

# DREAM Monitoring Committee

Post Office Box 5157, Stockton, CA 95205

*An Alliance of Water Districts, Central San Joaquin Water Conservation District, North San Joaquin Water Conservation District, and Stockton East Water District, located over the critically overdrafted Eastern San Joaquin County Groundwater Basin*

## NOTICE OF MEETINGS

Notice is hereby given that a meeting of the Board of Directors of the Eastern Water Alliance will be held at 9:30 a.m. on Wednesday, February 28, 2024 at Stockton East Water District, 6767 East Main Street, Stockton, California

### MEETING OF THE DREAM MONITORING COMMITTEE

	Page No.
A. Call to Order	
B. Roll Call	
C. Public Comment	
D. Action Items:	
1. Minutes 11/22/23	01
E. DREAM Pilot Project Extraction Update	05
F. Groundwater Monitoring Plan Introduction	19
G. Demonstration Recharge Extraction and Aquifer Management (DREAM)	
1. Request for DREAM Project Groundwater Extraction Extension to April 2024 Memo	37
a. Resolution 24-01- A Resolution of The Board of Directors of the Eastern Water Alliance to Recommend the Board of Supervisors Amend Resolution R-17-35 To Extend The Term of The Extraction Timeline for The Groundwater Banking Demonstration Project (Dream) Agreement To April 30, 2024	39
H. Other Business	
I. Plan for Next Meeting	
J. Adjournment	



**STOCKTON  
EAST WATER  
DISTRICT**

PROVIDING SERVICE SINCE 1948

[www.sewd.net](http://www.sewd.net)

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**Certification of Posting**

I hereby certify that on February 23, 2024 I posted a copy of the foregoing agenda in the outside display case at the District Office, 6767 East Main Street, Stockton, California, said time being at least 72 hours in advance of the meeting of the Board of Directors of the Eastern Water Alliance (Government Code Section 54954.2). Executed at Stockton, California on February 23, 2024.



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Priya Ram, Finance Director  
Stockton East Water District

**Assistance for the Disabled:** If you are disabled in any way and need accommodation to participate in the meeting, please call Heather Wood, Administrative Assistant (209) 948-0333 for assistance so the necessary arrangements can be made.

# Eastern Water Alliance (EWA)

Post Office Box 5157  
Stockton, CA 95205

*An Alliance of Water Districts, Central San Joaquin Water Conservation District (CSJWCD), North San Joaquin Water Conservation District (NSJWCD), and Stockton East Water District (SEWD), located over the critically overdrafted Eastern San Joaquin County Groundwater Basin*

Wednesday, November 22, 2023 Minutes

## MEETING OF THE EASTERN WATER ALLIANCE

1. Call to Order: Director McGurk called the meeting to order at 10:32 a.m.
2. Roll Call: A quorum of the Eastern Water Alliance Board members were present Chairman McGurk, and Directors Sanguinetti, Simpson, and Colombini. Also present were SEWD Directors Atkins and Watkins, General Manager Hopkins, District Engineer Evensen and Administrative Clerk Rodriguez, and NSJWCD General Manager Schwabauer and Legal Counsel Spaletta. CSJWCD General Manager Roberts and Director Thompson were absent.
3. Public Comment: Steve Schwabauer introduced himself as the new North San Joaquin Water Conservation District General Manager.
4. Approve Minutes:
  - a. May 24, 2023: A motion was moved by Director Colombini and seconded by Director Simpson to approve the May 24, 2023 minutes, as presented. The motion passed unanimously.
5. Appoint Representative to DREAM Monitoring Committee

Manager Hopkins provided the EWA with a draft DREAM Monitoring Committee roster handout to appoint new members to the vacant spots. Manager Hopkins reported at the last Eastern Water Alliance/ DREAM Monitoring Committee meeting it was identified one of the landowner representatives had a conflict due to their land being within the DREAM project area and should be replaced. Manager Hopkins reported it was recommended the new designee for landowners be Denise Warmerdam, one of the members representing the landowners within two miles of the extraction well. Manager Hopkins also reported Alex Chetley will be the alternate for the San Joaquin County Public Works.

A motion was moved by Director Sanguinetti and seconded by Director Colombini to appoint the new DREAM Monitoring Committee representatives, as presented. The motion passed unanimously.

Director Simpson requested staff send an updated roster of the DREAM Monitoring Committee.

6. Meeting of The DREAM Monitoring Committee:

- a. Call to Order: The DREAM Monitoring Committee was called to order at 10:38 p.m., by Director Simpson.
- b. Roll Call: Representatives of the DREAM Monitoring Committee in attendance were NSJWCD Director Simpson, SEWD General Manager Hopkins, and landowner representative Denise Warmerdam. Attending virtually were EBMUD Associate Civil Engineer Su and SJC Director of Public Works Buchman and Environmental Health Department Director Kang. Also present were SEWD Directors Atkins, McGurk, Sanguinetti and Watkins, District Engineer Evensen, and Administrative Clerk Rodriguez, NSJWCD Director Colombini, General Manager Schwabauer, and Legal Counsel Spaletta.
- c. Public Comment: None

d. Demonstration Recharge Extraction and Aquifer Management (DREAM):

1. Project Update and Test Results

Legal Counsel Spaletta provided an overview and the purpose of the presentation, particularly for the DREAM Monitoring Committee. Legal Counsel Spaletta reported a completion of the “put part” of the DREAM Project which is placing the East Bay Municipal Utility District (EBMUD) water into North San Joaquin Water Conservation District (NSJWCD) groundwater basin and will begin the final part of the extraction part of the project. Legal Counsel Spaletta reported whenever there is an extraction of groundwater by EBMUD the DREAM Monitoring Committee role comes in to play and the presentation will provide more information of where everything is. An update was provided by EBMUD. The project has released 342 acre-feet of EBMUD Mokelumne River water to NSJWCD in 2018 and 2019 and returned 40 acre-feet to EBMUD in February 2023 to test the new extraction facilities. EBMUD released the Mokelumne River water at 658 AF between August - October 2023. Channel losses occur between EBMUD releasing the water from Camanche Dam to the South System Pump station. Associate Civil Engineer Su presented the committee with a proposed extraction schedule starting November 22, 2023 with the Monitoring Committee establishing baseline groundwater levels, finalizing Bear Creek crossing construction on November 30<sup>th</sup>, complete EBMUD Aqueduct Tie-In Facility (ATF) start-up December 1<sup>st</sup>, flush NSJWCD pipeline December 4<sup>th</sup>, begin groundwater extraction and deliver into EBMUD Mokelumne Aqueduct December 5<sup>th</sup> and finally complete groundwater deliveries March 15, 2024. Discussion followed.

San Joaquin County Director of Public Works Buchman inquired why EBMUD released 658 AF and not 1,000 AF. Associate Civil Engineer Su replied, EBMUD already released and delivered the remaining 342 AF back in 2018. Manager Hopkins inquired if the permanent crossing of Bear Creek got permitted or is it still the temporary crossing. Legal Counsel Spaletta replied, it is now permitted.

Casey Kipf, Senior Geologist at Condor Earth Technologies, Inc presented the DREAM Monitoring Committee with a presentation of the Well Hydrographs. Casey reported the four monitoring wells currently related to this project are AG wells L003 and G002. The seasonal changes in water levels in the graph seem to bottom out in the late summer and begin rising as the irrigation season concludes. Casey reported a third graph of the monitoring well used to explain the threshold and how it is set up. Casey also reported a table of the thresholds as calculated, MW-4D, MW-8D, L003 and G002 are the monitoring wells. The initial water levels were taken on November 15<sup>th</sup>. Discussion followed.

Manager Hopkins inquired for an explanation of the minimal threshold calculation since the minimal threshold on the table seem like they are set 10ft below the current water level. Casey Kipf replied, it is the original groundwater level minus the regional trend adjustment which is very small.

2. Proposed Extraction Plan: Manager Hopkins inquired if the proposed extraction plan the DREAM Monitoring Committee needs to approve is just the plan of extracting water from December 5, 2023 – March 15, 2024. Legal Counsel Spaletta replied, yes.

A motion was moved by Manger Hopkins and seconded by Director Buchman to approve the Proposed Extraction Plan, as presented. The motion passed unanimously.

- e. Other Business: Legal Counsel Spaletta suggested speaking about the next steps in their expanded banking program under the protest dismissal agreement. The 1,000 acre-feet DREAM Pilot Banking Project would be completed by March 2024.

Director Colombini inquired if only extraction from Pixley could be used or anywhere on the south system. Legal Counsel Spaletta replied it could be anywhere.

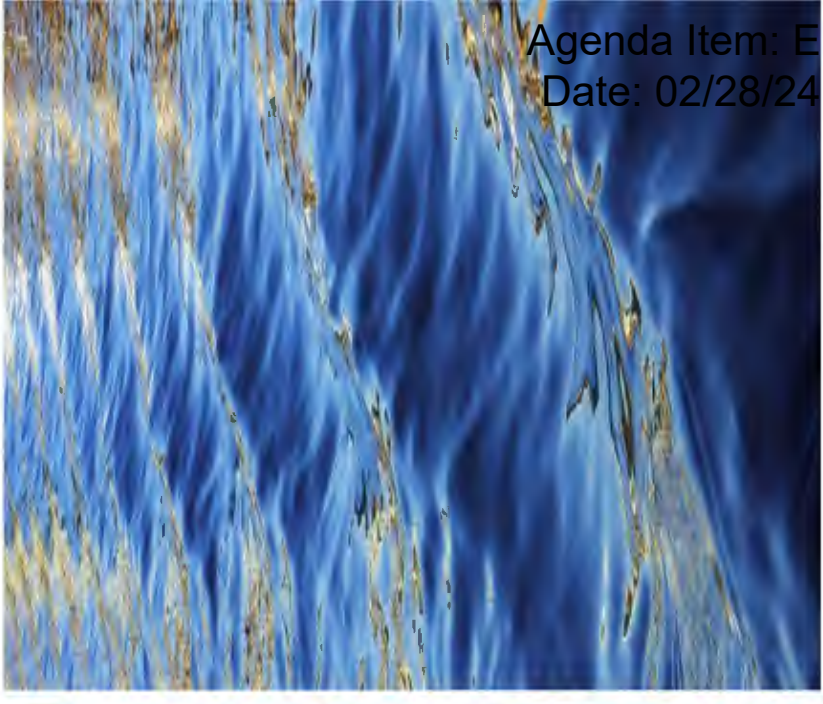
- f. Plan for Next Meeting: The next DREAM Monitoring Committee is tentatively scheduled for April 24, 2024 at 10:30 a.m.
  - g. Adjournment: Director Simpson adjourned the DREAM Monitoring Committee meeting at 11:54 a.m.
7. Agenda Planning for Next Meeting: The next Eastern Water Alliance is tentatively scheduled for April 24, 2024 at 10:30 a.m.
  8. Adjournment: Chairman McGurk adjourned the Eastern Water Alliance meeting at 11:58 a.m.

Respectfully submitted

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Justin Hopkins  
Secretary

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# DREAM Pilot Project Extraction Update



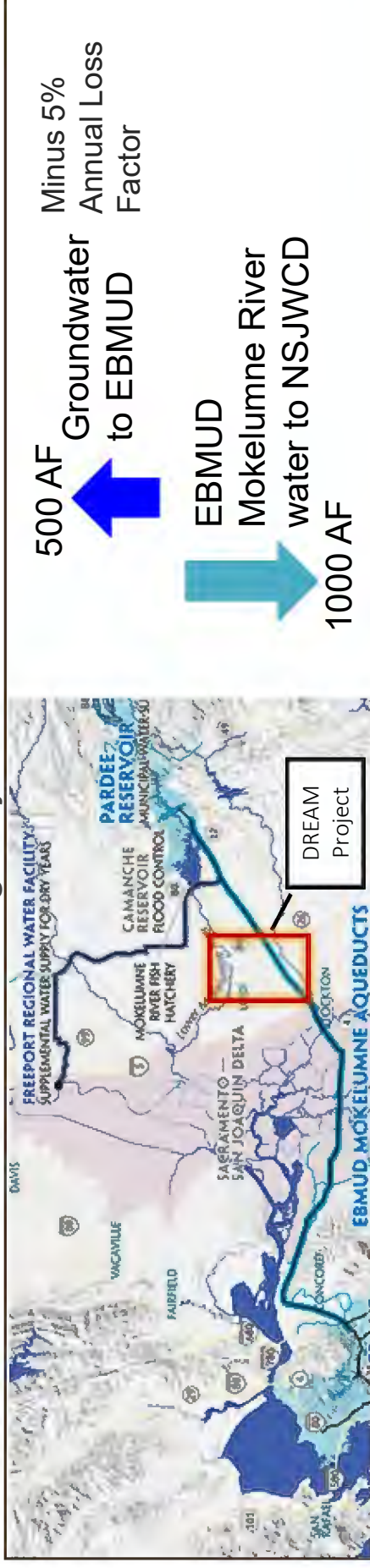
Eastern Water Alliance / DREAM Monitoring Committee  
February 28, 2024



# Background

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## DREAM – Pilot Groundwater Banking Project



- NSJWCD uses EBMUD Mokelumne River water to irrigate crops instead of pumping groundwater
- Half of the banked groundwater is credited to NSJWCD and the other half is credited to EBMUD who can request that it be returned

*DREAM: Demonstration Recharge, Extraction and Aquifer Management*



# Overview Plan



# Updated Extraction Schedule

Began groundwater extraction and delivered into EBMUD Mokelumne Aqueduct

**January 10, 2024**



Extraction continued following additional repairs

**February 5, 2024**



Extraction well pump trips, troubleshooting, and repairs

**January 12, 2024 to February 5, 2024**



Complete ongoing groundwater deliveries (~80 days)

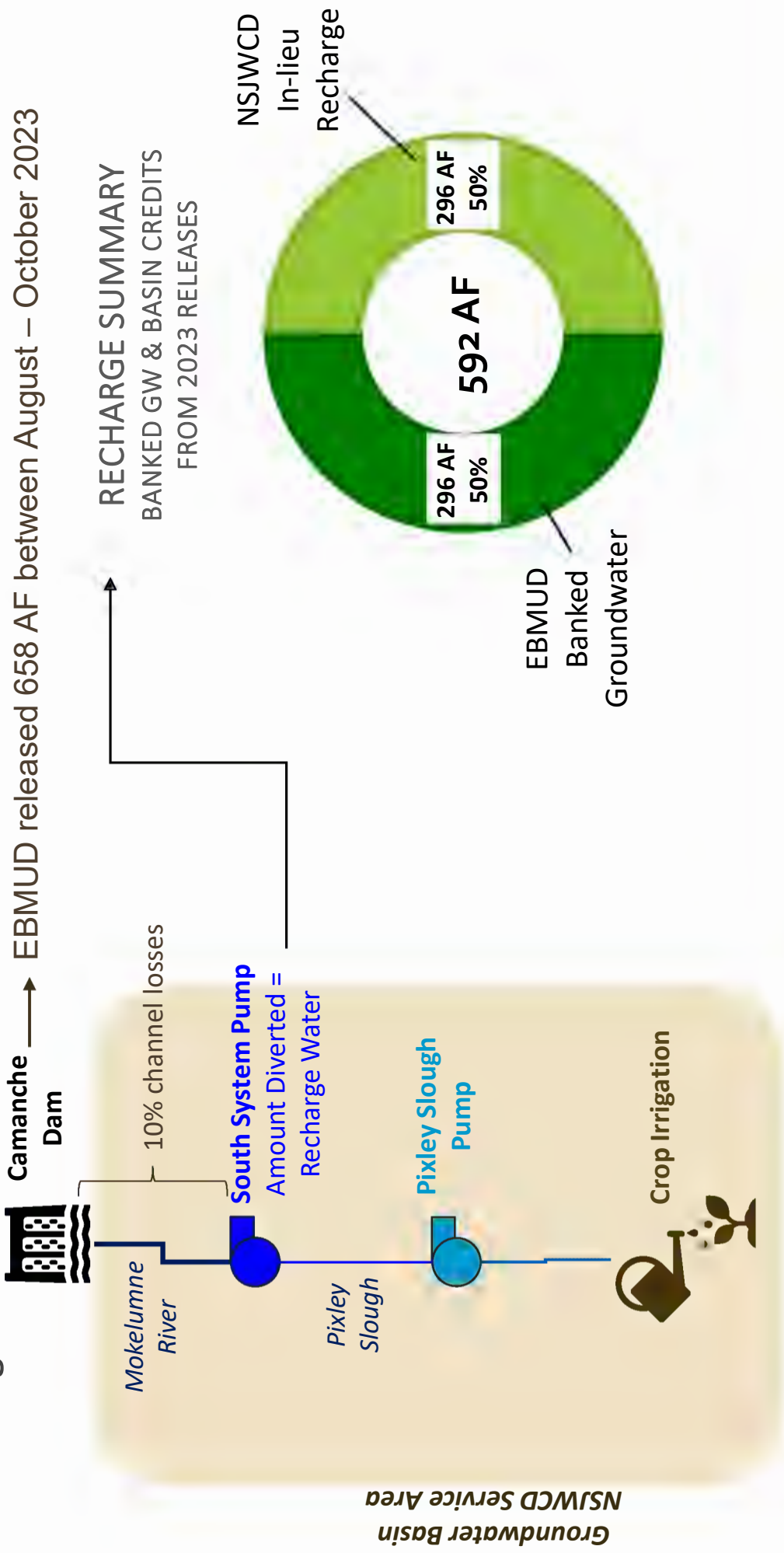
**March 29, 2024**



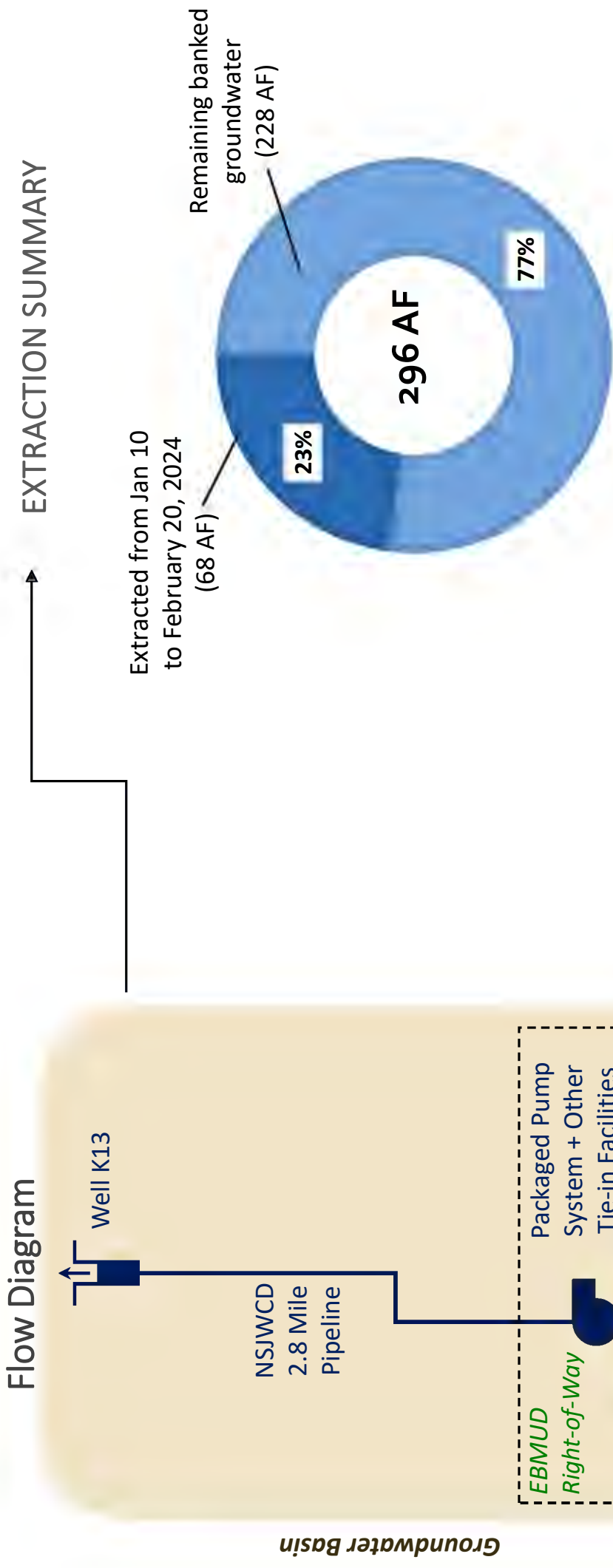
- Water quality monitoring at Well K13 & ATF
- Before and immediately after startup
- Monthly after startup (ongoing)

# 2023 Recharge Water Accounting

Flow Diagram



# Groundwater Extraction Accounting

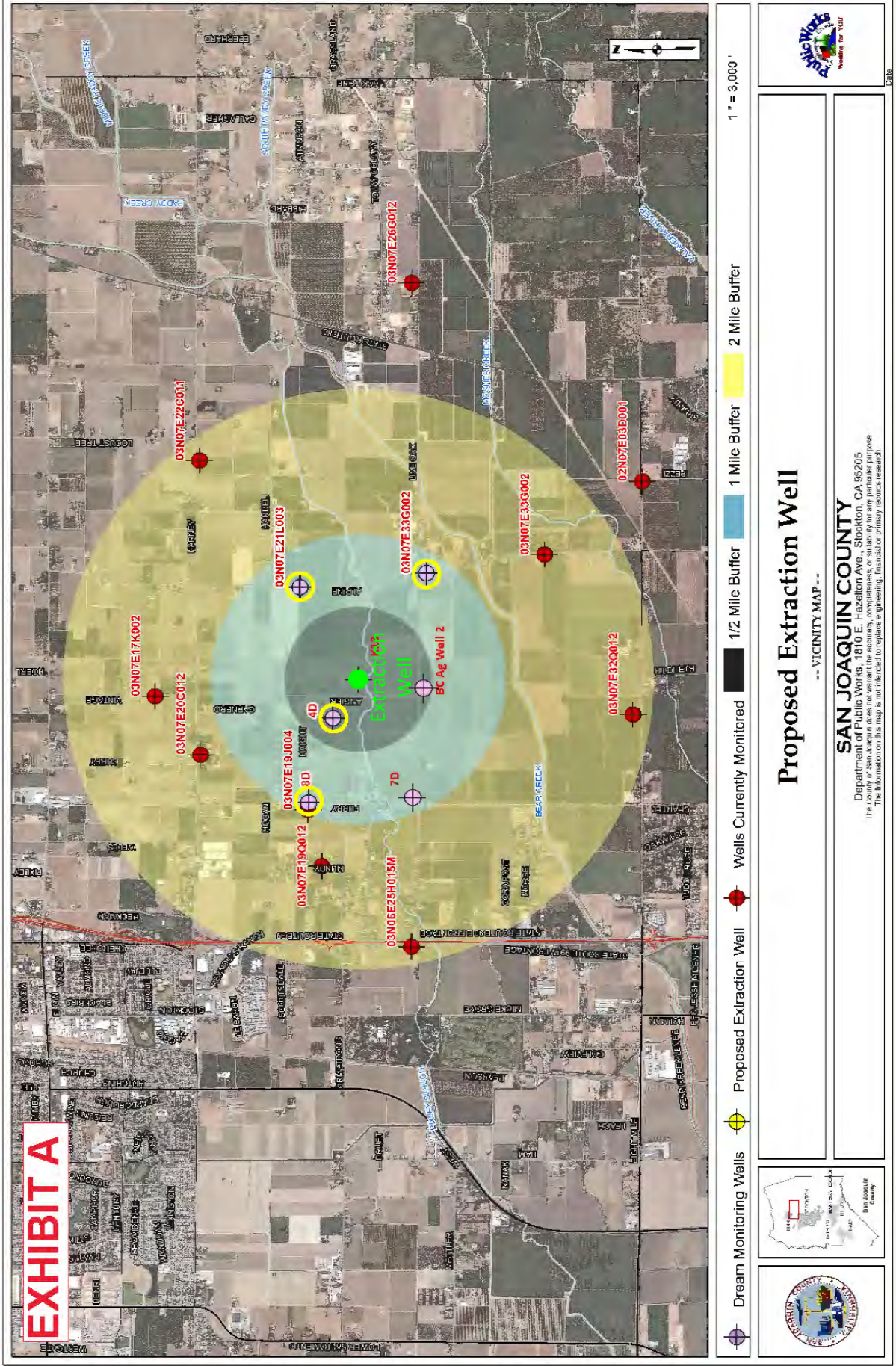


Estimated extraction through March 29 if no additional pump issues = 185 AF

# DREAM Monitoring Wells

## DREAM Monitoring Plan Wells, Monitoring Plan Amendment #1

1. MW-4D
2. MW-8D
3. 03N07E21L003
4. 03N07E33G002



# DREAM Groundwater Level Thresholds

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## Thresholds Calculations

- DREAM minimum threshold = Initial water level – regional trend – allowable drawdown (10 ft)
- DREAM maximum extraction threshold = Initial water level – regional trend - allowable drawdown (15 feet, or five feet below the minimum threshold)

## Criteria for Extraction Reduction/Shutdown

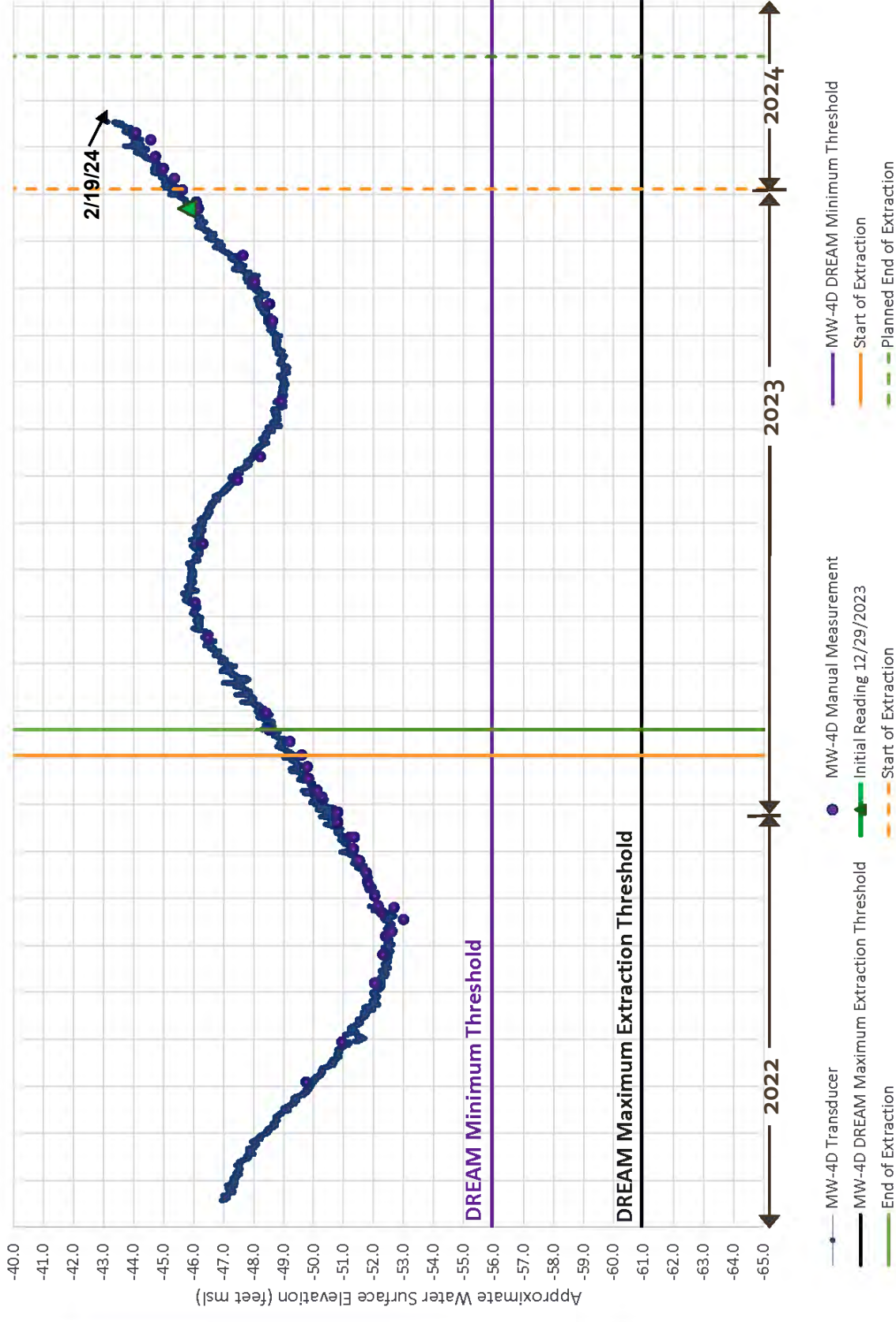
- If three of four DREAM monitoring wells reach the *minimum threshold*, extraction will be reduced or stopped while data is evaluated by the Monitoring Committee.
- If any one monitoring well reaches the *maximum extraction threshold*, extraction will be stopped while data is evaluated by the Monitoring Committee. Additionally, if well 03No7E21L003 exceeds its SGMA minimum threshold, extraction will cease.
- Automated alert notifications set up for wells with pressure transducers when the groundwater levels reach 75% of the minimum and maximum thresholds.

# MW-4D Hydrograph

- No negative impacts on groundwater levels observed to date
- Levels increasing since extraction started on January 10
- Levels currently > 12 feet above minimum threshold

	MW-4D
Initial Reading	-45.78
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-55.93
DREAM Maximum Extraction Threshold	-60.93

Well MW-4D Hydrograph



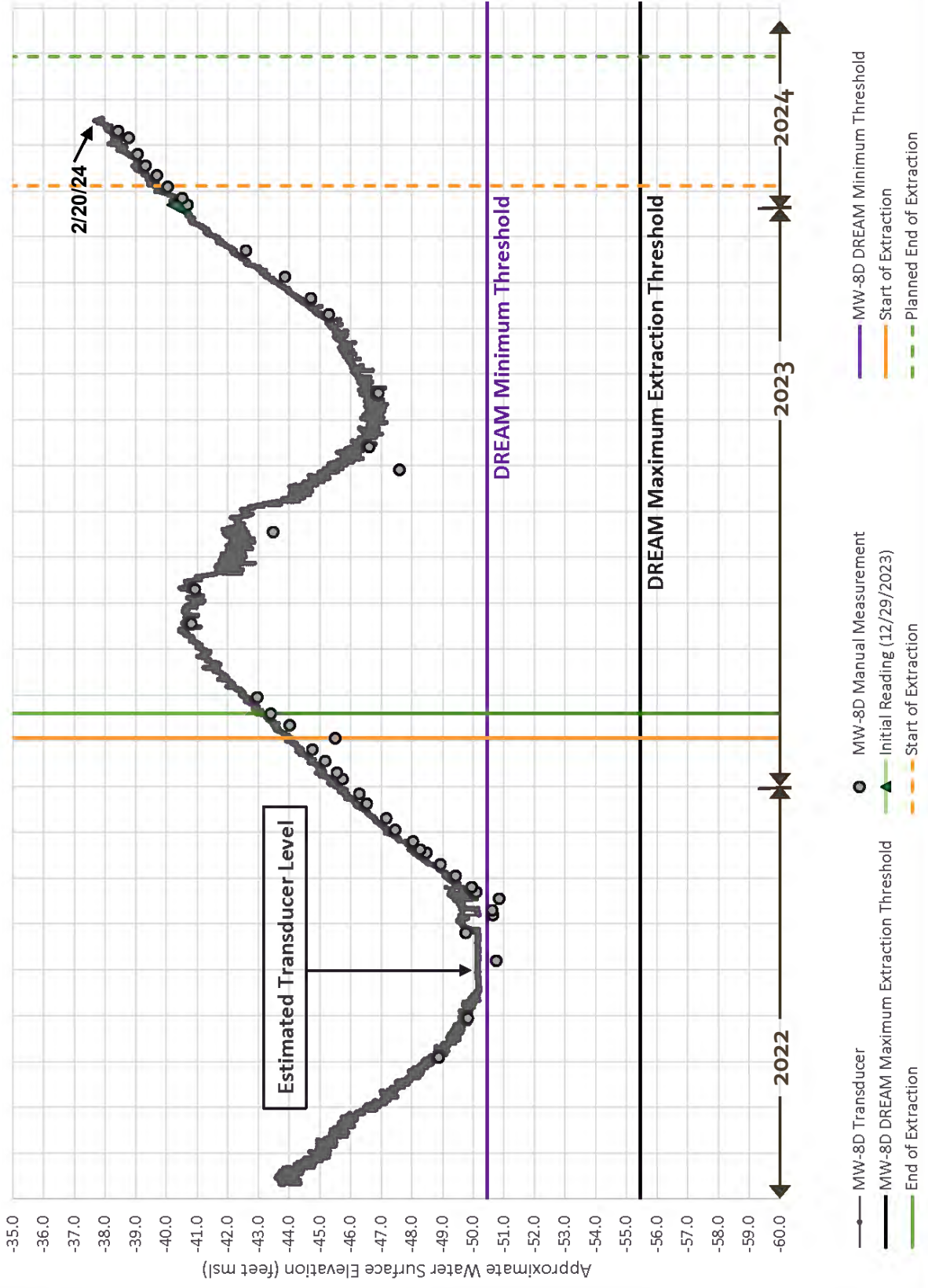
# MW-8D Hydrograph

14

- No negative impacts on groundwater levels observed to date
- Levels increasing since extraction started on January 10
- Levels currently > 12 feet above minimum threshold

MW-8D	MW-8D
Initial Reading	-40.30
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-50.45
DREAM Maximum Extraction Threshold	-55.45

Well MW-8D Hydrograph



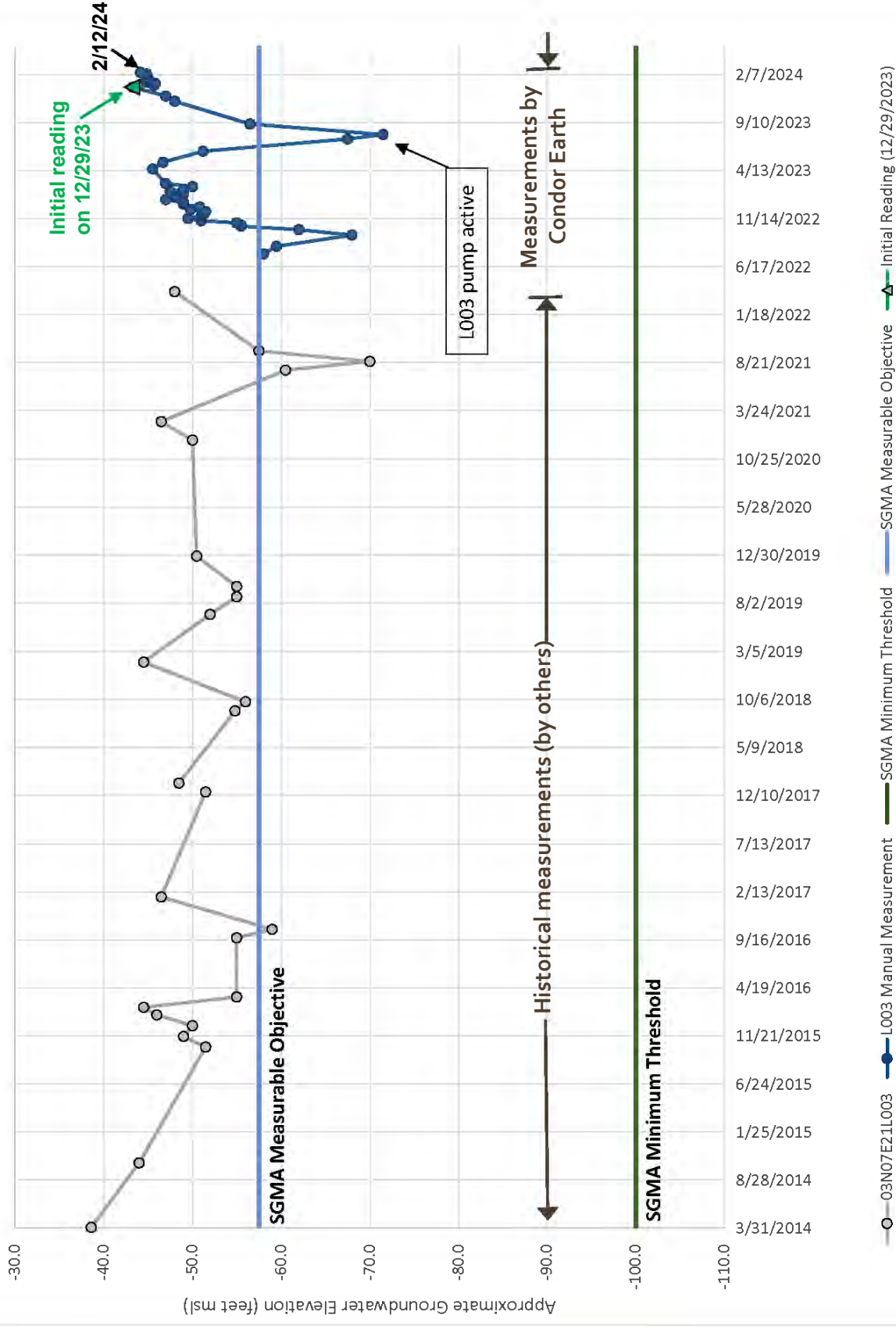


# 03N07E21L003 Hydrograph

- Limited interpretation of data trends, but levels measured since January 10 have been ~15 feet above the measurable objective
- Measurable objective and minimum thresholds are from the Eastern San Joaquin Groundwater Sustainability Plan (SGMA representative monitoring well)
- Manual water level measurements are less reliable due to access issues
- L003 may be pumped for agricultural purposes

Initial Reading	L003	-43
SGMA Measurable Objective		-57.5
SGMA Minimum Threshold		-100

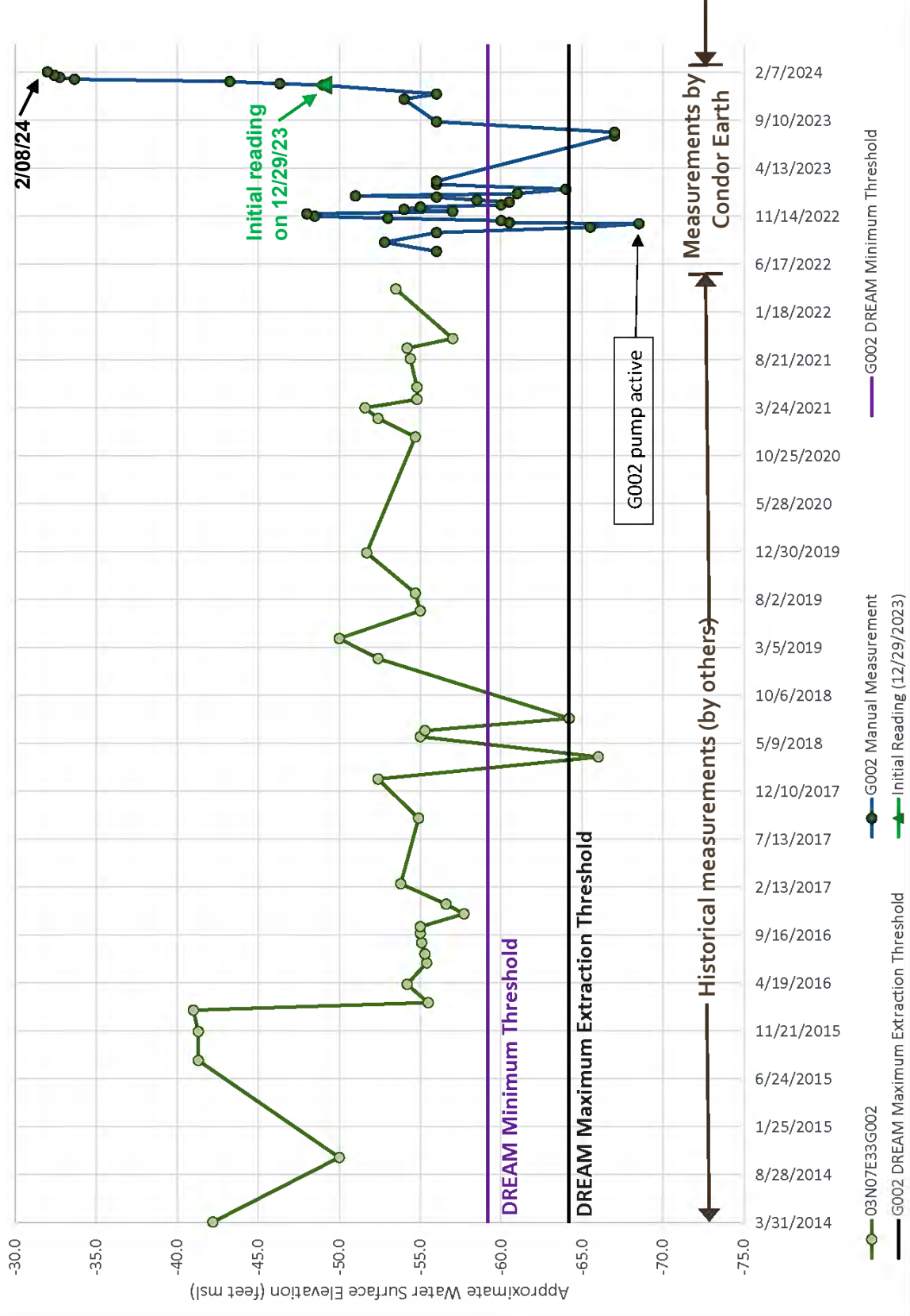
Well 03N07E21L003 Hydrograph



# 03N07E33G002 Hydrograph

- Limited interpretation of data trends, but levels measured since January 10 show no negative impacts to date and have increased significantly
- Manual water level measurements less reliable due to access issues
- G002 may be pumped for agricultural purposes

Well 03N07E33G002 Hydrograph



Parameter	G002
Initial Reading	-49
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-59.2
DREAM Maximum Extraction Threshold	-64.2

## Next Steps

- EWA to consider recommending that the San Joaquin County Board of Supervisors extend the extraction period through April 30
- Ongoing extraction and groundwater monitoring through March 29 or through April if extraction period extended
- Meet with EWA/Monitoring Committee after extraction completed to discuss pilot results

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# **Groundwater Monitoring Plan Introduction**

## **Monitoring Plan objectives in accordance with the SJC GW Export Ordinance:**

- Identify the project extraction well (K13).
- Extraction to occur in non-irrigation season (Oct 1 through March 31).
- Establish baseline GW conditions through monthly monitoring of representative wells.
- Establish GW Extraction operation monitoring thresholds/minimum operation levels which limit or terminate pumping/extraction activities.

## **Current GW conditions (hydrogeology)**

- Historic GW gradient direction (generally to the SE).
  - Recharge is typically from surface and Delta (shallow recharge)
- SJC East San Joaquin Sub-basin is generally considered an unconfined aquifer system; but confined and unconfined conditions locally prevail.
- Unconfined: Groundwater recharge occurs locally; pumping and recharge impact water levels in nearby wells.
- Confined: Aquifer is under “confining” pressure between low permeability zones and GW pumping affects (depressurize) the entire aquifer (reference SSJQV – Corcoran Clay).
- Monitoring summary (following slides).

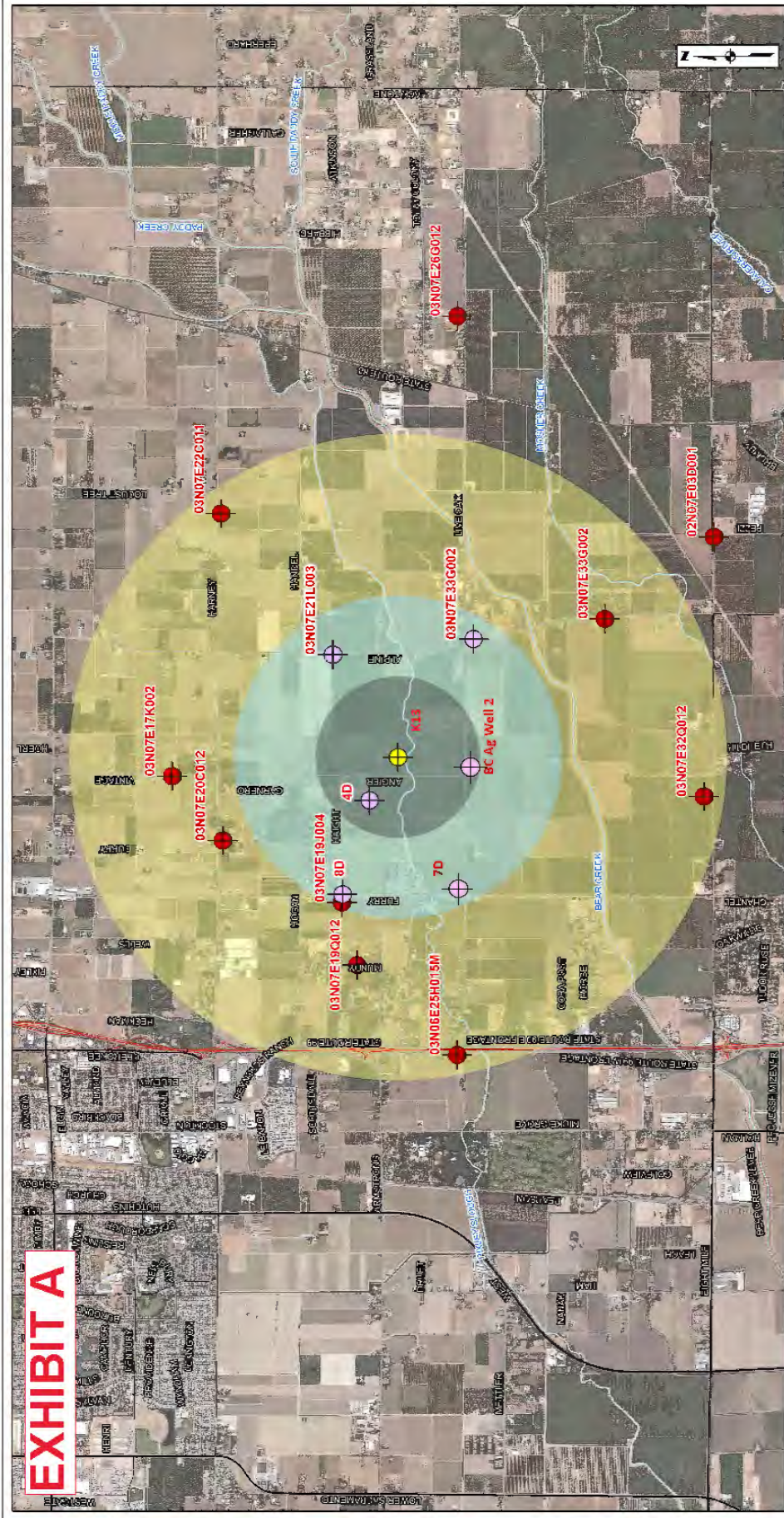
# DREAM Project Vicinity Map

**EXHIBIT A**

Vicinity map showing approximate locations of wells within the DREAM project area. Extraction well "K13" is shown in yellow, Ag wells initially evaluated for inclusion in the monitoring program are shown in red, and current DREAM monitoring wells are shown in pink.

Amendment #1 to the DREAM Monitoring Plan designates wells 4D, 8D, 03N07E21L003 (L003), and 03N07E33G002 (G002) to monitor effects of the DREAM project; wells 7D and BC Ag Well 2 are backup/alternate program wells.

Monitoring well L003 is identified as a Representative Monitoring Well in the Eastern San Joaquin County Groundwater Sustainability Plan (ESJGSP) and has defined minimum thresholds.



Dream Monitoring Wells
 Proposed Extraction Well
 Wells Currently Monitored
 1/2 Mile Buffer
 1 Mile Buffer
 2 Mile Buffer
 1" = 3,000'

**Proposed Extraction Well**  
-- VICINITY MAP --

**SAN JOAQUIN COUNTY**  
Department of Public Works, 1810 E. Hazelton Ave., Stockton, CA 95205  
The County of San Joaquin does not warrant the accuracy, completeness, or suitability for any particular purpose. The information on this map is not intended to replace engineering, financial or primary record relations.

# Amendment #1 to the Monitoring Plan of the DREAM Project

The Monitoring Wells, and Minimum Operating Thresholds in the Monitoring Plan shall be modified as follows through Amendment #1.

## **Monitoring Wells**

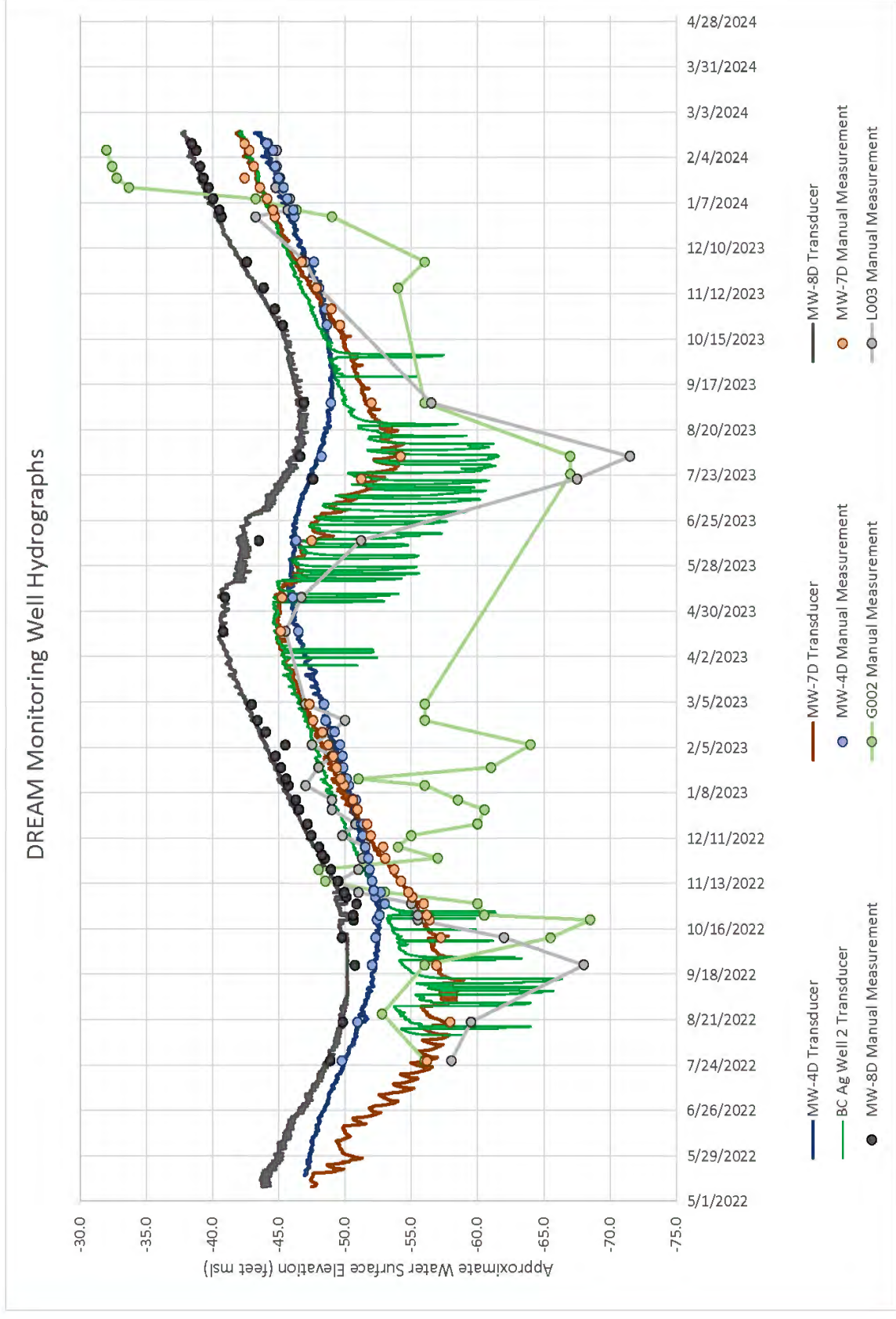
- a. The following monitoring wells (hereinafter referred to as the DREAM Monitoring Wells) will be used to monitor the effects of the DREAM Project; the location of these wells have been shown in Exhibit A. These wells can be substituted at the County Engineer's discretion.
- Bear Creek Monitoring Well 4D
  - Bear Creek Monitoring Well 8D (or 7D as alternative)
  - 03N07E21L003
  - 03N07E33G002

Although not included in Amendment #1, the Bear Creek (BC) Ag Well 2 was also successfully fitted with a remote monitoring system and, like MW-7D, may be used as an alternative monitoring well.

View includes hourly water level data from wells fitted with remote monitoring systems (MW-4D, -7D, -8D, and BC Ag Well 2), manual water level measurements collected from wells without remote monitoring systems (G002, L003), and manual water levels collected to verify remote system accuracy (MW-4D, -7D, -8D).

Manual water level measurements shown in this graph highlight the difficulty in using active Ag wells to monitor seasonal and long-term water level trends, including:

- Small, angled sounding access ports which limit equipment used to access water level measurements (steel tape),
- Well casing, sounding tubes, and groundwater are impacted by pump oil, and
- Residual pumping effects on groundwater levels during the irrigation season.





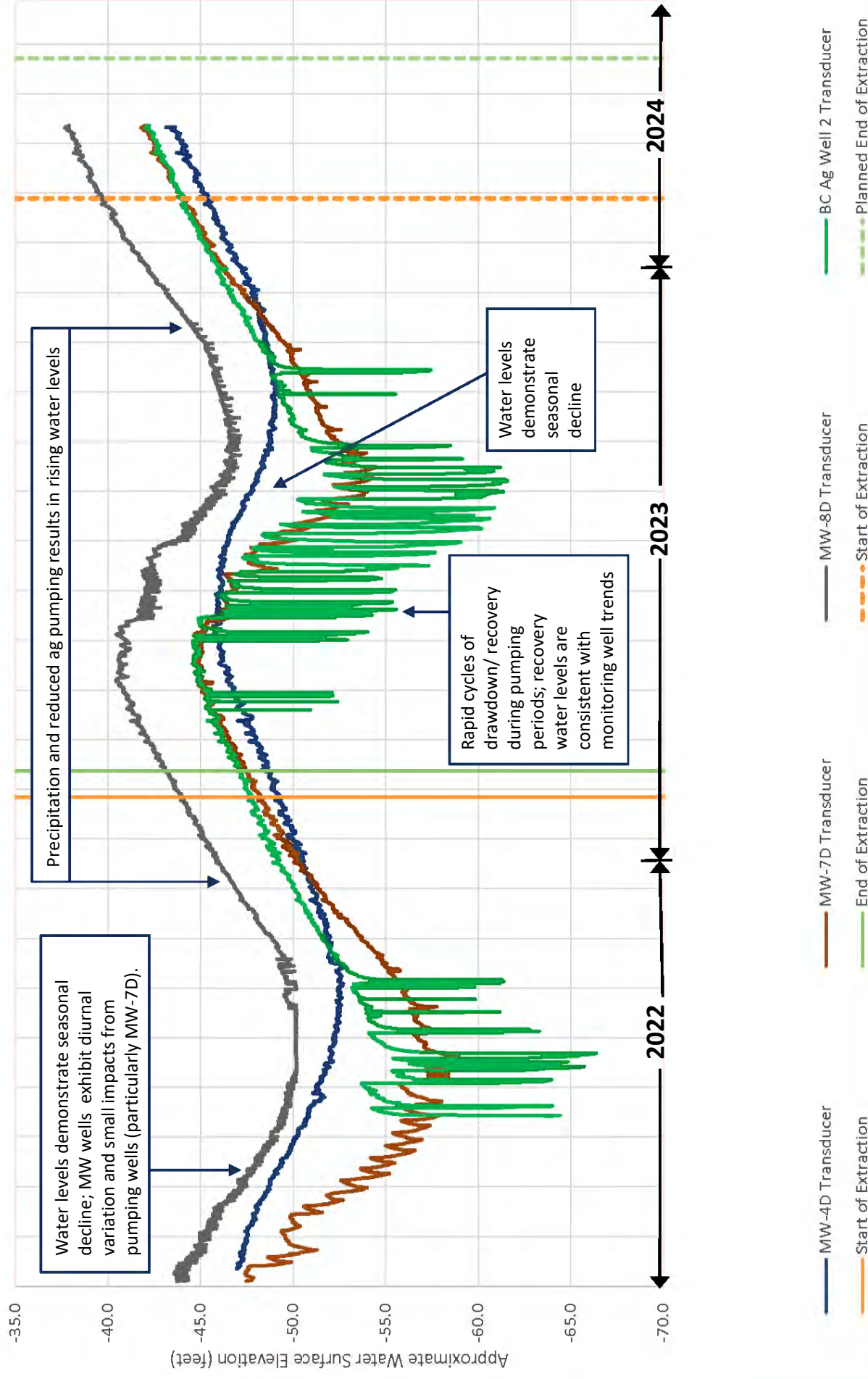
Hydrographs of wells fitted with remote monitoring equipment.

During 2022, groundwater levels began to recover between early September and early November. In 2023, groundwater levels began to recover in early August through late October.

Groundwater levels in 2023 recovered to higher levels than in 2022 and seasonal lows were above 2022 levels, potentially related to DREAM project recharge and decreased agricultural pumping.

Influence from K13 extraction is not apparent.

## DREAM Monitoring Well Hydrographs



### Monitoring Plan groundwater level thresholds are determined based on the following factors:

- **Initial water level:** Measurements are taken on the same date from all wells (for consistency) within approximately two weeks from the beginning of extraction.
- **Regional trend:** Reflects the overall, long-term trend (decline) in groundwater levels based on available local/regional water level data, estimated at 0.155 feet for the project duration of 91 days.
- **Allowable drawdown:** Identified as 10 to 15 feet based on historical data.

### Extraction thresholds definitions:

- **DREAM minimum threshold:** If three of four DREAM monitoring wells reach the minimum threshold, extraction will be reduced or stopped while data is evaluated by the Monitoring Committee.
- **DREAM maximum extraction threshold:** If any one monitoring well reaches the maximum extraction threshold, extraction will be stopped while data is evaluated by the Monitoring Committee. Additionally, if well L003 exceeds its minimum ESJGSP threshold, extraction will cease.

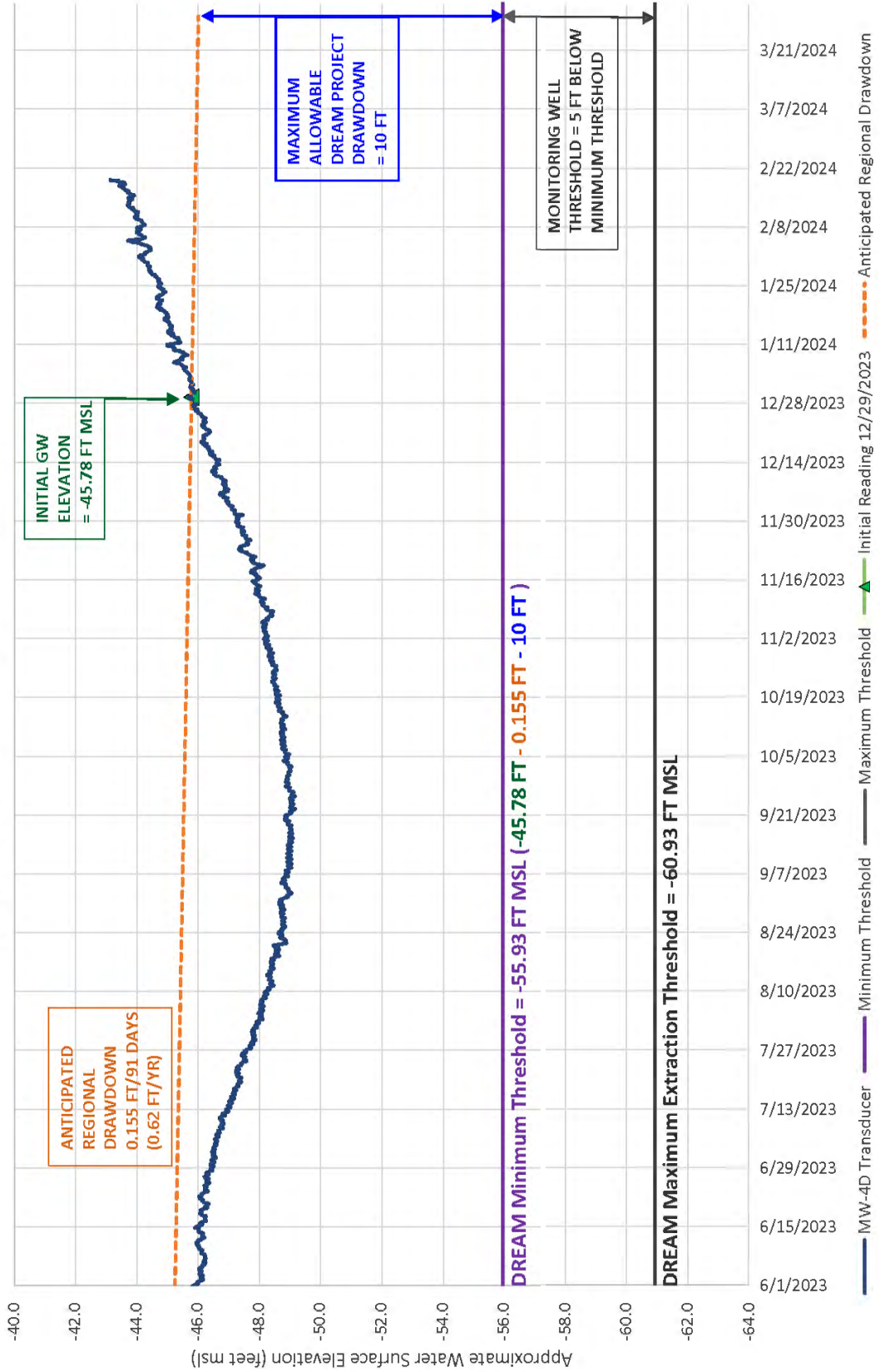
### Threshold calculation:

DREAM minimum threshold = Initial water level – regional trend – allowable drawdown (10 ft)

DREAM maximum extraction threshold = Initial water level – regional trend – allowable drawdown (15 feet, or five feet below the minimum threshold)

Following the end of extraction, water levels are again recorded to produce a final groundwater elevation for comparison to initial groundwater levels.

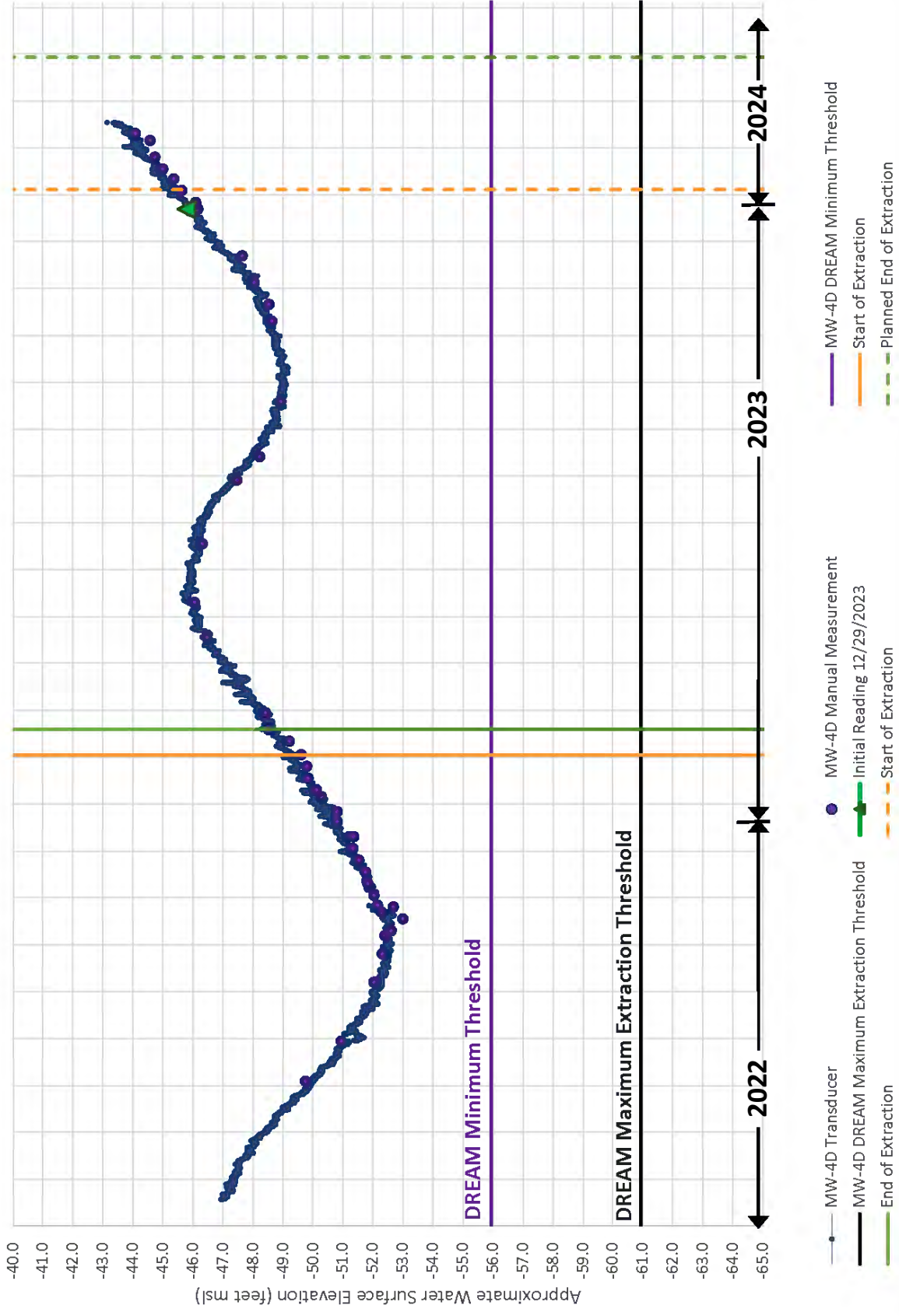
### Well MW-4D Hydrograph Threshold Example



MW-4D is a groundwater monitoring well fitted with a remote monitoring system. Water level data is collected hourly by the remote system and additional manual water level measurements are collected for quality control.

	MW-4D
Initial Reading	-45.78
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-55.93
DREAM Maximum Extraction Threshold	-60.93

Well MW-4D Hydrograph



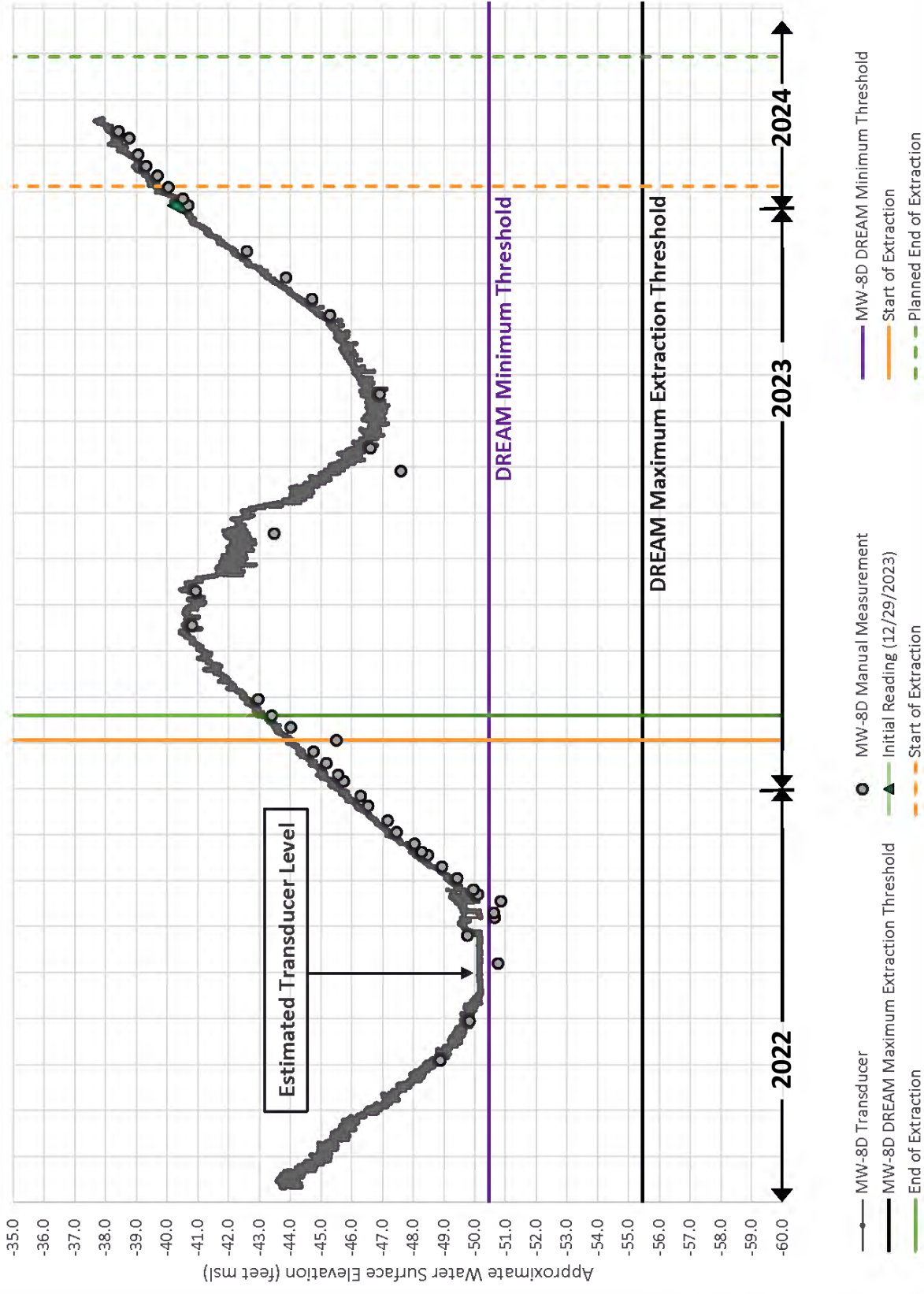
- MW-4D Transducer
- MW-4D Manual Measurement
- MW-4D DREAM Maximum Extraction Threshold
- Initial Reading 12/29/2023
- End of Extraction
- Start of Extraction
- MW-4D DREAM Minimum Threshold
- Start of Extraction
- Planned End of Extraction

MW-8D is a groundwater monitoring well fitted with a remote monitoring system. Water level data is collected hourly by the remote system and additional manual water level measurements are collected for quality control.

The MW-8D well bottom is above the minimum and maximum extraction thresholds, so this well's usefulness in monitoring compliance with the Groundwater Export Ordinance will be limited if water levels drop 9-10 feet at this location. If water levels drop below the well bottom, threshold triggers transfer to MW-7D. BC Ag Well 2 may also be used as a backup monitoring well if needed during the evaluation.

MW-8D	
Initial Reading	-40.30
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-50.45
DREAM Maximum Extraction Threshold	-55.45

Well MW-8D Hydrograph

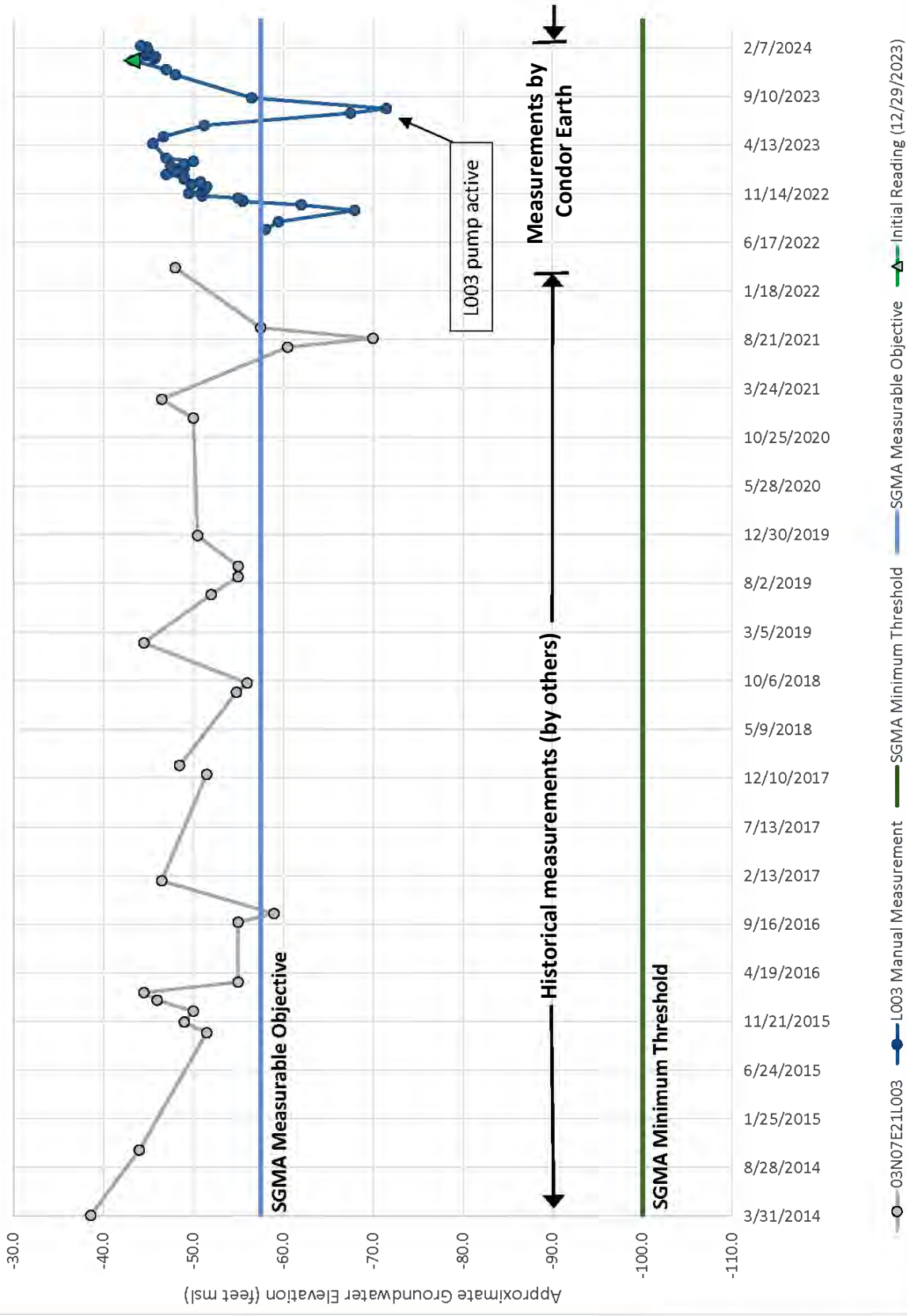


Monitoring well 03N07E21L003, referred to as "L003", is a Representative Monitoring Well identified and defined in the Eastern San Joaquin Groundwater Sustainability Plan (ESJGSP). While an Initial Reading (shown as a green triangle on this graph) was collected two weeks prior to extraction startup for reference, the measurable objective and minimum thresholds for this well are specified in the ESJGSP.

Manual water level measurements at L003 are less reliable due to access issues as presented earlier; interpretation of data trends compared to other wells is limited.

L003	
Initial Reading	-43
SGMA Measurable Objective	-57.5
SGMA Minimum Threshold	-100

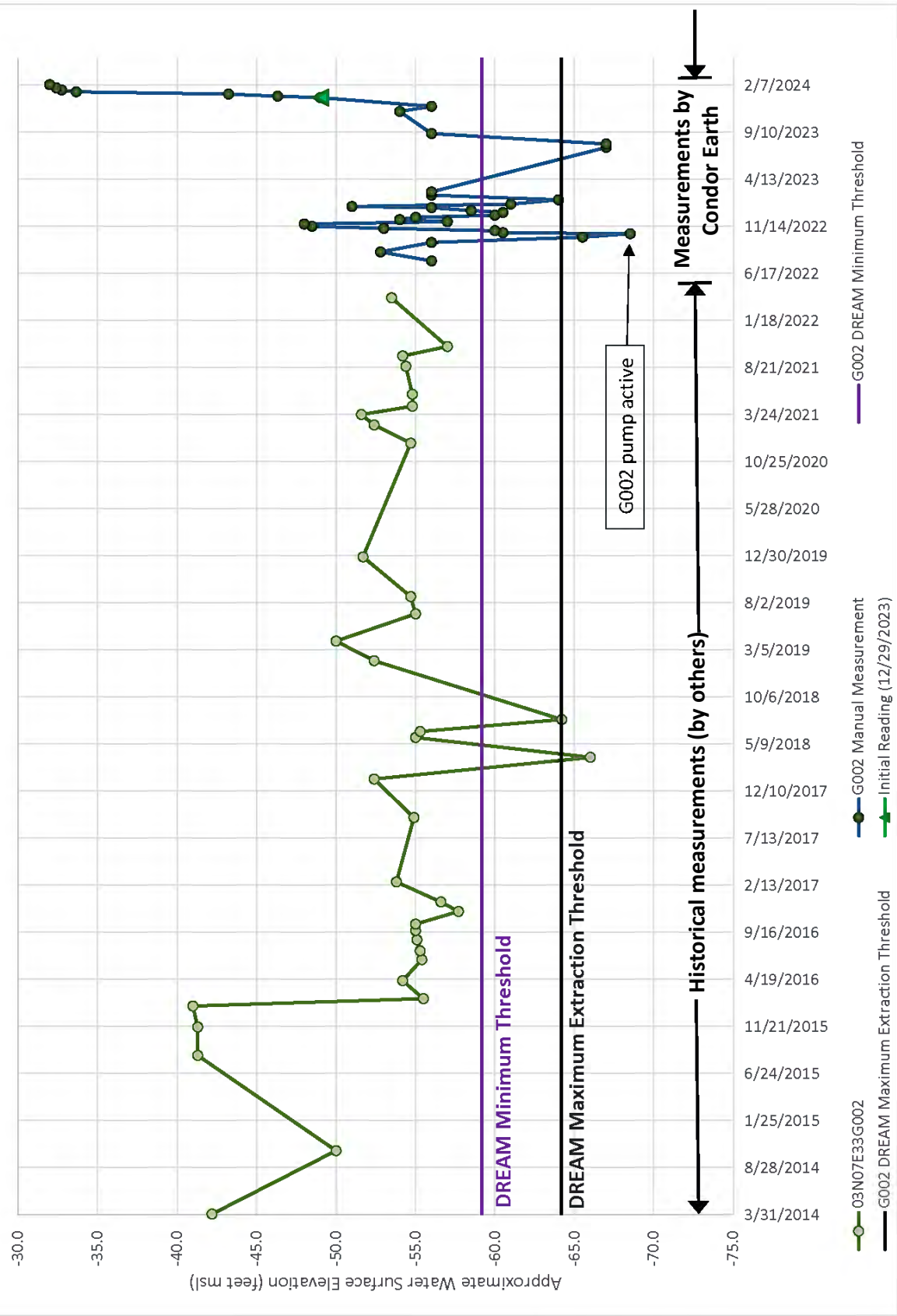
Well 03N07E21L003 Hydrograph



Well 03N07E33G002, referred to as "G002", is actively pumped for agricultural purposes and accurate manual water level measurements are difficult to collect. Manual water level measurements at G002 are less reliable due to access issues as presented earlier; interpretation of data trends compared to other wells is limited.

G002	
Initial Reading	-49
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-59.2
DREAM Maximum Extraction Threshold	-64.2

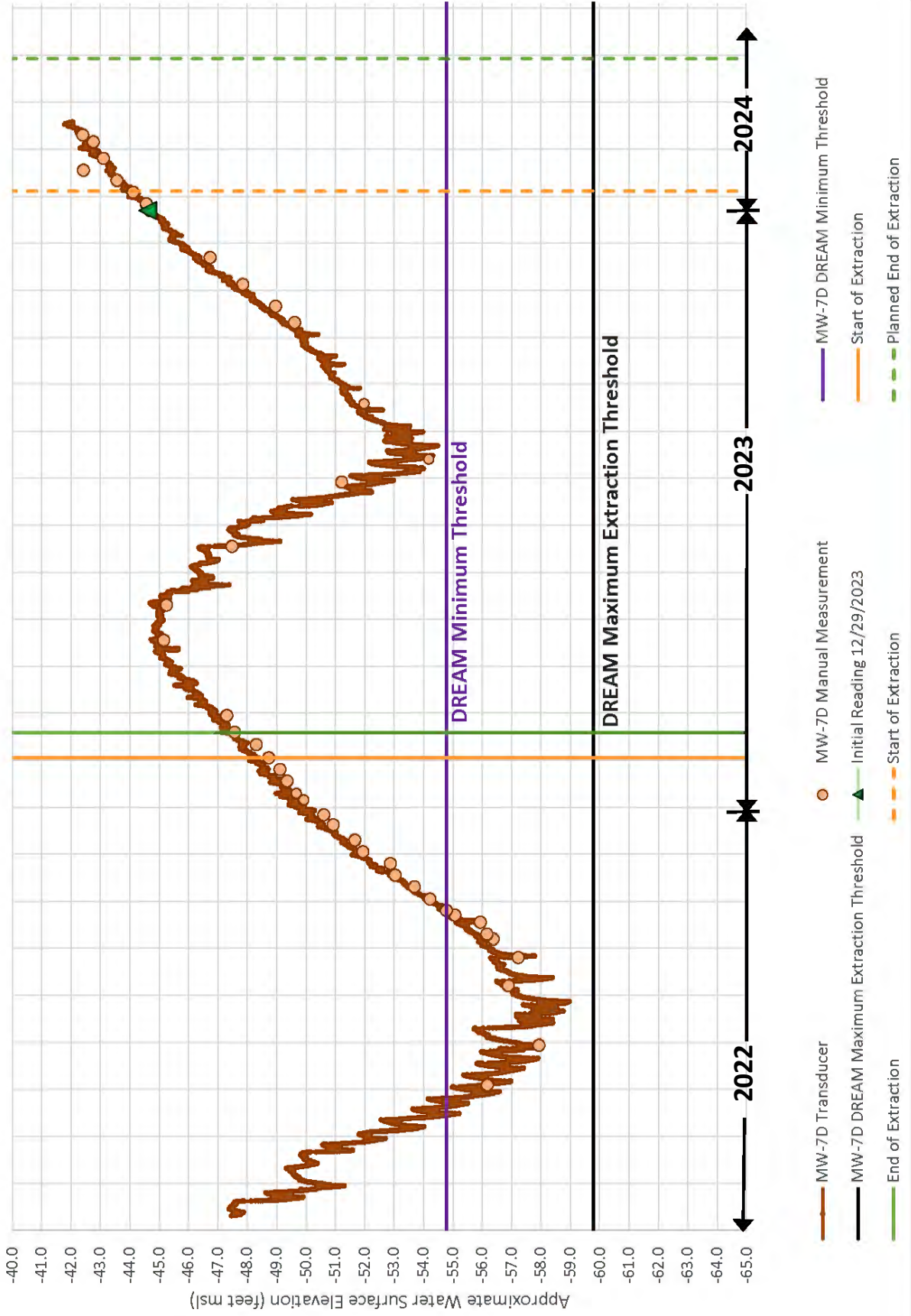
Well 03N07E33G002 Hydrograph



MW-7D is a groundwater monitoring well fitted with a remote monitoring system. Water level data is collected hourly by the remote system and additional manual water level measurements are collected for quality control.

	MW-7D
Initial Reading	-44.61
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-54.76
DREAM Maximum Extraction Threshold	-59.76

Well MW-7D Hydrograph

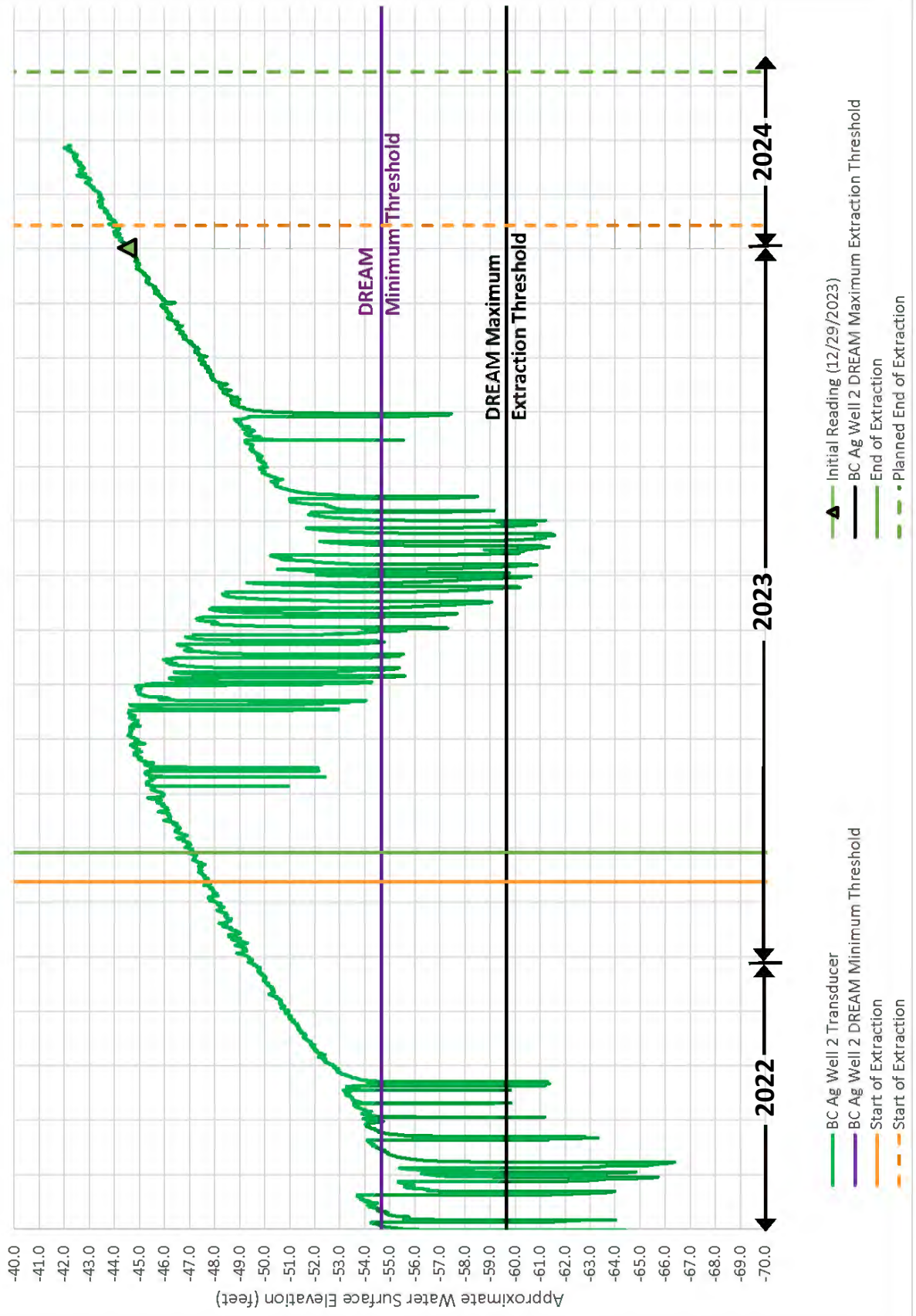




The Bear Creek (BC) Ag Well 2 is an agricultural well fitted with a remote monitoring system. This well serves as a backup monitoring well that may be utilized if needed. Water level data is collected hourly by the remote system.

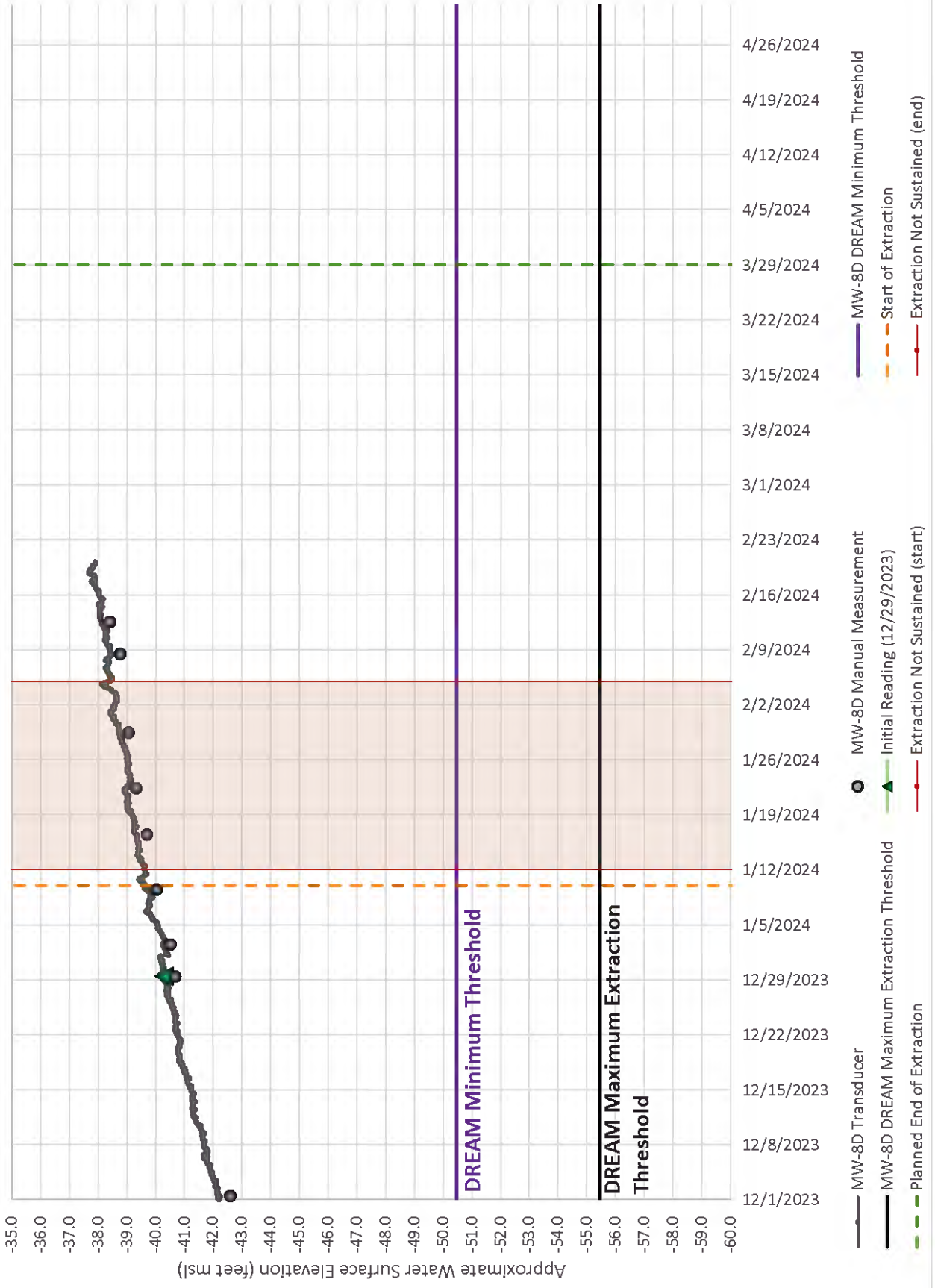
BC Ag Well 2	
Initial Reading	-44.50
Regional Trend Adjustment (91 Days)	-0.155
DREAM Minimum Threshold	-54.65
DREAM Maximum Extraction Threshold	-59.65

Bear Creek Ag Well 2 Hydrograph



Focused view of MW-8D hydrograph, showing extraction startup (1/10/2024), discontinuous extraction period due to well pump trips, troubleshooting, and repairs (1/12/2024 – 2/5/2024), and planned end of extraction (3/29/2024).  
 The water level at this location continues to increase over time and influence from extraction is not apparent.

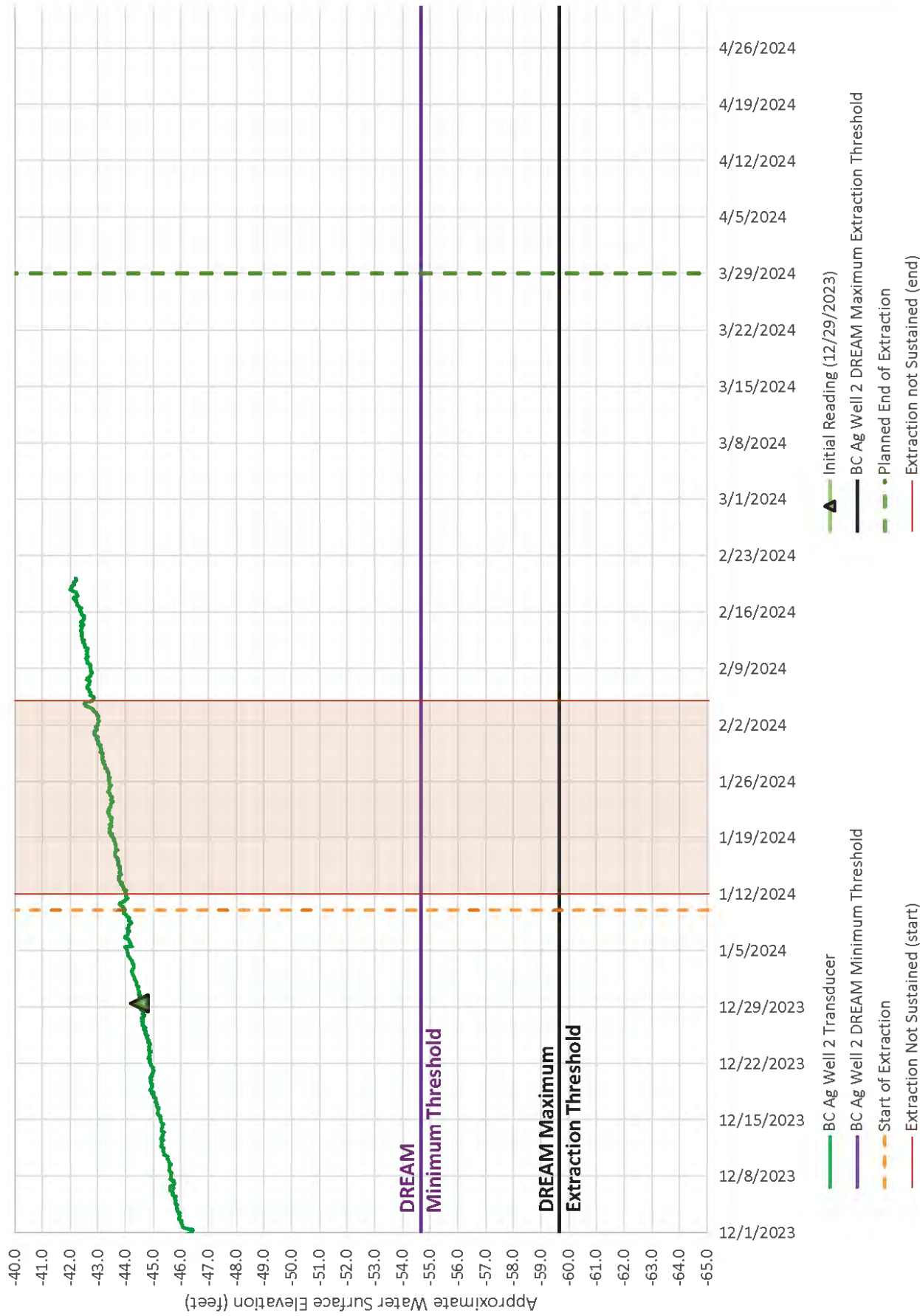
Well MW-8D Hydrograph



Focused view of Bear Creek Ag Well 2 hydrograph, showing extraction startup (1/10/2024), discontinuous extraction period due to well pump trips, troubleshooting, and repairs (1/12/2024 – 2/5/2024), and planned end of extraction (3/29/2024).

The water level at this location continues to increase over time and influence from extraction is not apparent.

Bear Creek Ag Well 2 Hydrograph



## Summary of Hydrograph Observations

- No negative impacts on groundwater levels to date from the DREAM extraction.
  - Last manual measurements on 2/8 (G002 only) and 2/12.
  - Transducer data last collected on 2/19 (MW-4D only) and 2/20.
- Most recent levels in all the wells are 12 feet or more above the minimum thresholds.
- Levels have been increasing in most wells since extraction started on January 10.
- Monitoring to continue throughout the extraction period.

## DREAM Monitoring Well Thresholds and Alert Notifications

<b>DREAM Monitoring Well Minimum and Maximum Extraction Thresholds</b>						
	MW-4D	MW-7D	MW-8D	L003	G002	BC Ag Well 2
Initial Reading (12/29/2023)	-45.78	-44.61	-40.30	-43.23	-49	-44.50
Regional Trend Adjustment (91 days to 3/29/2024)	-0.155	-0.155	-0.155		-0.155	-0.1546
DREAM Minimum Threshold	-55.93	-54.76	-50.45		-59.2	-54.65
DREAM Maximum Extraction Threshold	-60.93	-59.76	-55.45		-64.2	-59.65
Well Bottom Elevation (approximate)	-64.76	-73.19	-52.65			
SGMA Measurable Objective (for L003)				-57.5		
SGMA Minimum Threshold (for L003)				-100		

Initial reading for MW-4D, -7D, -8D, and the BC Ag Well 2 as measured by the transducer on 12/29/2023 at 10:00am.

Initial readings for G002 and L003 as measured manually by Condor on 12/29/2023 at approximately 9:30am-10:30am.

<b>Alert Notifications (Automated)</b>						
	MW-4D	MW-7D	MW-8D			BC Ag Well 2
Initial Reading	-45.78	-44.61	-40.30			-44.50
Regional Trend Adjustment (91 Days)	-0.155	-0.155	-0.155			-0.155
DREAM Minimum Threshold	-55.93	-54.76	-50.45			-54.65
Distance between Initial Reading & Minimum Threshold	10.15	10.15	10.15			10.15
75% of DREAM Minimum Threshold	7.62	7.62	7.62			7.62
<b>75% Minimum Threshold Alert Elevation *</b>	<b>-53.39</b>	<b>-52.23</b>	<b>-47.92</b>			<b>-52.12</b>
DREAM Maximum Extraction Threshold	-60.93	-59.76	-55.45			-59.65
Distance between Initial Reading & Maximum Threshold	15.15	15.15	15.15			15.15
75% of DREAM Maximum Extraction Threshold	11.37	11.37	11.37			11.37
<b>75% Maximum Extraction Threshold Alert Elevation *</b>	<b>-57.14</b>	<b>-55.98</b>	<b>-51.67</b>			<b>-55.87</b>

*Threshold below well bottom*

\* 75% Threshold Alerts previously requested by San Joaquin County Engineer; threshold alerts are customizable and may be adjusted as needed for the Monitoring Committee or for individuals.

## **GROUNDWATER MONITORING PLAN SUMMARY**

- Amendment #1 to the Monitoring Plan specifies that effects of the DREAM Project are monitored by wells MW-4D, MW-8D, L003, and G002. These wells can be substituted at the County Engineer's discretion. MW-7D and BC Ag Well 2 serve as backup/alternate monitoring wells.
- L003 is a Representative Monitoring Well in the East San Joaquin Groundwater Sustainability Plan (ESJGSP) and has defined minimum thresholds. Minimum and Maximum Extraction Thresholds were developed for other Dream Project wells as specified in Amendment #1.
- Amendment #1 states that if water levels in three of the four DREAM Project monitoring wells decrease to below their Maximum Extraction Thresholds, the project extraction well shall be shut down for evaluation and the Monitoring Committee shall make a recommendation to the Board of Supervisors for continued operation based on results of the evaluation.
- The DREAM Project shall not be allowed to operate if groundwater in L003 falls below the minimum threshold defined in the ESJGSP.
- Wells MW-4D, MW-7D, and MW-8D are dedicated groundwater monitoring wells, and the BC Ag Well 2 is an active irrigation well, owned by Bear Creek Winery; these wells are fitted with remote monitoring devices and water levels are recorded hourly. Near real-time data may be viewed through an online portal, [hydrovu.com](http://hydrovu.com); for access, contact Suzanna at [sfelton@condorearth.com](mailto:sfelton@condorearth.com).
- Automated, customized alert notifications may be set up for HydroVu users if water levels exceed specified levels. Alerts are proposed for water levels dropping to 75% of the specified thresholds as well as water levels exceeding the thresholds. Contact Suzanna at [sfelton@condorearth.com](mailto:sfelton@condorearth.com) if you would like to receive automated, customized alerts.
- The Monitoring Committee will be notified by e-mail if a Threshold (including 75% Minimum Alert Threshold or other Threshold as desired) is reached in any well (notification by Casey Kipf or Suzanna Felton).
- L003 and G002 are older agricultural-use wells with dedicated pumping systems and could not be fitted with remote monitoring devices. Water levels are measured manually and accurate measurements are challenging due to access and oil interference from the pump.

# Memorandum

**To:** DREAM Monitoring Committee  
**From:** Steve Schwabauer, NSJWCD General Manager  
**Date:** February 26, 2024  
**Re:** Request for DREAM Project Groundwater Extraction Extension to April 2024

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## **Background**

DREAM Pilot Project groundwater extraction is permitted from October 1<sup>st</sup> through March 31<sup>st</sup> under County of San Joaquin's Resolution R-17-35. In collaboration with North San Joaquin Water Conservation District (NSJWCD), East Bay Municipal Utility District (EBMUD) initiated extraction on January 10<sup>th</sup>, 2024, and planned to continuously extract approximately 296-acre feet of groundwater, half of the 592-acre feet banked in Fall 2023, through the end of March 2024. The extraction period was initiated in combination with San Joaquin County who is responsible for groundwater monitoring to identify whether significant impacts to groundwater levels would result from the DREAM Project. However, unanticipated mechanical and control system failures resulted in ongoing starts and stops every few days from the initiation of extraction on January 10<sup>th</sup>, 2024 through February 5<sup>th</sup>, 2024 when NSJWCD and EBMUD resolved the mechanical and control issues.

By March 31<sup>st</sup>, 2024, up to 212-acre feet of groundwater extraction could occur, with 84-acre feet of banked groundwater remaining. An extension to April 30<sup>th</sup>, 2024, is requested to allow extraction of the entire 296-acre feet of banked groundwater to observe whether impacts to groundwater exists with extraction of the full banked volume for a longer duration.

Condor will present groundwater monitoring data at the meeting showing that to-date the extraction has not had a negative impact on groundwater levels in the County.

## **Requested Action**

Recommend to the Eastern Water Alliance adoption of Resolution 24-01, recommending the San Joaquin County Board of Supervisors amend Resolution R-17-35 to extend the term of the extraction timeline for the groundwater banking demonstration project agreement (DREAM) to April 30, 2024

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**RESOLUTION 24-01**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE EASTERN WATER ALLIANCE TO RECOMMEND THE BOARD OF SUPERVISORS AMEND RESOLUTION R-17-35 TO EXTEND THE TERM OF THE EXTRACTION TIMELINE FOR THE GROUNDWATER BANKING DEMONSTRATION PROJECT (DREAM) AGREEMENT TO APRIL 30, 2024**

WHEREAS, North San Joaquin Water Conservation District (District), San Joaquin County (County) and East Bay Municipal Utility District (EBMUD) entered into the Agreement attached hereto as Exhibit A regarding the DREAM Project (DREAM Agreement); and

WHEREAS, EBMUD transferred 1,000 AF of surface water to the Eastern San Joaquin Groundwater Basin pursuant to the DREAM Agreement and is entitled to extract up to 500 AF of Groundwater in exchange, and a portion of the 500 AF of Groundwater was previously extracted with 296 AF left to extract in 2024; and

WHEREAS, the Eastern Water Alliance applied to County, and received from County a groundwater export permit for the DREAM Project; and

WHEREAS, the County Board of Supervisor’s Resolution R-17-35 provides that the groundwater extraction portion of the project must be complete by March 31; and

WHEREAS, a number of technical issues with the groundwater pump supplying the DREAM groundwater impaired EBMUDS’s ability to extract the full 296 Acre Feet of groundwater scheduled; and

WHEREAS, the parties to the DREAM Agreement have requested that the Eastern Water Alliance express its support for the extension of the extraction term for the DREAM Project extraction from March 31, 2024 to April 30, 2024.

WHEREAS, EBMUD and District have presented a hydrology report that indicates the extraction to date has not had a negative impact on groundwater levels in the County.

NOW, THEREFORE, BE IT RESOLVED by the Eastern Water Alliance, as follows:

1. The Eastern Water Alliance supports the extension of the DREAM Agreement extraction timeline to April 30, 2024.
2. Staff are directed to take all action necessary to carry out the purposes of this Resolution.

PASSED and ADOPTED at a meeting of the Eastern Water Alliance on the \_\_\_\_\_, 2024 upon motion by Director \_\_\_\_\_, seconded by Director \_\_\_\_\_, and passed by the following vote:

Ayes:  
 Noes:  
 Absent:  
 Abstain:

Chairperson \_\_\_\_\_ declared the resolution adopted.

I, \_\_\_\_\_, Secretary of the Board of Directors of the EASTERN WATER ALLIANCE, do hereby CERTIFY that the foregoing is a full, true and correct copy of a resolution duly adopted at an adjourned regular meeting of said Board of Directors held the \_\_\_<sup>th</sup> day of March 2024.

**DRAFT**

\_\_\_\_\_  
Secretary