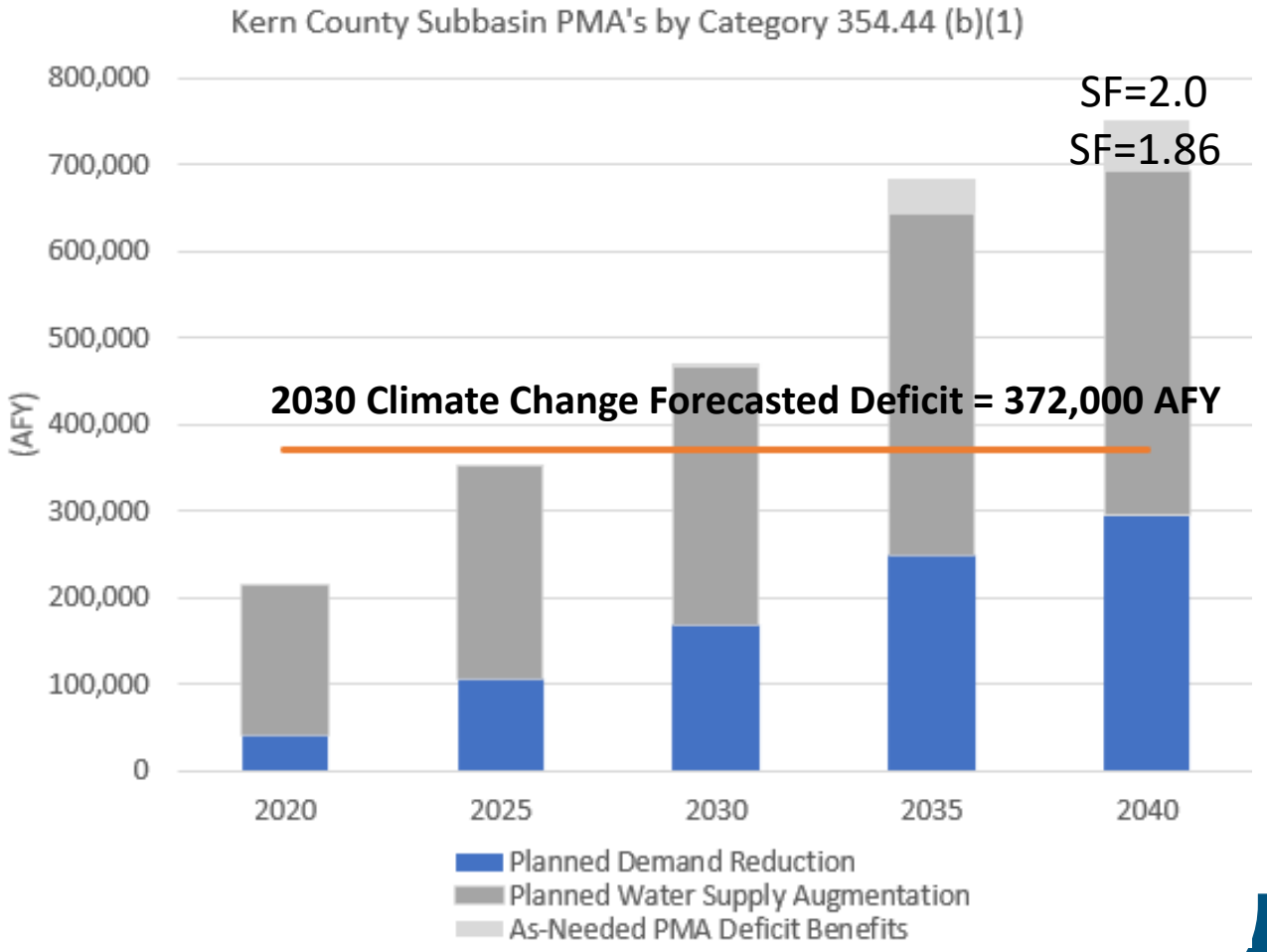
Planned Water Supply Augmentation	Supplemental Water Recharge
	Supplemental Water Use
	Third-Party Banking
	New Local Supply
	Exercise of Rights

Planned Demand Reduction	Land Retirement
	Demand Reduction
	Ag to Urban Conversion
	Water Conservation-Efficiency



Coordinated Allocation of Deficit to Each GSA for PMA Planning Purpose

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Table 4. Check Book Comparison

ENTITY	Prior Checkbook (2020 Version)			2010-2019 Near Average Hydrologic Conditions		2010-2022 Below Average Hydrologic Conditions	
	Net Water Deficit	Planning Deficit (2030 Climate Change)	Percent Deficit	Planning Deficit (2030 Climate Change)	Percent Deficit	Planning Deficit (2030 Climate Change)	Percent Deficit
AEWSD	-8,418	-9,148	2.5%	-46,054	12.4%	-48,231	13.0%
BVWSD	0	0		0		0	
CWD	-12,101	-13,150	3.5%	-2,619	0.7%	-8,425	2.3%
EWMA	-13,669	-14,854	4.0%	-5,760	1.5%	-5,069	1.4%
HMWD	-8,516	-9,254	2.5%	-3,441	0.9%	-2,618	0.7%
KRGSA	-38,487	-41,824	11.2%	-13,720	3.7%	-27,883	7.5%
KWB	0	0		0		0	
KTWD	-3,086	-3,354	0.9%	-2,436	0.7%	-1,859	0.5%
NKWSD w/ RRID	0	0		0		-2,419	0.7%
OWD	0	0		-173	0.0%	-144	0.0%
Pioneer	0	0		0		0	
RRBWSD	-14,918	-16,211	4.4%	0		-8,665	2.3%
SWSD	-165,910	-180,293	48.5%	-162,673	43.7%	-154,694	41.6%
SWID	-13,557	-14,732	4.0%	-27,092	7.3%	-25,149	6.8%
7th Standard	-17,155	-18,642	5.0%	-19,210	5.2%	-13,121	3.5%
SJJMUD	-16,557	-17,992	4.8%	-38,173	10.3%	-31,741	8.5%
TCWD	-6,815	-7,406	2.0%	-29	0.0%	-17	0.0%
WKWD	-2,421	-2,631	0.7%	0		-412	0.1%
WDWA	0	0		0		0	
WRMWSD	-14,665	-15,936	4.3%	-28,185	7.6%	-24,637	6.6%
Whitelands	-6,048	-6,572	1.8%	-22,436	6.0%	-16,917	4.5%
TOTAL	-342,323	-372,000	100%	-372,000	100%	-372,000	100%

Coordinated Presentation of PMA's

P/MA Number	P/MA Name	Summary Description	Relevant Sustainability Indicators Affected			Circ Imp
			Groundwater Levels & Storage	Groundwater Quality	Land Subsidence	
Projects		**Implemented** / **Functional** / **In-Process**		**As-Needed**		
RRB-1	**West Basin Recharge Improvements**	Improvement of approximately 100 acres of existing recharge ponds. Acquisition and retirement of 50 acres of irrigated ag lands and development of 50 acres of new recharge ponds.	✓	✓	✓	
RRB-2	**Superior Basin Recharge Improvements**	Improvement of approximately 100 acres of existing recharge ponds.	✓	✓	✓	
RRB-3	**Stockdale East Groundwater Storage and Recovery Project**	Acquisition and retirement of 200 acres of irrigated ag lands and development of 200 acres of new recharge ponds.	✓	✓	✓	
RRB-4	**Grimmway Groundwater Recharge Ponds**	Public/Private Partnership Developement of 400 acres of recharge ponds.	✓	✓	✓	

Circumstance for Implementation *§354.44(b)(1)(A)*

PMA Implementation is dictated by Glide Path Milestones and clearly categorized as:

Implemented - In anticipation of SGMA several PMAs had been initiated pre-2024 and have been completed and accruing benefits.

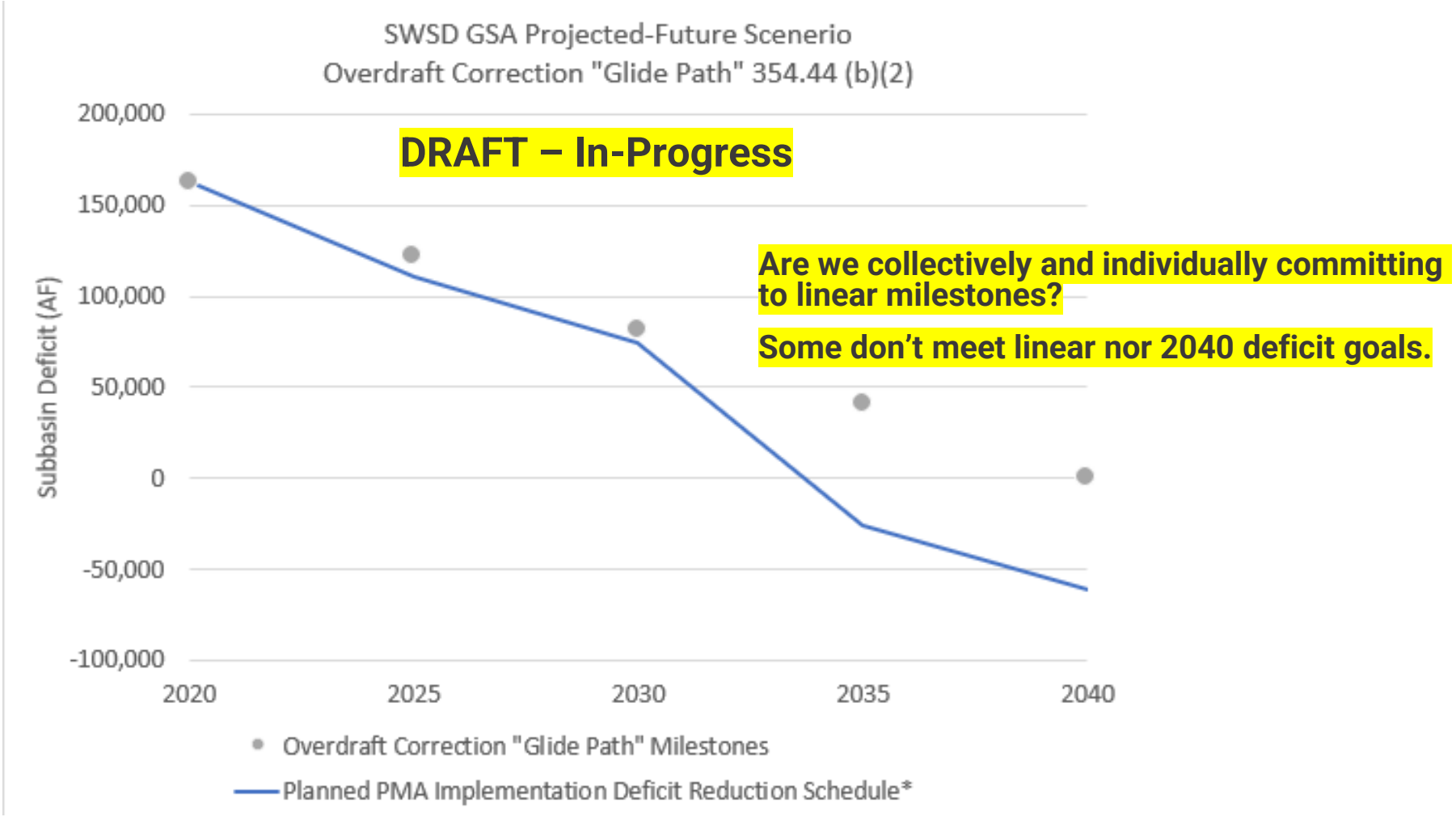
Functional - In anticipation of SGMA several PMAs had been initiated pre-2024 and are functional not yet to accruing benefits.

In-Process - Other PMAs are In-Process somewhere between Feasibility and Construction/Implementation. All of the In-Process PMAs will be implemented except for circumstances such as litigation, failed funding, failed ballot initiatives, or environmental constraints.

As-Needed – As part of the Adaptive Management efforts several PMAs have been identified in response to Minimum Threshold Exceedances, Failed or diminished PMA's, new Opportunities, or other unforeseen issues. At each 5-year planning window, these and other PMAs will be formally evaluated for implementation.

Goals and Objectives of PMA's §354.42

Each GSA with a Deficit will have a Glide Path in their respective Chapter 15



Goals and Objectives of PMA's §354.42

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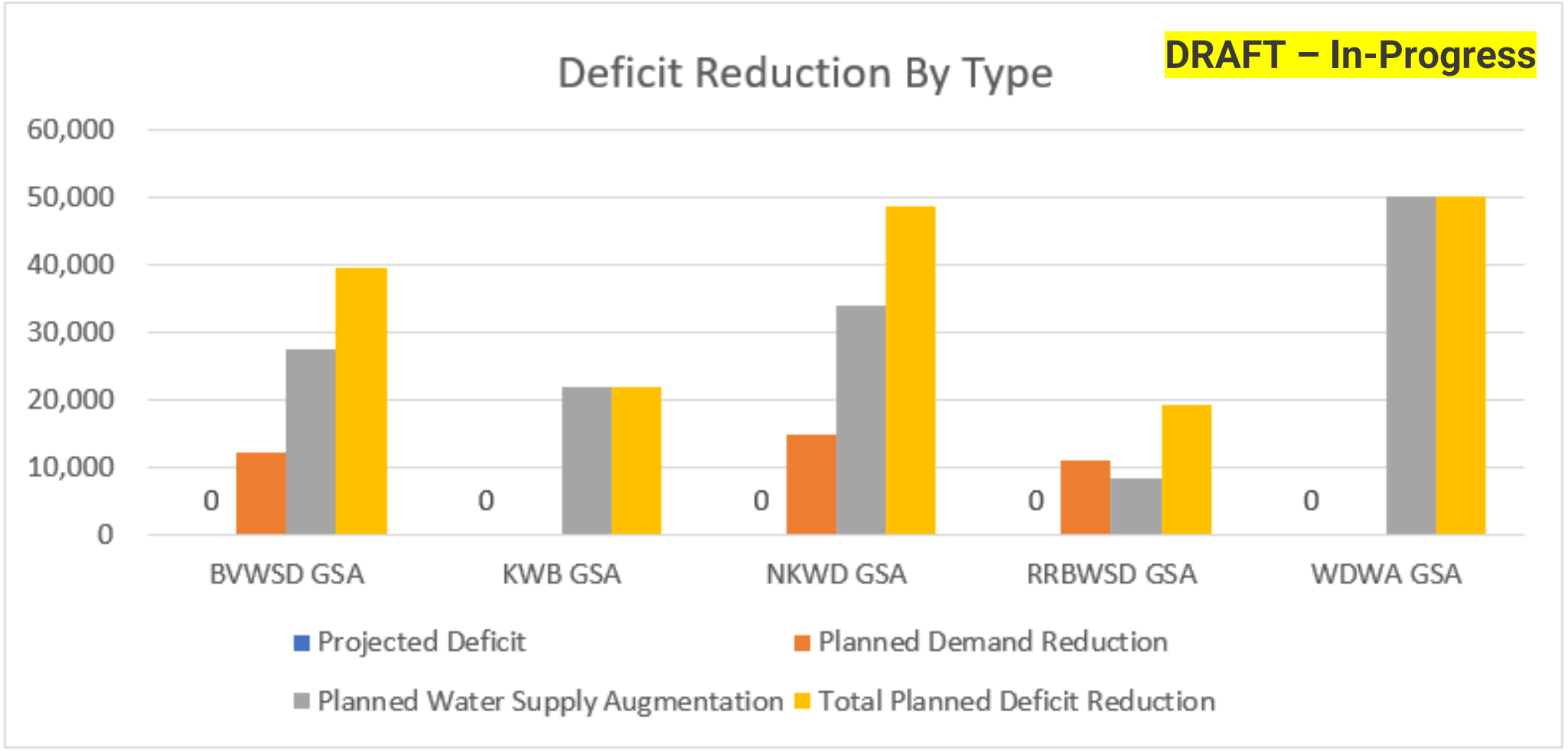

Goals and Objectives of PMA's §354.42

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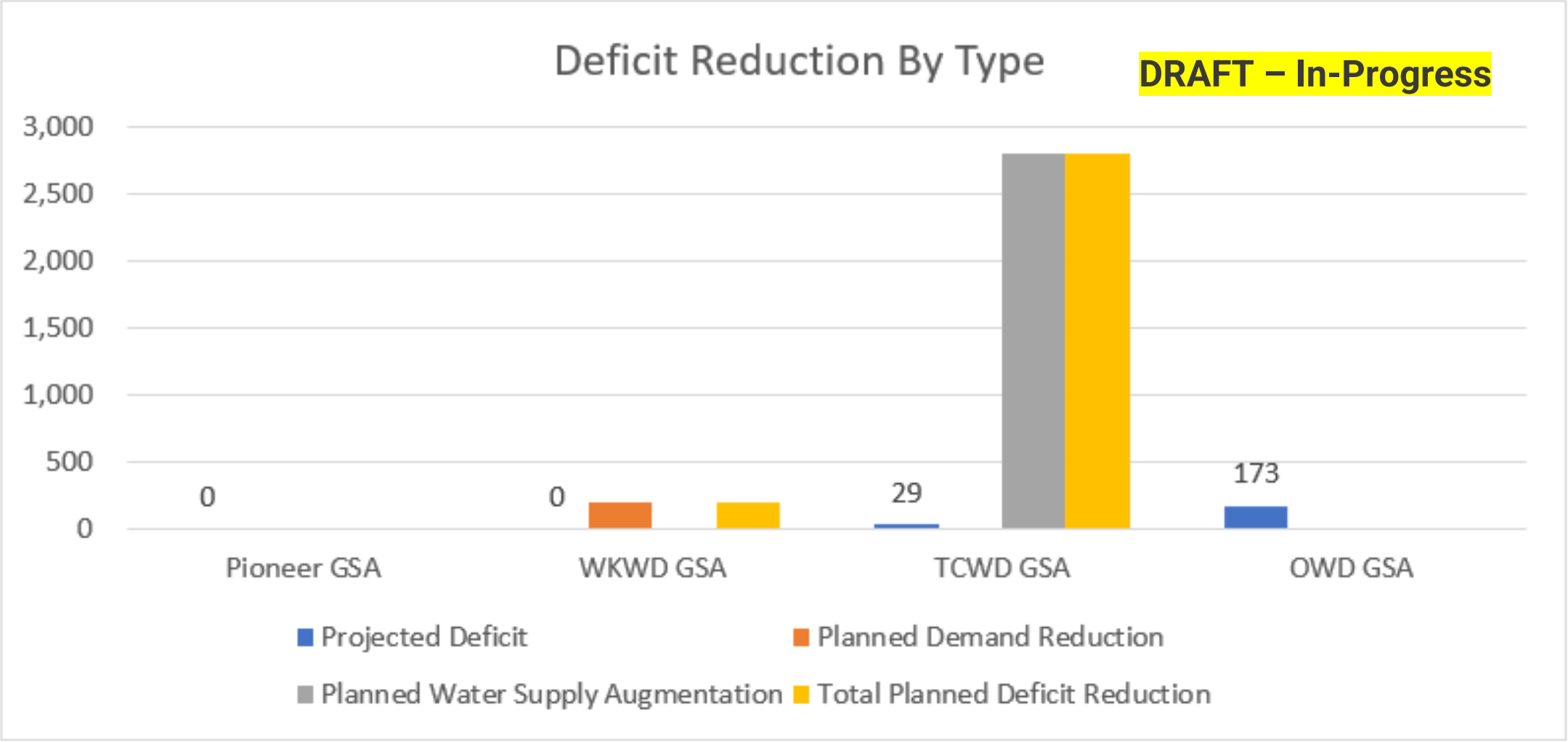

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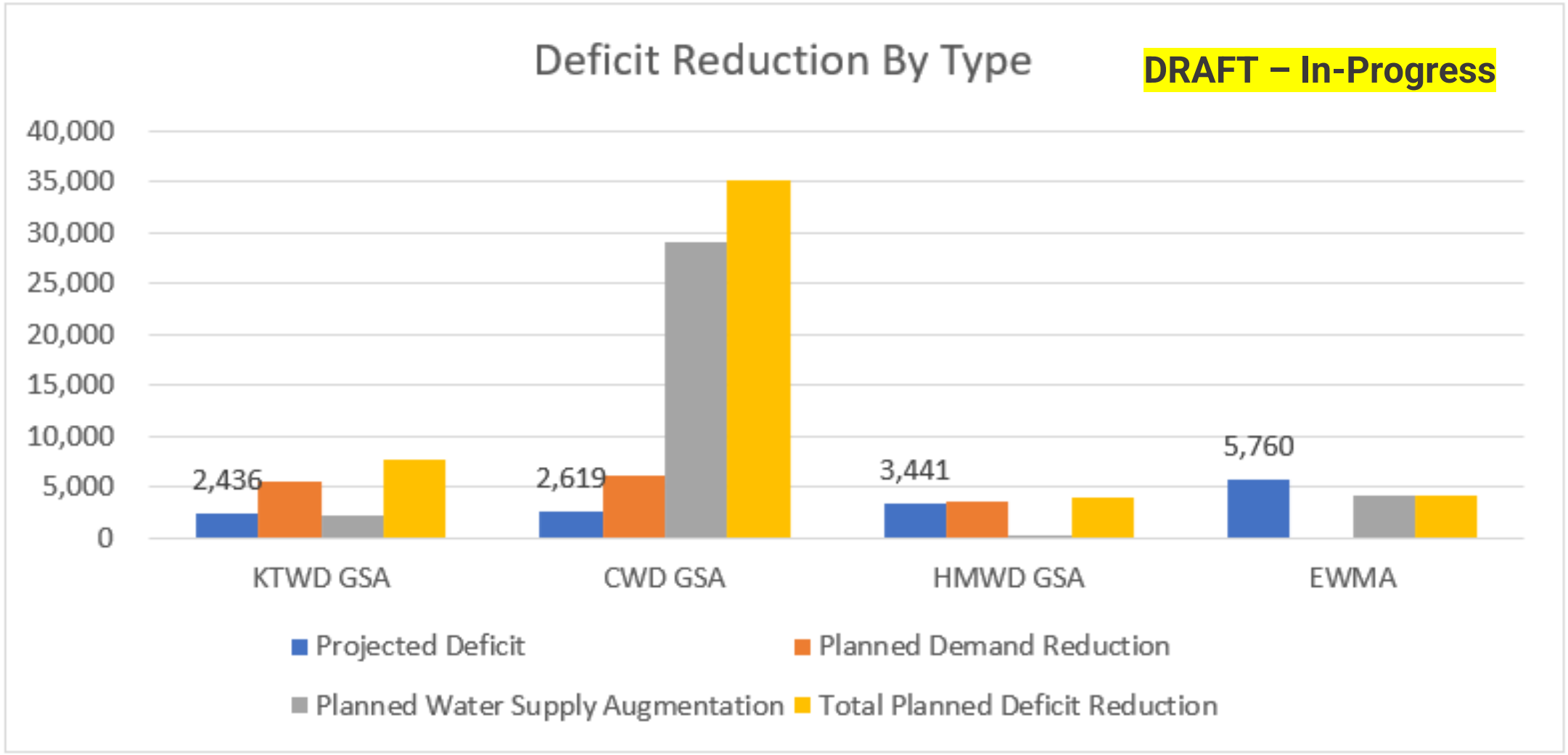

Goals and Objectives of PMA's §354.42

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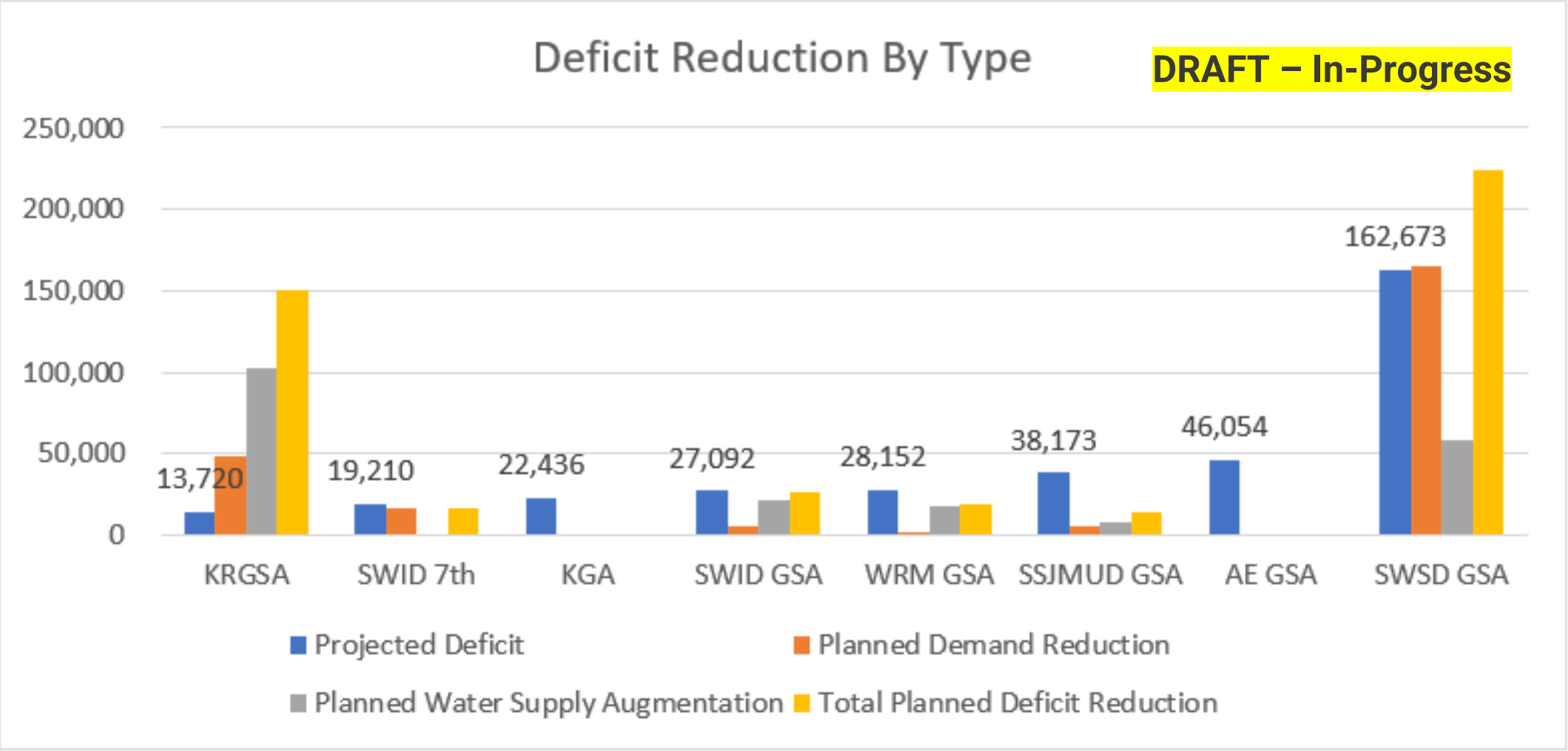

Coordinated Management Actions?

- KSB-1 Friant-Kern Canal Capacity Mitigation
- KSB-2 Coordination with Groundwater Regulatory Programs
- KSB-3 Exceedance Policy
- KSB-4 Coordination with Basin Study (Data Gaps)
- KSB-5 Domestic Well Mitigation Plan/Emergency Water Supply
- KSB-6 White Land Demand Management

  "Development of governance structure and demand reduction action for Subbasin white lands (lands not within a district or management area). Correct the water supply imbalance by setting water budgets and a linear reduction of 10% per year over the planning period of 2030-2040."

Coordinated Management Actions?

Demand Reduction of "District" White Lands is Inconsistent

- Average Demand Reduction strategies for **2025 milestone** vary as to average allowable imbalance as follows:
  - Unlimited? **(KGA)** (BV) (CWD) (KRGSA) (NK) (AE) (EWMA)
  - 3.2 AF/acre (SWSD)
  - 1.8 AF/acre (RRBWSD)
  - 2.4 AF/acre (SWID Annex)
- **Question?** Should this be coordinated subbasin wide?
- What should we say about the KGA white lands?

PMA Chapter 15 Structure (What to Expect)

GSA's will each have a "Very" Coordinated Chapter 15 from a Common Template

- *15.1 Goals and Objectives of Projects and Management Actions* ***(Subbasin)***
- *15.1.2a Implementation Glide Path* ***(Subbasin)***
- *15.1.2.b Implementation Glide Path* ***(GSA)***
- *15.2 List of Projects and Management Actions (GSA)*
- *15.3 Circumstances for Implementation (GSA)*
- *15.4 Public Notice Process (GSA)*
- *15.5 Addressing Overdraft Conditions (GSA)*
- *15.6 Permitting and Regulatory Process (GSA)*
- *15.7 Status and Implementation Timetable (GSA)*
- *15.8 Expected Benefits (GSA)*
- *15.9 Source and Reliability of Water from Outside the Basin (GSA)*
- *15.10 Legal Authority Required (GSA)*
- *15.11 Estimated Costs and Plans to Meet Them (GSA)*
- *15.12 Management of Recharge and Groundwater Extractions (GSA)*

Costs to Implement Subbasin PMA's

Kern County Subbasin	Estimated Costs	
	One-time	Annual
Implemented	$120,205,432	$52,185,800
Functional	$3,410,000	$13,175
In-Process	$906,506,409	$6,273,025
As-Needed	$248,095,000	$8,826,500
Total	**$1,278,216,841**	**$67,298,500**

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Thank You

Upper Kern River, May 2023

State Water Resources Control Board

NOTICE OF PROPOSED EMERGENCY RULEMAKING

Sustainable Groundwater Management Act (SGMA) Fees

Amendments to Division 3 of Title 23 of the California Code of Regulations

---

Required Notice of Proposed Emergency Action
Government Code section 11346.1, subdivision (a)(2) requires that, at least five working days prior to submission of a proposed emergency action to the Office of Administrative Law, the adopting agency must provide a notice of the proposed emergency action to every person who has filed a request for notice of regulatory action with the agency. After submission of the proposed emergency to the Office of Administrative Law, the Office of Administrative Law shall allow interested persons five calendar days to submit comments on the proposed emergency regulation as set forth in Government Code section 11349.6.

Proposed Emergency Action
Water Code section 1529.5 requires the State Water Resources Control Board (State Water Board or Board) to adopt emergency regulations establishing or revising fees to be deposited in the Water Rights Fund (WRF) in the State Treasury, including fees to cover costs incurred and expended from the WRF for purposes of implementing Chapter 11 (commencing with Section 10735) of Part 2.74 of Division 6 of the Water Code.

On March 19, 2024, the State Water Board adopted Resolution 2024-0011 to revise by emergency regulation the water rights fee schedules in title 23, section 1040 of the California Code of Regulations, pertaining to the Board's implementation administration of Chapter 11 of the Sustainable Groundwater Management Act (SGMA).

Proposed Text of Emergency Regulation
See the attached proposed text of the emergency regulation.

Finding of Emergency (Gov. Code, § 11346.1, subd. (b))
The State Water Board has a mandatory legal duty to assess fees and to adopt the schedule of fees by emergency regulation (Wat. Code, §§ 1529.5, 1530). Water Code section 1530, subdivision (b) states that "[t]he adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health, safety, and general welfare." Notwithstanding chapter 3.5 (commencing with section 11340) of part 1 of division 3 the

Government Code, the emergency regulation shall remain in effect until revised by the State Water Board (Wat. Code, § 1530).

Moreover, the State Water Board finds that the proposed amendments to the Board's fee regulations must be adopted immediately in order to allow for the timely collection of fees to conform to amounts appropriated by the Legislature from the WRF for the support of SGMA Chapter 11 activities. Without fee revenue in the amounts appropriated, critical work pursuant to the Sustainable Groundwater Management Act would be in danger of being shut down. Continued administration of this program is essential to the economy and environment of the State of California. The SGMA program is also important for the protection of public health. In sum, adoption of the proposed regulation is necessary for the immediate preservation of public health and welfare.

The State Water Board is unable to address the situation through non-emergency regulations because, as discussed above, it has a mandatory legal duty to adopt the fee schedules by emergency regulation.

Authority and Reference (Gov. Code, § 11346.5, subd. (a)(2))
Water Code section 1530 provides authority for the emergency regulation. The emergency regulation implements, interprets, or makes specific Water Code sections 1529.5, 1530, 5107, 5208, 10735.4(c), 10735.6 and 10736(d)(3).

These statues state "[t]he adoption of these regulations is an emergency and shall be considered by the Office of Administrative Law as necessary for the immediate preservation of the public peace, health, safety, and general welfare."

Informative Digest (Gov. Code, § 11346.5, subd. (a)(3))
To ensure groundwater resources are sustainably managed, SMGA gives the State Water Board the authority to protect groundwater resources through "state intervention" when local agencies are unable or unwilling to sustainably manage their groundwater basins. (Wat. Code, div. 6, pt. 2.74, ch. 11.) The State Water Board only collects extraction reports and fees when either: 1) there are areas of SGMA basins that are not managed by a groundwater sustainability agency, or 2) the State Water Board finds that a basin's management is deficient and designates the basin as probationary at a hearing. There have not yet been any basins designated as probationary.

The current fee schedule includes an annual base fee and volumetric fee. The current volumetric component of the fee is $40 per acre-foot extracted and has not been revised since the SGMA fee schedule was first adopted in 2017. The proposed fee schedule reduces the volumetric component of the annual fee from $40 per acre-foot extracted to $20 per acre-foot. This adjustment balances revenue stability for the program with the uncertainty about whether the State Water Board will place any specific basin on probation, how long a basin might remain on probation, how much revenue would be collected from the basin(s), and other factors. No changes are being proposed for any other element of the SGMA extraction reporting fees at this time.

There is no comparable federal statute or regulation. After conducting a review for any regulations that would relate to or affect this area, the Board has determined that the proposed regulation is not inconsistent or incompatible with existing state regulations.

Other Matters Prescribed by Statute (Gov. Code, § 11346.5, subd. (a)(4))
No other matters are prescribed by statute or regulation applicable to the State Water Board's SGMA fees.

Local Mandate (Gov. Code, § 11346.5, subd. (a)(5))
The proposed emergency regulation does not impose a mandate on local agencies or school districts because it does not mandate a new program or a higher level of service of an existing program. The fee schedule applies equally to public and private entities and is not unique to local government. No state reimbursement is required by part 7 (commencing with section 17500) of division 4 of the Government Code.

Estimate of Cost or Savings (Gov. Code, § 11346.5, subd. (a)(6))
There are currently no local or state agencies that pay fees for groundwater extractions as described in section 5202, subdivision (a)(1) of the Water Code. Therefore, any local or state agencies that is subject to the proposed regulation would potentially be subject to increased costs if required to pay fees based on their basin being put into probationary status. The proposed revision to the fee schedule would, however, lower any potential costs compared to the existing fee schedule. Furthermore, state and local agencies may also pass their costs to their contractors or constituents; if a state or local agency were to be subjected to the fee schedule, it would likely pass along the costs to customers or contractors or otherwise recover such costs. As a result, it is unlikely that any state or local agencies will see increased costs due to the proposed regulations.

There is no cost to any local agency or school district for which reimbursement is required.

There is no cost or savings in federal funding to the state.

23 CCR § 1040
§ 1040. Annual Filing Fee Schedule

Except as provided in section 1041, any person required to file a report shall submit to the board an annual filing fee in accordance with the following schedule:

(a) For groundwater extractions described in section 5202, subdivision (a)(2) of the Water Code, but not section 5202, subdivision (a)(1) of the Water Code:

(1) The annual fee is $300 per well plus:

(A) $10 per acre-foot of groundwater extracted during the preceding water year if the person uses a meter to measure groundwater extractions and certifies on a form provided by the Board that the measurements were made using a meter.

(B) $25 per acre-foot of groundwater extracted during the preceding water year if the person does not use a meter to measure groundwater extractions or fails to certify on a form provided by the Board that the measurements were made using a meter.

(2) For groundwater extractions in an area that became part of an agency's management area during the preceding water year and was within an agency's management area as of September 30, volumetric charges required by subdivision (a)(1) will be based on the volume of groundwater extracted during the portion of the preceding water year when the area was not within the management area of an agency.

(3) For groundwater extractions in an area that is not within the management area of an agency as of September 30, the volumetric charges required by subdivision (a)(1) will be based on the volume of groundwater the person extracted during the entire water year.

(b) For groundwater extractions described in section 5202, subdivision (a)(1) of the Water Code:

(1) The annual fee is $300 per well plus a volumetric charge of $~~40~~**20** per acre-foot of groundwater extracted during the preceding water year, except that for de minimis extractors required to file a report, the annual fee is $100 per well.

(2) For groundwater extractions in a basin where the board has determined pursuant to section 10735.4, subdivision (c) or section 10735.6, subdivision (b) of the Water Code that the deficiencies resulting in the probationary designation have not been remedied, an additional volumetric charge of $15

per acre-foot of groundwater extracted during the preceding water year shall apply to the fee required by subdivision (b)(1).

(c) For persons required to file a report who fail to file the report by February 1, the annual fee shall include an additional charge of 25 percent of the annual fee described in subdivisions (a) and (b), plus 25 percent of the annual fee described in subdivisions (a) and (b) for each 30-day period after February 1 in which the report has not been filed. In no case shall the additional charge exceed three times the annual fee described in subdivisions (a) and (b).

Authority: Sections 1529.5, 1530, 5107, 5208 and 10736(d)(3), Water Code.
Reference: Sections 5202, 5202(a)(1), 5202(a)(2), 10735.4(c) and 10735.6(b), Water Code.

March 29, 2024

Dorene D'Adamo, Vice Chair
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-0100
Via email: dorene.dadamo@statewaterboard.ca.gov

Subject: Kern County Subbasin Progress Update

Vice Chair D'Adamo:

The Kern County Subbasin (Subbasin) Groundwater Sustainability Agencies and Management Areas[1] (GSAs/MAs) write to inform the State Water Resources Control Board (SWRCB or Board) Members about the Subbasin's work to revise the 2022 Groundwater Sustainability Plans (GSPs) in response to the Department of Water Resources (DWR) March 2023 Inadequate Determination Letter[2] (DWR Letter). The Subbasin GSAs, in consultation with SWRCB staff and Subbasin stakeholders, have made significant progress during the past year to address the plan deficiencies identified by DWR for the 2022 GSPs and have incorporated feedback received from consultation meetings with SWRCB staff. The **Subbasin GSAs/MAs intend to submit revised GSP(s) in May 2024**[3] for the Board Members' consideration prior to preparation of the SWRCB staff report and the Subbasin's tentative January 2025 probationary hearing date.

Revised GSP(s) Development

Since receipt of the DWR Letter on March 2, 2023, which deemed the Kern County Subbasin GSPs inadequate, the Subbasin GSAs/MAs have invested significant time and resources in addressing the plan deficiencies through development of more consistent and coordinated revised GSP(s), with a project cost of $1.3 million. Throughout this process, the Subbasin held seven (7) technical meetings with SWRCB staff (Figure 1).[4]

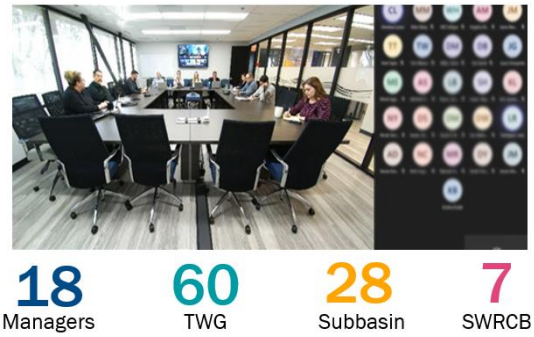


Figure 1. Kern County Subbasin Revised GSPs Development Meetings

The Subbasin has held over 117 meetings between landowner representative policy members, GSA/MA managers, and a technical working group (TWG) consisting of the GSA/MA consultants.[5] These meetings are in addition to regularly held GSA meetings.

The meetings to date have addressed the Subbasin's revised GSP(s) with a Subbasin-wide coordinated approach for:

- Sustainable Management Criteria
  - Groundwater Levels
  - Subsidence
  - Water Quality
  - Water Budgets
- Well Inventory and Well Mitigation Program
- Monitoring Network
- Projects and Management Actions

[1] December 2023, Kern County Subbasin Map (Attachment 1)
[2] March 2, 2023, Department of Water Resources, *Inadequate Determination Letter* (Attachment 2)
[3] Kern County Subbasin Revised GSP(s) Schedule (Attachment 3)
[4] 2023-2024, SWRCB and Kern County Technical Meetings (Attachment 4)
[5] March 2024, Kern County Subbasin Contacts List (Attachment 5)

Addressing DWR Identified Deficiencies

The Subbasin's aim over the last year has been to develop "a well-explained Plan that will be implemented in a coordinated manner." In addition to developing and applying uniform Sustainable Management Criteria (SMCs) methodologies based on the best available science to all GSPs within the Subbasin, the Subbasin has also developed a common organizational structure and a consistent narrative explanation for how the Subbasin will achieve sustainability by 2040. The revised GSP(s) also rely on common data and methodologies to SMCs and Undesirable Results (URs), as described in more detail below.

Deficiency 1: The GSPs do not establish undesirable results that are consistent for the entire Subbasin[6,7]

The revised GSP(s) utilize consistent data and methodologies, adopt clear and consistent terminology and standard templates to clearly define Subbasin-wide definitions for URs, Minimum Thresholds (MTs), and Measurable Objectives (MOs) for each applicable Sustainability Indicator. For example, to define UR's for lowering of groundwater levels, the Subbasin conducted a robust Subbasin-wide well impacts analysis using the revised MTs and updated Subbasin well inventory to quantify potential impacts to beneficial users. The progress made on revised MTs and URs for lowering of groundwater levels was presented to SWRCB staff on October 4, 2023. On November 1, 2023, the Subbasin presented additional analyses to SWRCB staff to address feedback received from the October 4, 2023, meeting.

Revised UR Definition: Based on the technical analysis, the Subbasin developed a two-part definition that considers direct impacts on domestic and drinking water supply wells (no more than 15 dewatered per year) and a Subbasin-wide percentage of 25% MT exceedances at representative monitoring wells (184 total) across the Subbasin. Through model results, the most likely scenario results in at most 51 total drinking water wells being impacted by 2040 at the projected MTs (out of 1,476 or 3%). To address potential impacts to drinking water wells, the following Subbasin-wide approaches were developed and presented to SWRCB staff on March 6, 2024:

1. **MT Exceedance Policy:** Requires GSA action in the event of a single MT exceedance for Chronic Lowering of Groundwater Levels, Degraded Water Quality, and Land Subsidence.
2. **Well Mitigation Program:** Addresses proactive mitigation of Chronic Lowering of Groundwater Levels and Degraded Water Quality impacts on domestic and drinking water wells.

The Subbasin has also initiated a Letter of Intent to begin negotiations with Self-Help Enterprises (SHE) to administer a locally funded Subbasin-wide Well Mitigation Program (Program). In response to SWRCB staff feedback, the Subbasin has accelerated the initial, proposed implementation timeline for the Program. The Subbasin intends for the Program to begin January 2025, and include Program components shown in Figure 2.

Figure 2. Kern Subbasin Coordinated Well Mitigation Program Components

[6] Page 13, March 2, 2023, Department of Water Resources, *Inadequate Determination Letter*
[7] Pages 9-13, March 2, 2023, Department of Water Resources, *Inadequate Determination Letter*

The Subbasin is committed to funding effective implementation of the Program to ensure domestic well mitigation services are provided to any domestic or drinking water user submitting a verified claim. Existing well mitigation programs in the Subbasin will continue to assure adequate coverage continues as the 2024 SHE contracts are finalized.

Deficiency 2: The Subbasin's chronic lowering of groundwater levels sustainable management criteria do not satisfy the requirements of SGMA and the GSP Regulations[8,9]

The revised GSP(s) utilize a Subbasin-wide methodology for setting MTs and MOs for Chronic Lowering of Groundwater Levels. This methodology was established using an iterative process that considered more than eleven (11) potential MT methodologies that were vetted against the Subbasin UR definition, and potential well impacts, which resulted in development of Subbasin-wide analyses (Figure 3).

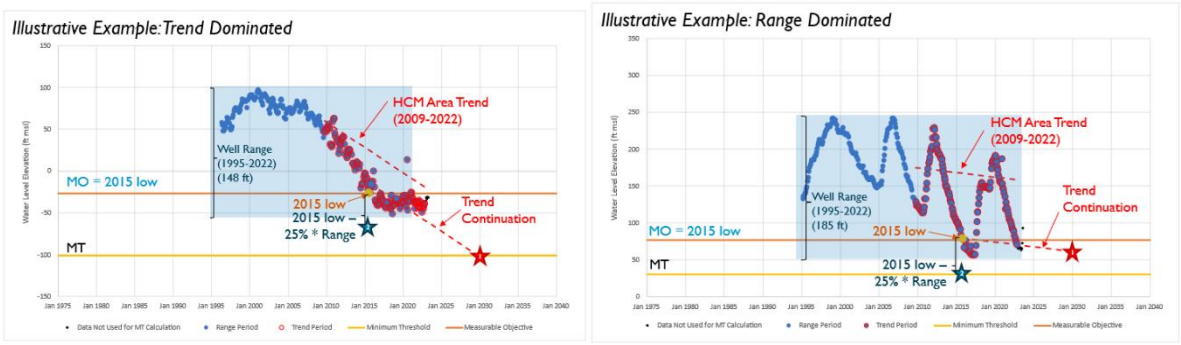


Figure 3. Kern Subbasin Coordinated Minimum Threshold Analyses

1. **Well Impacts Analysis:** Conducted using the updated Subbasin well inventory, MTs and the quantitative criteria for URs to better quantify potential impacts to beneficial users. To address SWRCB staff feedback, the Subbasin has set MOs at 2015 groundwater levels. The above graphic illustrates the MT variance to consider Subbasin complexity to address local concerns, while maintaining a unified approach throughout the Subbasin.
2. **Depletion of Supply Analysis**: Conducted to quantify the percentage of domestic and drinking water supply wells that may be impacted at MTs and the UR definition. Under the modeled most likely scenario, only 1.5% of the total estimated domestic and drinking water supply may be impacted by 2040 at the projected MTs (which will be subject to mitigation). The Subbasin has estimated a 4% reduction of groundwater storage that would occur at groundwater level MTs. As previously mentioned, the Subbasin will address impacts to domestic and drinking water supply wells via the Subbasin-wide well mitigation program developed in partnership with SHE.
3. **Representative Monitoring Well (Level and Quality) Density:** The Subbasin has a common and consistent groundwater level density grid (111 sites) with additional 73 monitoring sites for a total of 184 wells (Figure 4). In addition, groundwater level proxy for water quality

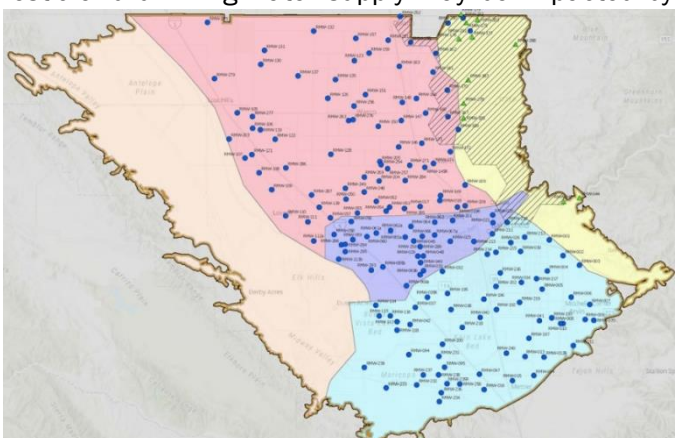


Figure 4. Kern Subbasin Coordinated Representative Monitoring Well Density

[8] Page 32, March 2, 2023, Department of Water Resources, *Inadequate Determination Letter*
[9] Pages 31-32, March 2, 2023, Department of Water Resources, Inadequate Determination Letter

results was replaced with a representative water quality network to protect areas with the potential for water quality to be impacted by groundwater management actions. In sensitive areas of drinking water concerns, groundwater level MTs were adjusted to be protective of water quality concerns. In response to SWRCB staff feedback received on February 5, 2024, water quality monitoring was expanded to include the addition of Uranium and 123TCP to the constituents of concern list (also monitoring Arsenic, Nitrate and Total Dissolved Solids [TDS]).

Deficiency 3: The Subbasin's land subsidence sustainable management criteria do not satisfy the requirements of SGMA and the GSP regulations[10,11]

The revised GSP(s) assess Subbasin-wide causes, extent, and magnitude of land subsidence and impacts to critical infrastructure through development of a coordinated approach in addressing land subsidence (Figure 5). As presented to SWRCB staff on December 13, 2023, analyses resulted in two main objectives which guided the Subbasin-wide approach for the assessment of impacts to land subsidence and critical infrastructure to develop SMCs:

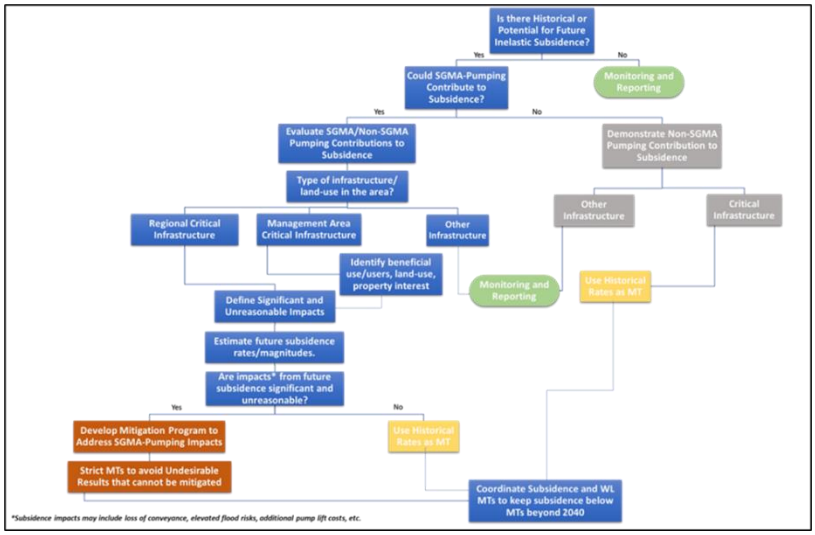


Figure 5. Kern Subbasin Coordinated Subsidence Approach

1. **Identify Subsidence Factors:** In comparison to other Southern San Joaquin Valley subbasins, the Subbasin has not historically experienced significant amounts of subsidence with widespread impacts to land surface infrastructure. However, in response to DWR's identified deficiencies, the Subbasin further investigated and scientifically demonstrated differences between subsidence caused by groundwater extraction activities (within GSA authorities) versus other causes for example oil production, geotechnical/expansive soils, and infrastructure lifespan (outside of GSA authorities) using the most recently available data (including DWR InSAR).
2. **Protect Regional and Management Area Infrastructure:** Developed consistent SMCs to address subsidence within GSA authorities that accommodate Subbasin complexity and meet SGMA objectives to assess and monitor land subsidence and develop projects and management actions to prevent future impacts. A Subbasin-wide monitoring network has been established.
3. **Considered Best Available Data and Studies:** During this process, the Subbasin:
    - Funded a series of new land subsidence studies that filled key data gaps noted by DWR in their deficiency letter. These studies have been shared with DWR's California Aqueduct Subsidence Project (CASP) and the Subbasin continues to engage with CASP as an interested stakeholder.
    - Coordinated with the Friant Water Authority (FWA), including construction of a new extensometer on the Friant-Kern Canal, and the Subbasin continues to engage with FWA as an interested stakeholder.

[10] Page 45, March 2, 2023, Department of Water Resources, *Inadequate Determination Letter*
[11] Pages 42-45, March 2, 2023, Department of Water Resources, Inadequate Determination Letter

- Continues to incorporate updated DWR InSAR data as it is released into technical analysis (Figure 6).
- Updated basin setting definitions consistent with DWR Best Management Practice guidance to consider physical (e.g., to of bedrock), geophysical (e.g., US EPA Underground Source of Drinking Water) and geologic boundaries of aquifer exemptions.

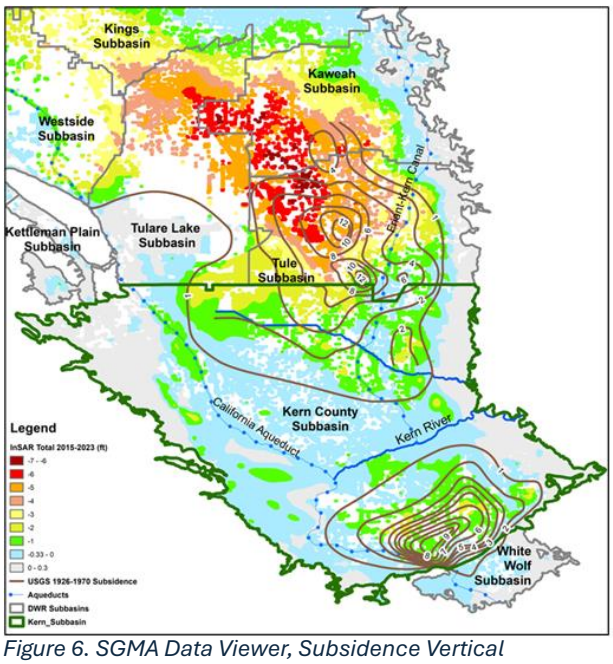


Figure 6. SGMA Data Viewer, Subsidence Vertical Displacement

Conclusion

The Subbasin has made significant progress and expended substantial resources to create revised GSP(s) to address the deficiencies identified in DWR's inadequate determination, as well as incorporating SWRCB staff feedback. **The existing GSPs do not represent the Subbasin, and the Subbasin respectfully request that SWRCB staff forego further review of the existing GSPs and instead focus review on the revised GSP(s) to be submitted in May 2024 for consideration prior to preparation of the SWRCB staff report and the Subbasin's tentative January 2025 probationary hearing date. The revised GSP(s) will include a brief Executive Summary that will present key aspects of the document(s).**

The Subbasin is eager to share a comprehensive overview of how our revised GSP(s) address both DWR's deficiencies and SWRCB staff feedback at our May 31, 2024, meeting with SWRCB staff. The Subbasin welcomes and encourages any State Board members who are available to attend this meeting. In addition, the Subbasin landowner representative policy members would like to extend an invitation to all Board Members (while respecting any legal limitations) and invite the Board Members to a hosted tour, or tours, of the Kern County Subbasin.

The Subbasin appreciates your consideration and this opportunity to provide an update on progress. If you have any questions regarding this letter, please contact Kristin Pittack at 760-223-5062 or kpittack@rinconconsultants.com.

Sincerely,

Kristin Pittack, MS
Kern County Subbasin Plan Manager/Point-of-Contact

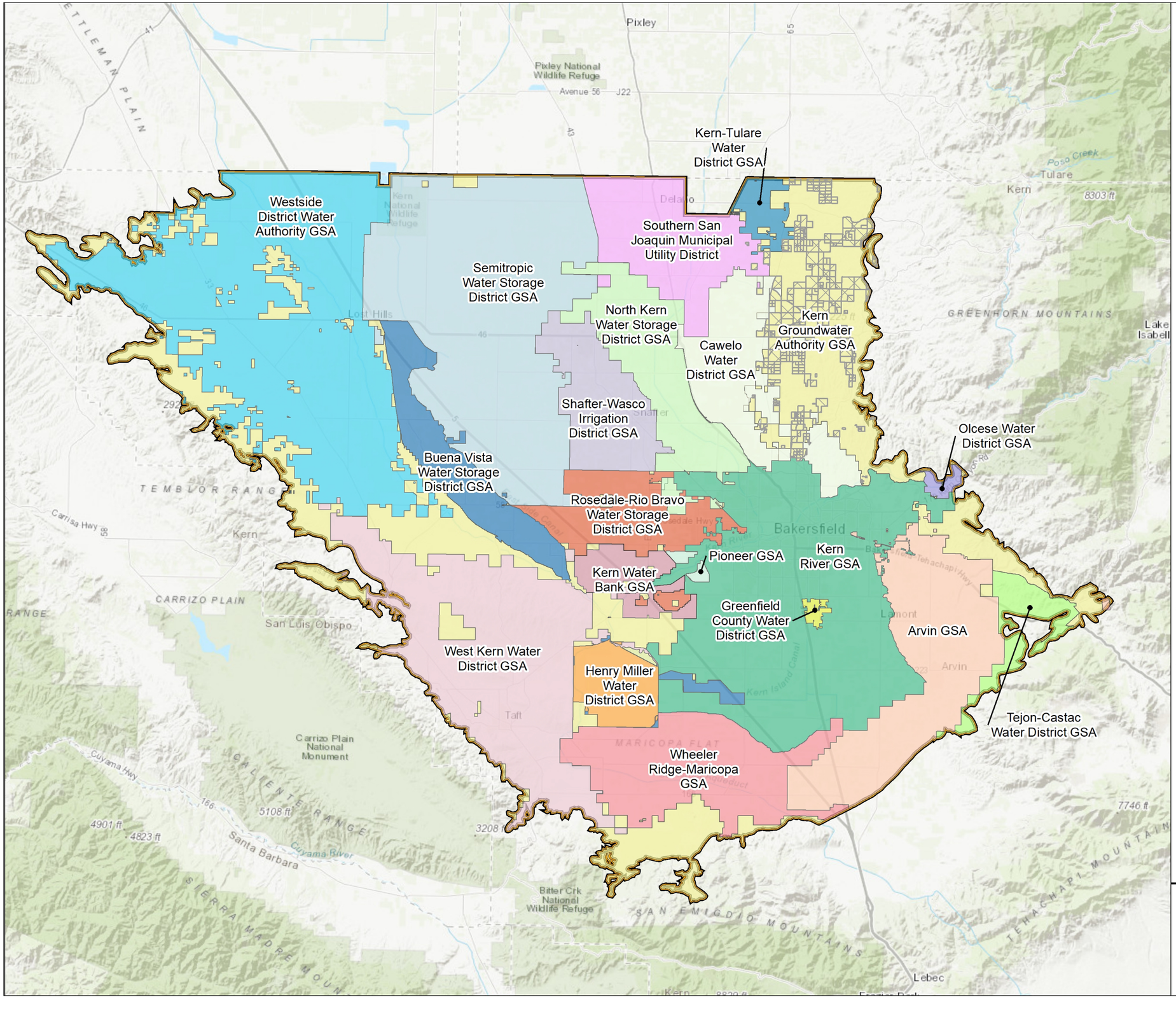
CC:

E. Joaquin Esquivel, Chair
State Water Resources Control Board

Laurel Firestone, Board Member
State Water Resources Control Board

Sean Maguire, Board Member
State Water Resources Control Board

Nichole Morgan, Board Member
State Water Resources Control Board



Legend

Groundwater Subbasin

- Kern County (DWR 5-022.14)

GSA

- Arvin GSA
- Buena Vista Water Storage District GSA
- Cawelo Water District GSA
- Greenfield County Water District GSA
- Henry Miller Water District GSA
- Kern Groundwater Authority GSA
- Kern River GSA
- Kern Water Bank GSA
- Kern-Tulare Water District GSA
- North Kern Water Storage District GSA
- Olcese Water District GSA
- Pioneer GSA
- Rosedale-Rio Bravo Water Storage District GSA
- Semitropic Water Storage District GSA
- Shafter-Wasco Irrigation District GSA
- Southern San Joaquin Municipal Utility District
- Tejon-Castac Water District GSA
- West Kern Water District GSA
- Westside District Water Authority GSA
- Wheeler Ridge-Maricopa GSA
- Eastside Water Management Area

Abbreviations

DWR = California Department of Water Resources
GSA = Groundwater Sustainability Agency

Notes

1. All locations are approximate.
2. Eastside Water Management Area (EWMA) is an organized management area of non-districted lands.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 27 February 2024.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - 2019 Update.
3. GSA boundaries downloaded from DWR SGMA data viewer on 5 December 2023. https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#boundaries

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Miles

GSA Coverage in the Kern Subbasin

eki environment & water

Kern County Subbasin
Kern County, CA
February 2024

CALIFORNIA DEPARTMENT OF WATER RESOURCES
SUSTAINABLE GROUNDWATER MANAGEMENT OFFICE
715 P Street, 8th Floor | Sacramento, CA 95814 | P.O. Box 942836 | Sacramento, CA 94236-0001

March 2, 2023

Patricia Poire
Kern County Subbasin Point of Contact
Kern Groundwater Authority
1800 30th Street, Suite 280
Bakersfield, CA 93301
ppoire@kerngwa.com

RE: Inadequate Determination of the Revised 2020 Groundwater Sustainability Plans Submitted for the San Joaquin Valley – Kern County Subbasin.

Dear Patricia Poire,

The Department of Water Resources (Department) has evaluated the six groundwater sustainability plans (GSPs or Plan) submitted for the San Joaquin Valley – Kern County Subbasin (Subbasin), as well as the materials considered to be part of the required coordination agreement. Collectively, the six GSPs and the coordination agreement are referred to as the Plan for the Subbasin. The Department has evaluated the revised Plan for the Kern County Subbasin in response to the Department's incomplete determination on January 28, 2022, and has determined that the actions taken to correct deficiencies identified by the Department were not sufficient (23 CCR § 355.2(e)(3)(C)).

The Department based its inadequate determination on recommendations from the Staff Report, included as an enclosure to the attached Statement of Findings, which explains why the Department believes that the Subbasin's Plan did not take sufficient actions to correct the deficiencies previously identified by the Department and, therefore, does not substantially comply with the GSP Regulations nor satisfy the objectives of the Sustainable Groundwater Management Act (SGMA).

Once the Department determines that a GSP is inadequate, primary jurisdiction shifts from the Department to the State Water Resources Control Board (State Board), which may designate the basin probationary (Water Code § 10735.2(a)). However, Department involvement does not end at that point; the Department may, at the request of the State Board, further assess a plan, including any updates, and may provide technical recommendations to remedy deficiencies to that plan. In addition, the responsibilities of the GSA do not end with an inadequate determination. Regardless of the status of a plan, a GSA remains obligated to continue collecting and submitting monitoring network data (Water Code Part 2.11; Water Code § 10727.2; 23 CCR § 353.40; 23 CCR § 354.40), submit an annual report to the Department (Water Code § 10728; 23 CCR § 356.2), conduct periodic updates to the plan at least every five years (Water Code § 10728.2; 23 CCR § 356.4), and submit this information to DWR's SGMA

Portal (23 CCR § 354.40). The Department also encourages GSAs to continue implementation efforts on project and management actions that will support the Subbasin's progress towards achieving sustainability.

Prior to this determination, the Department consulted with the State Board as required by SGMA (Water Code § 10735.2(a)(3)). Moving forward, for questions related to state intervention, please send a request to sgma@Waterboards.ca.gov. For any questions related to assessments, the State Board will coordinate with the Department.

For any other questions, please contact Sustainable Groundwater Management staff by emailing sgmps@water.ca.gov.

Thank You,

Paul Gosselin

Paul Gosselin
Deputy Director
Sustainable Groundwater Management

Attachment:

1. Statement of Findings Regarding the Inadequate Determination of the San Joaquin Valley – Kern County Subbasin Groundwater Sustainability Plans

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

STATEMENT OF FINDINGS REGARDING THE DETERMINATION OF INADEQUATE STATUS OF THE SAN JOAQUIN VALLEY BASIN – KERN COUNTY SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

The Department of Water Resources (Department) is required to evaluate whether a submitted groundwater sustainability plan (GSP or Plan) conforms to specific requirements of the Sustainable Groundwater Management Act (SGMA or Act), is likely to achieve the sustainability goal for the basin covered by the Plan, and whether the Plan adversely affects the ability of an adjacent basin to implement its GSP or impedes achievement of sustainability goals in an adjacent basin. (Water Code § 10733.) The Department is directed to issue an assessment of the Plan within two years of its submission. (Water Code § 10733.4.) If a Plan is determined to be Incomplete, the Department identifies deficiencies that preclude approval of the Plan and identifies corrective actions required to make the Plan compliant with SGMA and the GSP Regulations. The GSA has up to 180 days from the date the Department issues its assessment to make the necessary corrections and submit a revised Plan. (23 CCR § 355.2(e)(2)). This Statement of Findings explains the Department's decision regarding the revised Plan for the San Joaquin Valley Basin – Kern County Subbasin (No. 5-022.14).

SGMA allows for multiple GSPs implemented by multiple GSAs and coordinated pursuant to a single coordination agreement that covers the entire basin to be an acceptable planning scenario. (Water Code § 10727.) In the San Joaquin Valley – Kern County Subbasin (Subbasin), six GSPs were prepared by 17 GSAs for the various management areas established in the Subbasin pursuant to the coordination agreement. Collectively, the six GSPs and the coordination agreement are referred to as the Plan for the Subbasin. Individually, the GSPs include the following:

- *Kern Groundwater Authority Groundwater Sustainability Plan* – Amended July 2022 (KGA GSP) – prepared by the Kern Groundwater Authority (KGA) GSA, Semitropic Water Storage District (SWSD) GSA, Cawelo Water District (CWD) GSA, City of McFarland GSA, Pioneer GSA, West Kern Water District (WKWD) GSA, and Westside District Water Authority GSA.
- *Amended Kern River Groundwater Sustainability Plan* – July 2022 (Kern River GSP) – prepared by the Kern River GSA and Greenfield County Water District GSA.

- *Buena Vista Water Storage District GSA Groundwater Sustainability Plan* – July 2022 (Buena Vista GSP) – prepared by the Buena Vista Water Storage District (Buena Vista) GSA.
- *Olcese Groundwater Sustainability Agency Groundwater Sustainability Plan* – July 2022 (Olcese GSP) – prepared by the Olcese Water District (OWD) GSA.
- *Henry Miller Water District Groundwater Sustainability Plan* – July 2022 (Henry Miller GSP) – prepared by the Henry Miller Water District (HMWD) GSA.
- *South of Kern River Groundwater Sustainability Plan* – July 2022 (SOKR GSP) – prepared by the Arvin GSA, Tejon-Castac Water District (TCWD) GSA, and the Wheeler Ridge-Maricopa GSA.

Department management has discussed the Plan with staff and has reviewed the Department Staff Report, entitled *Groundwater Sustainability Plan Assessment Staff Report – San Joaquin Valley – Kern County Subbasin*, attached as Exhibit A, recommending an inadequate determination of the GSP. Department management is satisfied that staff have conducted a thorough evaluation and assessment of the resubmitted Plan and concurs with staff's recommendation. The Department therefore finds the resubmitted Plan **INADEQUATE** and makes the following findings:

A. The initial Plan for the basin submitted by the GSA for the Department's evaluation satisfied the required conditions as outlined the required conditions regarding the submission deadline, completeness, coordination, and Basin coverage, as outlined in § 355.4(a) of the GSP Regulations (23 CCR § 350 et seq.), and Department Staff therefore evaluated the initial Plan.

B. On January 28, 2022, the Department issued a Staff Report and Findings determining the initial GSP submitted by the Agencies for the basin to be incomplete, because the GSP did not satisfy the requirements of SGMA, nor did it substantially comply with the GSP Regulations. At that time, the Department provided corrective actions in the Staff Report that were intended to address the deficiencies that precluded approval. Consistent with the GSP Regulations, the Department provided the Agencies with up to 180 days to address the deficiencies detailed in the Staff Report. On July 27, 2022, within the 180 days provided to remedy the deficiencies identified in the Staff Report related to the Department's initial incomplete determination, the Agencies resubmitted the basin GSP to the Department for reevaluation. When evaluating a resubmitted GSP that was initially determined to be incomplete, the Department reviews the materials (e.g., revised or amended GSP) that were submitted within the 180-day deadline and does not review or rely on materials that were submitted to the Department by the GSAs after the resubmission deadline. Furthermore, the Department does not conduct a full evaluation of all components of a resubmitted Plan, but rather focuses on how the Agency has addressed the previously identified deficiencies that precluded approval of the initially submitted Plan. The

Department shall find a Plan previously determined to be incomplete to be inadequate if, after consultation with the State Water Resources Control Board, the Agency has not taken sufficient actions to correct the deficiencies previously identified by the Department. (23 CCR § 355.2(e)(3)(C).)

C. The Department's initial Staff Report identified the deficiencies that precluded approval of the initially submitted Plan. After staff's thorough evaluation of the resubmitted Plan, the Department makes the following findings regarding the sufficiency of the actions taken by the Agency to correct those deficiencies:

1. Deficiency 1: involved how the Plan established and justified undesirable results that represent effects caused by groundwater conditions occurring throughout the Subbasin. The corrective action advised the Agencies to evaluate the groundwater conditions that would be occurring throughout the Subbasin at the defined quantitative criteria described in the Plan. The corrective action also advised the Plan to explain how the Subbasin has utilized the same data and methodologies to define the Subbasin-wide undesirable results and how the Plan has considered the interests of beneficial uses and users of groundwater. The corrective actions included developing clear and consistent terminology and reporting processes for the Subbasin. The Staff Report indicates that the Agencies did not take sufficient actions to correct this deficiency, which materially affects the ability of the Agencies to achieve sustainability and the ability of the Department to evaluate the likelihood of the Plan to achieve sustainability.

2. Deficiency 2: involved the establishment of minimum thresholds for the chronic lowering of groundwater levels. The corrective action advised the Agencies to describe the various methods used to establish minimum thresholds and the potential effects on beneficial uses and users. The corrective action also advised the Plan to explain how the lowering of groundwater levels minimum thresholds and measurable objectives that are set below historical lows will impact other applicable sustainability indicators. The Staff Report indicates that the Agencies made progress toward describing the specific minimum thresholds at the management area plan scale but still did not take sufficient action to explain how the various minimum thresholds will collectively achieve the sustainability goals and avoid undesirable results for the Subbasin, which materially affects the ability of the Agencies to achieve sustainability and the ability of the Department to evaluate the likelihood of the Plan to achieve sustainability.

3. Deficiency 3: involved the establishment of sustainable management criteria for land subsidence. The corrective action advised the Plan to establish a Subbasin-wide approach to land subsidence, including Subbasin-wide subsidence sustainable management criteria and assessment of critical infrastructure that would be susceptible to substantial interference from future subsidence. The Staff Report indicates that the Agencies did not take sufficient actions to correct this deficiency, which materially affects the ability of the Agencies to achieve sustainability and the ability of the Department to evaluate the likelihood of the Plan to achieve sustainability.

D. In addition to the grounds listed above, the Department also finds that:

1. The Department developed its GSP Regulations consistent with and intending to further the state policy regarding the human right to water (Water Code § 106.3) through implementation of SGMA and the Regulations, primarily by achieving sustainable groundwater management in a basin. By ensuring substantial compliance with the GSP Regulations the Department has considered the state policy regarding the human right to water in its evaluation of the Plan. (23 CCR § 350.4(g).)

2. The California Environmental Quality Act (Public Resources Code § 21000 *et seq*.) does not apply to the Department's evaluation and assessment of the Plan.

SGMA requires basins to achieve sustainability within 20 years of Plan implementation and requires local GSAs and the Department to continually evaluate a basin's progress towards achieving its sustainability goals. SGMA also requires GSAs to encourage the active involvement of diverse social, cultural, and economic elements of the population within each basin prior to and during development and implementation of Plans. Under SGMA, the GSP is the primary document disclosing and informing the Department, local GSA boards, other local and state agencies, and interested or affected parties of the intended management program for the basin and the potential physical or regulatory impacts or changes that may occur within the basin during decades of Plan implementation. It is therefore essential that each basin begin with a Plan that adequately analyzes, discloses, and informs and that each Plan conform with certain requirements of SGMA and substantially comply with the GSP Regulations. For the reasons stated here and further discussed in the Staff Report, the revised Plan for the Kern County Subbasin is hereby determined to be **INADEQUATE**.

Signed:

Karla Nemeth

Karla Nemeth, Director
Date: March 2, 2023

Enclosure: Groundwater Sustainability Plan Assessment Staff Report – San Joaquin Valley – Kern County Subbasin

State of California
Department of Water Resources
Sustainable Groundwater Management Program
Groundwater Sustainability Plan Assessment
Staff Report

Groundwater Basin Name:	San Joaquin Valley Basin – Kern County Subbasin (No. 5-022.14)
Number of GSPs:	6 (see list below)
Number of GSAs:	17 (see list below)
Submittal Type:	Revised Plan in Response to Incomplete Determination
Submittal Date:	July 27, 2022
Recommendation:	Inadequate
Date:	March 2, 2023

On July 27, 2022, multiple GSAs submitted multiple groundwater sustainability plans (GSPs) for the entire Kern County Subbasin (Kern Subbasin or Subbasin), which are coordinated pursuant to a required coordination agreement, to the Department of Water Resources (Department) in response to the Department's incomplete determination on January 28, 2022[1] for evaluation and assessment as required by the Sustainable Groundwater Management Act (SGMA)[2] and GSP Regulations.[3] In total, six GSPs, 5 revised GSPs and one new GSP, which are adopted and will be implemented by 17 GSAs. Collectively, all GSPs and the coordination agreement are, for evaluation and assessment purposes, treated and referred to as the Plan for the Subbasin. Individually, the GSPs include the following:

- *Kern Groundwater Authority Groundwater Sustainability Plan* – Amended July 2022 (KGA GSP) – prepared by the Kern Groundwater Authority (KGA) GSA, Semitropic Water Storage District (SWSD) GSA, Cawelo Water District (CWD) GSA, City of McFarland GSA, Pioneer GSA, West Kern Water District (WKWD) GSA, and Westside District Water Authority GSA.
- *Amended Kern River Groundwater Sustainability Plan* (Kern River GSP) – July 2022 – prepared by the Kern River GSA and Greenfield County Water District GSA.

[1] Water Code § 10733.4(b); 23 CCR § 355.4(a)(4); https://sgma.water.ca.gov/portal/service/gspdocument/download/7785
[2] Water Code § 10720 *et seq*.
[3] 23 CCR § 350 *et seq*.

- *Buena Vista Water Storage District GSA Amended Groundwater Sustainability Plan* – July 2022 (Buena Vista GSP) – prepared by the Buena Vista Water Storage District (Buena Vista) GSA.
- *Olcese Groundwater Sustainability Agency Groundwater Sustainability Plan* – July 2022 (Olcese GSP) – prepared by the Olcese Water District (OWD) GSA.
- *Henry Miller Water District Groundwater Sustainability Plan* – July 2022 (Henry Miller GSP) – prepared by the Henry Miller Water District (HMWD) GSA.
- *South of Kern River Groundwater Sustainability Plan* – July 2022 (SOKR GSP) – prepared by the Arvin GSA, Tejon-Castac Water District (TCWD) GSA, and the Wheeler Ridge-Maricopa GSA. This is the new GSP.

After evaluation and assessment, Department staff conclude the Plan has not taken sufficient actions to address the deficiencies identified in the Department's incomplete determination.[4]

- **Based on the evaluation of the Plan, Department staff recommend the Plan be determined inadequate.**

This assessment includes five sections:

- **Section 1 – Summary:** Provides an overview of the Department staff's assessment.
- **Section 2 – Evaluation Criteria:** Describes the legislative requirements and the Department's evaluation criteria.
- **Section 3 – Required Conditions:** Describes the submission requirements of an incomplete resubmittal to be evaluated by the Department.
- **Section 4 – Deficiency Evaluation:** Provides an assessment of whether and how the contents included in the GSP resubmittal addressed the deficiencies identified by the Department in the initial incomplete determination.
- **Section 5 – Staff Recommendation:** Includes the staff recommendation for the Plan.

[4] 23 CCR § 352.2(e)(3)(C).

1 SUMMARY

Department staff recommend the Plan for the Kern County Subbasin be determined **INADEQUATE**.

Department staff concluded the GSAs did not take sufficient action to correct the following deficiencies identified in the incomplete determination:

Deficiency 1 – The GSPs do not establish undesirable results that are consistent for the entire Subbasin.

Deficiency 2 – The Subbasin's chronic lowering of groundwater levels sustainable management criteria do not satisfy the requirements of SGMA and the GSP Regulations.

Deficiency 3 – The Subbasin's land subsidence sustainable management criteria do not satisfy the requirements of SGMA and the GSP Regulations.

Generally, while the GSAs have put forth a great amount of effort to respond to the Department's corrective actions identified in the incomplete determination staff report, Department staff conclude that the information provided was not sufficiently detailed and the analysis was not sufficiently thorough and reasonable to correct the deficiencies identified by the Department. These deficiencies have been found to materially affect the ability of the Department to evaluate the likelihood of the Plan to attain sustainability.

2 EVALUATION CRITERIA

The Department evaluates whether a Plan conforms to the statutory requirements of SGMA[5] and is likely to achieve the basin's sustainability goal,[6] whether evaluating a basin's first Plan,[7] a Plan previously determined incomplete,[8] an amended Plan,[9] or a GSA's periodic update to an approved Plan.[10] To achieve the sustainability goal, each version of the Plan must demonstrate that implementation will lead to sustainable groundwater management, which means the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.[11] The Department is also required to evaluate, on an ongoing basis, whether the Plan will adversely affect the ability of an adjacent basin to implement its groundwater sustainability program or achieve its sustainability goal.[12]

[5] Water Code §§ 10727.2, 10727.4, 10727.6.
[6] Water Code § 10733; 23 CCR § 354.24.
[7] Water Code § 10720.7.
[8] 23 CCR § 355.2(e)(2).
[9] 23 CCR § 355.10.
[10] 23 CCR § 355.6.
[11] Water Code § 10721(v).
[12] Water Code § 10733(c).

The Plan evaluated in this Staff Report was previously determined to be incomplete. An incomplete Plan is one which had one or more deficiencies that precluded its initial approval, may not have had supporting information that was sufficiently detailed or analyses that were sufficiently thorough and reasonable, or Department staff determined it was unlikely the GSAs in the basin could achieve the sustainability goal. After a GSA has been afforded up to 180 days to address the deficiencies and based on the GSA's efforts, the Department can either approve[13] the Plan or determine the Plan inadequate.[14]

The Department's reevaluation and reassessment of a Plan previously determined to be incomplete, as presented in this Staff Report, continues to follow Article 6 of the GSP Regulations[15] to determine whether the Plan, with revisions or additions prepared by the GSA, complies with SGMA and substantially complies with the GSP Regulations.[16] As stated in the GSP Regulations, "substantial compliance means that the supporting information is sufficiently detailed and the analyses sufficiently thorough and reasonable, in the judgment of the Department, to evaluate the Plan, and the Department determines that any discrepancy would not materially affect the ability of the Agency to achieve the sustainability goal for the basin, or the ability of the Department to evaluate the likelihood of the Plan to attain that goal."[17]

The recommendation to approve a Plan previously determined to be incomplete does not signify that Department staff, were they to exercise the professional judgment required to develop a Plan for the basin, would make the same assumptions and interpretations as those contained in the revised Plan, but simply that Department staff have determined that the modified assumptions and interpretations relied upon by the submitting GSA(s) are supported by adequate, credible evidence, and are scientifically reasonable. The reassessment of a Plan previously determined to be incomplete may involve the review of new information presented by the GSA(s), including models and assumptions, and a reevaluation of that information based on scientific reasonableness. In conducting its reassessment, Department staff does not recalculate or reevaluate technical information or perform its own geologic or engineering analysis of that information.

The recommendation that a Plan previously determined to be incomplete be determined to be inadequate is based on staff's conclusion that the GSAs have not taken sufficient actions to correct the deficiencies previously identified by the Department when it found the Plan incomplete.[18]

[13] 23 CCR §§ 355.2(e)(1).
[14] 23 CCR §§ 355.2(e)(3).
[15] 23 CCR § 355 *et seq*.
[16] 23 CCR § 350 *et seq*.
[17] 23 CCR § 355.4(b).
[18] Water Code § 10735 *et seq*.

3 REQUIRED CONDITIONS

For a Plan that the Department determined to be incomplete, the Department identifies corrective actions to address those deficiencies that preclude approval of the Plan as initially submitted. The GSAs in a basin, whether developing a single GSP covering the basin or multiple GSPs, must attempt to sufficiently address those corrective actions within the time provided, not to exceed 180 days, for the Plan to be evaluated by the Department.

3.1 INCOMPLETE RESUBMITTAL

GSP Regulations specify that the Department shall evaluate a resubmitted GSP in which the GSAs have taken corrective actions within 180 days from the date the Department issued an incomplete determination to address deficiencies.[19]

The Department issued the incomplete determination on January 28, 2022. The GSAs resubmitted their individual GSPs and the coordination agreement on July 27, 2022, in compliance with the 180-day deadline.

4 DEFICIENCY EVALUATION

As stated in Section 355.4 of the GSP Regulations, a basin "shall be sustainably managed within 20 years of the applicable statutory deadline consistent with the objectives of the Act." The Department's assessment is based on a number of related factors including whether the elements of a GSP were developed in the manner required by the GSP Regulations, whether the GSP was developed using appropriate data and methodologies and whether its conclusions are scientifically reasonable, and whether the GSP, through the implementation of clearly defined and technically feasible projects and management actions, is likely to achieve a tenable sustainability goal for the basin.

In its initial incomplete determination, the Department identified three principal deficiencies in the Plan related to the establishment of undesirable results and sustainable management criteria for groundwater levels and subsidence, which precluded the Plan's approval in January 2022.[20] The GSAs were given 180 days to take corrective actions to remedy the identified deficiencies. Consistent with the GSP Regulations, Department staff are providing an evaluation of the revised Plan to determine if the GSAs have taken sufficient actions to correct the deficiencies.

[19] 23 CCR § 355.4(a)(4).
[20] Incomplete Determination of the 2020 Groundwater Sustainability Plans Submitted for the San Joaquin Valley – Kern County Subbasin. California Department of Water Resources, January 28, 2022, https://sgma.water.ca.gov/portal/service/gspdocument/download/7785

Evaluation Summary

As discussed in the initial incomplete determination, the Kern Subbasin is the largest groundwater subbasin and one of the most complex subbasins with regards to entities involved and associated demands. With that, Department staff still believe that in order to comply with SGMA and the GSP Regulations and achieve sustainable groundwater management, the Kern Subbasin needs a well-explained Plan that will be implemented in a coordinated manner. Although the revised Plan (i.e., the GSPs implemented together in accordance with the coordination agreement) made progress toward explaining a coordinated approach to sustainable groundwater management, especially regarding the development of consistent terminology, Department staff continue to find the Plan difficult to evaluate in terms of whether or not implementation will likely achieve the sustainability goals for the Subbasin.

The revised Plan maintains the sustainability goal of collectively bringing the Subbasin into sustainability and achieving long term sustainability through the implementation of more than 180 projects and management actions to be developed and executed by the individual management areas. The Plan also continues to use a percent of land area framework to quantify conditions that would lead to undesirable results. The Plan improved the quantitative metric that indicates when a management area would contribute to the Subbasin-wide percent land area calculation – the Plan considers this a Management Area Exceedance which occurs when 40% of a management area's representative monitoring wells exceed the management area specific minimum thresholds for four consecutive bi-annual measurements (i.e., spring and fall measurements). The Management Area Exceedance concept is an improvement from the original Plan's concept of the "watch area," but the definition still does not represent or explain the groundwater conditions that would be occurring throughout the Subbasin that the GSAs are trying to avoid to achieve sustainability. This continues to be evident because the Subbasin's management areas still employ various data and methodologies to establish minimum thresholds and measurable objectives in which all the individual minimum thresholds are set at differing magnitudes below historic low groundwater levels.

Additionally, the Plan maintains the results of the Todd Groundwater Technical Memorandum, a key piece of the Subbasin's coordinated management, which indicates that the 324,326 acre-feet per year of overdraft estimated from the baseline condition's projected future simulations may be offset by the various 180 projects and management actions "once fully implemented." [21] The Todd Groundwater Technical Memorandum also states that for most of the management areas in the Subbasin, the simulated projected water levels fall near or below the minimum thresholds without projects, but will generally be above the minimum thresholds if the SGMA projects are fully implemented. [22] Therefore, it is Department staff's understanding that if the projects and management actions are effectively implemented and the full allotment of water supply augmentation

[21] First Amended Kern County Subbasin Coordination Agreement, pp. 43-49.
[22] First Amended Kern County Subbasin Coordination Agreement, p. 49.

is realized then the management approach described in the coordination agreement may marginally address the initial estimate of overdraft, maintain conditions above the minimum thresholds, and avoid undesirable results.

However, after reviewing the revised Plan, Department staff believe that even though the Subbasin has developed consistent terminology and conducted well impact analyses and while the GSPs often state that the minimum thresholds for groundwater levels were coordinated and compared, there still appears to be no real analysis or understanding of the effects of the groundwater conditions if the minimum thresholds are exceeded and groundwater levels continue to decline for years before a Subbasin-wide undesirable result is declared. Department staff remain concerned that the varied and fragmented approaches to establish individual water budgets (i.e., the checkbook budgets) and sustainable management criteria might allow for groundwater conditions to worsen at a greater rate or extent than otherwise would have occurred with a more coordinated Plan.

As mentioned above, being that the Kern Subbasin maintains the sustainability goal to "achieve sustainable groundwater management in the Kern County Subbasin through the implementation of projects and management actions at the member agency level of each GSA,"[23] Department staff still consider the implementation of projects and management actions to be absolutely critical to assessing the progress toward sustainable groundwater management in the Kern Subbasin. However, being that the various data and methodologies used to establish sustainable management criteria and the fine margins indicated by the results of the Todd Groundwater Technical Memorandum to achieve sustainability (e.g., -45,965 acre-feet per year change in storage at 2070 climate with projects)[24] were not reevaluated or revisited, Department staff continue to believe and be concerned that if proposed projects and management actions are not diligently pursued, are significantly delayed, or are not likely to be implemented, it may lead to inadequate progress toward achieving sustainability for the Subbasin.

4.1 Deficiency 1 – The GSPs do not establish undesirable results that are consistent for the entire Subbasin.

4.1.1 Corrective Action 1

As described in the Department's GSP Assessment Staff Report released in January 2022, Department staff recommended the GSAs consider and address the following:

a) The Plan's Coordination Agreement should be revised to explain how the undesirable results definitions are consistent with the requirements of SGMA and the GSP Regulations, which specify that undesirable results represent effects caused by groundwater conditions occurring throughout the Subbasin.[25] The discussion should include descriptions of how the Plans have utilized the same

[23] First Amended Kern County Subbasin Coordination Agreement, p. 11
[24] First Amended Kern County Subbasin Coordination Agreement, p. 44.
[25] 23 CCR § 354.26(a).

data and methodologies to define the Subbasin-wide undesirable results and how the Plan has considered the interests of beneficial uses and users of groundwater.[26]

b) Because of the fragmented approach used in the Subbasin that could allow for substantial exceedances of locally defined minimum thresholds over sustained periods of time, the GSAs must commit to comprehensively reporting on the status of minimum threshold exceedances by area in the annual reports and describe how groundwater conditions at or below the minimum thresholds may impact beneficial uses and users prior to the occurrence of a formal undesirable result.[27]

c) The GSAs must adopt clear and consistent terminology to ensure the various plans are comparable and reviewable by the GSAs, interested parties, and Department staff. This terminology should also adhere to the definitions of various terms in SGMA and the GSP Regulations including the understanding that undesirable results are conditions occurring throughout the Subbasin.[28] The Plan and associated coordination materials must also be revised to clearly document how all of the various undesirable results definitions and methodologies achieve the same common sustainability goal.[29] Department staff recommend the revisions should include, at minimum:

- A map of the entire Subbasin showing each of the GSP areas, including management areas and the management areas within the management area plans, associated monitoring zones, etc. that have a locally defined "undesirable result" that can contribute to the Subbasin's undesirable result area-based definitions described in the Coordination Agreement
- A comprehensive table or another organized form of identifying each of the areas, the land coverage – both absolutely and as a percentage – of each of those listed areas in comparison to the Subbasin in total, and a clear and concise description of the conditions that would cause that area to trigger a localized undesirable result (i.e., a watch area, etc.). These materials should demonstrate that 100 percent of the Subbasin area is being managed under the various GSPs with reasonable definitions for undesirable results.

In addition to the graphical and tabular representation of the definition of the Subbasin-wide undesirable results, and if the GSAs elect to maintain the percentage of land area definition for undesirable results, the GSAs need to provide a comprehensive description of the groundwater conditions that would lead to localized undesirable results in the GSAs and other management areas which ultimately contribute to the 15 percent or 30 percent of land area criteria.

[26] 23 CCR §§ 354.26(b), 357.4(a).
[27] 23 CCR § 354.26(b)(4).
[28] 23 CCR § 354.26(a).
[29] 23 CCR § 357.4(a).

4.1.2 Evaluation

In response to Deficiency 1, the GSAs made appreciable efforts to develop consistent Subbasin-wide terminology and definitions for certain components of the Subbasin's sustainable groundwater management program. One key component was establishing the concept of a Management Area Exceedance which represents localized undesirable conditions specific to each management area (i.e., distinct from an undesirable result associated with groundwater conditions occurring throughout the Subbasin that may be impacting beneficial uses and users of groundwater). The Management Area Exceedance is quantitatively defined as when 40% of a specific management area's representative monitoring sites exceed the management area defined minimum thresholds for four consecutive bi-annual measurements.[30] The amended Coordination Agreement maintains the quantitative Subbasin-wide undesirable result definition for chronic lowering of groundwater levels as "when the minimum threshold for groundwater levels are exceeded in at least three (3) adjacent management areas that represent at least 15% of the Subbasin or greater than 30% of the Subbasin (as measured by each management area). Minimum thresholds shall be set by each of the management areas through their respective management area plans or Groundwater Sustainability Plans."[31] From a quantitative metric perspective, Department staff understand that if a management area observes conditions that exceed the minimum thresholds in 40 percent of their representative monitoring sites for four consecutive bi-annual measurements, then that management area would contribute to the 15 percent or 30 percent of land area criteria that represents a Subbasin-wide undesirable result. Effectively the Plan maintains a two-tier undesirable result definition for the Subbasin in which a management area prerequisite must occur before an undesirable result would be declared in the Subbasin.

While progress was made in standardizing terminology and definitions across the various management areas – including the Management Area Exceedance concept – the Plan continues to generally lack a comprehensive description of the groundwater conditions that would lead to localized undesirable results in the GSAs and other management areas (i.e., conditions that would result in a Management Area Exceedance) which then would ultimately contribute to the 15 percent or 30 percent of land area criteria. Looking at chronic lowering of groundwater levels as an example, it remains unclear to Department staff what effects or conditions would be occurring in each management area if a Management Area Exceedance was to be realized without triggering a Subbasin-wide undesirable result, especially being that the data and methodologies to establish groundwater level minimum thresholds varies across the management areas. In more general terms, Department staff maintain the position that the Plan still contains a complex set of minimum threshold values established in approximately 186 regional monitoring wells[32] that must be observed and evaluated before a Management Area Exceedance occurs, and consequently, before a collection of Management Area

[30] First Amended Kern County Subbasin Coordination Agreement, p. 12.
[31] First Amended Kern County Subbasin Coordination Agreement, p. 298.
[32] First Amended Kern County Subbasin Coordination Agreement, pp. 48, 110-296.

Exceedances result in an undesirable condition for the Subbasin via the land area criteria.[33] Department staff also reiterate, and discuss in further detail below in Deficiency 2, that the chronic lowering of groundwater minimum thresholds are still established using various datasets and methodologies across the management area plans. The specific management area methods utilized for developing the water level sustainable management criteria allow for differing degrees of lowering of groundwater levels – all beyond historical lows. The complexity involved with the variety of water level minimum threshold values, the four consecutive measurement condition, and the two-tier percentage definition to declare an undesirable result for the Subbasin, continues to be problematic because it can allow for situations where groundwater conditions could degrade for potentially sustained periods of time in potentially significant portions of the Subbasin without triggering Subbasin-wide management actions necessary to address Subbasin-wide undesirable results.

Regarding the chronic lowering of groundwater levels, many of the proposed sustainable management criteria in the Plan do not appear to consider the analysis and results of the Subbasin-wide California Central Valley Groundwater-Surface Water Simulation Model (C2VSim) Kern County model (i.e., C2VSimFG-Kern).[34] The model is presented in the Coordination Agreement and is used to produce estimates of the sustainable yield, total change in storage for a baseline period and future projections, and native yield as well as evaluate how sustainability will be achieved through the implementation of the assorted projects and management actions. In the view of Department staff, some management areas' approach to setting sustainable management criteria do not appear to be informed by the Todd Groundwater Technical Memorandum results indicating how, through the full implementation of the proposed projects and management actions, sustainability will be achieved and undesirable results will be avoided.[35] It should be noted that the sustainability assessment described in the Todd Groundwater Technical Memorandum indicates that without the implementation of any of the proposed projects and management actions the Subbasin groundwater extractions would exceed the estimated sustainable yield by 25 percent to 34 percent.[36] Below, Department staff describe select examples presenting the discrepancies between where the sustainable management criteria were established versus the C2VSim Kern County model simulations:

- In the KGA GSP Semitropic Water Storage District (SWSD) management area the measurable objectives and minimum thresholds for groundwater levels are set

[33] The total number of representative monitoring wells varies. The Todd Groundwater Memorandum in the Coordination Agreement contains hydrographs depicting simulated groundwater conditions and the associated measurable objectives and minimum thresholds for 186 regional monitoring wells. The Kern County Subbasin Third Annual Report submitted March 30, 2022, contains hydrographs comparing groundwater levels to measurable objectives and minimum thresholds in 203 representative monitoring wells. As of February 2023, the Department's Monitoring Network Module indicates 238 groundwater level representative monitoring wells.
[34] First Amended Kern County Subbasin Coordination Agreement, pp. 15-296.
[35] First Amended Kern County Subbasin Coordination Agreement, pp. 43-44.
[36] First Amended Kern County Subbasin Coordination Agreement, p. 48.

below all of the projected water level model scenarios, including the projected climate scenarios that exclude the implementation of the projects and management actions. In evaluating the hydrographs presented in the amended management area plan, it appears that the SWSD minimum thresholds would allow for approximately more than 100 feet of groundwater level decline beyond the simulated groundwater levels for water year 2040 where projects and management actions are not implemented.[37] This indicates to Department staff that if groundwater conditions reached the minimum thresholds in SWSD, then pumping would not likely be within the sustainable yield and undesirable results may be occurring.

- The Kern River GSP has established a narrower margin of operational flexibility (i.e., water level difference between the measurable objectives and minimum threshold) with many of the established measurable objectives aligning with the simulated projected groundwater conditions with the implementation of projects and management actions. However, the minimum thresholds, with the exception of two representative monitoring wells (RMW-026 and RMW-030), are set at groundwater levels below the projected water level scenarios that exclude projects and management actions. In some representative monitoring wells, the difference between the simulated water level without projects and management actions and the minimum threshold is upwards of 100 feet at water year 2040.[38] This indicates to Department staff that, although Kern River's measurable objectives appear to be correlated with the projected water levels with projects and management actions, without the full implementation of the various projects and management actions, the GSA may not achieve their sustainability goal. Additionally, the data indicate that – with the exception of the two wells listed above – if groundwater levels were to reach the minimum thresholds, then the management area and Subbasin may not be operating within its sustainable yield resulting in the Subbasin not likely achieving the sustainability goals.

As highlighted in the examples above, the locally derived minimum thresholds – and in some cases the measurable objectives – are well below the range of simulated water levels in model runs where sustainability was achieved through the implementation of projects and management actions at the member agency level of each GSA. This indicates that the baseline conditions in the model do not consider the groundwater conditions occurring throughout the Subbasin if the management areas were operating at or near their specific minimum thresholds. Additionally, in some management areas, the minimum thresholds – and in some cases the measurable objectives – are set below the model simulations which evaluate projected future climate conditions with no GSA actions taken (i.e., without the implementation of projects and management actions).

[37] First Amended Kern County Subbasin Coordination Agreement, pp. 200-216; KGA GSP Semitropic Water Storage District Revised Management Area Plan (MAP), Figures 5-7 through 5-18, pp. 329-340.
[38] First Amended Kern County Subbasin Coordination Agreement, pp. 127-146; Kern River Amended GSP, Appendix H, pp. 974-1016.

After evaluating the proposed management area minimum thresholds and the simulation results from the Todd Groundwater Technical Memorandum, Department staff cannot understand how the Plan's assessment of overdraft conditions were incorporated into the development of sustainable management criteria, and how the Subbasin will achieve its sustainability goal, especially if the estimated benefits of the various projects and management actions are not fully realized.

Department staff recognize that the amended Coordination Agreement includes a table and maps identifying each of the management areas and their land coverage (both absolute and as a percentage of the Subbasin), the total number of representative monitoring wells in each area, and the number of representative monitoring wells exceeding the minimum thresholds required to trigger a Management Area Exceedance which would contribute to the calculation for a Subbasin-wide undesirable result.[39] The entirety of the Subbasin appears to be represented on the maps and in the accompanying table. With the submission of these materials, Department staff find that sufficient action was taken by the GSAs in developing a graphical and tabular representation of the definition of the Subbasin-wide undesirable results as requested in Corrective Action 1c of Deficiency 1. However, as highlighted above and being that the Plan maintains the percent land area definition, Department staff do not believe the GSAs took sufficient action to provide a comprehensive description of the groundwater conditions that would lead to localized undesirable results in the GSAs and other management areas which ultimately contribute to the 15 percent or 30 percent of land area criteria.

Related to the graphical and tabular documentation of how the quantification of undesirable results will be triggered, it is still unclear to Department staff how minimum threshold exceedances will be tracked and reported in each management area and evaluated against the land area-based Subbasin-wide undesirable result definition. While Department staff understand the Subbasin has launched an initial version of their data management system[40] and the GSAs collectively produce and submit annual reports, Department staff cannot evaluate how the various management areas would assess whether any minimum threshold exceedance, for any amount of time and in any area, is causing effects that could be or become significant and unreasonable. It is Department staff's understanding that with the current two-tier undesirable result quantification with the associated multi-seasonal measurement component, the Subbasin could be experiencing minimum threshold exceedances at a large number of sites for a sustained period without this being considered undesirable by the Subbasin's groundwater managers – meaning localized conditions could be degrading while GSP and management area specific water budgets do not clearly show where the overdraft is occurring.

Additionally, the four consecutive bi-annual water level measurements constraint for minimum threshold exceedances associated with the Management Area Exceedance

[39] First Amended Kern County Subbasin Coordination Agreement, pp. 301-303.
[40] Kern County Subbasin GSPs Third Annual Report Water Year 2021, Section 7.1.2, p. 45.

criterion can allow for isolated or anomalous groundwater recharge events raising water levels above the minimum thresholds which would reset the temporal trigger incorporated in the two-tier Subbasin-wide undesirable result calculation framework. The occurrence of these nuanced groundwater level conditions may cause significant fluctuations in water levels in a selection of representative monitoring wells, occurring over relatively short time periods, and may be influenced by local groundwater banking operations. It is unclear to Department staff how or if groundwater banking operations occurring throughout the Subbasin would affect the quantitative metrics that define a Management Area Exceedance.

To support the evaluation of potential impacts to beneficial uses and users at the locally established sustainable management criteria, each GSP resubmission included some variation of a well impact analysis to identify wells that could go dry at proposed minimum thresholds and measurable objects. In addition to the well impact studies, the South of Kern River GSAs[41] and BVGSA[42] include (or will develop) some variation of a well mitigation plan if impacts are observed. Furthermore, all management areas in the KGA are required to have a mitigation plan if more than 5% of identified domestic wells are predicted to be dewatered at the minimum thresholds.[43]

Department staff are encouraged by the inclusion of the well impact studies and believe that the GSAs took steps to understand how beneficial users of groundwater, including drinking water users, may be affected during Plan implementation. These studies provide transparency of the potential magnitude of impacts to beneficial users that can be expected if water levels decline to local sustainable management criteria minimum thresholds. However, these studies provide less clarity on how an individual GSP's implementation may affect beneficial uses and users across the greater Subbasin given that excessive pumping in any given Management Area could affect water levels beyond that management area's jurisdictional boundaries. Again, this becomes problematic with the disparate methodologies used to establish sustainable management criteria and conflicts with GSP Regulations,[44] which require that management areas operating under different minimum thresholds and measurable objectives explain how they will not cause undesirable results outside the management area.

4.1.3 Conclusion

Ultimately, the fragmented management area approach to groundwater management, particularly in establishing minimum thresholds and measurable objectives, undermines the GSAs ability to clearly define the Subbasin-wide significant and unreasonable effects they hope to avoid. It is, therefore, unclear to Department staff how or whether the sustainable groundwater management approach described in the Plan will achieve the sustainability goals included in the amended Coordination Agreement, specifically: (1)

[41] South of Kern River GSP, Section 18.1.6.2, pp. 599-600.
[42] Buena Vista Amended GSP, Section 5.4.1.3, p. 144.
[43] KGA Amended GSP, p. 15.
[44] 23 CCR § 354.20(b)(4).

collectively bringing the Subbasin into sustainability and maintaining sustainability over the implementation horizon; (2) maintaining groundwater use within the sustainable yield as demonstrated by monitoring and reporting groundwater conditions; and (3) operating within the established sustainable management criteria which are based on collective technical information.[45]

4.2 Deficiency 2 – The Subbasin's chronic lowering of groundwater levels sustainable management criteria do not satisfy the requirements of SGMA and the GSP Regulations.

4.2.1 Corrective Action 2 and GSA Responses

Below is a table highlighting Department staff's recommendations from the Department's GSP Assessment Staff Report released in January 2022 and brief descriptions of what each management area provided in response to the corrective actions.

Kern Groundwater Authority GSP
Areas Outside of Management Areas (Umbrella Document)
Corrective Action Provide a comprehensive discussion of areas covered by the KGA GSP, but that are not contained within the various management area plans. Among other items, provide maps of these areas, describe the uses and users of groundwater in these areas, and either set sustainable management criteria for these areas or include robust discussions justifying why sustainable management criteria are not required. GSA Response to Corrective Action The Umbrella Plan states that descriptions of areas covered by the KGA GSP, such as non-districted lands, were included in the Umbrella Plan. However, the GSA was unable to include these lands at time of submittal due to the landowner not signing to become a member of KGA. The Umbrella Plan states that the GSA will retain and monitor over all lands under its jurisdiction. The Umbrella Plan states that activities in the non-districted lands that are still not under a management area include oil and grazing activities and do not require sustainable management criteria. A figure visualizing non-districted lands[46] and another figure reflecting the lack of water wells[47] within these lands are included in the Umbrella Plan.
Cawelo Water District Management Area

[45] First Amended Kern County Coordination Agreement, p. 11.
[46] KGA Amended GSP, Figure 1-5a, p. 81.
[47] KGA Amended GSP, Figure 1-6a, p. 83.

Corrective Action
The KGA GSP must describe how the minimum thresholds in the Cawelo management area may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

GSA Response to Corrective Action
The management area performed a 'well completion analysis.' The analysis compared screen intervals and saturated thickness of 290 water supply wells to the proposed minimum thresholds from nearby representative monitoring wells. The analysis determined that 3% of domestic wells and <1% of agricultural/industrial supply wells would be potentially impacted if water level conditions reached the proposed minimum thresholds. The Cawelo management area developed a summary table correlating each sustainability indicator to their respective beneficial uses/users, effects to beneficial uses and users, undesirable result causes, local undesirable result criteria and definitions, justification for local undesirable results, minimum threshold definitions and justification, and measurable objective definition. The minimum threshold definitions included a summary of how the conditions will avoid undesirable results for other sustainability indicators.[48]

Eastside Water Management Area

Corrective Action
The KGA GSP must describe how the minimum thresholds in the Eastside management area may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

GSA Response to Corrective Action
The Eastside Water Management Area (EWMA) conducted a well impact analysis to evaluate potential impacts to beneficial users. The analysis included developing a management area specific analytical model that established a radius of influence for each representative monitoring well, then existing well information was collected to see what well types (i.e., beneficial use) were within the radius of the monitoring location. The model then estimated the impacts to the well types as groundwater levels decreased to the minimum thresholds. EWMA then reviewed the potential impacts to agricultural and domestic wells in an area of influence at each representative monitoring well. The results of the well impact indicates 20 agricultural production wells, five domestic wells, and two municipal wells could be impacted if water levels reach the minimum thresholds. The EWMA management area plan states that the GSA ensures well information in the analysis includes all current, publicly available data.[49]

Kern Water Bank Management Area

Corrective Actions

[48] KGA GSP Cawelo Revised MAP, Section 7.2.6, pp. 200-202.
[49] KGA GSP Eastside Revised MAP, Section 12.1.3, p. 85.

- While the Department understands the unique circumstances with the Kern Water Bank, compliance with SGMA and the GSP Regulations is still a requirement and while the thresholds established in the Joint Operation Plan are being utilized to meet these requirements, all parts of the GSP Regulations related to the sustainable management criteria must be addressed. The KGA GSP must provide an explanation of how the Joint Operation Plan meets the requirements of SGMA and the GSP Regulations.
- It is also noted that the Joint Operation Plan expired on January 31, 2019. Provide an updated explanation if these thresholds have changed and the latest Joint Operation Plan if applicable.

GSA Response to Corrective Actions

The Kern Water Bank GSA renewed the Joint Operations Plan through 2023 and have not changed the original thresholds. The Joint Operations Plan was established to "prevent, eliminate or mitigate significant adverse impacts as a result of project implementation" in the Kern Water Bank, Rosedale-Rio Bravo, and Pioneer Project management areas. The Umbrella Plan states that the Kern Water Bank operations cannot recover native groundwater supplies.[50] However, the management area plan states the Kern Water Bank Memorandum of Understanding allows 0.3 acre-feet per acre of native groundwater to be extracted for farmed acreage. The management area plan explains that because irrigation does not occur in the management area, the allowance is not used.[51] As a result, the minimum threshold for a reduction of native groundwater supplies is when stored water accounts equal zero.[52]

Kern-Tulare Water District Management Area

Corrective Actions

- The KGA GSP must provide and explanation of how minimum thresholds within the Kern-Tulare management area at the monitoring sites are consistent with the requirement to be based on a groundwater elevation indicating a significant and unreasonable depletion of supply at a given location. If the minimum thresholds were not set consistent with levels indicating an undesirable depletion of supply, the thresholds should be revised accordingly.
- Provide a discussion identifying how the minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

GSA Response to Corrective Actions

The management area plan states that minimum thresholds were initially established as the historical low water elevation within the Santa Margarita Formation observed during the peak of the drought in August 2015. The Kern-Tulare Water District (KTWD) management area plan states that after discussing the minimum thresholds with the

[50] KGA Amended GSP, Table 2a, p. 18.
[51] KGA GSP Kern Water Bank Revised MAP, Section 2.1.3.1, p. 15.
[52] KGA GSP Kern Water Bank Revised MAP, Section 2.1.2.8, p. 14, Appendix I, pp. 183-190.

adjacent EWMA it became apparent that some of EWMA's monitoring locations were much shallower than KTWD and were at risk of going dry at KTWD's proposed minimum thresholds. Based on the feedback from EWMA and local landowners in KTWD, the minimum thresholds were adjusted on a well-by-well basis to prevent impacts to agricultural users. The KTWD management area plan states that all domestic wells within KTWD are to depths less than 700 feet below ground surface and would not be impacted by groundwater extractions occurring in the Santa Margarita Formation which is located at approximately 1,800 to 2,400 feet below ground surface.[53]

North Kern Water Storage District/Shafter-Wasco Irrigation District Management Area

Corrective Actions

- The KGA GSP must establish sustainable management criteria for management area NKWSD-MA-2.
- The KGA GSP must be revised to explain how minimum thresholds within the North Kern Water Storage District/Shafter-Wasco Irrigation District management area at the monitoring sites are consistent with the requirement to be based on a groundwater elevation indicating a significant and unreasonable depletion of supply at a given location. If the minimum thresholds were not set consistent with levels indicating an undesirable depletion of supply, the thresholds should be revised accordingly.
- Verify how the subset of wells used in the well impact analysis is representative of the wells in the management area. Provide an explanation of the mitigation plan for domestic wells.

GSA Response to Corrective Actions

The North Kern Water Storage District (NKWSD) identified two representative monitoring wells for MA-2, conducted a Well Impact Study, and established minimum thresholds and measurable objectives for each location. The Well Impact Study utilized groundwater elevation and well completion report data to identify monitoring locations to better evaluate impacts to beneficial uses and users in the management area. Groundwater level data was collected from State and local agency databases and filtered to include a subset of wells with similar groundwater elevations. The management area plan states that groundwater elevation data was then used to establish hydrogeologic zones and subzones, which were used to characterize well types in the management area. The Well Impact Study used well completion report data from the Department's public database, however, the NKWSD management area plan recognized a data gap in obtaining domestic well information. The GSA intends to address this data gap with the Domestic Well Survey management action, which is expected to be completed in the 2025 Plan update. The NKWSD management area plan states that the results of the Well Impact Study show the median minimum threshold is approximately 542 feet below ground surface, median well depth is 656

[53] KGA GSP Kern-Tulare Water District MAP, Section 3.5.1, pp. 74-76.

feet below ground surface, and the median value for the base of fresh water is 2,200 feet below ground surface.[54] The NKWSD management area plan states that minimum thresholds and measurable objectives were established at levels that had minor potential impacts on domestic wells and were protective of municipal wells. The NKWSD management area plan states that minimum thresholds are consistent with the requirement to be based on a groundwater elevation indicating a significant and unreasonable depletion of supply at a given location and set at depths that are sufficiently protective of beneficial uses and users and groundwater supply. The NKWSD management area plan included a draft Domestic Well Mitigation Plan, planned to be finalized and adopted by the end of 2022, which intends to designate measures to mitigate adverse impacts to domestic wells resulting from GSP implementation.[55]

Kern County Water Agency Pioneer GSA Management Area

Corrective Action

The KGA GSP must explain the selection of groundwater level minimum thresholds for the Pioneer management area, including how they represent site-specific levels of depletion that could cause undesirable results, how they may affect the interests of beneficial uses and users of groundwater, and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels.

GSA Response to Corrective Action

The Pioneer management area plan states that sustainable management criteria were established to provide operational flexibility and maintain long-term sustainability for beneficial uses and users. The management area plan also states that participants of the Pioneer Project, the sole beneficial users of groundwater in the management area, were consulted during sustainable management criteria development to determine what minimum thresholds were appropriate for groundwater elevations and storage to trigger an undesirable result as it related to the Pioneer Project's banking operations. The management area plan states that potential impacts of undesirable results on the beneficial uses and uses are increased operation costs. The management area plan also states that coordination efforts took place with neighboring GSA's during the establishment of sustainable management criteria to ensure that neighboring beneficial uses and users were protected and that minimum thresholds were consistent with minimum thresholds in adjacent management areas. The management area plan provides an analysis on the relationship between historical groundwater quality, land subsidence, and groundwater elevation data. For the water quality sustainability indicator, the analysis correlated historical groundwater elevation to arsenic, nitrate, and specific conductance data in four of the five monitoring locations through linear

[54] KGA GSP North Kern Water Storage District/Shafter-Wasco Irrigation District Revised MAP, Section 3.5.1, pp. 240-241.
[55] KGA GSP North Kern Water Storage District/Shafter-Wasco Irrigation District Revised MAP, Appendix N, pp. 922-928.

regression. The results of the analysis concluded that none of the constituents of concern, with the exception of arsenic at one monitoring location, would exceed minimum thresholds using the proposed chronic lowering of groundwater sustainable management criteria.[56] The management area plan states that land subsidence is anticipated to be influenced by groundwater level sustainable management criteria and that the minimum thresholds established for groundwater levels were set at elevations to mitigate potential inelastic subsidence.[57] The management area plan does not provide any additional information or analysis on the relationship between groundwater levels and inelastic subsidence used to make this determination.

Rosedale Rio Bravo Management Area

Corrective Action

The KGA GSP must provide clarification regarding why minimum threshold exceedances are allowed to occur in one of the North, Central, or South of the River zones for this management area (i.e., why it takes two of those zones to exceed their threshold before the management area plan considers an undesirable result to have occurred). Describe any projects or management actions that may be implemented if the minimum threshold is exceeded in one of those areas and users are impacted but an undesirable result is not triggered.

GSA Response to Corrective Action

The Rosedale-Rio Bravo Management Area (RRBMA) management area plan states that all monitoring areas (North, Central, South of River) will be included in one single management area and the entire management area will be subject to the Subbasin-wide undesirable result trigger. The RRBMA GSA conducted a Well Impact Analysis to evaluate wells that would be impacted at varying minimum thresholds. The minimum thresholds in the RRBMA plan were updated from 75 feet to 50 feet below the lowest groundwater elevation from the latest drought.[58] The RRBMA plan states that monitoring locations which exceed chronic lowering of groundwater levels minimum thresholds will be subject to the protocols of existing mitigation requirements or proposed adaptive management actions. The existing mitigation requirements are conducted through the Joint or Long-Term Operations Plan, including investigation of claims and pump lowering, well replacement, or reduction or adjustment of banking project recovery activities.[59] The proposed adaptive management action discussed in the RRBMA plan is intended to avoid undesirable results as a result of the chronic lowering of groundwater levels. This management action includes identifying the minimum threshold exceedance, investigation of the monitoring location area, evaluate contributing factors outside the management area, considerations towards developing new or modifying existing management actions and/or projects, and considerations

[56] KGA GSP Pioneer Revised MAP, Section 7.6.3, p. 143, Table 7-2, p. 143.
[57] KGA GSP Pioneer Revised MAP, Section 7.7.3, p. 144.
[58] KGA GSP Rosedale-Rio Bravo Water Storage District Revised MAP, Section 5.1, pp. 96-97.
[59] KGA GSP Rosedale-Rio Bravo Water Storage District Revised MAP, Section 1.4.4.4, p. 28.

towards developing and/or implementing policies and programs to mitigate or eliminate the exceedance.[60]

Semitropic Water Storage District Management Area

Corrective Actions

- The KGA GSP must explain the selection of groundwater level minimum thresholds for the Semitropic Water Storage District management area, including how they represent site-specific levels of depletion that could cause undesirable results and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels. If minimum thresholds were not set consistent with levels indicating a depletion of supply, the minimum thresholds should be revised accordingly.
- Reconcile Figure 3-1 and Table 3-1 to utilize the same well naming convention so that Department staff and other interested parties may correlate the two.
- Verify how the subset of wells used in the well impact analysis is representative of the wells in the management area. Provide an explanation of the mitigation plan for domestic wells.

GSA Response to Corrective Actions

The Semitropic Water Storage District (SWSD) GSA performed a Well Impact Analysis to evaluate impacts of declining groundwater elevations on beneficial uses and users. The Well Impact Analysis used well completion report data from the Department and Kern County Environmental Health Department to estimate the percentage of beneficial use wells that would be impacted by proposed sustainable management criteria. The wells used in the analysis were selected based on those that contained complete construction data. The proposed sustainable management criteria were selected based on groundwater levels that were able to support access to groundwater while considering costs those beneficial uses and users were able to self-mitigate. The results of the Well Impact Analysis, based on worst case drought scenarios, concluded that 25%, 37%, and 23% of domestic and small community wells would be dewatered by the proposed minimum thresholds in Management Areas 1, 2, and 3, respectively. The analysis also concluded that 15% of domestic and small community wells would be dewatered by the proposed measurable objectives in Management Areas 2 and 3.[61] The SWSD management area plan states that the sustainable management criteria utilized in the Well Impact Analysis were discussed with SWSD GSA stakeholders and landowners and ultimately accepted and adopted by the GSA.[62] The SWSD management area plan explains the relationship between the chronic lowering of groundwater levels and degraded water quality sustainability indicators are negligible as water quality is not significantly affected by groundwater elevations above the

[60] KGA GSP Rosedale-Rio Bravo Water Storage District Revised MAP, Section 7.5.2, pp. 121-122.
[61] KGA GSP Semitropic Water Storage District Revised MAP, Tables 3-3, 3-4, 3-5, pp. 238-239.
[62] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.5.1, p. 232.

minimum threshold.[63] The SWSD management area plan states that groundwater elevation changes and sodium concentrations in the lower zone aquifer west of the spreading ground show a direct correlation. However, groundwater elevation changes and sodium concentrations in the upper zone aquifer and the lower zone aquifer south of the spreading ground show an inverse correlation.[64] The SWSD management area plan states that as groundwater elevations decrease in the lower aquifer zone, arsenic concentrations tend to decrease as well. Conversely, as groundwater elevations increase in the upper aquifer zone, arsenic concentrations increase.[65] The SWSD management area plan does not include an analysis of the relationship between groundwater elevations and the other identified constituents of concern, nitrate and 1,2,3-Trichloropropane. The SWSD management area plan acknowledges that inelastic subsidence can occur from aquifer compact by overdraft caused by groundwater extraction;[66] however, the SWSD management area plan does not provide an analysis of the relationship between the chronic lowering of groundwater levels and land subsidence sustainability indicators.

The SWSD management area plan revised the original Figure 3-1 and Table 3-1 so that well numbers were able to be correlated. The SWSD management area plan included a Domestic Well Mitigation Program, funded by a Tiered Pricing Structure, which intends to designate measures to mitigate adverse impacts to domestic wells resulting from GSP implementation. The mitigation program consists of providing a short-term emergency water supply, providing funds to lower existing well pumps, providing funds to complete a connection to a water provider, supply water from an alternative source, provide funds to mitigate the impact of the affected well with a deeper domestic well, reduce or adjust groundwater storage recovery pumping to prevent the impact, and other mitigation measures not fully discussed in the SWSD management area plan.[67]

Shafter-Wasco Irrigation District (7th Standard Rd.) Management Area

Corrective Action

The KGA GSP must explain the selection of groundwater level minimum thresholds for the Shafter-Wasco Irrigation District management area, including how they represent site-specific levels of depletion that could cause undesirable results and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels. If minimum thresholds were not set consistent with levels indicating a depletion of supply, the minimum thresholds should be revised accordingly.

[63] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.5.1.1, p. 233.
[64] KGA GSP Semitropic Water Storage District Revised MAP, Figures 2-34, 2-36, 2-37, pp. 160-161.
[65] KGA GSP Semitropic Water Storage District Revised MAP, Figures 2-39 and 2-40, pp. 167-168.
[66] KGA GSP Semitropic Water Storage District Revised MAP, Section 2.3.6, pp. 171-172.
[67] KGA GSP Semitropic Water Storage District Revised MAP, Section 5.2.6, p. 325.

GSA Response to Corrective Action

The Shafter-Wasco Irrigation District 7th Standard Annex (SWID) amended management area plan states that the minimum thresholds for the chronic lowering of groundwater levels indicator were raised by 50 feet based on coordination efforts with neighboring management areas.[68] Minimum thresholds were established utilizing historical water level data from select monitoring locations, well construction information, and coordination with and consideration of adjacent GSAs, basins, and other sustainability indicators.[69] Monitoring locations were selected by those that contained long-term historical records, ranging from 1968 to 2018. The SWID management area plan states that minimum thresholds were established using a trendline analysis assuming that groundwater elevations that occurred during periods of overdraft (2006 – 2016) would continue over the 20-year GSP implementation horizon ending in 2040. The trendline analysis estimated that the lowest groundwater elevation in the management area by 2040 would be -137 feet above mean sea level. The SWID management area plan established the minimum threshold in this area at 50 feet above this projected groundwater elevation, ultimately setting the minimum threshold at -87 feet above mean sea level for all monitoring locations.[70] The SWID management area plan states that minimum thresholds for groundwater levels were established to avoid depletion of supply that would lead to undesirable results as they were set above projected low groundwater elevations based on historical groundwater trends in the management area. The SWID management area plan states that the chronic lowering of groundwater sustainability indicator is directly related to the reduction of groundwater storage and is used as a proxy for this indicator. However, the SWID management area plan does not believe that the chronic of lowering of groundwater indicator is correlated to degraded water or land subsidence in the management area based on the best available data.[71] The SWID states that due to limited data on constituent of concern concentrations statistically significant trends related to groundwater elevation changes were unable to be established.[72]

Southern San Joaquin Municipal Utility District Management Area

Corrective Actions

- The KGA GSP must explain the selection of groundwater level minimum thresholds for the Southern San Joaquin Municipal Utilities District management area, including how they represent site-specific levels of depletion that could cause undesirable results, how they may affect the interests of beneficial uses and users of groundwater, and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels. If minimum thresholds were not set consistent with levels

[68] KGA GSP Shafter-Wasco Irrigation District (7th Standard Rd.) Revised MAP, Section 13.1, p. 176.
[69] KGA GSP Shafter-Wasco Irrigation District (7th Standard Rd.) Revised MAP, Section 13.1, p. 175.
[70] KGA GSP Shafter-Wasco Irrigation District (7th Standard Rd.) Revised MAP, Table SMC-5, p. 176.
[71] KGA GSP Shafter-Wasco Irrigation District (7th Standard Rd.) Revised MAP, Section 13.1.1, p. 176.
[72] KGA GSP Shafter-Wasco Irrigation District (7th Standard Rd.) Revised MAP, Section 7.4.1, p. 90.

indicating a depletion of supply, the minimum thresholds should be revised accordingly.

- Verify how the subset of wells used in the well impact analysis is representative of the wells in the management area. Provide an explanation of the mitigation plan for domestic wells.

GSA Response to Corrective Actions

The Southern San Joaquin Municipal Utility District (SSJMUD) amended management area plan states that a Well Impact Analysis was completed to determine minimum thresholds for chronic lowering of groundwater levels and to determine if site-specific levels of depletions that could eventually lead to undesirable results. The Well Impact Analysis used well completion report data provided by the Department and proposed sustainable management criteria based on what groundwater elevations were appropriate for reasonable access and recovery. The SSJMUD management area plan states that the Well Impact Analysis was also performed to better understand the amount and type of wells in the management area. The analysis identified 19 municipal wells, 67 domestic and small community wells, and 243 agricultural and industrial wells. The SSJMUD management area plan concluded that 43% of domestic and small communities and 10% agricultural and industrial users would be impacted by the minimum thresholds. Also, 19% of domestic and small community wells and 5% of agricultural and industrial wells would be impacted by the measurable objectives.[73] The SSJMUD management area plan states that the results of the Well Impact Analysis concluded that minimum thresholds were set at depths that are protective of groundwater supply. The SSJMUD management area plan bases this statement on the fact that the GSA has elected to maintain approximately 10-years of groundwater supply above the groundwater level minimum threshold as method of managing a 10-year operational drought.

The SSJMUD management area plan explains that the chronic lowering of groundwater levels sustainability indicator is a proxy for the reduction of groundwater storage and degraded water quality indicators. The SSJMUD explains that the relationship between these sustainability indicators is based on the inverse relationship of constituents of concern and groundwater elevation changes, such as 1,2,3-Trichloropropane[74] and nitrate.[75] Arsenic concentrations, conversely, were observed to decline with decreasing groundwater elevations.[76] The SSJMUD management area plan did not provide an analysis discussing the correlation between groundwater elevations and sodium and chloride concentrations. The SSJMUD management area plan concludes that water quality in the SSJMUD management area is not significantly affected by groundwater elevation fluctuations above the minimum thresholds. The SSJMUD management area plan does not consider the impacts of the chronic lowering of groundwater elevations

[73] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Table 3-2, p. 201.
[74] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Figures 2-25 and 2-26, pp. 115-116.
[75] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Figure 2-29, 2-30, 2-31, pp. 124-125.
[76] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Figure 2-27, p. 118.

to the land subsidence sustainability indicator, but it does acknowledge that groundwater elevation decline will continue to cause land subsidence in the management area.[77]

The SSJMUD management area plan included a draft Domestic Well Mitigation Program, planned to be finalized and adopted by the end of 2022, which intends to designate measures to mitigate adverse impacts to domestic wells resulting from GSP implementation. The program includes a well vulnerability and impact analysis, domestic well monitoring, adaptive triggers and actions, and additional actions.[78] The management actions described in the program include notifications to well owners, GSA inspections, short-term water supply, and funding for increasing well depth to groundwater levels needed to avoid impacts. These actions are dependent on triggers such as groundwater elevations reaching measurable objectives, approaching minimum thresholds, landowner claims that wells are impacted, and if impacted wells meet criteria for mitigation.[79]

West Kern Water District Management Area

Corrective Actions

- The KGA GSP must provide sustainable management criteria for all identified management areas.
- The minimum thresholds must include a description of the selection of groundwater level minimum thresholds, including how they represent site-specific levels of significant and unreasonable depletion of supply that could cause undesirable results, how they may affect the interests of beneficial uses and users of groundwater, and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels.

GSA Response to Corrective Actions

The West Kern Water District (WKWD) management area plan states that the management area plan was revised to characterize the following areas to match the Subbasin-wide definition: North Project Management Area, South Project Management Area, Lake Watch Area, Western Watch Area, and Little Santa Maria Valley Watch Area. The WKWD management area plan states that sustainable management criteria were previously established for the two management areas in the 2020 management area plan submittal and that sustainable management criteria were not developed for the three watch areas as there is no significant ongoing or future use of groundwater.[80]

[77] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Section 3.5.2.5, p. 214.
[78] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Appendix L, pp. 552-556.
[79] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Appendix L, Table 1, p. 556.
[80] KGA GSP West Kern Water District Revised MAP, Section 7.3, pp. 180-181.

The WKWD management area plan determined that the minimum threshold trigger for groundwater levels would signify an undesirable result which would impact the management area's sole beneficial user, WKWD. According to the WKWD management area plan, the WKWD GSA was consulted during the GSP development process to ensure that sustainable management criteria accurately represented the quantitative and qualitative conditions required by SGMA. WKWD GSA coordinated with neighboring GSAs to ensure that the management area's minimum thresholds and measurable objectives would not negatively impact the adjacent management area's beneficial uses and users. A water level trend analysis was conducted by WKWD to ensure that minimum thresholds within the management area were consistent with those of adjacent management areas. The water level trend analysis for minimum thresholds was conducted by determining the maximum and minimum historical groundwater elevations for each monitoring location. Once historical groundwater elevations were established, the difference between the maximum and minimum was calculated and then 20% of the calculated difference from each well was subtracted from that monitoring location's historically low groundwater elevation. The resulting value was then used as that monitoring locations minimum threshold. Measurable objectives established by calculating a water level where groundwater elevations were above the minimum thresholds during three years of drought usage and/or storage decline.[81]

Minimum thresholds and measurable objectives were calculated in the same manner for both the North and South Project Management Areas. The WKWD management area plan provides an analysis on the relationship between historical groundwater quality and groundwater elevation minimum thresholds. The analysis consisted of performing a linear regression between constituent of concern concentration data to minimum thresholds in representative monitoring locations. The WKWD management area plan provides the results of the analysis for one monitoring location, where no groundwater quality thresholds would be exceeded at the minimum threshold for groundwater levels.[82] The WKWD management area plan acknowledges that land subsidence may be a result of groundwater extraction, however it does not provide an analysis on the relationship with the chronic lowering of groundwater sustainability indicator.[83]

Westside District Authority Management Area

Corrective Actions

- The KGA GSP must explain the selection of groundwater level minimum thresholds for the Westside management area, including how they represent site-specific levels of depletion that could cause undesirable results, how they may affect the interests of beneficial uses and users of groundwater, and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels. If minimum

[81] KGA GSP West Kern Water District Revised MAP, Section 7.4.1, pp. 182-183.
[82] KGA GSP West Kern Water District Revised MAP, Table 7-3, p. 189.
[83] KGA GSP West Kern Water District Revised MAP, Section 7.8.3, p. 191.

thresholds were not set consistent with levels indicating a depletion of supply, the minimum thresholds should be revised accordingly.
- The larger portion of the management area must establish sustainable management criteria, including the establishment of minimum thresholds and monitoring; otherwise, further evaluation and justification is needed to negate management criteria in this portion of the management area.

GSA Response to Corrective Actions

The Westside District Water Authority (WDWA) management area plan states that there is no significant use of groundwater within the management area that would be subject to SGMA. The WDWA management area plan also states that changes in groundwater levels and storage are attributed to underflow beneath WDWA and that the GSA has no control over this phenomenon.[84] The WDWA management area plan states that definitions of watch areas, including Lost Hills Watch Area and Southwest Watch Area have been revised to match Subbasin-wide definitions. The WDWA management area plan has included KGA Undistricted Lands as a watch area within WDWA. The WDWA management area plan states that two additional monitoring locations were added to the monitoring network, with one additional monitoring location under consideration. The minimum thresholds for the added wells are considered preliminary and were established based on historic groundwater elevations within the management area.[85] The management area plan states that through hydrogeologic modeling efforts, the proposed sustainable management criteria would not negatively impact beneficial uses and users nor lead to an undesirable result. Additional information on the establishment of sustainable management criteria or their impacts on beneficial uses and users was not provided. The management area plan acknowledges that inelastic subsidence is occurring within the management area, but data gaps exist to fully understand the cause of the subsidence.[86]

KERN RIVER GSP

KRGSA Agricultural Management Area

Corrective Action

The Kern River GSP must provide clarification regarding the management action mentioned in the sustainable management criteria section of the GSP related to identification of well users, including domestic users and small water systems, in the agricultural subareas of the Agricultural Management Area.

GSP Response to Corrective Action

As a response to the Department's Corrective Action, the Kern River GSP now includes a standalone management action, which extends across the entire Plan Area, that was developed to avoid widespread impacts to domestic and small water systems wells. The GSP states that the evaluation of the management action has allowed the GSA to

[84] KGA GSP Westside District Water Authority Revised MAP, Section 4.2.1, p. 146.
[85] KGA GSP Westside District Water Authority Revised MAP, Section 4.1.1, p. 143.
[86] KGA GSP Westside District Water Authority Revised MAP, Section 4.1.2, pp. 144-145.

update domestic well numbers and depths. The Kern River GSA has developed a more comprehensive dataset of active domestic wells, which was used to conduct a recent Well Impact Analysis.[87]

BUENA VISTA GSP

Maples Management Area

Corrective Action

The Buena Vista GSP must be revised to include sustainable management criteria, including groundwater level minimum thresholds, for the Maples Management Area. Reference the specific methodologies from the Kern River GSP (of which there are several, depending on nearby beneficial uses and users, as noted herein) that guide development of the Maples Management Area's criteria and describe how those criteria are consistent with the requirements of the GSP Regulations. Department staff recommend providing similar detail regarding the hydrogeologic and beneficial user considerations as were provided for the Buttonwillow Management Area sustainable management criteria development.

GSP Response to Corrective Action

The Maples Management Area (MMA) in the Buena Vista Water Storage District did not contain applicable sustainable management criteria in the 2020 GSP submittal. The amended GSP states that minimum thresholds in the MMA were established using historically low groundwater elevations observed in the management area. Minimum thresholds were set at elevations ranging from 20 to 50 feet below historical lows to adjust to Kern River GSA minimum thresholds within the same groundwater elevations.[88] Measurable objectives were established using a similar method as the minimum thresholds; however, the measurable objectives were set at groundwater elevations ranging from 40 to 118 below historical high groundwater elevations. The GSP states that measurable objectives were established at groundwater elevations similar to those in the adjacent Kern River GSA area.[89] The GSP does not include additional information validating the establishment of the sustainable management criteria or how these may impact beneficial uses and users.

The GSP states that chronic lowering of groundwater sustainable management criteria will be used as a proxy for the reduction of groundwater storage.[90] Groundwater elevations were used as a proxy for the degraded water quality sustainability indicator, however the groundwater elevations differed from the chronic lowering of groundwater sustainable management criteria. The minimum thresholds for degraded water quality were established at 50 feet below the historic low groundwater elevation. Measurable objectives were established based on the average high groundwater elevation, minimum threshold, and four benchmark Kern River GSA monitoring wells. The methodology for establishing the MMA water quality measurable objectives is not

[87] Kern River Amended GSP, Section 5.4.4.2, pp. 311-314.
[88] Buena Vista Amended GSP, Section 5.9.1, pp. 193-194.
[89] Buena Vista Amended GSP, Section 5.9.2, pp. 195-196.
[90] Buena Vista Amended GSP, Section 5.10, pp. 197-199.

discussed in the Plan. The GSP states that available water quality data is insufficient to establish baseline minimum thresholds based on constituent of concern concentrations.[91] The GSP states that sustainable management criteria for land subsidence are based historical groundwater elevations. Minimum thresholds were set at 20 feet below the historical low groundwater level at the monitoring location.[92] Measurable objectives for land subsidence were established using the average historical high groundwater elevation, the minimum threshold, and four benchmark Kern River GSA monitoring wells.[93] Similar to the degraded water quality sustainability indicator, the GSP does not provide a full analysis of how sustainable management criteria were established or their impacts to beneficial uses and users.

HENRY MILLER GSP

Corrective Action

The Henry Miller GSP must provide a sufficient description of the selection of groundwater level minimum thresholds, including how they represent site-specific levels of significant and unreasonable depletion of supply that could cause undesirable results, how they may affect the interests of beneficial uses and users of groundwater, and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels.

GSP Response to Corrective Action

The HMWD GSP states that groundwater level minimum thresholds are based on historical groundwater levels, the potential for future decline, and well construction information. The GSP states that a minimum threshold has been exceeded when a static depth to groundwater of 350 feet is exceeded in 40% or more of monitoring locations over four consecutive bi-annual monitoring events. The GSP states that the minimum thresholds will not adversely affect beneficial uses and users as a subset of monitoring locations will have pump settings that prevent groundwater extraction and will only temporarily prevent access to groundwater. The GSP further explains that these monitoring locations have well screens that extend much deeper into the aquifer and the pumps would be lowered for affected monitoring sites and access would be reestablished. Additionally, the GSP does not consider the operational cost of lowering pumps to 350 feet below ground surface to be a burden economically and not considered an undesirable result by agricultural beneficial users.[94]

SOUTH OF KERN RIVER GSP

Arvin-Edison Water Storage District Management Area

Corrective Action (Previously Identified in the KGA GSP)

[91] Buena Vista Amended GSP, Section 5.11, pp. 199-201.
[92] Buena Vista Amended GSP, Table 5-32, p. 203.
[93] Buena Vista Amended GSP, Table 5-33, p. 203.
[94] Henry Miller Amended GSP, Section 3.3.1, p. 155.

As the Arvin-Edison management area plan appears to rely, at least to some extent, on the Impacted Well Mitigation Program to justify its minimum thresholds, which allow for continued lowering of groundwater levels in some areas, the KGA GSP must provide specific details, including timeline for implementation, of the program. Describe the scope of the program and how users impacted by continued groundwater level decline, particularly early in implementation of the Plan, will be addressed.

GSP Response to Corrective Action

The South of Kern River (SOKR) GSA includes three management areas, Arvin-Edison, Wheeler Ridge-Maricopa, and Tejon-Castac, that were previously members of the KGA GSP. The SOKR GSP provided responses to the Corrective Actions directed towards its management areas. The GSP identified beneficial uses and users for each sustainability indicator, how each sustainability indicator impacts the other, potential impacts of sustainable management criteria to neighboring basins and management areas and expanded the discussion of data and methodologies used to conduct the Well Impact Analysis. The GSP also developed multiple approaches related to the degraded water quality sustainability indicator, including an approach to developing Local Management Area Exceedance Criteria in accordance with the Water Code,[95] additional justification for screening constituents of concern, and establishing sustainable management criteria for arsenic at two monitoring locations in the Arvin-Edison management area.[96]

Tejon-Castac Water District Management Area

Corrective Action (Previously Identified in the KGA GSP)

The KGA GSP must explain the selection of groundwater level minimum thresholds for the Tejon-Castac management area, including how they represent site-specific levels of depletion that could cause undesirable results, how they may affect the interests of beneficial uses and users of groundwater, and the relationship between this sustainability indicator and other sustainability indicators such as degradation of groundwater quality and subsidence, both of which can be exacerbated by lowering groundwater levels. If minimum thresholds were not set consistent with levels indicating a depletion of supply, the minimum thresholds should be revised accordingly.

GSP Response to Corrective Action

The GSP states that minimum thresholds for the chronic lowering of groundwater in the Tejon-Castac management area were set at the average historical low groundwater elevation for wells within the Arvin-Edison management area nearest the respective Tejon-Castac monitoring location. The Plan concludes that the relationship between these two management areas justifies both areas avoiding an undesirable result.[97]

Wheeler Ridge-Maricopa Water Storage District Management Area

[95] South of Kern River GSP, Section 14.4.1, p. 443.
[96] South of Kern River GSP, Section 14.4.2, pp. 443-447.
[97] South of Kern River GSP, Section 14.1.1, pp. 430-439.

Corrective Action (Previously Identified in the KGA GSP)
As the KGA GSP Wheeler Ridge-Maricopa management area appears to rely, at least to some extent, on the Impacted Well Mitigation Program to justify its minimum thresholds, which allow for continued lowering of groundwater levels in some areas, provide specific details, including timeline for implementation, of the program. Describe the scope of the program and how users impacted by continued groundwater level decline, particularly early in implementation of the Plan, will be addressed.

GSP Response to Corrective Actions
The South of Kern River (SOKR) GSA includes three management areas, Arvin-Edison, Wheeler Ridge-Maricopa, and Tejon-Castac, that were previously members of the Kern Groundwater Authority GSA. The SOKR GSP provided responses to the Corrective Actions directed towards its management areas. The GSP identified beneficial uses and users for each sustainability indicator, how each sustainability indicator impacts the other, potential impacts of sustainable management criteria to neighboring basins and management areas and expanded the discussion of data and methodologies used to conduct the Well Impact Analysis. The GSP also developed multiple approaches related to the degraded water quality sustainability indicator, including an approach to developing Local Management Area Exceedance Criteria in accordance with the Water Code[98], additional justification for screening constituents of concern, and establishing sustainable management criteria for arsenic at nine monitoring locations in the Wheeler Ridge-Maricopa management area.[99] The GSP also provides details related to the proposed Well Mitigation Program, which aims to address negative impacts related to groundwater level decline.

ALL GSPs

Corrective Action
All the GSPs must demonstrate the relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the GSA has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators.

GSP Response to Corrective Action
As discussed in detail in Deficiency 1, the Plan does not adequately describe the basin conditions at each minimum threshold that would lead to or help avoid undesirable results in the Subbasin.

[98] South of Kern River GSP, Section 14.4.1, p. 443.
[99] South of Kern River GSP, Section 14.4.2, pp. 443-447.

4.2.2 Evaluation

The Department reviewed the GSA's responses to the Incomplete Determination in each revised GSP (including management area plans). Department staff believe the individual management areas made progress toward addressing the specific management area corrective actions and are encouraged by the Plan's analysis of potential impacts to the various water supply wells throughout the Subbasin. Department staff recognize that nearly every GSP has provided some level of assessment of potential well impacts and some GSPs, such as the KGA GSP and the Kern River GSP, provide discussion related to projects and management actions that can be implemented to help offset impacts to drinking water users (i.e., KGA member agencies agreed to develop a well mitigation strategy if it's predicted that more that 5% of wells within their management area may be dewatered; the Kern River GSA has proposed developing allocation schemes and reducing agricultural pumping and municipal pumping via conjunctive use efforts). After reviewing the revised GSPs, however, Department staff still believe the approaches used for developing chronic lowering of groundwater levels minimum thresholds and the level of analysis to support those approaches, is disparate across the various plans.

Based on the Department's evaluation, although progress was made on the individual management area scale it is still unclear how the various approaches to developing sustainable management criteria help achieve the sustainability goals for the Subbasin. The following has been determined to still be lacking with respect to Deficiency 2:

- The Plans still use various data and methods to establish the sustainable management criteria which generally do not incorporate the analysis and results of the Todd Groundwater Technical Memorandum.
- The Plan's discussion related to why the various minimum thresholds reflect different groundwater conditions across the Subbasin and between adjacent management areas is still incomplete. These discussions should include how other sustainability indicators may be affected by the various minimum thresholds within the specific management areas but also in adjacent management areas.

As discussed in the evaluation of Deficiency 1 above, Department staff believe the various approaches, data, and methodologies used to establish minimum thresholds across the management areas complicates understanding the groundwater conditions the Subbasin identifies as significant and unreasonable and would lead to a Subbasin-wide undesirable result. For example, some of the management areas in the northern portion of the Subbasin still project recent historic conditions (i.e., 2006 to 2016 conditions) to 2040 and establish the minimum threshold at that projected value which in some cases is over 200 feet below historical lows.[100] In contrast, some management areas in the southern portion of the Subbasin utilize a formula approach to establish the minimum thresholds that incorporates the historical low groundwater levels, a "variability correction factor", and a

[100] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.5, pp. 232-240; KGA GSP North Kern Water Storage District/Shafter-Wasco Irrigation District Revised MAP, Section 3.5, pp. 235-258.

"trend continuation factor."[101] The minimum thresholds in these southern management areas are still below historical lows but within approximately 100 feet of the lowest observed water level. It remains unclear to Department staff why the management areas have employed such different approaches to establishing sustainable management criteria that results in a disparate level of continued groundwater declines beyond historical lows. Additionally, none of the methods to establish sustainable management criteria described in the management area plans incorporate or discuss the results of the Todd Groundwater Technical Memorandum, which as discussed in length above, establishes estimates of overdraft and sustainable yield. It should also be noted that the Todd Groundwater Technical Memorandum also does not incorporate the analyses or final minimum threshold values into the evaluation of change in storage or future projected conditions – with the exception of superimposing sustainable management criteria values on simulated hydrographs.

Because of the various methods employed that result in continued groundwater declines at different magnitudes across the management areas, Department staff are still unable to fully evaluate the potential effects conditions in one management area may have on adjacent management areas. Department staff understand that some management areas have consulted neighboring management areas and adjusted minimum thresholds in representative monitoring sites; however, given the Management Area Exceedance criteria, it is conceivable that multiple management areas could operate at or near the minimum thresholds without resulting in a Management Area Exceedance. And because the definition of a Management Area Exceedance does not include a description of the significant and unreasonable groundwater conditions that would be occurring in the management areas at the 40% of minimum threshold exceedances over a four consecutive biannual measurement timeframe, it is unclear how one management area's operations may affect another or how a collection of management areas may affect a particular region of the Subbasin, especially as it relates to effects on the other sustainability indicators.

4.3 Deficiency 3 – The Subbasin's land subsidence sustainable management criteria do not satisfy the requirements of SGMA and the GSP Regulations.

4.3.1 Corrective Action 3

As described in the Department's GSP Assessment Staff Report released in January 2022, Department staff recommended the GSAs consider and address the following:

> The Subbasin's GSAs should coordinate and collectively satisfy the requirements of SGMA and the GSP Regulations to develop the sustainable management criteria for land subsidence. The GSPs should document the conditions for undesirable results for which the GSAs are trying to avoid, supported by their

[101] South of Kern River GSP, Section 14.1, pp. 430-439.

understanding of land uses and critical infrastructure in the Subbasin and the amount of subsidence that would substantially interfere with those uses.[102] The revised Plan, and component GSPs and management areas, should identify the rate and extent of subsidence corresponding with substantial interference that will serve as the minimum threshold, or should thoroughly demonstrate that another metric can serve as a proxy for that rate and extent. [103] As described in Deficiency 1, the Coordination Agreement should be revised to clearly identify the undesirable result parameters for each of the GSPs, management areas, and management area plans so it is clear how the various plans work together at the Subbasin level.

The revised Plan should explain how implementing projects and management actions proposed in the various GSPs is consistent with avoiding subsidence minimum thresholds, sufficient to avoid substantial interference, similar to the original Plan's assessment of whether implementation would avoid undesirable results for groundwater levels.

If land subsidence is not applicable to parts of the Subbasin, the GSPs must provide supported justification of such. The supporting information must be sufficiently detailed and the analyses sufficiently thorough and reasonable based on the best available information and best available science.

4.3.2 Subbasin's Response to Deficiency 3

In response to Deficiency 3, the Subbasin's GSAs submitted a revised Plan including updated content related to subsidence in its amended Coordination Agreement and the various GSPs and management area plans.

As part of its "Basin-wide Coordinated GSP Subsidence Plan", the amended Coordination Agreement establishes new Subbasin-wide definitions for "Regional Critical Infrastructure" and "Management Area Critical Infrastructure" as part of the Subbasin-wide response to subsidence.[104] Most of the GSPs and management area plans were updated to also include these new definitions.

Regional Critical Infrastructure is defined as "infrastructure located within the Subbasin that serves multiple areas of the Subbasin and whose loss of significant functionality due to inelastic subsidence, if caused by SGMA related Subbasin groundwater extractions, would have significant impacts to beneficial users."[105] The Regional Critical Infrastructure within the Subbasin were then collectively identified as the California Aqueduct and the Friant-Kern Canal. The amended Coordination Agreement also provided definitions for interim sustainable management criteria for subsidence for both Regional Critical Infrastructure.

[102] 23 CCR § 354.26(b).
[103] 23 CCR § 354.28(c)(5).
[104] First Amended Kern County Subbasin Coordination Agreement, pp. 362 and 392.
[105] First Amended Kern County Subbasin Coordination Agreement, pp. 362 and 392.

The amended Coordination Agreement explains that the sustainable management criteria were established as interim criteria for subsidence due to Subbasin's GSAs' concerns about setting sustainable management criteria with "significant" data gaps.[106] The Plan intends to establish new sustainable management criteria in 2025 that will be informed by data from additional studies and subsidence modeling.[107] The interim minimum threshold is intended to be used until 2025, with several "caveats". These caveats include:

1) the sustainable management criteria would be valid until 2025 then updated in the 2025 GSP update;

2) the GSAs would not be required to manage or otherwise be liable for "impacts resulting from actions outside the authority of the GSA or outside the GSA's ability to manage sustainability under SGMA"; and

3) the GSAs would not be held responsible for addressing subsidence caused by activities outside the jurisdiction of SGMA.[108]

The KGA GSP, Buena Vista GSP, and Henry Miller GSP specify the activities outside the jurisdiction of SGMA as the "[p]ermanent loss of freeboard from land subsidence due to other causes including but not limited to oil or gas production, natural compaction of shallow underlying soils beneath or near the Aqueduct, or any other cause that is not within the jurisdiction of a GSA, shall not be considered as a loss of freeboard that contributes to the amount specified for any [measurable objective] or [minimum threshold]".[109]

The amended Coordination Agreement also includes two new white papers describing the process and methods for defining the interim sustainable management criteria for the California Aqueduct and Friant-Kern Canal. Both white papers reference two studies, conducted by Earth Consultants International[110] and Lawrence Berkeley National Laboratory,[111] that provided the Subbasin with baseline subsidence rates. The studies documented analyses using Differential Interferometric Synthetic Aperture Radar data (i.e., InSAR). The analysis considered a "long-time series" (ranging from 2015 to 2021)[112] to capture the "cyclical pumping and recharge [pattern] of underlying aquifers and… long-term effects such as drought conditions [in the Subbasin]".[113] They have expressed that the subsidence rates previously calculated by the National Aeronautics and Space Administration/Jet Propulsion Laboratory for "shorter time intervals" were overestimated by 45% to 50%.[114] The Subbasin used these studies and their results to develop a

[106] First Amended Kern County Subbasin Coordination Agreement, pp. 363 and 393.
[107] First Amended Kern County Subbasin Coordination Agreement, pp. 367, 396-397.
[108] First Amended Kern County Subbasin Coordination Agreement, pp. 363 and 393.
[109] KGA Amended GSP, Section 3.5.3.2, p. 301; Buena Vista Amended GSP, Section 5.7.11, p. 185; Henry Miller Amended GSP, Section 3.3.4, p. 156.
[110] First Amended Kern County Subbasin Coordination Agreement, pp. 417-520.
[111] First Amended Kern County Subbasin Coordination Agreement, pp. 399-415.
[112] First Amended Kern County Subbasin Coordination Agreement, pp. 400 and 429.
[113] First Amended Kern County Subbasin Coordination Agreement, p. 429.
[114] First Amended Kern County Subbasin Coordination Agreement, p. 429.

methodology for developing the Subbasin's interim minimum thresholds and measurable objectives.[115]

The amended Coordination Agreement defines Management Area Critical Infrastructure as "infrastructure located within a particular Subbasin Management Area whose loss of significant functionality due to inelastic subsidence if caused by SGMA related Subbasin groundwater extractions would have significant impacts to beneficial users within that Subbasin Management Area."[116] Identification of Management Area Critical Infrastructure was delegated to the individual GSPs and management area plans.

The revised GSPs and management area plans in which the California Aqueduct or Friant-Kern Canal runs through their jurisdictional boundaries updated their sustainable management criteria to be consistent with the amended Coordination Agreement.

4.3.2.1 Regional Critical Infrastructure: The California Aqueduct

The California Aqueduct White Paper defines an undesirable result for land subsidence along the California Aqueduct as "the point at which the amount of inelastic subsidence, if caused by SGMA-related Subbasin groundwater extractions, creates a significant and unreasonable impact (requiring either retrofitting or replacement to a point that is economically unfeasible to the beneficial users) to surface land uses or critical infrastructure. A significant loss in functionality that could be mitigated through retrofitting and is considered economically feasible to the beneficial users would not be considered undesirable."[117] An undesirable result will occur when a single minimum threshold is exceeded along the California Aqueduct.[118]

The interim minimum threshold for the California Aqueduct is defined as "[t]he avoidance of a permanent loss (associated with inelastic subsidence) of conveyance capacity as attributable to subsidence as limited by remaining concrete liner freeboard for a specific Aqueduct Pool that exceeds twice the average observed rate from 2016-2022."[119] The minimum threshold rate was established by calculating twice the average subsidence rate along the portion of the California Aqueduct that lies in the Subbasin from 2016-2022 (i.e., -0.05 feet per year) using the Department's California Aqueduct Subsidence Program (CASP) data.[120] This is equivalent to a land surface elevation change of -0.1 feet per year and cumulatively -1.8 feet by 2040.[121] The measurable objective rate is set at the 2016-2022 average, or -0.05 feet per year and cumulatively -0.9 feet by 2040. The Plan intends

[115] First Amended Kern County Subbasin Coordination Agreement, p. 367.
[116] First Amended Kern County Subbasin Coordination Agreement, pp. 362 and 392.
[117] First Amended Kern County Subbasin Coordination Agreement, pp. 363-364.
[118] First Amended Kern County Subbasin Coordination Agreement, p. 362.
[119] First Amended Kern County Subbasin Coordination Agreement, p. 367.
[120] First Amended Kern County Subbasin Coordination Agreement, p. 367. Note: The First Amended Kern County Subbasin Coordination Agreement provides the average observed rate of -0.05 feet per year "for all Pools of the Aqueduct within the Kern Subbasin" however, Table 2 contradicts this statement by establishing a different rate for Pools 33 through 35 of -0.07 feet per year.
[121] First Amended Kern County Subbasin Coordination Agreement, Table 2, p. 368.

to assess the minimum threshold and measurable objective as a respective average annual rate over a rolling 6-year period. [122]

The California Aqueduct is contained within the boundaries of the KGA GSP Westside District Water Authority Management Area, the KGA GSP West Kern Water District Management Area, Henry Miller Water District GSP, Buena Vista Water Storage District GSP, and the South of Kern River Wheeler Ridge Maricopa Water Storage District Management Area. These GSPs and management area plans were all updated to include the definition of Regional Critical Infrastructure and were updated to include or reference the amended Coordination Agreement Subbasin-wide sustainable management criteria for subsidence.

4.3.2.2 Regional Critical Infrastructure: The Friant-Kern Canal

In addition to the California Aqueduct white paper, the amended Coordination Agreement provided the Friant-Kern Canal White Paper for the Lower Reach of the Friant-Kern Canal, which is nearly entirely located in the Subbasin between its northern boundary and terminates at the Kern River. [123] The Friant-Kern Canal White Paper defines an undesirable result for land subsidence along the Friant Kern Canal as when "the flow capacity through the Lower Reach is reduced to capacities below historical operational flow capacities over the previous 10 years, impacting surface land uses of available water supplies, as a result of groundwater extractions from agricultural, domestic, municipal, or urban beneficial users within the Kern County Subbasin."[124]

The interim minimum threshold for the lower reach of the Friant Kern Canal is defined as a land surface elevation change of -0.2 feet per year and cumulatively -3.6 feet by 2040.[125] The interim minimum threshold values were established by using the average annual rate of subsidence along the Lower Reach of the Friant Kern Canal between 2016 to 2022.[126] The Plan intends to assess the minimum threshold as an average annual rate over a rolling 6-year period and monitor within a 2.5 mile corridor on either side of the Friant -Kern Canal.[127] The measurable objective is defined as a land surface elevation change of -0.1 feet per year and cumulative -1.8 feet by 2040.[128] As described previously, the amended Coordination Agreement states that new sustainable management criteria will be established for the Friant -Kern Canal in 2025.[129]

The Friant-Kern Canal is contained within the boundaries of the KGA GSP Southern San Joaquin Municipal Utilities District Management Area, KGA GSP North Kern Water Storage District Management Area, and the Kern River GSP. All these plans were

[122] First Amended Kern County Subbasin Coordination Agreement, p. 367.
[123] First Amended Kern County Subbasin Coordination Agreement, pp. 392-393.
[124] First Amended Kern County Subbasin Coordination Agreement, p. 395.
[125] First Amended Kern County Subbasin Coordination Agreement, p. 396.
[126] First Amended Kern County Subbasin Coordination Agreement, p. 396, Table 1, p. 397.
[127] First Amended Kern County Subbasin Coordination Agreement, pp. 396 and 398.
[128] First Amended Kern County Subbasin Coordination Agreement, p. 397.
[129] First Amended Kern County Subbasin Coordination Agreement, p. 396.

updated to define the Friant-Kern Canal as Regional Critical Infrastructure consistently with the amended Coordination Agreement.

4.3.2.3 *Plan Areas Outside of Regional Critical Infrastructure*

There are several management areas that do not contain Regional Critical Infrastructure but may still be within the boundaries of the respective monitoring corridors, extending 2.5 miles on each side of the California Aqueduct and Friant Kern Canal. These management areas are discussed below.

- The KGA GSP Kern Water Bank Management Area is located to the east of the California Aqueduct and may be within the monitoring corridor, corresponding to Pools 28 and 29.[130] The management area plan describes that the management area has experienced subsidence ranging from 0.16 feet to -0.36 feet from 2015-2018.[131] In terms of the California Aqueduct, mile post 238 is reported to have risen by 0.3 feet and subsided by 0.35 feet. Available freeboard for most of the area adjacent has not changed from as-built conditions.[132] The management area plan concludes that the changes are indicative of elastic rebound and recovery for Pools 28 and 29.[133]
- The KGA GSP Semitropic Water Storage District Management Area is located to the east of the California Aqueduct and may be within the monitoring corridor, corresponding to Pool 24.[134] The management area plan did not establish minimum thresholds for subsidence since the management area has not historically experienced impacts to local infrastructure[135] and the Semitropic Water Storage District GSA identifies the need for greater understanding of the causes of local and regional subsidence.[136] However, the management area plan does provide the Subbasin-wide minimum threshold definition for Regional Critical Infrastructure[137] but there is no discussion of adopting the Subbasin-wide minimum threshold nor is there a discussion on potential impacts to Pool 24.
- The Buena Vista GSP Buttonwillow Management Area border lies near the California Aqueduct, corresponding to Pool 24, Pool 25, and a portion of Pool 26.[138] Additionally, it may be within the monitoring corridor for Pools 27 and 28.[139] The Buena Vista GSP provides minimum thresholds for Pools 24 through 28 that differ from the amended Coordination Agreement's minimum thresholds, ranging

[130] First Amended Kern County Subbasin Coordination Agreement, p. 366.
[131] KGA GSP Kern Water Bank Revised MAP, Section 2.2.2.11 and Figure 16, pp. 33 and 34.
[132] KGA GSP Kern Water Bank Revised MAP, Section 2.2.2.11, p. 33.
[133] KGA GSP Kern Water Bank Revised MAP, Section 2.2.2.11 and Figure 17, pp. 33 and 35.
[134] First Amended Kern County Subbasin Coordination Agreement, p. 366.
[135] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.5.2.3, p. 240.
[136] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.5.2.3, p. 241.
[137] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.5.2.3, p. 241.
[138] Buena Vista Amended GSP, Section 5.7.1.2, p. 179, Section 5.7.9, p. 183.
[139] Buena Vista Amended GSP, Table 5-22, p. 184.

from -0.38 feet to -2.62 feet.[140] The GSP states that these minimum thresholds were established by multiplying the average existing freeboard by 75 percent.[141] Measurable objectives ranged between -0.25 and -1.75 feet and were established by multiplying the existing freeboard by 50 percent.[142] Additionally, while the California Aqueduct is defined as critical infrastructure within the GSP, the GSP does not use the Regional Critical Infrastructure definition as described in the amended Coordination Agreement.[143]

- The South of Kern River Arvin Edison Water Storage District Management Area is located to the east in the vicinity of the California Aqueduct.
- The KGA GSP Shafter Wasco Irrigation District Management Area is located to the west of the Friant-Kern Canal. Because the KGA Shafter Wasco Irrigation District Management Area submitted a joint management area plan with the KGA North Kern Water Storage District Management Area, the Sustainable Management Criteria for the Shafter Wasco Irrigation District is the same and is consistent with the amended Coordination Agreement's sustainable management criteria.[144]
- The KGA GSP Cawelo Water District Management Area is located to the east of the Friant-Kern Canal.

4.3.2.4 *Management Area Critical Infrastructure*

The GSPs and management area plans within the Subbasin were tasked with defining their own Management Area Critical Infrastructure, which included but were not limited to roadways, water conveyances, transportation routes, utility lines, and wells. The definitions of Management Area Critical Infrastructure and the responses from their respective agencies vary across the Subbasin. Some GSPs or management area plans defined Management Area Critical Infrastructure but did not develop sustainable management criteria, some GSPs or management area plans did not define Management Area Critical Infrastructure nor sustainable management criteria, and some GSPs or Management Areas defined Management Area Critical Infrastructure and defined sustainable management criteria. Below are descriptions of select examples of where Department staff identified the various scenarios related to management area critical infrastructure.

Examples of GSPs or management area plans that defined Management Area Critical Infrastructure but did not define sustainable management criteria include the following:

[140] Buena Vista Amended GSP, Table 5-24, p. 185.
[141] Buena Vista Amended GSP, Section 5.7.11, p. 185.
[142] Buena Vista Amended GSP, Section 5.7.12, p. 186, Table 5-25, p. 187.
[143] Buena Vista Amended GSP, Section 5.7.1, p. 171.
[144] KGA GSP North Kern Water Storage District/Shafter-Wasco Irrigation District Revised MAP, Section 3.5.5, p. 261.

- The KGA GSP Semitropic Water District Management Area acknowledges "critical infrastructure" within its plan boundaries; however, it does not specify what the critical infrastructure is. The management area plan states that subsidence is occurring primarily in its Management Areas 1 and 3 and that "no impacts to critical infrastructure have been identified" within any of its management areas. The plan states that because no impacts to critical infrastructure have been identified and that the lack of understanding of the relationship between groundwater pumping and subsidence, subsidence was identified as a "data gap" and that no minimum thresholds are established at this time. The plan states the management area will adopt minimum thresholds once "a clear understanding of the causes and effects can be developed."[145] However, a description of how the management area will establish sustainable management criteria in the future is not clearly outlined within the plan.
- The KGA GSP West Kern Water District Management Area identifies natural gas pipelines and electrical transmission lines as Management Area Critical Infrastructure but does not set sustainable management criteria related to these facilities. The plan does not explicitly state why it chooses to not define sustainable management criteria but states that "impacts on this infrastructure due to subsidence caused by groundwater recovery are expected to be minimal."[146] The plan does not explain the process or what factors or evidence were used to reach this conclusion.
- The KGA GSP Southern San Joaquin Municipal Utility District management area plan establishes the Regional Critical Infrastructure sustainable management criteria for the Friant-Kern Canal and states that nine Friant-Kern Canal Turnouts are within its plan area and considered to be Management Area Critical Infrastructure. The plan states that these structures "have not experienced adverse impacts" while acknowledging the historical subsidence experienced within the management area. The plan states that while these facilities will be monitored, no sustainable management criteria are defined at this time.[147] While the Southern San Joaquin Municipal Utility District management area uses the Subbasin-wide sustainable management criteria for the Regional Critical Infrastructure, it states that it does not establish sustainable management criteria "relative to impacts to local infrastructure or beneficial uses and users."[148]
- KGA GSP Kern County Water Authority Pioneer Management Area identifies the Cross Valley Canal and Kern River Canal as Management Area Critical Infrastructure. However, no sustainable management criteria were defined because the management area plan states that no undesirable results have

[145] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.4.4, p. 231.
[146] KGA GSP West Kern Water District Revised MAP, Section 7.8.2, p. 190.
[147] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Section 3.4.4, p. 199.
[148] KGA GSP Southern San Joaquin Municipal Utility District Revised MAP, Section 3.5.2.5, p. 214.

historically been identified.[149] The plan did not include any analysis that subsidence has never occurred or analysis that future groundwater elevation declines below historic low levels will not cause subsidence.

- The KGA GSP Kern Water Bank Management Area also identifies the Cross Valley Canal as Management Area Critical Infrastructure.[150] However, the plan states that no sustainable management criteria are provided because "[t]he Kern County Water Agency monitors the elevation of the Cross Valley Canal and has reported no subsidence to the KWBA to date. Likewise, the City of Bakersfield operates the Kern River Canal and no issues have been reported to the [Kern Water Bank]."[151]
- The KGA GSP Shafter-Wasco Irrigation District 7th Standard Annex management area plan identifies the North of River Sanitary Wastewater Treatment Plant, utility infrastructure, and industrial facilities as Management Area Critical Infrastructure. However, no sustainable management criteria were provided because the management area plan states that "no historical subsidence or subsidence related impacts…have been observed".[152] The plan did not include any analysis that subsidence has not ever occurred or analysis that future groundwater elevation declines below historic low levels will not cause subsidence.
- KGA GSP North Kern Water Storage District/Shafter Wasco Irrigation District management area plan establishes criteria for Regional Critical Infrastructure and identifies the Lerdo Canal, Calloway Canal, 8-1 Pump Station, and the Shafter-Wasco FKC Turnout #2 as Management Area Critical Infrastructure. However, while the Agencies commit to "monitoring their respective facilities", sustainable management criteria for the Management Area Critical Infrastructure are not defined.[153]
- The Buena Vista GSP defines its Management Area Critical Infrastructure as Interstate-5. The Plan states that its minimum thresholds for the chronic lowering of groundwater levels "are intended to be protective of critical infrastructure."[154] However, the GSP states that because there have been no impacts to critical infrastructure identified there is not a clear understanding of how groundwater pumping in different areas of the Subbasin affect subsidence and the development of a regional approach to the subsidence undesirable result. The Buena Vista GSP identifies subsidence as a data gap and does not define sustainable management criteria for subsidence.[155]

[149] KGA GSP Pioneer Revised MAP, Section 7.7.3, pp. 144-145.
[150] KGA GSP Kern Water Bank Revised MAP, Section 3.2.4, p. 44.
[151] KGA GSP Kern Water Bank Revised MAP, Section 3.2.4, p. 44.
[152] KGA GSP Shafter-Wasco Irrigation District (7th Standard Rd.) Revised MAP, Section 12.5.3, p. 172.
[153] KGA GSP North Kern Water Storage District/Shafter-Wasco Irrigation District Revised MAP, Section 3.4.4, pp. 232-233.
[154] Buena Vista Amended GSP, Section 5.7.1, p. 171.
[155] Buena Vista Amended GSP, Section 5.7.1.2, pp. 179-180.

SGMA requires sustainable management criteria for all indicators even if subsidence has never previously occurred.

Examples of GSPs or management area plans that did not define Management Area Critical Infrastructure nor subsidence sustainable management criteria include the following:

- The KGA GSP Tejon-Castac Water District management area plan states that there is no Regional or Management Area Critical Infrastructure within the management area and that groundwater level minimum thresholds "are set to be protective of potential subsidence." Therefore, the management area plan does not set sustainable management criteria for subsidence.[156]
- The KGA GSP Eastside Water management area plan states that no critical infrastructure is located within the management area and does not define sustainable management criteria.[157]
- The KGA GSP Kern-Tulare Water District management area plan listed roads, wells, and pipelines as infrastructure within the area but were not designated as "critical infrastructure", therefore no undesirable results have been experienced and no sustainable management criteria are established.[158]
- The KGA GSP Westside District Authority management area plan provides a discussion of the Regional Critical Infrastructure but does not provide discussion on Management Area Critical Infrastructure.[159] The plan references a study which indicates that subsidence within the management area is attributable to oilfield activities over which the District has no control.[160]

Examples of GSPs or management area plans that defined Management Area Critical Infrastructure and defined subsidence sustainable management criteria include the following:

- Kern River GSP identifies municipal wells, canals, pipelines, roads, buildings, water treatment facilities, Bakersfield Meadows Field Airport, Highway 99, and Interstate-5 as critical infrastructure[161] within its three management areas (i.e., urban, agricultural, and banking). The minimum thresholds were established using historical water levels or setting the minimum threshold at 20 or 50 feet below the historic water levels. [162]
- KGA GSP Rosedale-Rio Bravo WSD management area plan identifies major transportation routes, pipelines, railroads, and water conveyance facilities as

[156] South of Kern River GSP, Section 13.5.2, p. 423, Section 14.5, p. 450.
[157] KGA GSP Eastside Revised MAP, Section 12.5 and 12.5.2, p. 90.
[158] KGA GSP Kern-Tulare Water District MAP, Sections 3.4.3 and 3.5.3, pp. 73 and 76.
[159] KGA GSP Westside District Water Authority Revised MAP, Section 4.1.2, pp. 144-145.
[160] KGA GSP Westside District Water Authority Revised MAP, Table 2b, p. 362.
[161] Kern River Amended GSP, Section 3.3.5.3, p. 177.
[162] Kern River Amended GSP, Table 5-2a, p. 304.

critical infrastructure.[163] The management area plan defined the subsidence sustainable management criteria for the management area critical infrastructure. A management area exceedance for land subsidence occurs when the average measured subsidence rate exceeds the minimum thresholds over a six-year rolling average. The minimum threshold is set at 0.10 feet per year over a six-year rolling average.[164]

- The South of Kern River Arvin-Edison management area plan does not identify Regional Critical Infrastructure but identifies Management Area Critical Infrastructure and establishes sustainable management criteria. The minimum threshold is defined as the maximum annual rate of subsidence observed between 2014 and 2018 which is equal to 1.5 inches per year. The minimum threshold will be assessed as an average annual rate over a 6-year rolling monitoring period.
- KGA GSP Cawelo Water District management area plan identified the CWD gravity flow components of surface water distribution system, Lerdo Canal, 8-1 Pump Station, and Beardsley Canal as Management Area Critical Infrastructure. The management area establishes groundwater levels as a proxy for land subsidence sustainable management criteria. The minimum threshold is set at 80 feet below the lowest historical low groundwater elevation. The plan states an estimated 0.8 feet of additional subsidence may occur in the management area.[165]
- The Olcese Water District GSP defines its Management Area Critical Infrastructure as the Gravity driven canal to its Rio-Bravo Hydroelectric Plant. The GSP states that because this canal was defined as Management Area Critical Infrastructure, "therefore, sustainable management criteria for land subsidence are defined." The GSP defines its Undesirable Result "in terms of reduction in canal capacity, defined based on the relationship between capacity and slope." The Undesirable Result is defined as a 25% reduction in canal capacity, if found to be "due to land subsidence caused by groundwater extractions." The GSP uses two monitoring locations a known distance apart to calculate a reduction of slope, which can be used to calculate the canal capacity via Manning's equation. The Minimum Threshold for land subsidence is defined as a relative elevation difference of 0.75 feet between the two selected monitoring points, which results in a reduction of canal capacity of 25%. The measurable objective is defined as a relative elevation difference of 0 feet between the two selected monitoring points.[166]

4.3.3 Evaluation

As part of Corrective Action 3, the Department stated that the Plan should define their undesirable results supported by the amount of subsidence that would substantially interfere with the land uses and critical infrastructure in the Subbasin; additionally, plans

[163] KGA GSP Rosedale-Rio Bravo Water Storage District Revised MAP, Section 3.2.5, p. 89.
[164] KGA GSP Rosedale-Rio Bravo Water Storage District Revised MAP, Section 5.5, p. 108.
[165] KGA GSP Cawelo Revised MAP, Section 7.4.3, pp. 210-212.
[166] Olcese Amended GSP, Section 13.5, pp. 151-153, Section 14.5, p. 158, Section 15.5, p. 162.

should identify the rate and extent of subsidence corresponding with substantial interference that will serve as the minimum threshold or should thoroughly demonstrate that another metric can serve as a proxy for that rate and extent. While the Subbasin provided the analysis documented in the two white papers and defined new interim sustainable management criteria for the Subbasin Regional Critical infrastructure, the Plan does not provide supporting evidence that the minimum thresholds, corresponded to a rate of subsidence, would cause substantial interference to these facilities.

Department staff believe that the rates and cumulative amounts of subsidence that are defined for minimum thresholds along the California Aqueduct and Friant-Kern Canal are not consistently analyzed in terms of lasting impacts, but rather from estimates from observed subsidence rates from previous studies. As a result, the Plan does not provide a coordinated, complete analysis of how the respective minimum thresholds could affect the conveyance operations of the California Aqueduct or Friant-Kern Canal. Ultimately, Department staff still cannot determine how the Agencies apparently concluded that the amount of subsidence potentially allowed by the interim minimum thresholds would not substantially interfere with the operations of the California Aqueduct or Friant-Kern Canal.

For example, the Subbasin's undesirable result for the Friant-Kern Canal is in part defined as "when the flow capacity through the Lower Reach is reduced to capacities below historical operational flow capacities over the previous 10 years."[167] However, the Friant-Kern Canal White Paper does not explain how its interim minimum thresholds, which plan to continue historical rates of subsidence, would impact the conveyance capacity of the Friant-Kern Canal. It is not clear whether the minimum thresholds would prevent the flow capacity of the canal from being further reduced to capacities below that of the previous 10 years. Additionally, the Plan does not state if or how the agencies plan to monitor the conveyance capacity of the canal for use in the undesirable result definition. Due to the apparent disconnect between the definition of the undesirable result and the definition of the interim minimum thresholds, Department staff are unable to determine how or whether the Agencies determined the proposed or allowable rates of subsidence under the interim minimum thresholds would avoid substantial interference to the Friant-Kern Canal.

For the California Aqueduct, an undesirable result is defined in part as "the amount of inelastic subsidence…[that] creates a significant and unreasonable impact (requiring either retrofitting or replacement to a point that is economically unfeasible to the beneficial users) to surface land uses or critical infrastructure".[168] However, the Plan does not explain how its minimum thresholds, set at two times the average observed from 2016 to 2022, could impact the Aqueduct.[169] While the California Aqueduct white paper provides the remaining freeboard ranges at the various aqueduct pools, it does not provide an analysis about the effects (e.g., loss of conveyance capacity, increased maintenance

[167] First Amended Kern County Subbasin Coordination Agreement, p. 395.
[168] First Amended Kern County Subbasin Coordination Agreement, pp. 363-364.
[169] First Amended Kern County Subbasin Coordination Agreement, p. 367.

costs, other operational considerations, etc.) of further reducing the freeboard through continued subsidence.[170] Due to the apparent disconnect between the definition of the undesirable result and the definition of the interim minimum thresholds, Department staff are unable to determine how or whether the Agencies determined the proposed rates of subsidence for the interim minimum thresholds would not cause substantial interference to the California Aqueduct.

The Plan also emphasizes that the Subbasin-wide sustainable management criteria will only apply to subsidence caused by "SGMA-related groundwater extractions" from certain beneficial uses and users and that subsidence purportedly caused by other activities will not constitute or contribute to an exceedance of minimum thresholds or measurable objectives; however, the Plan does not describe the process that the Agencies will use to differentiate between possible causes of subsidence.[171]

All of the initial sustainable management criteria definitions relating to Regional Critical Infrastructure emphasize that for subsidence to apply towards a minimum threshold exceedance, it must be caused by "SGMA-related" activities. The KGA GSP, Buena Vista GSP, Henry Miller GSP, and some management area plans contain similar caveats which state that "[p]ermanent loss of freeboard from land subsidence due to other causes including but not limited to oil or gas production, natural compaction of shallow underlying soils beneath or near the Aqueduct, or any other cause that is not within the jurisdiction of a GSA, shall not be considered as a loss of freeboard that contributes to the amount specified for any measurable objective or minimum threshold."[172] However, despite this caveat, the plans lack discussion on how the GSAs would determine whether the subsidence was caused by so-called SGMA-related activities rather than other causes of subsidence.

It is unclear to Department staff whether the Plan has the capability to quantify "SGMA related" subsidence when evaluating its subsidence monitoring which it will be using to monitor the minimum thresholds. The Lawrence Berkeley Study and Earth Consultants International Study imply that they are able to differentiate between oil and gas and SGMA-related subsidence; however, it is unclear if or how the plans will be utilizing these studies to quantify SGMA-related subsidence.[173] Additionally, the Plan does not demonstrate that they will be using consistent methodology to quantify the amount of "SGMA-related" subsidence. For example, some plans state that they do not understand the relationship between subsidence and groundwater extraction at this time. The KGA GSP Semitropic Water Storage District Management Area does not define minimum thresholds for subsidence because of "data gaps" related to a lack of knowledge of the

[170] First Amended Kern County Subbasin Coordination Agreement, Table 1b, p. 366.
[171] First Amended Kern County Subbasin Coordination Agreement, pp. 368-369.
[172] KGA Amended GSP, Section 3.5.3.2, p. 301; Buena Vista Amended GSP, Section 5.7.11, p. 185; Henry Miller GSP, Section 3.3.4, p. 156.
[173] First Amended Kern County Subbasin Coordination Agreement, Lawrence Study, p. 404, Earth Consultants International Study, p. 426.

relationship between groundwater pumping and subsidence.[174] Similarly, the Buena Vista GSP states that sustainable management criteria for subsidence were not defined in part because there is not a clear understanding of how groundwater pumping in different areas of the Subbasin affect subsidence.[175] If there is a way that the studies are differentiating between "SGMA related" and other types of subsidence, this methodology is not part of a coordinated response at the GSP or management area plan level.

Department staff also conclude that outside of the regional infrastructure, the Subbasin still does not have a Subbasin-wide approach for managing subsidence because of the differing data and methodologies used to establish Management Area Critical Infrastructure and corresponding sustainable management criteria. The new subsidence approach is primarily concerned with the Subbasin's Regional Critical Infrastructure (i.e., the California Aqueduct and Friant Kern Canal). However, the GSPs and management area plans were tasked with defining their own Management Area Critical Infrastructure and corresponding sustainable management criteria. As previously described, some plans defined both Management Area Critical Infrastructure and sustainable management criteria; some plans defined Management Area Critical Infrastructure but did not provide sustainable management criteria; and some plans did not define Management Area Critical Infrastructure nor subsidence sustainable management criteria. Due to the variations in the plans' responses, Department staff conclude that the plans did not define "Management Area Critical Infrastructure" consistently and many do not set corresponding sustainable management criteria. The varying approaches to managing Management Area Critical Infrastructure does not clearly demonstrate a coordinated Subbasin-level response to subsidence, as required by Corrective Action 3.

4.3.4 Conclusion

In sum, the Plan made progress in moving towards coordinated Subbasin-wide subsidence management by establishing sustainable management criteria for the Regional Critical Infrastructure and defining Management Area Critical Infrastructure. However, the Plan still lacks a description and discussion of the conditions occurring throughout the Subbasin that would cause undesirable results that the GSAs propose to manage the basin to avoid. The Plan lacks detailed, supporting information describing and demonstrating the understanding of land uses and critical infrastructure (the Management Area Critical Infrastructure in particular) in the Subbasin and the amount of subsidence that would substantially interfere with those uses and critical infrastructure.

[174] KGA GSP Semitropic Water Storage District Revised MAP, Section 3.4.4, p. 231, Section 3.5.2.3, p. 241.
[175] Buena Vista Amended GSP, Section 5.7.1.2, pp. 179-180.

5 STAFF RECOMMENDATION

Department staff conclude that the GSAs did not take sufficient actions to correct the previously identified deficiencies. Department staff recommend the Plan be determined **INADEQUATE**.

Kern Subbasin
GSP Development Timeline

Activity	October 2023				November 2023				December 2023				January 2024					February 2024				March 2024				April 2024				May 2024				August 2024			
	1	2	3	4	2	3	4	5	1	2	3	4	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Decisions Needed																																					
# of GSPs																												1									
GSP format					!																																
Manager Policy Development																																					
Exceedance Policy (P/MA team)																						F															
Well Mitigation Program																									F												
GSP Preliminary and Draft GSP Chapters																																					
1-4: Purpose, Sustainability Goal, Agency Information, GSP Organization																																					
5: Plan Area, Introduce Organizing Themes, Land Use Elements, Communications																																					
6-8: Basin Setting, Hydrogeological Conceptual Model, Groundwater Conditions																																					
9: Water Budget																			F																		
10: Management Areas																																					
11-15: SMCs																						F															
16: Monitoring Network																							F														
17: P/MAs																								F													
18: Plan Implementation																																					
Executive Summary																																					
Final Draft																																					
State Board Meetings																																					
Follow up to GWL SMCs																																					
Subsidence SMCs																																					
Water Quality SMCs																																					
Well Inventory & Well Mitigation Program, Monitoring Network																																					
Water Budgets & Banking Programs																																					
Projects & Management Actions																																					
Overview of the Final GSP																																					

Legend for Symbols

- Monday final decision required to meet GSP schedule
- Subcommittee draft presentation to TWG/Managers
- Draft presentation to Monday meeting
- Meeting/presentation to SWRCB
- TWG/Managers review and feedback
- F — Final draft approved for Monday meeting presentation
- F — Revised GSP submitted to SWRCB by May 15, 2024
- End of SWRCB 90-day Review Period (August 15)

Legend for Shaded Cells

- Thanksgiving holiday
- Easter/Spring Break
- Christmas holiday
- New Year's holiday
- TWG review period, includes Manager's review for Water Budgets, SMCs, Monitoring Network, & PMAs
- Monday meeting review period

SWRCB Staff and Kern County Subbasin Meetings (2023 - 2024)	
Date	**Topics**
5/17/23	SWRCB Probation Process and Kern County Subbasin Introductions
6/23/23	Revised GSPs Approach: Sustainability Considerations, Addressing Deficencies, Proposed Timeline
10/4/23	Minimum Thresholds, Measureable Objectives, and Undesirable Results Approach
11/1/23	10/04/23 Technical Follow Up: Groundwater Levels
12/13/23	Subsidence Approach
1/24/24	Water Quality Approach
3/6/24	Well Inventory & Well Mitigation Program Approach
4/3/24	Sustainable Management Criteria and Monitoring Network Approach
4/23/24	Water Budgets, Banking Programs, & PMAs Approach
5/29/24	Final GSP Presentation

Kern County Subbasin Contact List - March 2024

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Plan Manager (Kristin Pittack - Rincon)
Listed Manager is Agencies SGMA rep and may not be the General Manager
Kern River GSA includes Greenfield and Lamont
SWID/NKWSD includese Shafter and Wasco
Arvin GSA includes Arvin CSD

Technical Working Group Members

Name	GSA	Firm
Abhishek Singh	North Central Kern GSA - NK & SWID	Intera
Anona Dutton	South of Kern River & Olcese GSAs	EKI
Christina Lucero	South of Kern River GSA	EKI
Dan Bartel	Rosedale-Rio Bravo Water Storage District	Rosedale-Rio Bravo Water Storage District
David Miller	Buena Vista WSD GSA	GEI
Jonathan Parker	KGA – Kern Water Bank	Kern Water Bank
Larry Rodriguez	KGA – Semitropic GSA	GEI
Micah Eggleton	KGA – Pioneer GSA & West Kern WD	Woodward & Curran
Mike Maley	North Central Kern GSA - Cawelo	Todd Groundwater
Maureen Riley	Kern River GSA	Todd Groundwater
Stephanie Hearn	North Central Kern GSA - SSJMUD	GEI
Tom Watson	KGA – Westside Districts MA	Aquilogic
Vanessa Yap	KGA – Kern-Tulare WD	Kern-Tulare Water Storage District
Will Halligan	Henry Miller GSA	Luhdorff & Scalmanini Consulting Engineers

Technical Working Group Tasks

Task	Name
GSP Amendment & Schedule	All TWG Members
Subcommittees	
Alternative Methodologies for Groundwater Levels SMC – 7 *Additional Committees: Domestic/Beneficial Users, Critical Infrastructure/Subsidence, Aquifers, Gradients, Banking, Trends, Refinements*	**Anona (Lead)**, Christina, Larry, Abhi, Tom, Will, and David – *7 Additional Committees: All TWG Members*
Well Mitigation Program	**Stephanie (Lead)**, Dan, Jon, Abhi
Projects and Management Actions	**Dan (Lead)**, David, Mike, Larry
Subsidence	**Tom (Lead)**, Abhi, Mike, Anona, Stephanie, Vanessa
Water Quality	**Stephanie (Lead)**, Maureen, Anona
Monitoring Network	**Will (Lead)**, Vanessa, Mike

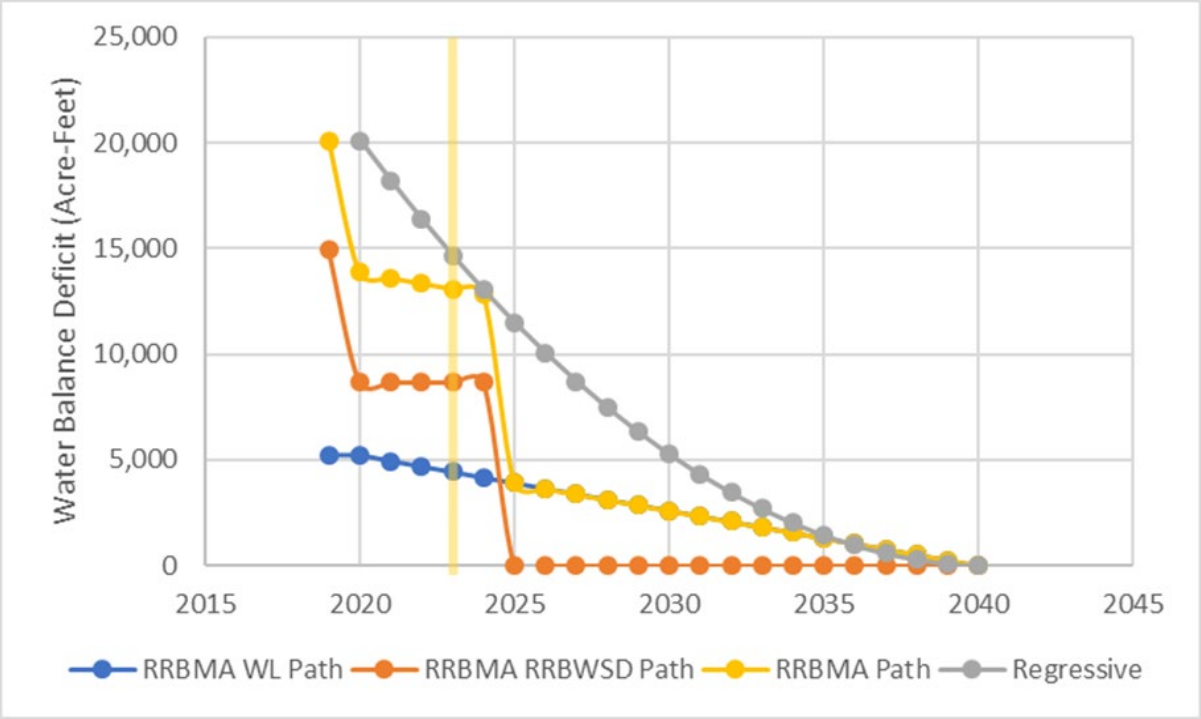
Interconnected Surface Water: Not applicable.

c) Assessment Of Potential Impacts to Beneficial Users

Through the RRBWSD GSA, all potential impacts to beneficial users have been thoroughly examined and studied when establishing minimum thresholds. This is especially important to beneficial users impacted by groundwater levels and groundwater quality. No exceedances in the groundwater levels or the water quality thresholds were observed in 2023.

Another method for the GSA to assess potential impacts and prevent adverse effects to beneficial users is by tracking interim milestones. These interim milestones are key to preventing any potential impacts to Beneficial Users. If the GSA remains on track with their interim milestones, potential impacts are to be very minimal. There are three identified interim milestone goals that RRBWSD GSA has outlined in their GSP.

Path to Sustainability: The RRBWSD GSA is on its regressive path to sustainability as shown by the red dots on the graph below.



Projects and Management Action Implementation: The RRBWSD GSA, as of the end of 2023, has successfully exceeded its 2020 Implementation Milestone by 1,250 AF and has implemented 83% of its 2025 16,800 AF Implementation Milestone goal (see Figure below).

White Land Demand Reduction: White Lands Allowable Imbalance Calculation - As part of the White Land Demand reduction action implementation, demand (AF) is tracked monthly using ET data. Supplies are compared based on developed acres and a straight-line reduction as seen on the blue line in the "Path to Sustainability" chart above. The District is actively monitoring water use on White Land's with the first interim milestone occurring at the end of 2024, when adaptive management actions may be

RRBWSD - GSP Projected Project and Management Action Milestones			
Year	Projects (AFY)	Management Actions (AFY)	Total (AFY)

2) Compliance with Additional Sustainable Management Criteria

Chronic Lowering of Water Levels: RRBWSD GSA groundwater levels trends changed and began to slope upwards as a result of a historical wet year. Water levels in the representative monitoring wells (RMWs) increased by 5-10 feet from Fall 2022 to Fall 2023. No exceedances occurred in 2023 within the RRBWSD GSA. RRBWSD GSA will continue to monitor and report the RMWs in accordance with SGMA guidelines.

Reduction in Groundwater Storage: 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 2022-2023 period, Project Water supplies were approximately 60,595 AFY. District Assessed

White Lands Allowable Imbalance Calculation

Name	Developed Acres	2020	2021	2022	2023	Sum 2020-2
Landowner A1	118	92	83	90	160	425
Landowner A2	558	(125)	157	512	47	590
Landowner A3	60	80	91	129	128	427
Landowner A4	44	26	32	48	72	178
Landowner A5	315	782	989	1041	739	3551
Landowner A6	38	63	(21)	64	(283)	(177)
Landowner A7	318	232	309	439	316	1296
Landowner A8	637	282	(90)	339	944	1475
Landowner A9	208	(110)	207	243	168	509
Landowner A10	60	139	191	187	143	660
Landowner A11	371	911	1026	470	252	2659
Landowner A12	58	(11)	(21)	(7)	21	(18)
Landowner A13	139	105	19	62	13	199
Total Allowable Imbalance Used	2924	2465	2973	3616	2721	11775
Total Allowable Imbalance (GSP)		5936	5640	5343	5046	21964

Acres total 39,468 acres, resulting in Project Water of 1.54 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 83,092 AFY or 2.11 AF/acre/yr.

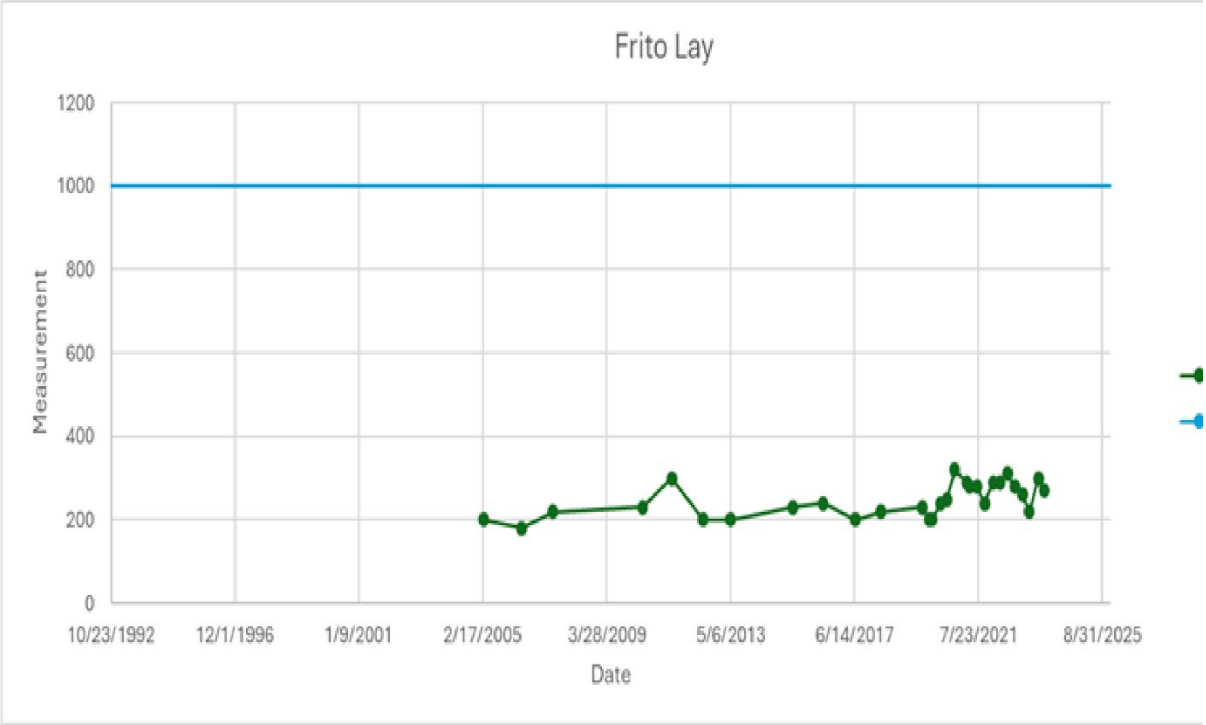
RRBWSD prepares an annual operations report including an updated checkbook groundwater balance. For the period of 1995-2022, RRBWSD has a cumulative storage balance of 149,229 AF. In 2022 the overall balance was reduced by about 36,313 AF due to dry hydrology.

Groundwater elevations for each Fall measurement cycle were also compared and groundwater storage volume was calculated using RRBWSD's numerical groundwater model. The model area includes the RRBWSD GSA and portions of other neighboring management areas and RRBWSD GSA's. In the model area, based on the Fall 2023 measurement, there was 406,673 AF estimated to be in storage above the RRBWSD GSA Minimum Thresholds. The amount of water estimated in storage increased by 162,710 AF between Fall 2022 and Fall 2023.

a) Water Quality

Water Quality: The current monitoring wells offer reliable long-term data. Data collection continues and results have been graphed. Per the GSP, the baseline calculations for the Minimum Thresholds (MT's) and Measurable Objectives (MO's) are complete, with RRBWSD set to collect samples in 2024. To streamline the semiannual data reporting, KGA developed the web-based Data Management System (DMS) for

accessing groundwater level and water quality data. Water Quality is a feature that is currently being developed within the DMS. See below for an example of one constituent of water quality graphed versus the MT. Each well and each constituent in the water quality network has been graphed similarly to below. No exceedances were reported in the 2023 reporting period.



b) Subsidence

Land Subsidence: No exceedances occurred in 2023 within the RRBWSD GSA. The annual subsidence rate for the five locations (2018-2023) ranged from 0.007 feet to 0.018 feet (or 0.060.10 feet in total over six years), which is well below the Minimum Threshold of 0.6 feet over the six-year period. InSAR data for 2023 is still being finalized, and unavailable at multiple locations.

c) Interconnected Surface Water

Interconnected surface water: Not applicable.

3) Implementation of Projects and Management Actions (PMAs)

Projects:

- **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 is scheduled for 2024.

- **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.
- **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 a 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.
- **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, having now acquired 350 acres of property for new recharge and recovery. On these properties, recharge improvement plans and specifications stand at 90% with construction expected in 20242025. Pilot recharge operations were commenced on 150 acres during 2023 and approximately 8,000 AF was delivered for groundwater recharge that otherwise would not have been stored.
- **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 are currently underway. No implementation date is known at this time.

Management Actions:

- **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 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 for the 2024 calendar year and assessed $95/AF to incentivize water conservation and project financing.
- **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. Ten 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. During 2023 approximately 20,000 AF was recharged and stored under this new program.

  The District also offered special landowner programs that incentivized recharge on fallow lands given the extraordinary wet year. Approximately 6,000 AF was recharged and stored under this program that otherwise would not have been stored.

4) Coordination with Stakeholders

RRBWSD held monthly Board meetings during all of 2023 which included briefing the Board on SGMA-related activities. Six stakeholder meetings were also held in person at the District's office with a virtual option. RRBWSD provided updates on groundwater monitoring results, plan revisions associated with DWR comments, and implementation of projects and management actions.

5) Summary of Other GSP-related Special Studies or Activities

RRBWSD GSA engaged in significant GSP-related studies in 2023, focused on the development of a basin wide amended GSP for with the hopes of submittal to the SWRCB by mid-2024.

KERN COUNTY WATER AGENCY
CROSS VALLEY CANAL ADVISORY COMMITTEE

MEETING NOTICE & AGENDA
Stuart T. Pyle Water Resources Center
3200 Rio Mirada Drive
Bakersfield, California

March 27, 2024

Conference Line: 1 (571) 317-3122
Access Code: 500-820-565#
https://global.gotomeeting.com/join/500820565

Agenda

1. Call to order – 1:30 p.m.

2. Cross Valley Canal Advisory Committee Members Report

3. Public Comment

4. Approval of Cross Valley Canal Advisory Committee Meeting Minutes

   Regular Meeting – February 21, 2024

5. Report of the Water Resources Manager
   a. Update on Cross Valley Canal Construction/Maintenance Projects

6. Report on Cross Valley Canal Operations and Deliveries
   a. Operations and Maintenance Activity
   b. Year-to-Date Deliveries

7. Recommendation to Execute Amendment No. 2 to the Kern County Water Agency Agreement for a Construction Management Services Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05

8. Recommendation to Execute Amendment No. 2 to the Kern County Water Agency Agreement for a Geotechnical Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05

9. Recommendation to Execute a Contract for the Cross Valley Canal Pools 1-6 Sediment Removal

10. Recommendation to Execute an Agreement for Construction of Pacific Gas and Electric Company Pipeline L-300B Replacement Crossing of the Cross Valley Canal

11. Adjourn

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the CVC Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

NOTICE: This meeting is being conducted primarily by telephone conference.
Conference Line:1 (571) 317-3122/ Access Code: 500-820-565#/ https://global.gotomeeting.com/join/500820565

Lower Tule Irrigation District
357 East Olive Avenue
Tipton, CA 93272

Arvin–Edison Water Storage District
20401 East Bear Mountain Boulevard
Arvin, CA 93203

DRAFT

KERN COUNTY WATER AGENCY
CROSS VALLEY CANAL ADVISORY COMMITTEE

3200 Rio Mirada Drive, Bakersfield, CA 93308
Phone: (661) 634-1400

Minutes
February 21, 2024

The Cross Valley Canal Advisory Committee conducted its regular meeting Wednesday, February 21, 2024 at 1:30 p.m. in the board room of the Kern County Water Agency's Stuart T. Pyle Water Resources Center, via teleconference, and go to meeting. Those who attended the meeting were as follows:

Members Present:	
Arvin-Edison Water Storage District	Jeevan Muhar
Cawelo Water District	David Ansolabehere
Fresno-Tulare Group	John Domodon, alt
Improvement District No. 4	Tim Ruiz
	Dave Beard, alt
Kern County Water Agency	Sheridan Nicholas
Kern Delta Water District	Steven Teglia
Kern Tulare Water District	Skye Grass
Rosedale-Rio Bravo Water Storage District	Dan Bartel
	Roy Pierucci, alt

Members Absent:

Others Present:	
Kern County Water Agency	Director Charles (Bill) W. Wulff
	Director Gene Lundquist
	Director Martin Milobar
	Director Royce Fast
	Director Ted Page
	Amelia Minaberrigarai
	Candice Valdez
	Lauren Bauer
	Steve Yoder
	Scott Chambless
	Stephanie Prince
	Steve Yoder
	Thane Campbell
	Tom McCarthy
	Monica Tennant
Arvin-Edison Water Storage District	Samuel Blue
City of Bakersfield	Kristina Budak

1. Call to order – 1:30 p.m. Chairman Sheridan Nicholas called the Cross Valley Canal (CVC) Advisory Committee (Committee) meeting to order at 1:30 p.m. and directed the Committee to the agenda for further discussion. The meeting was conducted by go to meeting and telephone conference, so the proceeding agenda items that required an action by all participants were taken as a roll call vote.

2. Cross Valley Canal Advisory Committee Members Report - No comments.

3. Public Comment – No comments.

4. Approval of Cross Valley Canal Advisory Committee Meeting Minutes

Action: Tim Ruiz made a motion and Steve Teglia seconded to approve the minutes from the December 18, 2023 special meeting and the January 24, 2024 regular meeting.

Roll call vote: Ayes: Muhar, Ansolabehere, Domondon, Ruiz, Nicholas, Teglia, Grass, Bartel
Noes:
Absent:

5. Report of the Water Resources Manager

a) Update on Cross Valley Canal Construction/Maintenance Projects – Lauren Bauer provided a brief update monthly overview of the CVC facilities improvements, outages and construction projects.

b) Update on Pioneer Inlet Improvement Project – Lauren Bauer provided an update on the Pioneer Inlet Improvements Project. Lauren reported on feedback from CVC participants regarding two options for completing the project, including their comments and suggestions for proceeding with the option for single operational outage period.

6. Report on Cross Valley Canal Operations and Deliveries

a) Operations and Maintenance Activity – Thane Campbell reported that staff performed mechanical cleaning of pumping plant forebays and walk decks using Gradall excavator; assisted contractor with installation of discharge coupler for pump 2E (400/565 h.p.) at Pumping Plant No. 2A; pulled 3G (100 h.p.) pump at Pumping Plant No. 3A, to be rebuilt; burned tumbleweeds along CVC fence lines and rights-of-way when permitted by San Joaquin Valley Air Pollution Control District; assisted electrical staff with multiple motor control issues at various pumping plants; continued to collect groundwater level measurements from CVC Pools 1-8 piezometers; performed spare motor maintenance by spinning motor shafts on all spare motors at CVC Operations & Maintenance (O&M) Center; performed pre-emergent herbicide applications; performed fence and gate repairs; performed road and levee maintenance and washout repairs along CVC rights-of-way; performed siphon breaker and compressor checks throughout entire CVC system; performed electrical preventative maintenance checks and testing at all CVC Motor Control Centers (MCC); performed routine maintenance activities that included vehicle and heavy equipment maintenance repairs; pump maintenance and interior MCC buildings cleaning; and performed a monthly safety inspection at the CVC O&M Center.

b) Year-to-Date Deliveries – Lauren Bauer reported that deliveries for January 2024 were approximately 48,892 acre-feet, with deliveries on behalf of Kern-Tulare Water District, Arvin-Edison Water Storage District, Improvement District No. 4, Rosedale-Rio Bravo Water Storage District, and other Kern County Water Agency (Agency) Member Units. All deliveries were made in forward flow.

7. Recommendation to Execute Change Order No. 3 to Cross Valley Canal Pioneer Inlet Improvement Project – Scott Chambless reported that on December 5, 2022, the Agency executed a contract with Nicholas Construction, Inc. for the Cross Valley Canal Pioneer Inlet

Improvements Project – Contract No. KCWA 2022-02. Contract Change Order No. 3 extends the duration of the existing contract to account for placing the project on hold due to high flows in the Kern River and requested use of the Pioneer Inlet. Additional costs associated with restarting the project include the work to remobilize, labor rate increases, material cost increases, restoration of work site to pre-shutdown conditions and a credit for the elimination of dewatering. The proposed contract change order was provided as Attachment 1. Agency staff recommended authorizing the execution of the change order for an amount not to exceed $54,414 and for a contract time extension of 150 calendar days. Money for this additional cost will be expended from the CVC Operations Fund and will be paid by the Integrated Canal Participants.

Action: Jeevan Muhar made a motion and Steve Teglia seconded to recommend authorizing execution of Change Order No. 3 to Cross Valley Canal Pioneer Inlet Improvements Project – Contract No. KCWA 2022-02 in the amount of $54,414 and for a contract time extension of 150 calendar days, subject to approval of General Counsel as to legal form, as outlined in the February 21, 2024 staff memorandum to the Cross Valley Canal Advisory Committee, Agenda Item No. 7

Roll call vote: Ayes: Muhar, Ruiz, Nicholas, Teglia, Grass, Bartel
Noes: Ansolabehere, Domondon
Absent: None

This motion passed with a 69.60% percent vote.

8. Recommend Authorization to Execute Amendment No. 2 to the Kern County Water Agency Agreement for Construction Management Service for the Cross Valley Canal Pioneer Inlet Improvement Project – Contract No. KCWA 2022-02 – Scott Chambless reported that on November 16, 2022, the Agency Board of Directors authorized the Engineering and Groundwater Services Manager to retain V&A, Inc. to provide construction management services for the Cross Valley Canal Pioneer Inlet Improvements Project – Contract No. KCWA 2022-02 (Project). The Agreement with V&A, Inc. expires on February 29, 2024, and the Project has had delays due to high flows in the Kern River and requested use of the Pioneer Inlet; therefore, Agency staff recommended that the Water Resources Manager be authorized to execute Amendment No. 2 to the Kern County Water Agency Agreement for Professional Consulting Services with V&A, Inc. amending the contract termination term to January 31, 2025. The amendment is a no cost time extension.

Action: Steven Teglia made a motion and Tim Ruiz seconded to recommend authorizing the Water Resources Manager to execute Amendment No. 2 to the Kern County Water Agency Agreement for Professional Consulting Services with V&A, Inc. for the Cross Valley Canal Pioneer Inlet Improvements Project – Contract No. KCWA 2022-02 amending the contract termination term to January 31, 2025, subject to approval of General Counsel as to legal form, as outlined in the February 21, 2024 staff memorandum to the Cross Valley Canal Advisory Committee, Agenda Item No. 8.

Roll call vote: Ayes: Muhar, Ruiz, Nicholas, Teglia, Grass, Bartel
Noes: Ansolabehere, Domondon
Absent: None

This motion passed with a 69.60% percent vote.

9. Adjourn – Chairman Sheridan Nicholas adjourned the Committee meeting at 1:48 p.m.

MEMORANDUM

20.2.1

TO: Cross Valley Canal Advisory Committee
Agenda Item No. 5a

FROM: Lauren Bauer

DATE: March 27, 2024

SUBJECT: Update on Cross Valley Canal Construction/Maintenance Projects

Issue:
Update on Cross Valley Canal construction/maintenance projects.

Recommended Motion:
None – information only.

Discussion:
An overview of the construction projects associated with the Cross Valley Canal are provided as Attachments 1A and 1B.

Cross Valley Canal
Attachment 1A

Monthly Facilities Improvement and Construction Project Update
March 2024

1. HEC-RAS Model Compilation and Hydraulic Analysis

- Description: Aggregate the six existing post-expansion HEC-RAS hydraulic models representing Cross Valley Canal (CVC) Pools 1 through 6 into a single comprehensive model that can evaluate pump operations and canal hydraulics in forward and reverse flow.
- Consultant Contract: GEI – Task H
- Participant Group: CVC Integrated Canal Participants
- Progress to date:
  1. Draft technical memorandum distributed to the CVC participants on January 28, 2021.
  2. Consultant presented the technical memorandum to the CVC Advisory Committee on February 24, 2021.
  3. Issued final technical memorandum on April 19, 2021.
- Next Project Milestone:
  1. Conduct field verification of the model 1,000 cfs flow test of CVC Pools 4 through 6.
     a. Create this milestone as a stand-alone project, item 11.
     b. Requested by the Hydraulic Improvement Project (HIP) ad hoc committee during the May 1, 2023 meeting.
  2. Conduct field verification of CVC pump flow versus head (lift) data.
  3. Prepare next steps for mitigation of the following:
     a. Perform review of CVC pumping plant control philosophy.
     b. Pool 1 dependence on California Aqueduct operations.
     c. Explore impacts of adjusted Aqueduct water levels on CVC capacity.
     d. Pool 1A reverse flow hydraulics (back siphonage).
     e. Prepare feasibility analysis and develop project schedule for proposed mitigations.

2. Evaluation to Review the CVC Channel Freeboard and Pump Submergence

- Description: Evaluate the feasibility and potential risks of reducing the minimum pump submergence for infrequent operations when the CVC is approaching its capacity as a method of increasing the canal freeboard and thereby increasing canal capacity.
- Consultant Contract: GEI – Task J
- Participant Group: CVC Integrated Canal Participants
- Progress to date:
  1. Completed preparation of consultant proposal.
  2. Received Kern County Water Agency (Agency) Board authorization to execute task order on March 25, 2021.
  3. Completed data collection effort.
  4. Completed draft conceptual design review of CVC ‘A’ Pumping Plant forebays.
  5. Finalized physical model testing and mitigation for all pools and utilize pertinent information in the submergence assessment and freeboard evaluation.
  6. Performed review of CVC pumping plant control philosophy.
- Next Project Milestone:
  1. Prepare pump submergence assessment.
  2. Prepare channel freeboard evaluation.
  3. Coordinate technical study with findings from the Approach Channel and Water Level Fluctuation Hydraulic Analysis.
  4. Submit draft technical memorandum to the Agency.

3. **Pumping Plant Forebay Approach Channel and Water Level Fluctuation Hydraulic Analysis**
    - Description: Develop a scaled physical model and analyze the water level fluctuations associated with the pumping plant bifurcation geometry that causes a diverging flow directly upstream of the pumping plant forebays when both the 'A' and 'B' Pumping Plants are in operation.
    - Consultant Contract: GEI – Task K
    - Participant Group: CVC Integrated Canal Participants
    - Progress to date:
        1. Completed physical model internal workings.
        2. Completed physical model design and construction.
        3. Constructed physical model.
        4. Initiated physical model startup, testing and calibration.
        5. Conducted physical model testing for Pumping Plants 1 through 5.
        6. Completed testing of mitigation measures for Pumping Plants 1, through 5.
        7. Received draft technical memorandum.
        8. Dismantled the physical model.
        9. Completed staff review of draft technical memorandum.
        10. Staff and GEI-NHC reviewed HIP ad hoc comments on draft technical memorandum.
        11. Prepared and submitted final technical memorandum on June 29, 2023.
    - Next Project Milestone:
        1. Determine if recommendations to install blocks in the A-side and B-side channel of the canal will be implemented.

4. **Pumping Plant B Spare Pump Procurement**
    - Description: Procure one spare 800-horsepower (hp) pump, two spare 700-hp pumps and one spare 600-hp pump for 'B' Pumping Plants.
    - Consultant Contract: GEI – Task C
    - Participant Group: CVC Integrated Canal Participants
    - Progress to Date:
        1. Performed Agency staff review of Cascade Pump 600-hp spare pump proposal.
        2. Completed evaluation of existing 600-hp motor thrust values.
        3. Reviewed spare pump alternatives based on existing motor thrust rating limitations.
        4. Received updated Cascade Pump 600-hp spare pump price quotation.
        5. Completed review of updated Cascade Pump 600-hp spare pump price quotation.
        6. Received Agency Board approval to executed change order #4 on September 23, 2021.
        7. Issued the Notice to Proceed to Cascade Pumps.
        8. Performed field measurements of existing pump by Cascade Pumps.
        9. Received pump submittals and analysis from Cascade Pumps on February 2, 2022.
        10. Completed submittal review and provided Cascade review comments.
        11. Finalized submittal.
        12. Received completed pump design from Cascade Pump's engineering department.
        13. Finalized the casting machining process and fabricated the pump.
        14. Coordinated the delivery of the 600-hp motor to Cascade Pump, which occurred in December 2022.
        15. Inspected and tested the 600-hp pump.
        16. Received pump, bowl assembly and motor from Cascade Pump.
        17. Project complete.
        18. Filed Notice of Completion in June 2023.

5. **Pumping Plant B Forebay Modifications**
    - Description: Prepare contract bidding documents to hydraulically isolate 'B' Pumping Plant forebays and install pump forebay vortex mitigation modifications.
    - Consultant Contract: GEI – Task F
    - Participant Group: CVC Expansion Participants
    - Progress to Date:
        1. Received draft 100 percent complete project drawing set on April 6, 2021.
        2. Completed 100 percent complete contract bidding documents for Pumping Plant No 2B.
        3. Completed review of engineer's cost estimate for Pumping Plant No. 2B.
        4. Completed partial value engineering analysis and procurement alternatives evaluation.
        5. Completed staff recommendation for initial project scope of work.
        6. Completed review of removeable baffle wall system price quotations from fabrication shops for Pumping Plant No. 2B.
        7. Determined to delay purchase of inflatable dam system.
        8. Received Agency Board approval to purchase baffle wall system for Pumping Plant 2B on December 15, 2021.
        9. Completed review of fabricator shop drawings which were returned to the fabricator on February 2, 2022.
        10. Received final shop drawings from the fabricator.
        11. Began fabrication of the baffle wall system.
        12. Galvanize the three manufactured baffle walls.
        13. Inspected galvanized baffle walls at fabricators facility.
        14. Received baffle wall system from fabricator.
    - Next Project Milestone:
        1. Install baffle wall system and monitor for reduction of vortices in the forebay.
        2. Continue developing project procurement alternatives.
        3. Coordinate final design of pump forebay modifications with pump submergence analysis to verify elevational placement of proposed pump forebay modifications prior to the issuance of the project Notice of Award.

6. **Pumping Plant Power Outage Mitigation**
    - Description: Develop modifications to the pumping plant electrical control relays to provide more information to Agency staff during electrical outages and allow Agency staff to restore electrical power more quickly.
    - Consultant Contract: GEI – Task E
    - Electrical Field Consultants: Electrical Power Systems (EPS) and Northern Digital Inc. (NDI)
    - Participant Group: CVC Integrated Canal Participants
    - Progress to Date:
        1. Completed staff recommendation and implementation plan for mitigation measures.
        2. Completed evaluation facility scheduled outages for implementation of mitigation measures.
        3. Received engineering consultant design proposal for implementation of mitigation measures.
        4. Reviewed and evaluated the submitted proposals for all the pumping plants.
        5. Requested a revised proposal to focus on Pumping Plants 1B and 2B.
        6. Received consultant proposals for Pumping Plants 1B and 2B.
        7. Received electrical consultant recommended changes to engineering consultant's proposal that design was not needed and issues could be addressed with updated programming at the individual sites.
        8. Performed site evaluation at all 'B' Pumping Plants and modified programming.
        9. Operated 'B' Pumping Plants with programming modifications to determine if issues were addressed.

10. Discussed ‘A’ Pumping Plants with consultants and developed a plan to address outage issues.
11. Reviewed ‘A’ Pumping Plant plan and determined cost and schedule.
12. Performed site evaluation at all ‘A’ Pumping Plants.
13. Prepare construction plans for conduit and equipment installation.

- Next Project Milestone:
  1. Install the new modules, program SCADA and test the system for functionality.
  2. Continue to operate ‘A’ Pumping Plants with modifications to determine if issues have been addressed.

7. Pioneer Inlet Modifications and Repair

- Description: Prepare Computational Fluid Dynamics (CFD) model on the Pioneer Inlet (Inlet) to evaluate and provide final design parameters based on the selected alternative from the feasibility study. Once the CFD model is completed, the design to repair and modify the Inlet to minimize impacts of Inlet operations in CVC Pool 5. The project will also address structural damage to the Inlet and adjoining CVC concrete canal liner from 2017 high-flow operations.
- Consultant Contract: GEI
- Participant Group: CVC Integrated Canal Participants
- Progress to Date:
  1. Completed final conceptual design based on CFD model.
  2. Completed final inlet facility design.
  3. Received, reviewed and commented on 30, 60 and 99 percent complete drawings.
  4. Issued notice to proceed for the geotechnical analysis.
  5. Received and reviewed geotechnical investigation report.
  6. Authorized GEI proposal to finalize plans, specifications and cost estimate package, prepare construction schedule, provide bid, and design support during construction.
  7. Met with Agency staff to determine project schedule.
  8. Receive 100 percent complete plans and specifications.
  9. Finalize bid set.
  10. Received Agency Board approval for Notice to Invite Bids on September 22, 2022.
  11. Opened bids October 28, 2022.
  12. Presented and obtained recommendation to award contract at the November 14, 2022 CVC Advisory Committee meeting.
  13. Presented and obtained approval to award contract at the November 16, 2022 Agency Board meeting.
- Next project milestone:
  1. Construct replacement structure.
  2. Project currently on hold due to the necessity to operate the Pioneer Inlet for Kern River operations.

8. Cross Valley Canal I-5 Siphon Outlet Freeboard Mitigation

- Description: Prepare investigation and design of the CVC I-5 Siphon Outlet levees and canal liner to mitigate loss of freeboard during high-flow operations.
- Consultant Contract: Meyer Civil Engineering
- Participant Group: CVC Integrated Canal Participants
- Progress to Date:
  1. Completed draft technical memorandum and feasibility analysis.
  2. Completed staff review of draft technical memorandum and feasibility analysis.
  3. Completed phased project feasibility analysis.
  4. Updated draft technical memorandum and feasibility analysis based on staff review.
  5. Finalized technical memorandum.

6. Received first draft of construction drawings for Pool No. 2 Liner Raising Project.
7. Received 90 percent complete plans for Pool No. 2 Liner Raising Project.
8. Finalized the review of 90 percent completed plan submittal for Pool No. 2 Liner Raising Project.
9. Received and reviewed 95 percent completed plans and specifications for Pool No. 2 Liner Raising Project.

- Next project milestone:
  1. Review and evaluate Pool No. 2 Liner Raising Project design based on Task M – Post-expansion (1422 cfs) HEC-RAS model compilation and hydraulic analysis.
  2. Request design proposal for Pool No. 3 Liner Raising Project.

9. Pre-Expansion (922 cfs) Hydraulic Capacity Evaluation

- Description: Prepare a HEC-RAS model reflecting changes to the CVC between 1976 and 2007 to analyze the flow of the canal prior to Expansion.
- Consultant Contract: GEI – Task L
- Participant Group: CVC Integrated Canal Participants
- Progress to Date:
  1. Reviewed consultant proposal with HIP ad hoc.
  2. Received Agency Board approval to execute Task L on January 27, 2022.
  3. Held start-up meeting with HIP ad hoc on February 17, 2022.
  4. Performed hydraulic model testing and verification to validate parameters.
     a. Reviewed Boyle Technical Memorandum No. 4 Final – 10/11/04.
     b. Reviewed October 5, 2020 CVC Hydraulic Improvements Project CVC Original Construction Hydraulic Capacity Evaluation Final Technical Memorandum.
  5. Met with HIP ad hoc on March 23, 2022 to review hydraulic model testing and verification to validate parameters.
  6. Received proposal for out-of-scope work for additional analysis as requested by HIP ad hoc.
  7. Met with HIP ad hoc to review proposal for out-of-scope work (Task L -3A).
  8. Provided Task L general project update to CVC Advisory Committee on April 27, 2022.
  9. Received recommendation to approve Task L – 3A from CVC Advisory Committee on April 27, 2022.
  10. Received Agency Board approval to execute Task L – 3A on April 28, 2022.
  11. Presented Task L - 3A parameter recommendations to the HIP ad hoc on May 31, 2022.
  12. Received approval from HIP ad hoc on May 31, 2022 to use recommended parameters and move forward with model runs.
  13. Received additional questions about recommended parameters from HIP ad hoc on June 6, 2022.
  14. Hold work on the model runs until concurrence from HIP ad hoc.
  15. Received direction from HIP ad hoc on June 28, 2022 to present consultant findings and recommendations to CVC Advisory Committee and request direction.
  16. Presented Task L-3A parameter recommendations and general project update to CVC Advisory Committee on July 27, 2022.
  17. Received direction from CVC Advisory Committee on July 27, 2022 to move forward with Task 5 utilizing consultant recommendations for model parameters.
  18. Completed Task 5, Pools 1 through 6 model runs using design flowrates and recommended parameters.
  19. Discussed results with HIP ad hoc and developed additional eight model run scenarios.
  20. Presented Task 5 final model run scenario results with HIP ad hoc on September 12, 2022.
  21. Prepared draft hydraulic analysis report and submitted to HIP ad hoc on October 10, 2022 for review and comment.
  22. Collected and compiled comments from HIP ad hoc review by November 1, 2022.

23. Presented Task 5 results and general project update at the November 14, 2022 CVC Advisory Committee meeting.
24. Finalized final hydraulic analysis report on December 1, 2022.
25. Distributed final report to the CVC Advisory Committee members.
26. Project complete.

10. Post-Expansion (1422 cfs) Hydraulic Capacity Evaluation

- Description: Prepare a HEC-RAS model reflecting changes to the CVC based on the 2007 canal Expansion.
- Consultant Contract: GEI – Task L
- Participant Group: CVC Integrated Canal Participants
- Progress to Date:
  1. Reviewed consultant proposal with HIP ad hoc.
  2. Received Agency Board approval to execute Task M on November 16, 2022.
  3. Scheduled preparation meetings and HIP ad hoc meetings.
  4. Discussed Post-expansion parameters and geometry data, which will be used in the model runs, with the HIP ad hoc for concurrence.
  5. Completed Pools 1 through 6 model runs using design flowrates, recommended parameters and defined geometry.
  6. Discussed results with HIP ad hoc and developed additional eight model run scenarios.
  7. Presented final model run scenario results to HIP ad hoc.
  8. Presented Task M findings and general project update to CVC Advisory Committee on February 22, 2023.
  9. Prepared draft hydraulic analysis report and submitted to HIP ad hoc for review and comment.
  10. Collected and compiled comments from HIP ad hoc.
  11. Received final hydraulic analysis report on August 4, 2023.
- Next project milestone:
  1. Review final hydraulic analysis report to ensure all comments were addressed.
  2. Distribute final report to the CVC Advisory Committee.

11. Field Verification of Model Evaluation

- Description: Collect field data, including flow data, water surface elevations, CA Aqueduct deliveries and SCADA data for Pools 1 through 6 at a flow rate near or greater than 1,000 cfs.
- Work to be performed by Agency staff
- Participant Group: CVC Integrated Canal Participants
- Progress to Date:
  1. Scheduled preparation kick-off meeting.
  2. Discussed Agency staff roles and data collection process. Data collection work sheets and maps have been finalized for Pools 1 through 3.
- Next project milestone:
  1. Finalize data collection work sheets and maps for Pools 4 through 6.
  2. Verify current and collect additional survey benchmarks needed to convert water depths collected during flow measurements to water surface elevations.
  3. Monitor future water deliveries to determine when flow rate criteria may be met in order to schedule field data collection effort.

CROSS VALLEY CANAL PIONEER INLET IMPROVEMENTS PROJECT CONTRACT NO. KCWA 2022-02

PROJECT SUMMARY FOR FEBRUARY 2024

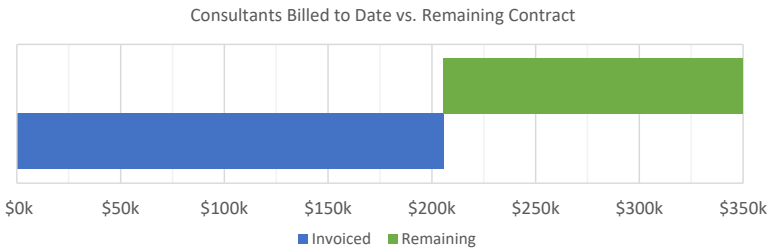
SUMMARY

Remove and replace existing Pioneer Inlet and damaged concrete liner and tie-in Pioneer Canal box culvert to the replaced structure.

Prepared By: Scott Chambless
Reviewed By: Tom McCarthy

COST BREAKDOWN

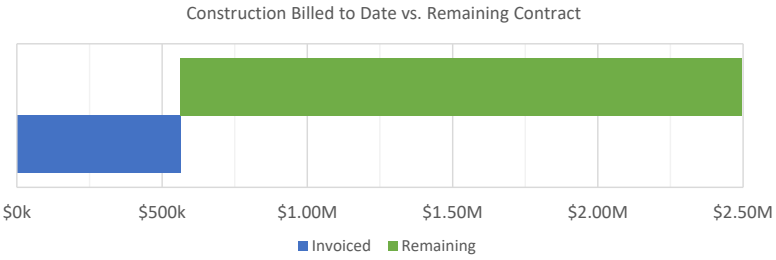
CONSULTANTS



	Contracted	Invoiced	Remaining
V&A, Inc.	$ 210,000	$ 115,662	**$ 94,338**
SEI	$ 60,000	$ 24,720	**$ 35,280**
GEI	$ 80,000	$ 65,146	**$ 14,854**

TOTAL CONSULTANT COSTS	
Total Contract Amount	$ 350,000
Total Invoiced Amount	$ 205,528
REMAINING BALANCE	**$ 144,472**

CONSTRUCTION



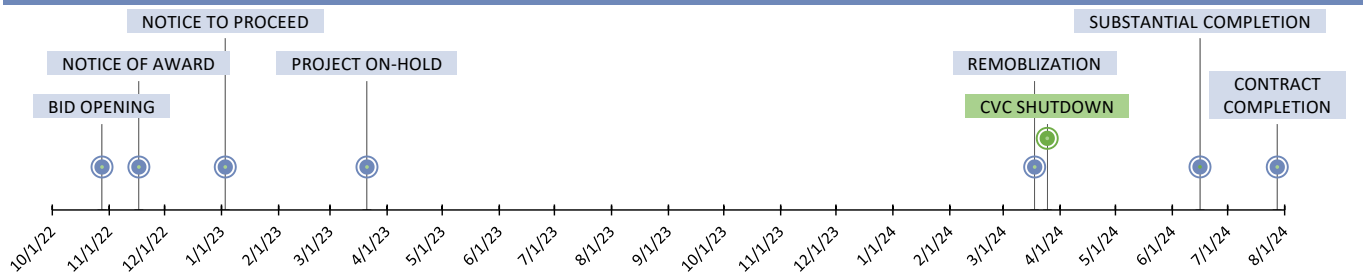
Original Contract	$ 2,379,244
Original Contingency Amount	$ 237,924
Increase to Contract	$ 70,178
TOTAL	**$ 2,449,422**

PAYMENT BREAKDOWN	
Pay Requests Total	$ 562,513
Retained (5%)	$ (28,126)
Paid to Date	$ 534,388

CONTRACT CHANGE ORDERS

Description of Changes	DATE	AMOUNT	DAYS ADDED
Change Order 1 - Emergency use of the CVC (Kern River shutdown)	5/19/2023	$ 47,670	0
Change Order 2 - ID1 Levee Restoration	11/20/2023	$ 15,764	92
Change Order 3 - Remobilization and Material Cost Increases	2/26/2024	$ 54,414	150
	Contingency Expended	$ 117,847	242
	Contingency Remaining	**$ 190,255**	

PROJECT SCHEDULE



Bid Opening:	10/28/2022	Length of Contract (Days):	572
Notice of Award:	11/17/2022	Time Extension (Days):	242
Notice to Proceed:	1/3/2023	Substantial Completion:	6/16/2024
Project On-hold:	3/21/2023	Contract Completion:	7/28/2024
Second Mobilization:	3/18/2024		

RECENT ACTIVITY

ID1 levee restored in July 2023.
CVC shutdown scheduled for end of March.

PLANNED CONSTRUCTION ACTIVITY

Mobilize to site.
Remo remaining plates and beams from shoring system.
Demoltion of existing Pioneer Inlt structure and damaged concrete liner.

CONSTRUCTION ACTIVITY LOCATION (Blue circled area denotes construction location)

PHOTOGRAPHS

Removing plates from shoring system.

Plates within canal prism removed and slope armored with rip-rap.

MEMORANDUM

20.2.1

TO: Cross Valley Canal Advisory Committee
Agenda Item No. 6a

FROM: Thane Campbell

DATE: March 27, 2024

SUBJECT: Update on Cross Valley Canal Construction/Maintenance Projects

Issue:
Update on Cross Valley Canal construction/maintenance projects.

Recommended Motion:
None – information only.

Discussion:
An overview of the construction projects associated with the Cross Valley Canal is provided as Attachment 1.

CROSS VALLEY CANAL
REPORT ON OPERATIONS, MAINTENANCE AND DELIVERIES
MARCH 2024

CROSS VALLEY CANAL

OPERATIONS

Preliminary inflows and deliveries for the month of February were as follows:

	California Aqueduct SWP (AF)	California Aqueduct CVP (AF)	CVC Total (AF)
Deliveries by Turnout:			
N-2 Siphon	-	492	492
Strand Siphon	-	1,644	1,644
Rosedale-Rio Bravo Turnout No. 1	-	2,834	2,834
Kern Water Bank P-11 Turnout	-	1,801	1,801
Rosedale-Rio Bravo Central Intake	-	2,611	2,611
River Turnout No. 1	-	2,978	2,978
Rosedale-Rio Bravo Turnout No. 2		6,089	6,089
Arvin-Edison Turnout	-	8,033	8,033
Lined Losses - Pools 1-6	18	160	178
Calloway Canal Intertie	-	9,007	9,007
River Turnout No. 3 Pond	385	-	385
Big Bertha Siphon	557	-	557
Lined Losses – Pool 7	4	26	30
Henry C. Garnett Water Purification Plant	2,140	-	2,140
Lined Losses – Pool 8	28	-	28
Total	3,132	35,675	38,807

MAINTENANCE AND REPAIRS;

- Assisted contractor with the coating of pump 2E (400/565 hp) discharge pipe at Cross Valley Canal (CVC) Pumping Plant No. 2A;
- Installed electrical conduit from power monitors to Programmable Logic Control cabinets at all seven CVC "A" Pumping Plants;
- Installed and electrically connected 6B (250 hp) motor at Pumping Plant No. 6A;
- Repaired a leaking siphon breaker spool at Pumping Plant No. 7A;
- Replaced thermistors and a relay on pump 4D (400/565 hp) at Pumping Plant No. 4A;
- Assisted electrical contractor with the arc flash study of CVC turnouts and turn-ins;
- Assisted PG&E with site visits for their pipeline replacement project;
- Responded to multiple power failures at various CVC pumping plants;
- Replaced the revolutions per minute ring on the speed sensor on pump 5K (700 hp) at Pumping Plant No. 5B;
- Escorted contactors for pre-bid job walk for the afterbay trash racks at Pumping Plant No. 3A;
- Repaired lifelines in multiple CVC pools;
- Performed mechanical cleaning of pumping plant forebays and walk decks using Gradall excavator
- Burned tumbleweeds along CVC fence lines and rights-of-way when permitted by San Joaquin Valley Air Pollution Control District;
- Assisted electrical staff with multiple motor control issues at various pumping plants;
- Continued to collect groundwater level measurements from CVC Pools 1-8 piezometers;
- Performed spare motor maintenance by spinning motor shafts on all spare motors at CVC Operations & Maintenance (O&M) Center;
- Performed pre-emergent herbicide applications;
- Performed fence and gate repairs;

- Performed road and levee maintenance and washout repairs along CVC rights-of-way;
- Performed siphon breaker and compressor checks throughout entire CVC system;
- Performed electrical preventative maintenance checks and testing at all CVC Motor Control Centers (MCC);
- Performed routine maintenance activities that included vehicle and heavy equipment maintenance repairs; pump maintenance and interior MCC buildings cleaning; and
- Performed a monthly safety inspection at the CVC O&M Center.
- Field Operations staff completed the annual respiratory fit test;
- Field Operations staff completed active shooter training; and
- Field Operations staff attended the CPR/first aid course.

MEMORANDUM

20.2.1

TO: Cross Valley Canal Advisory Committee
Agenda Item No. 6b

FROM: Monica Tennant

DATE: March 27, 2024

SUBJECT: Report on Cross Valley Canal Operations and Deliveries

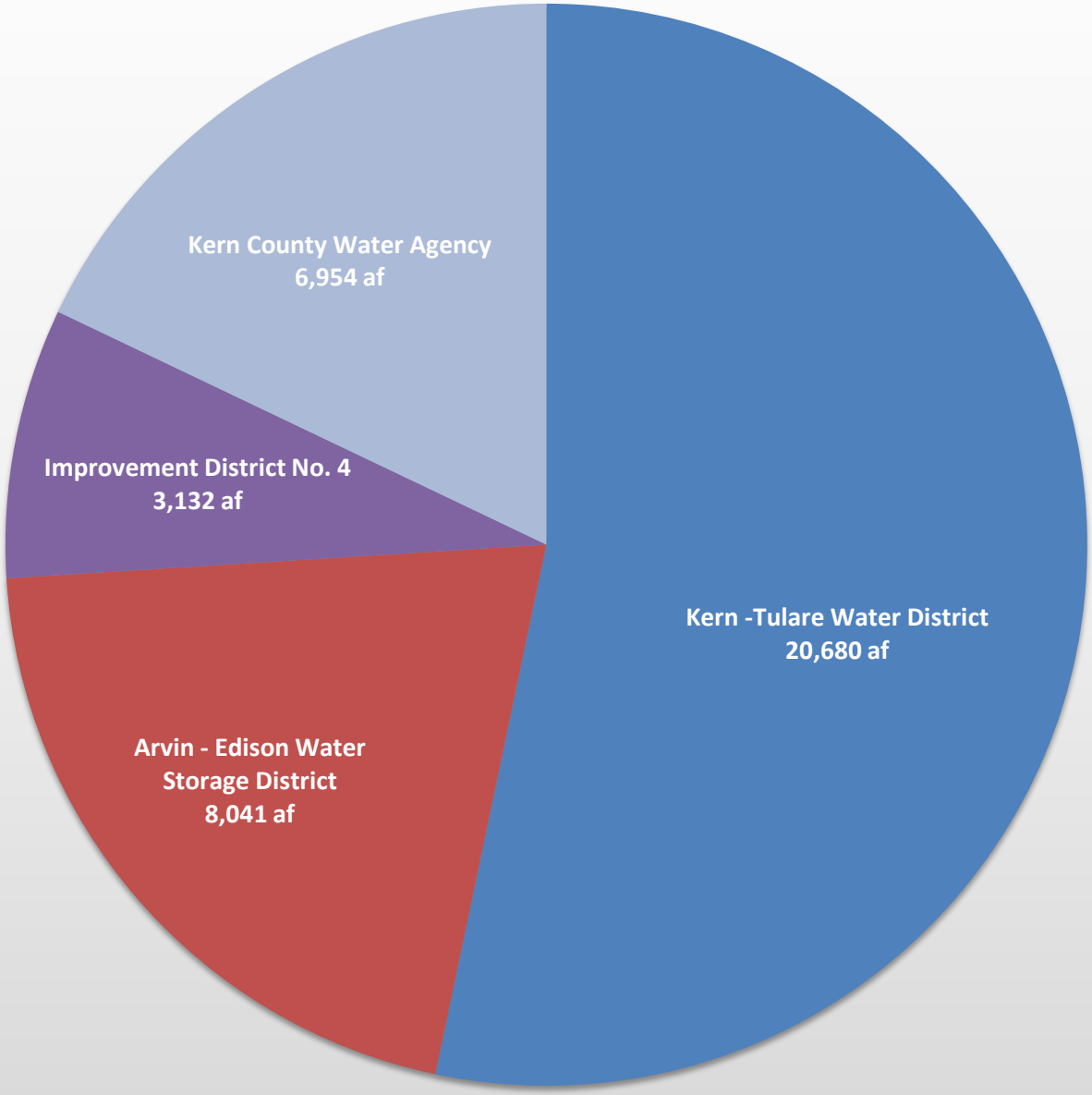
Issue:
Report on Cross Valley Canal operations and deliveries.

Recommended Motion:
None – information only.

Discussion:
A summary and graph of the Cross Valley Canal (CVC) operations, maintenance and deliveries for February 2024 is provided as Attachment 1. A table summarizing the year-to-date deliveries is provided as Attachment 2. Graphs illustrating deliveries by direction of flow and by source over the last 12 months are provided as Attachment 3. A schematic illustrating current CVC operations is provided as Attachment 4. A schematic illustrating the current maintenance and availability status of the pumps and motors at each pumping plant is provided as Attachment 5.

Attachment 1

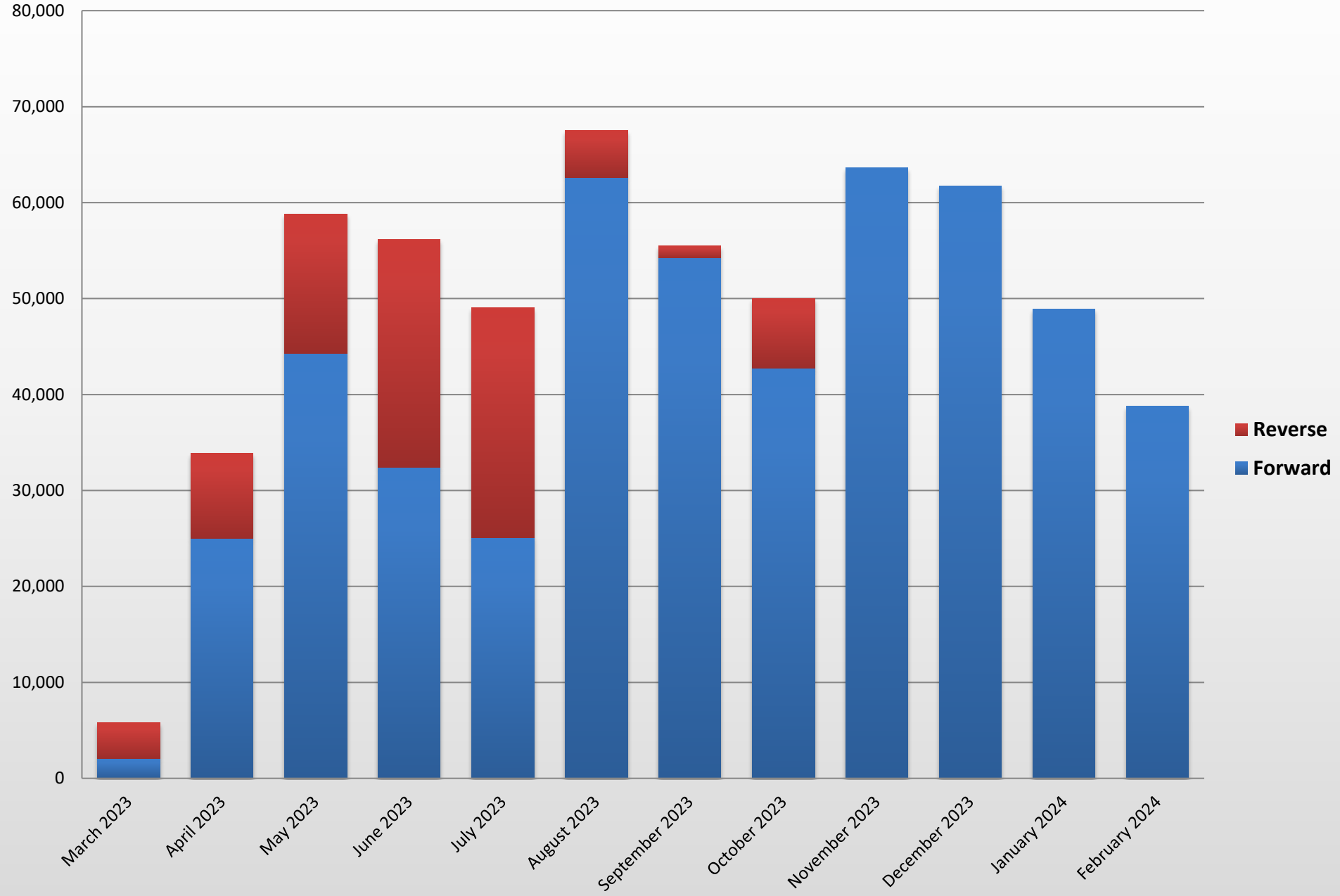
Cross Valley Canal
February 2024 Deliveries
Total deliveries 38,807 af



Attachment 2

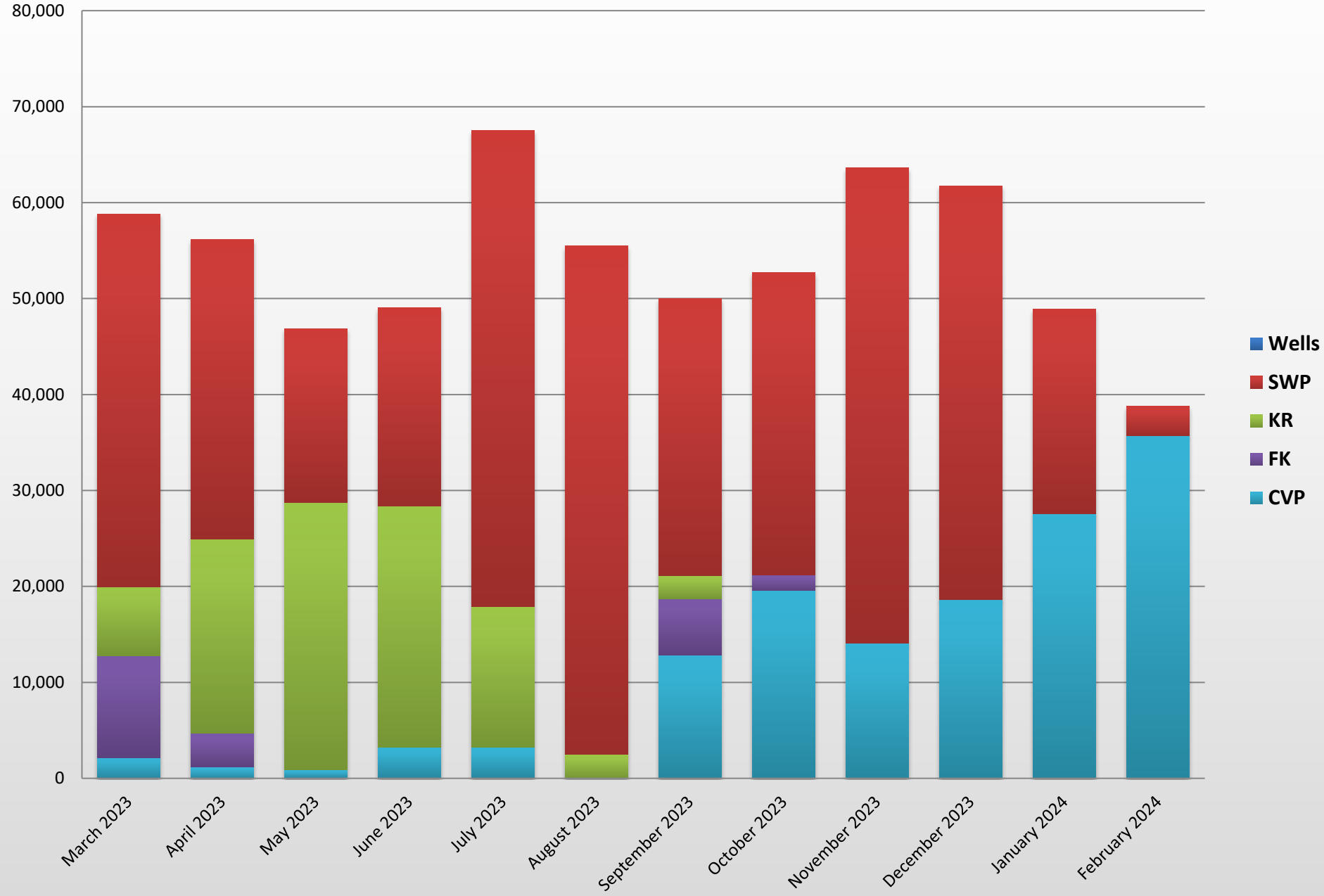
Cross Valley Canal

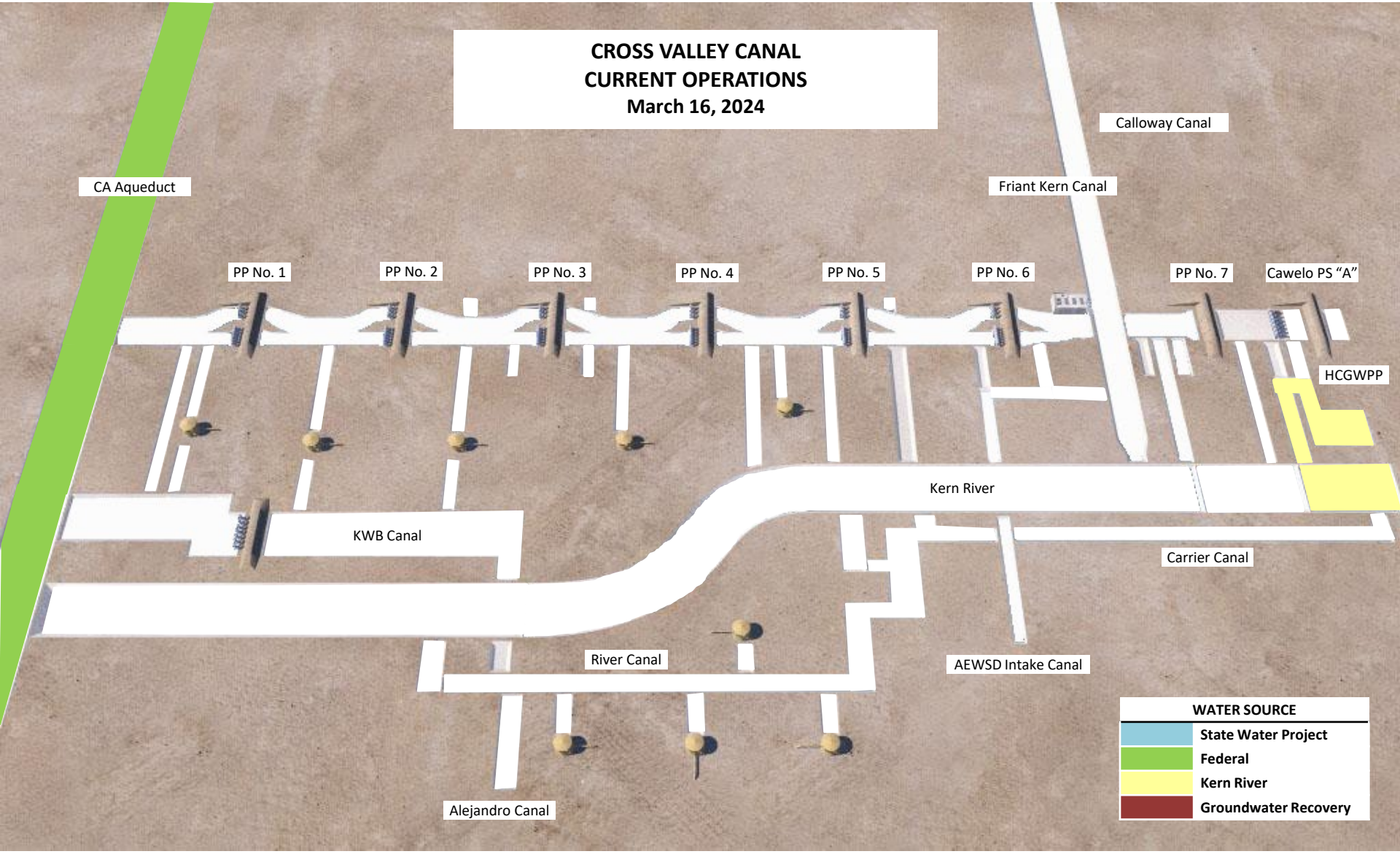
Twelve Month Delivery by Direction



Attachment 3

Cross Valley Canal
Twelve Month Delivery by Source




CROSS VALLEY CANAL
CURRENT OPERATIONS
March 16, 2024
Calloway Canal
CA Aqueduct
Friant Kern Canal
PP No. 1
PP No. 2
PP No. 3
PP No. 4
PP No. 5
PP No. 6
PP No. 7
Cawelo PS "A"
HCGWPP
Kern River
KWB Canal
Carrier Canal
River Canal
AEWSD Intake Canal
Alejandro Canal
WATER SOURCE
State Water Project
Federal
Kern River
Groundwater Recovery

Cross Valley Canal

Pump and Flow Configuration

Last Updated on March 13, 2024

		'A' Pumping Plants										'B' Pumping Plants					
		A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**Total cfs**	**K**	**L**	**M**	**N**	**Total cfs**	**Total cfs**
Pumping Plant No. 1	Estimated Horsepower	100	250	565	565	565	565	250	100			800	800	800			
	Estimated Flow Rate (cfs)	31	70	180	180	180	180	70	31		**922**	167	167	167		**500**	**1,422**
Pumping Plant No. 2	Estimated Horsepower	100	250	565	565	400	565	250	100			700	700	700			
	Estimated Flow Rate (cfs)	Service	Service	180	180	Service	180	70	31		**641**	167	167	167		**500**	**1,141**
Pumping Plant No. 3	Estimated Horsepower	100	250	565	565	565	250	100	250	100		700	700	700			
	Estimated Flow Rate (cfs)	Service	70	180	180	180	70	Service	70	31	**781**	167	167	Service		**334**	**1,115**
Pumping Plant No. 4	Estimated Horsepower	100	250	565	565	565	250	100	250	100		700	700	700			
	Estimated Flow Rate (cfs)	Service	Service	180	Service	180	Service	31	70	31	**492**	167	167	167		**500**	**992**
Pumping Plant No. 5	Estimated Horsepower	100	250	565	565	565	250	100	250	100		700	700	700			
	Estimated Flow Rate (cfs)	31	70	180	180	180	Service	31	Service	31	**703**	167	Service	167		**334**	**1,037**
Pumping Plant No. 6	Estimated Horsepower	100	250	565	565	565	250	250	100			200	600	600	350		
	Estimated Flow Rate (cfs)	31	Service	180	180	180	Service	70	Service		**641**	40	193	Service	90	**323**	**964**
Pumping Plant No. 7	Estimated Horsepower	100	250	250	250	250	100										
	Estimated Flow Rate (cfs)	31	Service	70	70	70	31				**272**						**272**

MEMORANDUM

20.2.1

TO: Cross Valley Canal Advisory Committee
Agenda Item No. 7

FROM: Scott Chambless

DATE: March 27, 2024

SUBJECT: Recommendation to Execute Amendment No. 2 to the Kern County Water Agency Agreement for a Construction Management Services Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05

Issue:
Consider authorizing the Water Resources Manager to execute Amendment No. 2 to the Kern County Water Agency Agreement for a Construction Management Services Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05.

Recommended Motion:
Recommend authorizing the Water Resources Manager to execute Amendment No. 2 to the Kern County Water Agency Agreement for Professional Consulting Services with NV5 for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05 amending the contract termination term to December 31, 2024, subject to approval of General Counsel as to legal form, as outlined in the March 28, 2024 staff memorandum to the Cross Valley Canal Advisory Committee, Agenda Item No. 7.

Discussion:
On November 16, 2022, the Kern County Water Agency (Agency) Board of Directors authorized the Engineering and Groundwater Services Manager to retain NV5 to provide construction management services as part of the construction of facilities and associated with the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05 (Project).

The agreement with NV5 expires on March 31, 2024 and the Project had delays due to high flows in the Kern River and extended earthwork activities due to unsuitable material and shallow groundwater. The Project delays and extended earthwork requires additional construction management oversight to close out the Project; therefore, Agency staff recommends that the Water Resources Manager be authorized to execute Amendment No. 2 to the Kern County Water Agency Agreement for Professional Consulting Services with NV5 amending the contract termination term to December 31, 2024. The amendment is a no cost time extension. Amendment No. 2 is provided as Attachment 1.

AMENDMENT NO. 2 to
KERN COUNTY WATER AGENCY
AGREEMENT
FOR
PROFESSIONAL CONSULTING SERVICES

This Amendment No. 2 is made this 28th day of March, 2024, by and between the Kern County Water Agency, a political subdivision of the State of California, hereinafter referred to as "Agency", and NV5, hereinafter referred to as "Consultant".

WITNESSETH:

WHEREAS, the Agency and Consultant entered into an agreement for construction management services dated November 16, 2022; and

WHEREAS, the Agency and Consultant entered into Amendment No. 1, dated November 15, 2023; and

WHEREAS, the Agency continues to require construction management services for the Cross Valley Canal Extension Lining Project – Pool No. 8 Project; and

WHEREAS, the Agency and Consultant desire to extend the time for such professional services; and

NOW, THEREFORE, in consideration of the covenants and conditions herein contained, the parties hereto agree as follows:

I. Article III. A. of the Agreement with Kern County Water Agency for Professional Consulting Services dated November 16, 2022 is hereby amended to extend the termination date to December 31, 2024.

II. All other provisions of the Kern County Water Agency Agreement for Professional Consulting Services dated November 16, 2022, as amended by Amendment No. 1 dated November 15, 2023 shall remain in full force and effect.

IN WITNESS WHEREOF, the Agency and Consultant have executed this Amendment No. 2 on the day and year first herein above set forth.

KERN COUNTY WATER AGENCY

By: _____
Water Resources Manager

CONSULTANT

By: _____
NV5

MEMORANDUM

20.2.1

TO: Cross Valley Canal Advisory Committee
Agenda Item No. 8

FROM: Scott Chambless

DATE: March 27, 2024

SUBJECT: Recommendation to Execute Amendment No. 2 to the Kern County Water Agency Agreement for a Geotechnical Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05

Issue:
Consider authorizing the Water Resources Manager to execute Amendment No. 2 to the Kern County Water Agency Agreement for a Geotechnical Consultant for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05.

Recommended Motion:
Recommend authorizing the Water Resources Manager to execute Amendment No. 2 to the Kern County Water Agency Agreement for Professional Consulting Services with Soils Engineering, Inc. for geotechnical services, amending the contract termination term to December 31, 2024, subject to approval of General Counsel as to legal form, as outlined in the March 27, 2024, staff memorandum to the Cross Valley Canal Advisory Committee, Agenda Item No. 8.

Discussion:
On November 16, 2022, Kern County Water Agency (Agency) Board of Directors authorized the Engineering and Groundwater Services Manager to retain Soils Engineering, Inc. (SEI) to perform geotechnical services for the Cross Valley Canal Extension Lining Project – Pool No. 8 – Contract No. KCWA 2022-05 (Project).

The agreement with SEI expires on March 31, 2024 and the Project had delays due to high flows in the Kern River and extended earthwork activities due to unsuitable material and shallow groundwater. The Project delays and extended earthwork requires additional material testing analysis to close out the Project; therefore, Agency staff recommends that the Water Resources Manager be authorized to execute Amendment No. 2 to the Kern County Water Agency Agreement for Professional Consulting Services with Soils Engineering, Inc. amending the contract termination date to December 31, 2024. The amendment is a no cost time extension. Amendment No. 2 is provided as Attachment 1.

AMENDMENT NO. 2 to
KERN COUNTY WATER AGENCY
AGREEMENT
FOR
PROFESSIONAL CONSULTING SERVICES

This Amendment No. 2 is made this 28th day of March, 2024, by and between the Kern County Water Agency, a political subdivision of the State of California, hereinafter referred to as "Agency", and Soils Engineering, Inc., hereinafter referred to as "Consultant".

WITNESSETH:

WHEREAS, the Agency and Consultant entered into an agreement for professional services dated November 16, 2022; and

WHEREAS, the Agency and Consultant entered into Amendment No. 1, dated November 15, 2023; and

WHEREAS, the Agency continues to require geotechnical services for the Cross Valley Canal Extension Lining Project – Pool No. 8; and

WHEREAS, the Agency and Consultant desire to extend the time for such professional services; and

NOW, THEREFORE, in consideration of the covenants and conditions herein contained, the parties hereto agree as follows:

I. Article III. A. of the Agreement with Kern County Water Agency for Professional Consulting Services dated November 16, 2022 is hereby amended to extend the termination date to December 31, 2024.

II. All other provisions of the Kern County Water Agency Agreement for Professional Consulting Services dated November 16, 2022, as amended by Amendment No. 1 dated November 15, 2023 shall remain in full force and effect.

IN WITNESS WHEREOF, the Agency and Consultant have executed this Amendment No. 2 on the day and year first herein above set forth.

KERN COUNTY WATER AGENCY

By: _____
Water Resources Manager

CONSULTANT

By: _____
Soils Engineering, Inc.

PIONEER PROJECT PARTICIPANTS
Agenda

Thursday, March 14, 2024
1:00 p.m. – 1:30 p.m.

Conference Line: (872)-240-3311
Access Code: 516-202-301#
https://meet.goto.com/516202301

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1. Update on Current Operations
2. Discussion of the Proposed McAllister Canal and Pioneer Improvements
3. Discussion of the Recharge Replacement Fee
4. Discussion of the Pioneer GSA
5. Other

Kern Fan Authority

Rosedale-Rio Bravo Water Storage District
849 Allen Road
Bakersfield, CA 93314

Buena Vista Water Storage District
PO Box 756
Buttonwillow, CA 93206

Kern Delta Water District
501 Taft Highway
Bakersfield, CA 93307

Henry Miller Water District
PO Box 9759
Bakersfield, CA 93389

March 27, 2024

VIA U.S. MAIL
Kern County Water Agency
Attn.: Tom McCarthy, General Manager
3200 Rio Mirada Drive
Bakersfield, CA 93308

Dear Mr. McCarthy:

The members of the Kern Fan Authority (KFA) are providing this correspondence to express their sincere concern regarding recent communications with the State Water Resources Control Board (SWRCB) on behalf of the Pioneer Banking Project and other groundwater banking projects within the Kern Fan area. As the Recharge Participants in the Pioneer Banking Project, the KFA members were surprised to learn, after the fact, that a presentation to SWRCB staff was made regarding groundwater banking within the Kern Fan in early February.

The matter-of-fact way in which the Pioneer Project Participants learned of this communication is especially concerning. The Pioneer Project participants meet regularly, and the Pioneer Project Participation Agreement itself provides that the Kern County Water Agency "will consult with the Participants prior to making decisions affecting such capabilities, costs, and benefits." (Section 9(f)). Further, all of the Pioneer Project Participants are involved in the Kern Subbasin Coordination Committee which meets weekly. Simply put, there was ample opportunity to discuss this matter and no excuse for failing to inform the Pioneer Recharge Participants of the intended communications with the SWRCB staff. This lack of communication is especially problematic given the basin-wide coordination efforts that are currently underway and has the potential to undermine the trust and cooperation needed to ensure that this subbasin can avoid probation and come in compliance with SGMA.

As Recharge Participants in the Pioneer Project, members of the KFA would have gladly contributed to the presentation to the SWRCB and would have been able to provide vital information and perspective. As you are well aware, groundwater banking in the Kern Fan is an important element for SGMA compliance and a sustainable subbasin. It is vital that Recovery Participants and Recharge Participants in the Pioneer Project keep an open line of communication. In the future, please remember to communicate with the Recharge Participants regarding such

important matters and any communications with the SWRCB before they take place. The KFA members look forward to working together with the Kern County Water Agency and the Pioneer Recovery Participants in continued efforts to ensure a sustainable groundwater subbasin. To that end, the KFA members request a meeting with the KCWA Pioneer Project Ad Hoc Committee to ensure that we maintain an open line of communication.

Respectfully:

Dan Bartel, Engineer-Manager
Rosedale-Rio Bravo Water
Storage District

Tim Ashlock, Engineer-Manager
Buena Vista Water Storage District

Steve Teglia, General Manager
Kern Delta Water District

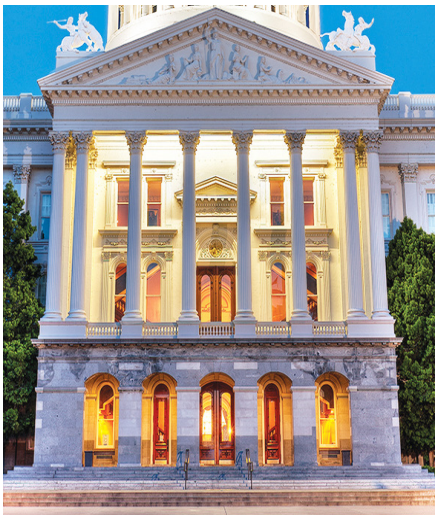
Dominic Sween
Dominic Sween, General Manager
Henry Miller Water District

cc: KCWA Pioneer Project Ad Hoc Committee

SACRAMENTO REPORT

March 2024

Volume 19, Issue 3



NEWS BRIEFS

Opportunities for Public Comment on the Proposed Designation of Tule Basin as Probationary Basin

The California State Water Resources Control Board (State Water Board or Board) will hold a public hearing on September 17, at which it will consider designating the Tule Subbasin as a probationary basin pursuant to the Sustainable Groundwater Management Act (SGMA). The Board is seeking comments from the public to inform its decision.

continued on next page

VAWC Takes Positions on New Bills

With the passage of the February 16, 2024 deadline to introduce new bills, the second year of the 2023-24 Legislative Session is now in full swing. The Valley Ag Water Coalition took positions on the following bills during its committee meeting last month:

AB 2060, by Assemblymember Esmeralda Soria (D-Fresno): The bill would repeal the January 1, 2029 sunset date for provisions included in the public resources budget trailer bill for FY 2023-2024, which did not require an appropriative water right for the diversion of groundwater recharge under certain conditions. VAWC took a support position on the bill as repealing this sunset date would allow for the continued diversion of flood flows in the San Joaquin Valley, protecting communities from possible flood damage and supporting groundwater recharge.

ACA 2, by Assemblymember Juan Alanis (R-Modesto): The measure, should it be approved by voters, would require the California Treasurer to annually transfer an amount equal to 1.5% of all state revenues from the General Fund to the California Resiliency Trust Fund, which the measure would create. The measure would continuously appropriate money in the fund to the California Water Commission to cover the costs of implementing these provisions and for specified water projects. VAWC is supporting ACA 2 as it would allow state agencies and

*See **VAWC Positions,** page 2*

LAO Estimates $15 Billion Increase in Budget Deficit; Senate Democrats Release Plan to "Shrink the Shortfall"

Last month, the Legislative Analyst's Office (LAO) released a deficit update for the 2024–25 state budget. According to the LAO, recent revenue collections data indicate a $15 billion increase to the budget problem, raising the estimated deficit from $58 billion to $73 billion.

To resolve the increase, the LAO recommends the California Legislature start by reviewing whether "recent augmentations for one-time and temporary spending could be pulled back or reduced" to achieve savings.

*See **Budget Deficit,** page 2*

Inside Sacramento Report

NEWS BRIEFS *continued*

Board staff have developed a draft recommendation for the Board to consider, which describes the actions staff recommends the Board should take. Public comment on the draft staff report is requested to be submitted no later than May 7, 2024, at 12:00 noon. All comments received by the deadline will be considered by Board Staff when developing the final staff report.

Staff will also hold two public staff workshops to explain the draft staff report and share more about how to participate in the State Water Board's state intervention process. Verbal public comments may be provided on the draft staff report at the workshops.

Virtual Staff Workshop
Friday, April 5, 2024
11:00 AM – 1:30 PM
Staff presentation will start at 11:00 AM
Staff will begin accepting public comments at 12:15 PM
Zoom link: https://kearnswest.zoom.us/j/84005853021

In-Person Staff Workshop
Monday, April 8, 2024
5:30 PM – 8:30 PM
Staff presentation will start at 5:30 PM
Staff will begin accepting public comments at 7:00 PM
Porterville Veterans Memorial Building at 1900 W Olive Ave, Porterville, CA 93257

While a quorum of the State Water Board may be present, the State Water Board will not take regulatory action at the workshops.

continued on next page

VAWC Positions, *continued from page 1*

local agencies to access state financial assistance for infrastructure projects regardless of fluctuations in state revenues from year to year. Though this would reduce the flexibility of the Governor and Legislature to respond to economic downturns and their effects on state revenues, setting aside state revenues for infrastructure on a "pay-as-you-go" basis is more cost effective over time compared to issuing general bonds. Further, by ensuring there is continued funding available for critical infrastructure projects, ACA 2 would ultimately bolster overall climate resilience against the current and future impacts of climate change in the state.

SB 973, by Senator Shannon Grove (R-Bakersfield): The bill would authorize a board of supervisors or city council to grant a petition for cancellation of a Williamson Act contract where the land subject to the contract is located in a basin under the jurisdiction of an adjudicated watermaster or the groundwater sustainability agency. The bill would require the landowner to commit to limiting the amount of water rights to a specific solar energy project that uses less water than the agricultural use. According to the author's office, farmland is coming out of production due to water limitations in water basins from the Sustainable Groundwater Management Act and adjudicated basins in both the Central Valley and the desert areas. However, the fee to the state if a Williamson Act Contract is canceled by a board of supervisors is a disincentive for companies to use that land for utility-scale solar. An estimated 140,000 acres of land that could produce over 20 GW of solar and battery storage could be opened up with SB 973. The legislation is sponsored by Kern County. VAWC has taken a watch position on the bill.

SB 1390, by Senator Anna Caballero (D-Merced): The bill proposes to tackle the same subject as AB 2060; however, instead of repealing the January 1, 2029 sunset provision, SB 1390 proposes to extend the application of the permits through January 1, 2034. Further, the bill would expand authority to divert floodflows to a local or regional agency that has a county emergency operations plan or a publicly available regional flood plan certified by the Department of Water Resources. Additionally, this legislation also would expand authority beyond where flows would inundate ordinarily dry areas in the bed of a terminal lake to a depth that floods dairies and other ongoing agricultural activities, or areas with substantial residential, commercial, or industrial development and would authorize the diversion of floodflows where they are projected to inundate in ordinarily dry areas. As with AB 2060, the Coalition has taken a support position on this bill.

Budget Deficit, *continued from page 1*

"We recommend this approach for two key reasons," the LAO writes in the report. "First, when this one-time and temporary spending was adopted, it was understood that doing so would provide a cushion for future budget problems… Second, the more the Legislature reduces one-time and temporary spending this year, the more other tools it can preserve for future budget problems."

According to estimates, after setting aside disbursements and Governor's budget proposals, the state could pull back and reduce one-time and temporary spending by as much as $6.4 billion in 2023-24, $4.1 billion in 2024-25, and $5.1 billion in 2025-26. These reductions would come from a variety of program areas, including education, health and human services, transportation, environmental programs, housing and homelessness. These could include potential cuts to water resilience projects, flood and dam safety, urban flood risk reduction, and water conveyance and water storage projects.

See ***Budget Deficit,*** *page 3*

Budget Deficit, *continued from page 2*

The LAO notes that reducing one-time and temporary spending is a "use-or-lose" tool for addressing the budget problem as once the funds are disbursed to recipients, they can no longer be pulled back. Other tools, such as reserve withdrawals and cost shifts, also can be used only once, but at any time; thus, they should be reserved for deployment in the future to avoid cuts to ongoing services.

Legislators on both sides of the aisle have reacted to the LAO's update with concerns for California's future fiscal health. "We are very concerned about short-term fixes for long-term problems," said Assembly Speaker Robert Rivas (D-Hollister) in a statement. "Clearly, we need to prioritize oversight and curb spending and our investments."

Republicans, however, have been more critical of the ballooning deficit, citing it as the result of fiscal irresponsibility, and highlighting the stark contrast between the LAO's estimates and Governor Gavin Newsom's more "optimistic" deficit projection of $38 billion.

On March 14, Senate Democrats released an early action plan titled "Shrink the Shortfall" which proposes a series of budget solutions to reduce the budget deficit by $17.1 billion. According to the plan, these early actions are step one of a two-prong strategy, with step two to be released later in the spring and provide a comprehensive proposal for balancing the budget.

Combined with the Governor's proposed partial use of the Rainy Day Fund, the intent with step one is to "shrink the shortfall" from a projected $38-$53 billion, to a more manageable $9-24 billion.

The Plan is light on the details but would approve several of Newsom's January budget proposals. These proposals include $3.7 billion in a combination of program reductions, revenue/borrowing, fund shifts, delays and deferrals in FY 2023-24 (which ends on June 30) and $13.4 in FY 2024-25 (which begins on July 1). Of these solutions, $3,747 million would come from Resources and Energy Programs — $1,105 in FY 2023-24 and $2,641 in FY 2024-25.

The Plan's proposed early actions include:

- Approval of the Governor's level of fund shifts from the General Fund to the Greenhouse Gas Reduction Fund of $557 million in FY 2023-24 and $1,721 million in FY 2024-25. The specific programs to backfill to be determined through continued discussions between legislative leadership.
- Approval of the Governor's proposal to delay $100 million and reduce $174.4 million in FY 2023-24 for water recycling/groundwater cleanup. This solution is expected to be offset by the Infrastructure Investment and Jobs Act (IIJA) contribution to the State Revolving Fund Program.
- Approval of the Governor's proposal to reduce the forecasted informed reservoir operations budget by $6.8 million in FY 2024-25.
- Approval of the Governor's proposal to reduce $5 million for climate adaptation and resilience planning grants.
- Partial approval of half of the Governor's proposal to reduce $413.3 million for watershed climate resilience, for a total of $296.7 mullion. The plan points out to a possible upcoming bond as a potential source of funding for offsetting this reduction.

See ***Budget Deficit,*** *page 4*

NEWS BRIEFS *continued*

Spotlight on Rural California

Rural California is vast— and varied. It faces unique challenges, from high poverty to sparse social services to a lingering digital divide. What are the most immediate challenges and how are leaders and stakeholders addressing them?

Join PPIC on March 21, 2024, from 11:30am-1:00pm, for a conversation between James Gallagher, assembly Republican leader, and Tani Cantil-Sakauye, president and CEO of PPIC, followed by a panel discussion with State and local leaders.

Registration and event information is available Here.

Salinity Management Workshop 2024

The Delta Science Program is hosting a two-day virtual workshop to discuss tools and strategies, identify knowledge gaps, and build shared goals for adaptively managing ocean saltwater intrusion in the Sacramento-San Joaquin Delta. This free workshop will include presentations from researchers on the human dimensions of salinity management and on modeling tools to assess the impacts of various management actions. It will feature interactive sessions to share ideas and gather input from participants about the impacts of management actions, their tradeoffs, and ways of improving modeling tools. Topics of conversation will include drought, climate change, ecosystem responses, human dimensions, conceptual models, management approaches, tradeoffs, partnership opportunities, and more.

continued on next page

NEWS BRIEFS *continued*

Register to attend via Zoom.

March 26 Zoom Registration
March 27 Zoom Registration

An information sheet titled "A Primer on Delta Salinity: Natural and Human Influences" has been posted as part of the workshop announcement.

Lunch-MAR

On April 3, DWR Flood-Managed Aquifer Recharge (Flood-MAR) Program will host the monthly Lunch-MAR webinar. Lunch-MAR webinars take place the first Wednesday of each month. In these webinars, network members and invited guests present on and discuss a wide range of topics relevant to Flood-MAR, ranging from water rights to geophysics. To join a Lunch-MAR Session, please use this registration link

Explore Flood Risks with a New Online Tool

A new website created by the Delta Stewardship Council helps people explore flood risks on Delta islands. The Delta Levees Investment Strategy (DLIS) Decision Support Tool, unveiled this month, is here.

The site shows risks under various scenarios and timeframes. The strategy prioritizes levee investments in the Delta based on risks. It became State law as part of the Delta Plan in January. Learn more about the DLIS in this storymap.

continued on next page

***Budget Deficit** continued from page 3*

The Shrink the Shortfall early action plan will be heard in the Senate Budget and Fiscal Review Committee and could come up for a vote on the Senate Floor as soon as there is agreement with the Assembly and Governor.

"The deficit we're facing this year will require big solutions, and I appreciate the Senate's plan to close California's budget deficit by $17 billion. I look forward to seeing this proposal move forward quickly." Governor Newsom said of the Plan.

For the full LAO report, please visit the LAO's website, the Senate Democrats proposal can be found Here.

Assembly Holds Joint Hearing on SGMA Implementation

February 21, 2024—A joint hearing held by the Assembly Budget Subcommittee No. 4 on Climate Crisis, Resources, Energy, and Transportation, and the Assembly Water, Parks, and Wildlife Committee discussed the next phase of the Sustainable Groundwater Management Act (SGMA). The informational hearing was led by Budget Subcommittee No.4 Chair Steve Bennett (D-Ventura) and Assembly Water Committee Chair Diane Papan (D-San Mateo). Panelists providing testimony for the hearing included: Sonja Petek from the Legislative Analyst's Office (LAO); Paul Gosselin, DWR; James Nachbaur and Tina Leahy, State Water Resources Control Board (State Water Board); Jeff Pratt, Fox Canyon Groundwater Management Agency (FCGMA); and Professor Jennifer Harder, McGeorge School of Law.

The first half of the meeting centered on the implementation phase of SGMA, with the announcement of the Department of Water Resources (DWR's) completed assessments of all groundwater sustainability plans (GSPs). According to the Chairs, with SGMA at this critical juncture, it is important to define areas where the state may be helpful and useful in the implementation of GSPs. Assemblymember Bennett added that with the millions of dollars invested into SGMA, the Budget Subcommittee's approach is to ensure that resources directed towards groundwater sustainability agencies (GSAs) were "good" investments and consider all groundwater users to move forward.

At the hearing, the LAO provided an overview of SGMA while DWR and State Water Board staff discussed their roles moving forward. The LAO reported that with most GSPs approved (about 2/3), SGMA is now in "full implementation mode." The state has provided over $900 million for SGMA implementation in various forms, such as local assistance grants, planning grants, and implementation grants. Some funding has gone directly to DWR and the State Water Board to support state operations for SGMA; however, some of this funding is set to expire. Though SGMA was largely supported by bond funding (Proposition 1 and Proposition 68) during its early years, such funding has now been exhausted; thus, the state has more recently heavily relied on the General Fund. The governor's current budget proposal for 2024–25, however, does not include any new funding for the program aside from $50 million of previously authorized funding for state operations.

While significant progress has already been made to bring basins into sustainability, groundwater basins in California remain in drought conditions. Implementation will likely be difficult with considerable work ahead. During the implementation phase of SGMA, DWR noted that their role in the process transitions

*See **SGMA Implementation,** page 5*

SGMA Implementation, *continued from page 4*

to that of "basin stewardship," providing assistance and regulatory oversight to ensure basins continue on their path to sustainability and maintain compliance. This will include periodic evaluations, during which GSPs could still be deemed incomplete or inadequate depending on the circumstances. With plans that are now approved, DWR also noted that some basins will need to adjust their GSPs, starting in 2025, as their plans could potentially impede adjoining basins from achieving their sustainability goals.

The State Water Board, meanwhile, will possess a role of intervention that only begins with a triggering event, such as a GSP being determined inadequate by DWR. Throughout the hearing, Board staff repeatedly maintained that its role is temporary with the discretion to evaluate whether or not probation is warranted through a public process. The public process will include providing notice and holding public hearings, during which interested parties will have the opportunity to address the Board. Staff also noted that by the time a public hearing takes place, the Board will have worked with the basin to address some of the deficiencies in their plans. Should a basin be placed under probation, pumpers in the basin would be subject to reporting requirements and fees. Fees are currently structured under 2017 assumptions ($300 per well charge, and $40 per acre feet), however, SGMA allows the Board to change this fee structure. The State Water Board has already asked staff to reevaluate the fee structure; with Board staff reporting that fee revenues from probationary designations are likely to be volatile, thus it may be prudent to lower fees in the future depending on how many basins will be subject to fees.

The latter half of the hearing focused on groundwater adjudication. Professor Harder provided an overview of groundwater rights and groundwater adjudication in California; Pratt discussed the FCGMA's groundwater adjudication case, which he believed could be used as a template in other cases throughout the state.

SGMA designated FCGMA as the exclusive GSA for the three basins within its boundaries, and required the development of GSPs for all three basins, including Las Posas Valley. SGMA also further provided FCGMA new authorities: to establish programs and projects to develop new supplies to augment basin yields; to acquire water rights/supplies to augment basin yields and groundwater resources; and to impose and collect fees to construct projects. All of the GSPs submitted by FCGMA were approved and adopted in December 2019.

While GSPs were under development, separate lawsuits were filed against the Las Posas Valley GSP due to disputes between mutual water companies and their shareholders regarding whether mutual water companies or their shareholders owned the water rights. The judgment ultimately determined all water rights in the Las Posas Valley basin, appointed FCGMA as Watermaster for the basin, incorporated the Las Posas Valley GSP, and authorized FCGMA/Watermaster basin assessments for the administration of judgment/physical solution and implementation/construction costs.

The judgment, however, also created new policy and technical advisory committees and required FCGMA/Watermaster to compensate the technical advisory committee members. The technical advisory committee is not subject to the Brown Act and is made up of agricultural interest. As a result, FCGMA will essentially pay to develop the record that will potentially be used to challenge its

See ***SGMA Implementation,*** *page 6*

NEWS BRIEFS *continued*

Division of Boating and Waterways Set to Control Aquatic Invasive Plants in the Sacramento-San Joaquin Delta

California State Parks' Division of Boating and Waterways (DBW) announced plans to control aquatic invasive plants in the west coast's largest estuary, the Sacramento-San Joaquin Delta and its southern tributaries. Starting March 6 through November 30, 2024, DBW crews will begin herbicide treatments on water hyacinth, South American spongeplant, Uruguay water primrose, Alligator weed, Brazilian waterweed, curlyleaf pondweed, Eurasian watermilfoil, coontail, ribbon weed, and fanwort in the Delta. Depending on weather conditions and plant growth/movement, treatment dates may change. Select areas of the Delta with high infestations or coverage of water hyacinth will be controlled using mechanical harvesting efforts through December 2024.

Read the news release for more information.

Series of Papers on Interconnected Surface Water Begins

The Department of Water Resources (DWR) has started releasing a series of papers on the technical aspects of interconnected surface water (ISW). The first paper, *Depletions of Interconnected Surface Water: An Introduction*, defines ISW and explains how it is identified. There is also information on the basic concepts of depletion. The next two papers in the series will be released this spring.

continued on next page

NEWS BRIEFS *continued*

CA Water Institute Begins Quarterly Newsletter

The California Water Institute (CWI) has released its inaugural newsletter, a quarterly report that will provide updates on CWI's projects, upcoming events, and other related news. The first issue includes an item on subsurface artificial groundwater recharge. An online subscription form is available on the CWI's website.

Still Reeling from Pandemic, Sacramento Delta Residents Eye Major Deals

Courthouse News Service — California's fertile Sacramento Delta region has long been central to debates over how to best manage California's water resources and agricultural lands. But as the region recovers from the pandemic, many residents are more concerned with immediate problems like power outages and business growth. Read the entire article.

Final 2024 California Integrated Report

The State Water Resources Control Board adopted California's Clean Water Act Section 303(d) List portion of the 2024 California Integrated Report on February 6, 2024. Changes were incorporated into the final documents as directed by the Board at the February adoption meeting, Resolution No. 2024-0007, and Change Sheet #1. The Final Documents and Summary of Comments and Responses are posted to the program's webpage. Board staff will submit the 2024 California Integrated Report to the U.S. EPA by April 1, 2024.

SGMA Implementation, *continued from page 4*

management actions/decisions in court. FCGMA anticipated that this "committee consultation" process would be used to challenge FCGMA's science and technical solutions, specifically those related to Las Posas Valley GSP. In the judgment, the physical solution allocated 42 thousand acre-feet in contrast to the sustainable yield of 31 thousand acre-feet.

According to Pratt, the judgment virtually eliminated the possibility of an open and public water market, which had started long before SGMA hit. All FCGMA/Watermaster actions are subject to the court's continuing jurisdiction, which means any party can challenge almost any action/decision made by FCGMA/Watermaster. Further, FCGMA/Watermaster actions and decisions are subject to de novo review, a standard that does not give deference to a previous court's decisions. According to Pratt, the judgment ultimately allows the court to decide the science, creating potential conflicts with the approved GSPs. He then asserted that the case has the potential to become a template for litigation against GSPs.

Though the joint hearing was primarily informational, questions and discussions posed by legislators throughout the hearing implied possible actions they believed could continue to support SGMA.

For example, lines of questioning from the committee chairs indicated possible future legislation to ensure that the FCGMA case settlement would not become the template for the state. Bennett stated that adjudication could make it more difficult for GSAs to meet the goals of SGMA and asserted that it would be "incumbent" on the legislature to stop that from happening. Papan agreed stating that the utilization of the FCGMA case as a template could be "circumvented at the state level." Bennett additionally inquired as to whether legislation requiring GSPs to be exposed to the courts at the onset of litigation would be beneficial. In response, both Pratt and Harder agreed that doing so could provide significant value to the courts.

On SGMA implementation, Bennett opined that GSAs have "significant conflicts of interest" with the potential to "drag feet" in terms of compliance with SGMA. The implication is that GSAs could continue to improperly implement SGMA multiple times; should this be the case, Bennett suggested that the state should impose consequences. This apparent distrust of GSAs and their methods is further reflected in Bennett's line of questioning regarding metering requirements. In response to Bennett's questions, Nachbaur noted that SGMA allows multiple methods for estimating pumping. Bennett responded to this answer that based on his experienced in Ventura County "there is nothing more accurate than using meters on the well".

Papan meanwhile focused her questions on the fees that would be imposed on basins should they be placed on probation by the State Water Board. She noted that compliance could bury GSAs to the point where they don't have enough funds to implement. She argued that perhaps some of the fee revenue collected by the State Water Board could be redirected to GSAs to help them comply. Nachbaur responded that the State Water Board's revenues from fee collection would be used to cover their operations costs. Bennett later commented that the fees seem to be punitive in nature, noting that there is a reason why there are other funding sources; Papan, however, pointed out that many of those are in "short supply."

For more information, a recording of the joint hearing is available on the State Assembly's media archives website.

DWR Releases Groundwater Well Permitting Report

Earlier this month, the Department of Water Resources (DWR) released a report discussing the ways well-permitting agencies and groundwater sustainability agencies (GSAs) met executive order (EO) requirements for lessening the effects of drought conditions.

The report summarizes the local actions taken to comply with EO N-7-22 and EO N-3-23. These EOs specified additional considerations for local agencies to make when considering permitting wells to improve the understanding of the potential effects of new or modified wells. The report also includes observations of groundwater conditions that occurred while these actions were taken and policy recommendations that DWR believes could be used to develop future solutions to align land use planning, well permitting, and groundwater management and use.

"To address current effects and proactively reduce future impacts like more dry wells and greater land subsidence, concerted actions are needed to improve the understanding of local effects on groundwater basin conditions," DWR states in the report. "By taking holistic consideration of the effects of these decisions, coupled with improved coordination, Californians can help mitigate worsening groundwater conditions and reduce the risk of negative and potentially irreversible impacts to California's well users."

DWR found that the EOs caused some changes in well-permitting considerations, such as a shift from the primary concern of protecting groundwater quality to a broader concern that includes sustainable groundwater management. According to DWR's analysis, though the EOs provided critical direction and understanding to local agencies of how SGMA considerations could be included in the well permitting process, the EOs do not fully address the complexities of well permitting, and more structure is needed.

To conclude the report, DWR recommended the enactment of four statutory concepts to "fulfill the intent of the EOs and minimize impacts from new well extractions, not just during drought years, but in all years." These concepts are: (1) statutory provisions that would provide public disclosure of well permit applications and collaborations between local enforcing agencies and GSAs; (2) statutory minimum standards for well spacing and well depth, and the prohibition of new well permits in areas where subsidence impacts are occurring; (3) the exemption of certain wells from the previously recommended statutes, based on size and volume as well as small, public supply wells; and (4) standards of applicability or exemption set for basins with low- and very low-priority designations or in non-alluvial areas.

To view the full report, please visit DWR's Wells webpage.

Proposed Order Setting Aside Water Quality Certifications

On March 11, 2024, the State Water Resources Control Board (State Water Board) issued a Notice of Opportunity for Public Comments and Board Consideration of a Proposed Order Reconsidering Water Quality Certifications (Notice).

The State Water Board will accept written comments on a proposed order setting aside the water quality certifications (certifications) for hydropower project licenses for: (1) Merced Irrigation District's Merced River Hydroelectric Project and Merced Falls Hydroelectric Project (Federal Energy Regulatory Commission

*See **Proposed Order,** page 8*

UPCOMING MEETINGS

State Water Resources Control Board
March 19-20, 2023; 9:00am
Joe Serna Jr. - CalEPA Building
1001 I St., Coastal Hearing Rm
Sacramento, CA 95814
Agenda , Webcast
Participation Guide

Central Valley Flood Protection Board
March 22, 2024; 9:00am
Sacramento Area Council of Governments
1415 L Street, Suite 300
Sacramento, CA 95814
Agenda, Zoom
Dial-in: +1 669 219 2599
Enter Webinar ID:
*868 5917 3646

Delta Independent Science Board Meeting
March 22, 2024; 10:00am
Remove Participation Only
Agenda, Meeting Materials
Webcast, Zoom

Sacramento-San Joaquin Delta Conservancy
March 27, 2024; 9:00am
Location TBD
Agenda and Participation Guide
(Not Yet Posted)

State Water Resources Control Board
April 3-4, 2023; 9:00am
Joe Serna Jr. - CalEPA Building
1001 I St., Coastal Hearing Rm
Sacramento, CA 95814
Agenda (Not Yet Posted)

continued on next page

UPCOMING MEETINGS
continued

Central Valley Flood Protection Board
April 12, 2024; 9:00am
Remote Participation Only
Agenda and Participation Guide (Not Yet Posted)

State Water Resources Control Board
April 16-17, 2023; 9:00am
Joe Serna Jr. - CalEPA Building
1001 I St., Coastal Hearing Rm
Sacramento, CA 95814
Agenda (Not Yet Posted)

California Water Commission
April 17, 2024; 9:30am
State of CA, Resources Bldg
715 P St., 1st Floor Auditorium
Sacramento, CA 95814
Agenda (Available April 5)

Central Valley Regional Water Quality Control Board
April 18-19, 2024
1685 E. Street
Fresno, CA 93706
Agenda and Participation Guide (Not Yet Posted)

Delta Stewardship Council
April 25-26, 2024
Meeting location TBD
Agenda (Available April 15)

Proposed Order, *continued from page 7*

[FERC] Project Nos. 2179 and 2467), issued on July 31, 2020; (2) Nevada Irrigation District's Yuba-Bear Hydroelectric Project (FERC Project No. 2266), issued on August 14, 2020; and (3) Turlock Irrigation District's and Modesto Irrigation District's Don Pedro Hydroelectric Project and La Grange Hydroelectric Project (FERC Project Nos. 2299 and 14581), issued on January 15, 2021. The proposed order would set aside these three certifications and dismiss the pending petitions for reconsideration of these certifications.

The Notice includes information on how to access the proposed order. Any person wishing to file a written comment with the State Water Board must do so by 12:00 noon on Tuesday, April 9, 2024, as directed in the Notice.

BACKGROUND

On September 27, 2023, the United States Environmental Protection Agency (USEPA) promulgated the Clean Water Act Section 401 Water Quality Certification Improvement Rule (2023 Rule). In the preamble accompanying the 2023 Rule, USEPA provided, for the first time, an interpretation of section 401 of the federal Clean Water Act (Section 401) that precludes certifying authorities such as the State Water Board from issuing a certification in the absence of a currently pending request for certification. In light of USEPA's new interpretation, the proposed order sets aside the three certifications listed above that were issued by the State Water Board's Executive Director without a pending request for certification, where the State Water Board had previously received a request for certification that had either been denied or withdrawn, and the project proponent(s) was still actively pursuing a federal hydropower license. Although the State Water Board believes its issuance of these certifications was proper and its interpretation of Section 401 remains reasonable, the State Water Board defers to USEPA's new interpretation. If these certifications are set aside by the proposed order, there would no longer be any action of the State Water Board to be reconsidered. Therefore, to avoid the unnecessary expenditure of resources, the proposed order also dismisses the petitions for reconsideration of these certifications.

As discussed in the Notice, the State Water Board will consider adoption of the proposed order at the State Water Board meeting on Tuesday, May 7, 2024.

(Source: State Water Resources Control Board, Notice of Opportunity for Public Comments and Board Consideration of a Proposed Order Reconsidering Water Quality Certifications, March 11, 2024)

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Valley Ag Water Coalition

The mission of the Valley Ag Water Coalition is to represent the collective interests of its San Joaquin Valley member agricultural water companies and agencies in California legislative and regulatory matters by providing leadership and advocacy on issues relating to the development and delivery of a reliable farm water supply.

AMENDED IN ASSEMBLY MARCH 21, 2024

CALIFORNIA LEGISLATURE—2023–24 REGULAR SESSION

ASSEMBLY BILL No. 2079

Introduced by Assembly Member Bennett

February 5, 2024

An act to ~~amend Section 10735.4 of~~ *add Article 5 (commencing with Section 13807) to Chapter 10 of Division 7 of* the Water Code, relating to groundwater.

LEGISLATIVE COUNSEL'S DIGEST

AB 2079, as amended, Bennett. ~~Sustainable Groundwater Management Act: groundwater basins.~~ *Groundwater extraction: large-diameter, high-capacity wells: permits.*

Existing law, the Sustainable Groundwater Management Act, requires all groundwater basins designated as high- or medium-priority basins by the Department of Water Resources to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans, except as specified. Existing law authorizes any local agency or combination of local agencies overlying a groundwater basin to decide to become a groundwater sustainability agency for that basin and imposes specified duties upon that agency or combination of agencies, as provided.

Existing law requires the State Water Resources Control Board to adopt a model water well, cathodic protection well, and monitoring well drilling and abandonment ordinance implementing certain standards for water well construction, maintenance, and abandonment and requires each county, city, or water agency, where appropriate, not later than January 15, 1990, to adopt a water well, cathodic protection well, and monitoring well drilling and abandonment

ordinance that meets or exceeds certain standards. Under existing law, if a county, city, or water agency, where appropriate, fails to adopt an ordinance establishing water well, cathodic protection well, and monitoring well drilling and abandonment standards, the model ordinance adopted by the state board is required to take effect on February 15, 1990, and is required to be enforced by the county or city and have the same force and effect as if adopted as a county or city ordinance.

This bill would require a local enforcement agency, as defined, to perform specified activities at least 30 days before determining whether to approve a permit for a new large-diameter, high-capacity well, as defined. By imposing additional requirements on a local enforcement agency, the bill would impose a state-mandated local program. The bill would require a groundwater sustainability agency with oversight for the area of the basin where the local enforcement agency has well permitting jurisdiction to provide specified information to the local enforcement agency, including, but not limited to, the name of the applicable groundwater sustainability agency, the agency manager and contact information, and the applicable sustainable management criteria related to groundwater levels, including the groundwater level measurable objectives and minimum thresholds. The bill would provide various requirements for the local enforcement agency to consider before approving or denying a permit. The bill would provide exemptions for its provisions for specified wells if they are proposed to be constructed with well screens and pump depths below the applicable minimum thresholds for groundwater levels as reported by the groundwater sustainability agency. The bill would provide that its provisions apply only to applications for permits for the construction, maintenance, abandonment, or destruction of water wells in basins identified in the Department of Water Resources Bulletin 118.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

~~Existing law, the Sustainable Groundwater Management Act, authorizes the State Water Resources Control Board to designate a groundwater basin as a probationary basin if the state board makes a certain determination and to develop an interim plan for the probationary~~

~~basin. The act requires that a local agency or groundwater sustainability agency have 180 days to remedy the deficiency if the board designates the basin as a probationary basin.~~

~~This bill would make nonsubstantive changes to the latter provision.~~

Vote: majority. Appropriation: no. Fiscal committee: ~~no~~ *yes*. State-mandated local program: ~~no~~ *yes*.

The people of the State of California do enact as follows:

SECTION 1. Article 5 (commencing with Section 13807) is added to Chapter 10 of Division 7 of the Water Code, to read:

Article 5. Well Sustainability

13807. This article shall apply only to applications for permits for the construction, maintenance, abandonment, or destruction of water wells in basins identified in the Department of Water Resources Bulletin 118.

13807.5. The Legislature finds and declares all of the following:

(a) The groundwater extraction from large-diameter, high-capacity wells can interfere with nearby drinking water wells and result in impacts to critical infrastructure from subsidence.

(b) It is in the public interest to ensure that the permitting of new wells extracting groundwater will be conducted to minimize the impacts to drinking water wells and subsidence.

(c) Sustainable groundwater management in many parts of the state requires coordination between local agencies permitting water wells and groundwater sustainability agencies managing groundwater basins.

(d) People, businesses, and industries seeking to construct or operate water wells should be adequately informed about groundwater conditions and groundwater management programs that may affect the current or future use and operation of their wells.

(e) Applicants seeking, and agencies permitting, the construction and operation of water wells should take into account the reliability and sustainability of the groundwater sources intended to be used to avoid unexpected or unplanned well dewatering or loss of well production capacity, which could lead to higher rates of

unexpected, unplanned, or premature well abandonment and dereliction that could pose additional threats to groundwater quality.

(f) Agencies permitting for the construction and operation of water wells should consider the potential for those wells to cause or contribute to land subsidence, which can have impacts on water quality by adversely affecting the concentration of naturally or artificially occurring chemical constituents of concern and posing other serious public health and economic problems.

13808. The following definitions shall apply to this article:

(a) "Large-diameter, high-capacity well" means any water well with a diameter of more than eight inches and intended to produce greater than two acre-feet annually.

(b) "Local enforcement agency" means any city, county, or water agency that has adopted and is administering an ordinance for the construction, maintenance, abandonment, or destruction of a water well pursuant to this chapter.

13808.5. (a) A local enforcement agency shall perform all of the following activities at least 30 days before determining whether to approve a permit for a new large-diameter, high-capacity well:

(1) Provide electronic notice to the general public by posting notice of receipt of the application and the contents of the application on the local enforcement agency's internet website.

(2) Provide notice to all groundwater sustainability agencies managing within a 10-mile radius of a proposed well, including those in adjacent basins or counties, as applicable.

(3) Provide notice to all other local enforcement agencies, if any, administering well permitting programs within the basin in which the activities covered in the application would occur.

(4) Provide written notice through the United States Postal Service to the registered owners or agents of all parcels within a one-mile radius of the site where the activities covered in the application would occur and any relevant information on the well permitting process.

(b) The groundwater sustainability agency with oversight for the area of the basin where the local enforcement agency has well permitting jurisdiction shall provide all of the following information to the local enforcement agency:

(1) The name of the applicable groundwater sustainability plan being implemented and where an electronic copy of the plan may be accessed.

(2) The name of the applicable groundwater sustainability agency, the agency manager and contact information, and the applicable sustainable management criteria related to groundwater levels, including the groundwater level measurable objectives and minimum thresholds.

(3) The estimated depth to the groundwater level based on the most recent monitoring conducted by the groundwater sustainability agency for the area of the basin where the proposed activities covered by the application would occur.

(4) Any fees, allocation, metering, spacing determinations, or other regulations or ordinances that the groundwater sustainability agency has adopted.

(5) Any updates to the information provided pursuant to this subdivision as necessary, should changes occur.

(c) Before approving any well permit for a large-diameter, high-capacity well, a local enforcement agency shall provide all of the following information to the applicant:

(1) The basin name, number, and priority as assigned by the department in its most recent Bulletin 118.

(2) The name of all groundwater sustainability agencies, if any, managing the basin in which the activities covered in the application would occur.

(3) Information on regulations or ordinances adopted by the groundwater sustainability agency relevant to the construction and operation of the proposed well.

(4) Notice to the applicant that the approval of the application and granting of any associated permit is subject to the regulatory authority of any groundwater sustainability agency managing the portion of the basin in which the activities covered in the application would occur. The notice shall specifically inform the applicant that in addition to any regulatory authority already being exercised, a groundwater sustainability agency may exercise authority to limit groundwater extraction, the imposition of fees, and metering.

13809. (a) A local enforcement agency shall not approve a permit for a large-diameter, high-capacity well if that well is proposed to be located within one-quarter mile of a well used for

supplying domestic water to one or more persons or to a community.

(b) (1) A local enforcement agency shall not approve a permit for a large-diameter, high-capacity well if that well is proposed to be located within one-quarter mile of an area that has subsided greater than 0.5 feet in total since January 1, 2015, as reported and defined by the department based upon provided InSAR subsidence data report posted on the Natural Resources Agency open data portal and department internet websites.

(2) A local enforcement agency may approve a permit for a large-diameter, high-capacity well if the area identified in paragraph (1) has not had subsidence of over 0.1 feet for four consecutive years, is consistent with the local groundwater sustainability plan, and is screened above geologic units known to be susceptible to compaction.

(c) A local enforcement agency shall not approve a permit for any well unless that well is screened below the minimum thresholds applicable to that portion of the basin as established by the groundwater sustainability agency pursuant to paragraph (2) of subdivision (b) of Section 13808.5.

(d) To ensure the reliability and long-term operation of wells within its jurisdiction, a local enforcement agency may determine not to approve an application or grant a permit based on criteria that are more stringent than those provided in this section.

13809.5. This article does not apply to applications or permits for the following wells if they are proposed to be constructed with well screens and pump depths below the applicable minimum thresholds for groundwater levels as reported by the groundwater sustainability agency pursuant to paragraph (2) of subdivision (b) of Section 13808.5 or otherwise provided to the local enforcement agency by the groundwater sustainability agency:

(a) Wells that will draw less than two acre-feet per acre.

(b) Wells that will be located on a parcel of five acres or fewer that is in an area that has been zoned by the local land use authority for rural residential use.

(c) Public supply wells or state small or community water systems.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service

charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

~~SECTION 1. Section 10735.4 of the Water Code is amended to read:~~

~~10735.4. (a) If the board designates a basin a probationary basin pursuant to paragraph (1), (2), or (4) of subdivision (a) of Section 10735.2, a local agency or groundwater sustainability agency shall have 180 days to remedy the deficiency. The board may appoint a mediator or other facilitator, after consultation with affected local agencies, to assist in resolving disputes, and identifying and implementing actions that will remedy the deficiency.~~

~~(b) After the 180-day period provided by subdivision (a), the board may provide additional time to remedy the deficiency if it finds that a local agency is making substantial progress toward remedying the deficiency.~~

~~(c) The board may develop an interim plan pursuant to Section 10735.8 for the probationary basin at the end of the period provided by subdivision (a) or any extension provided pursuant to subdivision (b), if the board, in consultation with the department, determines that a local agency has not remedied the deficiency that resulted in designating the basin a probationary basin.~~

O

Website: SitesProject.org

Reservoir Committee/Authority Board Meeting **March 22, 2024**

9:00 AM – Noon

Click here to join the meeting

Call in: **1-916-538-7066**

122 Old Hwy 99W, Maxwell, CA 95955
(additional locations below)

Code: **226 107 158#**

Authority Board Chair:	Fritz Durst (Reclamation District 108)
Authority Board Vice Chair:	Jeff Sutton (Tehama-Colusa Canal Authority)
Reservoir Committee Chair:	Mike Azevedo (Colusa County)
Reservoir Committee Vice-Chair:	Robert Kunde (Wheeler Ridge-Maricopa Water SD)
Treasurer:	Jamie Traynham (Davis Water District)

AGENDA

ROLL CALL & CALL TO ORDER:

- Introductions.
- Pledge of Allegiance.
- Approval of today's meeting agenda for March 22, 2024.
- Announcement of Closed Session.
- Period for Public Comment.

People may speak about any subject of concern, provided it is within the Reservoir Committee's (RC) and Authority Board's (AB) jurisdiction. Before speaking, you must submit a public comment card electronically or on paper. The time allotted for receiving such public communication shall be 3 minutes per person. Note: No action shall be taken on comments made during this period.

1. Consent Agenda

Approximate start time 9:10 am

The Executive Director reviewed the following items. To his knowledge, there is no opposition to the action. The items can be acted on in one consolidated motion as recommended or may be removed from the Consent Calendar and separately considered at the request of any person. Each item indicates the body authorized to approve such actions according to the JPA, Bylaws and Project Agreement.

1.1 Reservoir Committee and Authority Board consider approval of February 16, 2024, Reservoir Committee and Authority Board Meeting Minutes. **(Attachments A & B)**

1.2 Reservoir Committee and Authority Board consider acceptance of the Sites Project Authority Treasurer's Report. **(Attachment A & B)**

1.3 Reservoir Committee and Authority Board consider approval of the Sites Project Authority Payment of Claims. **(Attachment A & B)**

1.4 Reservoir Committee and Authority Board confirm committee and workgroup designations and participation. **(Attachment A)**

1.5 Reservoir Committee and Authority Board consider authorizing the Executive Director to enter into a Memorandum of Understanding with Glenn County, committing the Authority to pay County costs for performing property/sales tax analysis and land use planning activities needed to support County and local agency permits and approvals for the Project. The requested action includes a transfer of $50,000 from the Engineering Subject Area Contingency to be committed to Glenn County for the above services.

2. Action Items: Approximate start time 9:15 am

2.1 Reservoir Committee and Authority Board consider approval of Construction Legal Services contracts for the performance period ending December 31, 2025, with:

1) Best, Best, & Krieger, LLP (BBK) for Civil Works with a total contract authority budget of $228,000 for the performance period through December 31, 2025, and an initial total authority of $136,600 through the end of 2024 and
2) Cox, Castle & Nicholson, LLP (Cox Castle) for Environmental Mitigation, with a total contract authority of $400,000 for the performance period through December 31, 2025, and an initial total authority of $200,000 through the end of 2024.

2.2 Reservoir Committee and Authority Board consider authorizing the Executive Director to execute Operations Agreements with Maxwell Irrigation District and Colusa Drain Mutual Water Company

2.3 Authority Board consider authorizing the Executive Director to act on the request of newly formed Zone 3 of the Colusa County Flood Control and Water Conservation District to become an Associate Member of the Sites Project Authority.

3. Discussion and Information Items: Approximate start time 9:45 am
No action from the Reservoir Committee or Authority Board.

3.1 Receive update on the California Independent System Operator interconnection application.

3.2 Receive an overview of preliminary Project operations modeling results using the recently developed CalSim model platform (commonly referred to as CalSim 3). **(Attachment A & B)**

3.3 Review and comment on the 'conditions precedent' status report and storage partner approval coordination table. **(Attachment A & B)**

4. Reports: Approximate start time 10:15 am

4.1 Chairpersons' Reports:

This time is set aside to allow the Reservoir Committee & Authority Board Chair/Vice-Chair an opportunity to disclose/discuss items related to the Project.

4.2 Committee & Workgroup Chairpersons' Reports:

This time is set aside to allow the Committee & Workgroup Chairpersons an opportunity to disclose/discuss items related to the Sites Project. Agendas are located on the project website (sitesproject.org).

4.3 Authority Board & Reservoir Committee Participant Reports:

This time is set aside to allow Representatives or their Alternates to disclose/discuss items related to the Sites Project.

4.4 Executive Director's Reports:

- Monthly status report. **(Attachment A)**
- Work Plan Key Deliverables Report. **(Attachment B)**
- Meetings Action Items Summary. **(Attachment C)**

5. Closed Session: Approximate start time 10:30 am

5.1 Conference with legal counsel regarding existing litigation (Gov. Code §§54956.9(d)).

Friends of the River, et al. v. Sites Project Authority, et al., Yolo County Superior Court, Case No. CV2023-2626

5.2 Negotiations concerning water right permit terms and conditions (Govt. Code §54956.9(c) and §54956.9(d)(4)).

5.3 Conference with Real Property Negotiators (Gov. Code § 54956.8).

Property: [Colusa County] APNs 011-130-004-000, 011-130-011-000, 011-150-017-000, 011-150-018-000, 011-150-020-000

Agency negotiators: Jerry Brown, Kevin Spesert
Negotiating parties: Shirley Jensen
Under negotiation: Price and terms of payment

6. Report from Closed Session Approximate start time 11:55 am

7. Recap: Approximate start time 12:00 pm

7.1 Suggested Future Agenda Items.

7.2 Upcoming Meetings:

Joint Reservoir Committee & Authority Board
Friday, April 19, 2024 (9:00 am to noon)

Meetings are held in the Maxwell Project Office and virtual.

Virtual Information will be provided on the meeting agenda at Sitesproject.org.

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This meeting will be recorded.

Alternate Meeting Locations:

City of American Canyon, 4381 Broadway Street, American Canyon, CA 94503

Desert Water Agency, 1200 S. Gene Autry Trail, Palm Springs, CA 92264

Metropolitan Water District, 1121 L Street, Suite 900, Sacramento, CA 95814

Rosedale Rio Bravo, 849 Allen Road, Bakersfield, CA 92214

San Gorgonio Pass Water Agency, 1210 Beaumont Avenue, Beaumont, CA 92223

Santa Clarita Valley Water Agency, 26501 Summit Circle, Santa Clarita, CA 91350