



TEJON-CASTAC
WATER
DISTRICT



South of Kern River Executive Committee Regular Meeting

Tuesday, November 21, 2023

10:00 a.m. to 11:30 a.m.

Meeting Information Posted:

www.sokrgsp.com

<http://www.aewsd.org> * <http://www.wrmwsd.com>

<http://www.tejoncastacwd.com> * <https://www.arvincsd.com>

In Person: Arvin-Edison Water Storage District Headquarters
20401 E. Bear Mountain Blvd. Arvin, CA 93203

Via Remote (**Microsoft Teams**): <https://www.microsoft.com/microsoft-teams/join-a-meeting>

Click here to join the meeting

Meeting Number: **289 619 843 830**

Meeting Password: **ko5K35**

Phone: **1.213.437.9052**

Phone Meeting Number (access code): **276 512 496#**

NOTICE: Members of the public interested in participating by teleconference may do so using the call-in information above or by following [this link](#). Please note that this teleconference option is provided as a courtesy and at the participant's own risk. The Committee cannot guarantee that there will be no loss of connectivity or other technological obstacle to full participation through teleconferencing. By participating in this way, participants confirm that they understand this risk and that the Committee is not obliged to delay any portion of the meeting due to such technological obstacles and thus that teleconference participants may be unable to participate.

1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE
4. APPROVAL OF THE AGENDA
5. APPROVAL OF OCTOBER 20, 2023 MEETING MINUTES
6. PUBLIC COMMENT
7. REPORT ITEMS
 - a. GSP Manager Report (*Muhar*)
 - i. Basin Coordination
 - b. Technical Consultant Report (*EKI*)
 - i. Technical Working Group (TWG) Update
 - ii. Report on technical meeting with State Water Resources Control Board (SWRCB) Staff
 - iii. SGMA Monitoring Network performance and sustainable management criteria (SMC) compliance

- c. Finance Report (*Nicholas*)
- d. California Aqueduct Subsidence Program (CASP) update (*Nicholas*)
- e. Management Area updates (*Muhar, Nicholas, Martin, Barraza*)

8. ACTION ITEM(S)

- a. Discussion and potential action to recommend Kern Subbasin cost-sharing agreement for revising GSP(s) for approval by SOKR GSA boards.
- b. Discussion and potential action to formally endorse Arvin GSA's request for replacement monitoring well.

9. CLOSED SESSION

- a. Potential Litigation (Government Code §54956.9(d)(2), (e)(1); 1 item).

10. ADJOURNMENT

**MINUTES OF THE MEETING OF THE
SOUTH OF KERN RIVER EXECUTIVE COMMITTEE
October 20, 2023**

Director Yurosek called the meeting to order at 12:00 p.m., with a quorum and attendance by:

Executive Committee Directors

Derek Yurosek – Arvin-Edison Water Storage District (AEWSD; Arvin GSA) (in person)

Mark Valpredo – Tejon-Castac Water District (TCWD; Tejon-Castac GSA) (in person)

Michael Blaine – Wheeler Ridge-Mariposa Water Storage District (WRMWSD; Wheeler Ridge-Maricopa GSA) (in person)

Rafael Gallardo – Arvin Community Services District (ACSD) (in person)

District Staff

Jeevan Muhar – AEWSD (in person)

Sheridan Nicholas – WRMWSD (in person)

Angelica Martin – TCWD (remote)

Raul Barraza – ACSD (in person)

Participants recited the Pledge of Allegiance.

APPROVAL OF THE AGENDA

Director Valpredo moved to approve the agenda. Director Blaine seconded. The motion passed unanimously.

APPROVAL OF SEPTEMBER 14, 2023 MEETING MINUTES

Director Valpredo moved to approve the September 14, 2023 South of Kern River (SOKR) Executive Committee meeting minutes. Director Blaine seconded. The motion passed unanimously.

PUBLIC COMMENT

There were no public comments.

REPORT ITEMS

GSP Manager Report

Basin Coordination

Mr. Muhar reported that the Subbasin met with State Water Resources Control Board (SWRCB) Staff on 4 October 2023 to discuss revisions to the chronic lowering of groundwater levels Sustainable Management Criteria (SMCs).

The Subbasin GSAs continue to: (1) coordinate on technical studies and other tasks related to revising the Groundwater Sustainability Plan(s) (GSP) by spring 2024, and (2) Plan Manager contract review.

Technical Consultant Report

Technical Working Group (TWG) Update

EKI reported on the subbasin-wide technical work efforts the TWG has been conducting over the past month to address DWR-identified GSP deficiencies, as presented in the 4 October 2023 meeting with the SWRCB. EKI also reported on key findings from the SWRCB staff report that was issued in support of the Notice of Probationary Hearing for the Tulare Lake Subbasin.

SGMA Monitoring Network performance and sustainable management criteria (SMCs) compliance

EKI reported on September groundwater conditions within the SOKR Plan Area compared to the existing Minimum Thresholds (MTs).

Finance Report

Mr. Nicholas reported on finances to date, which are split equally between the SOKR GSAs, except for white lands issues where TCWD is excluded. WRMWSD will continue to be billed and AEWSD and TCWD will reimburse WRMWSD.

California Aqueduct Subsidence Program (CASP) update

Mr. Nicolas reported on the SOKR GSAs 29 October 2023 meeting with CASP to discuss the California Aqueduct conditions for pools within the Wheeler Ridge-Maricopa GSA boundary and potential proposed land subsidence SMCs.

Management Area Updates

Mr. Muhar reported no updates from last month.

Mr. Nicholas reported that WRMWSD continues to meet to discuss potential demand reduction management actions.

Ms. Martin reported no updates from last month.

Mr. Barraza reported no updates from last month.

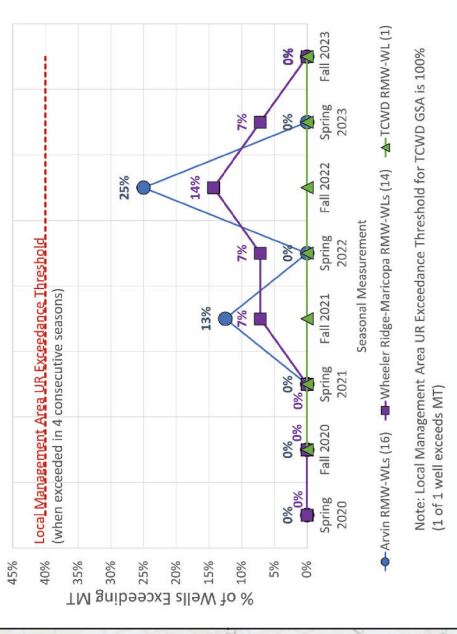
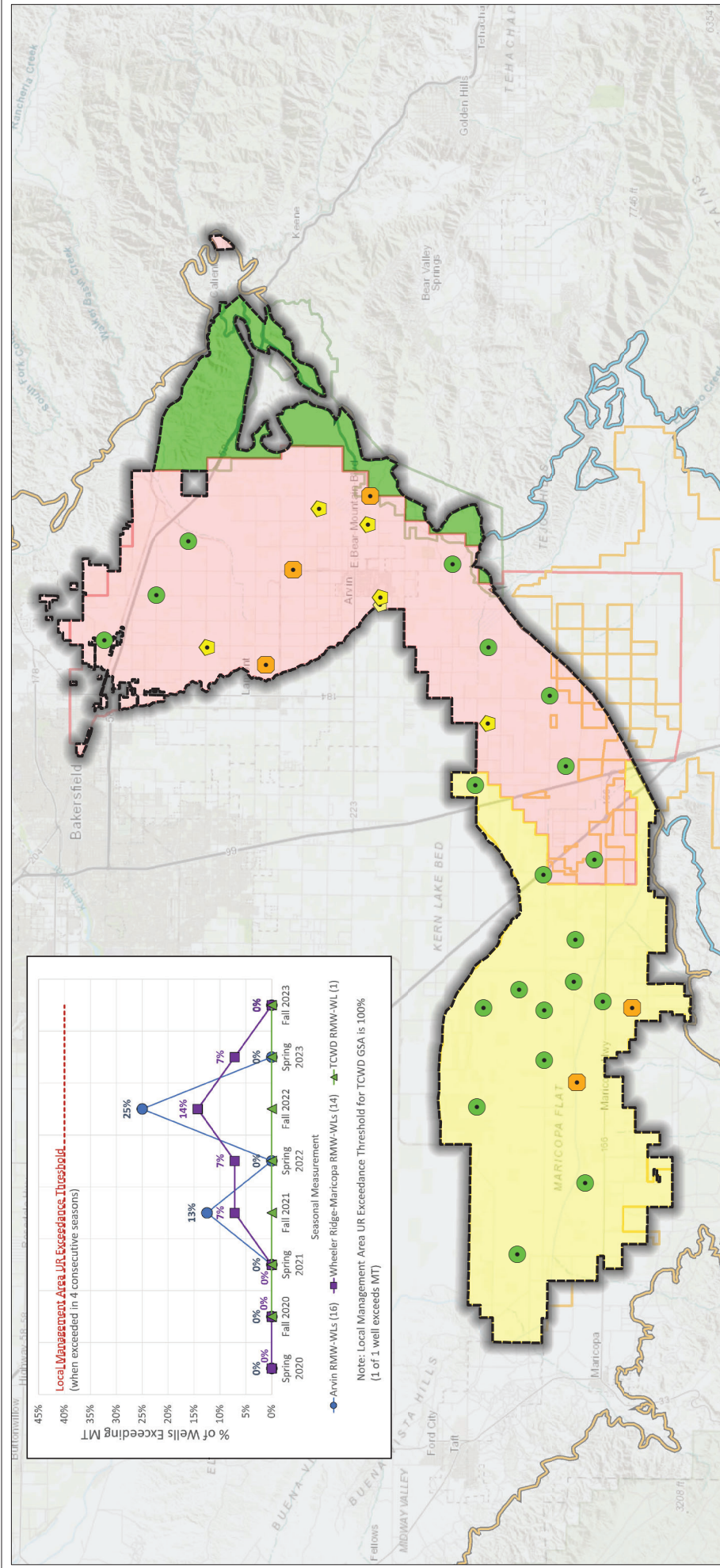
CLOSED SESSION

Conference with Legal Counsel pursuant to Government Code §54956.9(d)(2), (e)(1) (potential litigation; 1 item). There was no action to report out of closed session.

ADJOURNMENT

Director Yurosek adjourned the South of Kern River Executive Committee meeting at 1:57 p.m.

Mark Valpredo, South of Kern River
Executive Committee Secretary



Legend

Representative Monitoring Well and Status as of October 2023

- Water Level Above MO (20 or 66%)
- Water Level between MO and MT but closer to MO (6 or 19%)
- Water Level between MO and MT but closer to MT (5 or 15%)
- South of Kern River Plan Area
- Arvin GSA
- Wheeler Ridge-Maricopa GSA
- Tejon-Castac Water District GSA
- WRMWSD Service Area
- AEWSD Service Area
- TCWD Service Area
- Groundwater Subbasin
 - Kern County (DWR 5-022.14)
 - White Wolf (DWR 5-022.18)

Abbreviations

- AEWSD = Arvin-Edison Water Storage District
- DWR = California Department of Water Resources
- GSA = Groundwater Sustainability Agency
- MO = Measurable Objective
- MT = Minimum Threshold
- RMW = Representative Monitoring Well
- SGMA = Sustainable Groundwater Management Act
- SMC = Sustainable Management Criteria
- TCWD = Tejon-Castac Water District
- UR = Undesirable Result
- WRMWSD = Wheeler Ridge-Maricopa Water Storage District

Notes

- All locations are approximate.
- Undesirable Results are deemed to occur if groundwater levels in 40% or more RMWs are below their respective MT for four consecutive biannual measurements (Spring and Fall) in any management area.

Sources

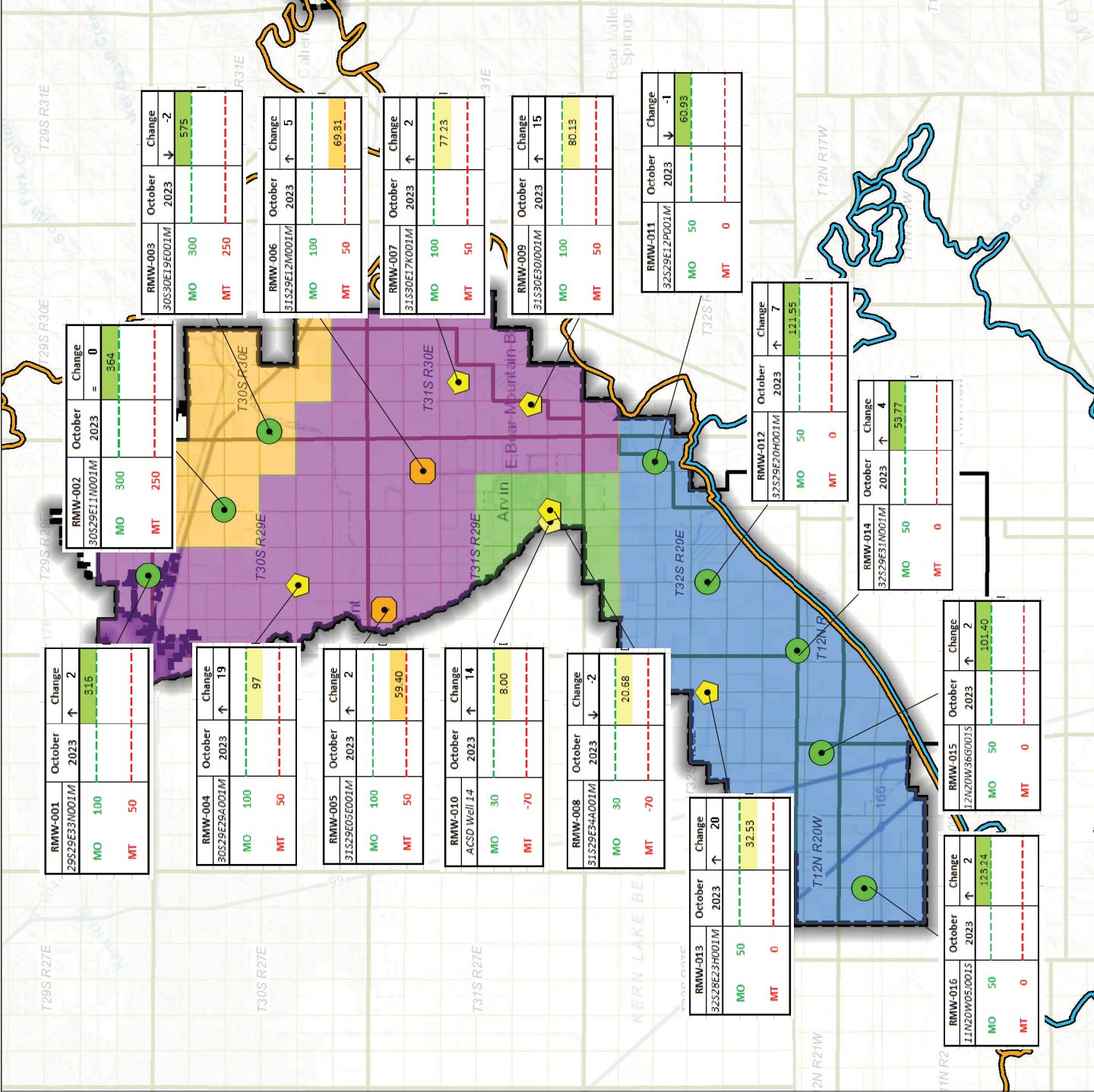
- Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 November 2023.
- GSA boundaries obtained from SGMA GSA Map Viewer portal, accessed 6 May 2022.
- DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - 2019 Update.

October 2023 Water Levels Relative to SMCs

South of Kern River GSP
Kern County, CA
October 2023
C20055.00

Figure 1





Legend

Representative Monitoring Well and Status as of October 2023

- Water Level Above MO (8 or 50%)
- ⬠ Water Level between MO and MT but closer to MO (6 or 38%)
- ⬠ Water Level between MO and MT but closer to MT (2 or 12%)

Sustainability Criteria Zones

- ACSD
- Edison
- North Canal
- South Canal
- Arvin GSA
- Arvin-Edison Water Storage District

Groundwater Subbasin

- Kern County (DWR 5-022.14)
- White Wolf (DWR 5-022.18)

Abbreviations

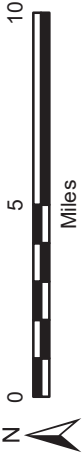
- ACSD = Arvin Community Services District
- DWR = California Department of Water Resources
- ft msl = feet above mean sea level
- GSA = Groundwater Sustainability Agency
- MO = Measurable Objective
- MT = Minimum Threshold
- RMW = Representative Monitoring Well
- SMC = Sustainable Management Criteria

Notes

1. All locations are approximate.
2. Groundwater elevations reported in units of ft msl.
3. All water levels collected during October 2023.
4. Arrow direction indicates water level change from previous month.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 November 2023.



Groundwater Levels Relative to SMCs October 2023

Arvin GSA
 Arvin-Edison Water Storage District
 Kern County, California
 October 2023
 B60064.10



Figure 2

INTERIM FIGURE - FOR INFORMATIONAL PURPOSES ONLY

RMW-001 29S29E33N001M	October 2023	Change
MO 100	↑ 3.16	
MT 50		

RMW-004 30S29E34N001M	October 2023	Change
MO 100	↑ 19	
MT 50		

RMW-005 31S29E05E001M	October 2023	Change
MO 100	↑ 2	
MT 50		

RMW-010 ACSD Well 14	October 2023	Change
MO 30	↑ 14	
MT -70		

RMW-008 31S29E34N001M	October 2023	Change
MO 30	↓ -2	
MT -70		

RMW-013 32S28E23H001M	October 2023	Change
MO 50	↑ 20	
MT 0		

RMW-016 11N20W05J001S	October 2023	Change
MO 50	↑ 123.24	
MT 0		

RMW-015 17N20W36G001S	October 2023	Change
MO 50	↑ 101.40	
MT 0		

RMW-014 32S29E31N001M	October 2023	Change
MO 50	↑ 53.77	
MT 0		

RMW-012 32S29E20H001M	October 2023	Change
MO 50	↑ 121.55	
MT 0		

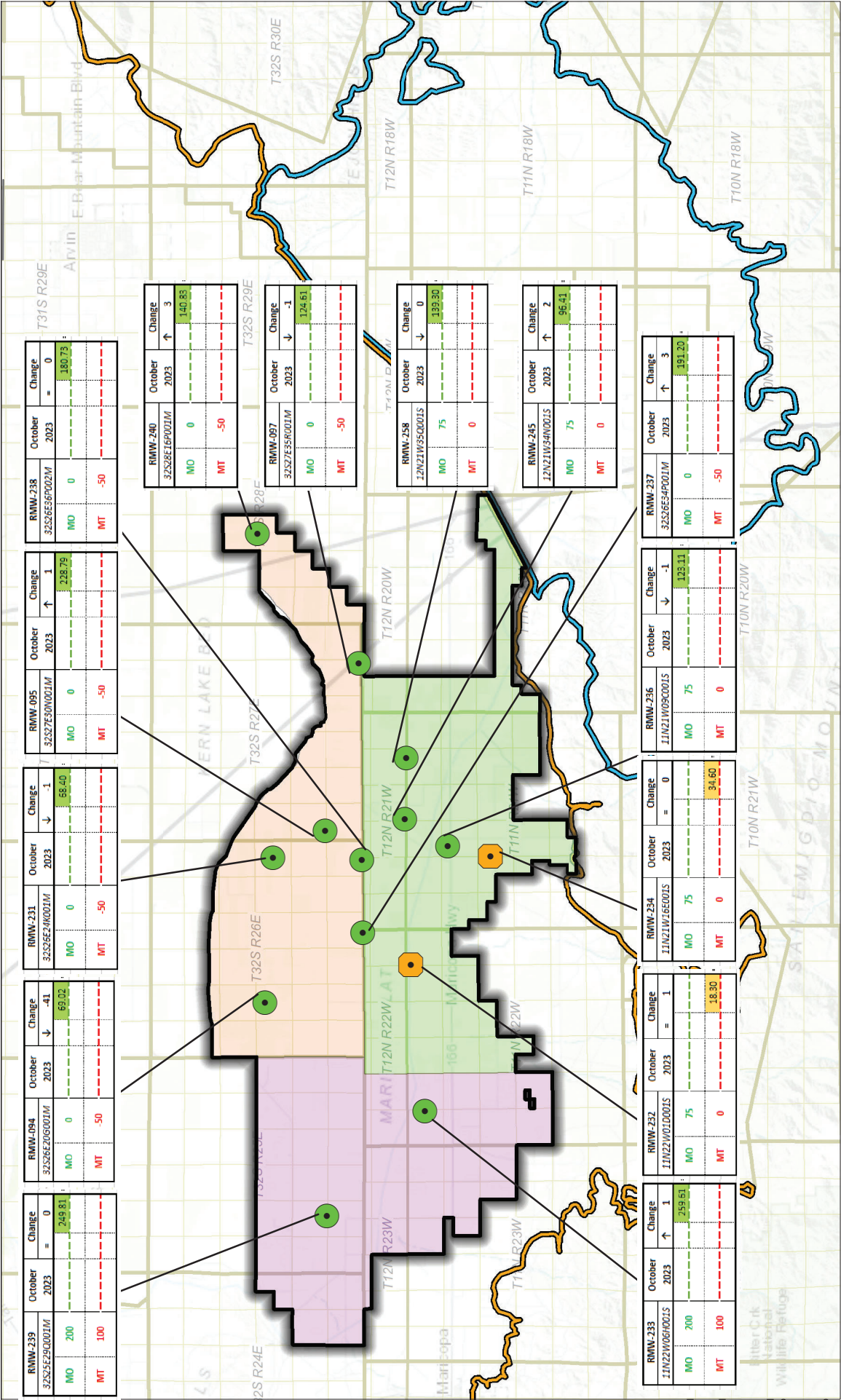
RMW-011 32S29E22P001M	October 2023	Change
MO 50	↓ -1	
MT 0		

RMW-009 31S30E00D001M	October 2023	Change
MO 100	↑ 15	
MT 50		

RMW-007 31S30E17K001M	October 2023	Change
MO 100	↑ 2	
MT 50		

RMW-006 31S29E12M001M	October 2023	Change
MO 100	↑ 69.31	
MT 50		

RMW-003 30S30E19E001M	October 2023	Change
MO 300	↓ -2	
MT 250		



Legend

Groundwater Subbasin

- Kern County (DWR 5-022.14)
- White Wolf (DWR 5-022.18)

Sustainability Criteria Zones

- Northeast
- Southeast
- West
- Wheeler Ridge-Maricopa GSA

Notes

- All locations are approximate.
- Groundwater elevations reported in units of ft msl.
- All water levels collected during October 2023.
- Arrow direction indicates water level change from previous month.

Sources

- Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 November 2023.

Representative Monitoring Well and Status as of October 2023

- Water Level Above MO (12 or 14%)
- Water Level Between MO and MT but closer to MT (2 or 14%)

Abbreviations

DWR = California Department of Water Resources

ft msl = feet above mean sea level

GSA = Groundwater Sustainability Agency

MO = Measurable Objective

MT = Minimum Threshold

SMC = Sustainable Management Criteria

Groundwater Levels Relative to SMCs October 2023

Wheeler Ridge-Maricopa GSA

South of Kern River
Kern County, California
October 2023
C20055.00

eki environment & water

Scale in Miles: 0, 4, 8

Figure 3

Legend

Representative Monitoring Well and Status as of October 2023

- Water Level Above MO (8 or 50%)
- ◆ Water Level between MO and MT but closer to MO (6 or 38%)
- Water Level between MO and MT but closer to MT (2 or 12%)
- + District Recovery Well
- AEWSD Spreading Basin
- Arvin GSA
- Arvin-Edison Water Storage District
- Groundwater Subbasin
- Kern County (DWR 5-022.14)
- White Wolf (DWR 5-022.18)

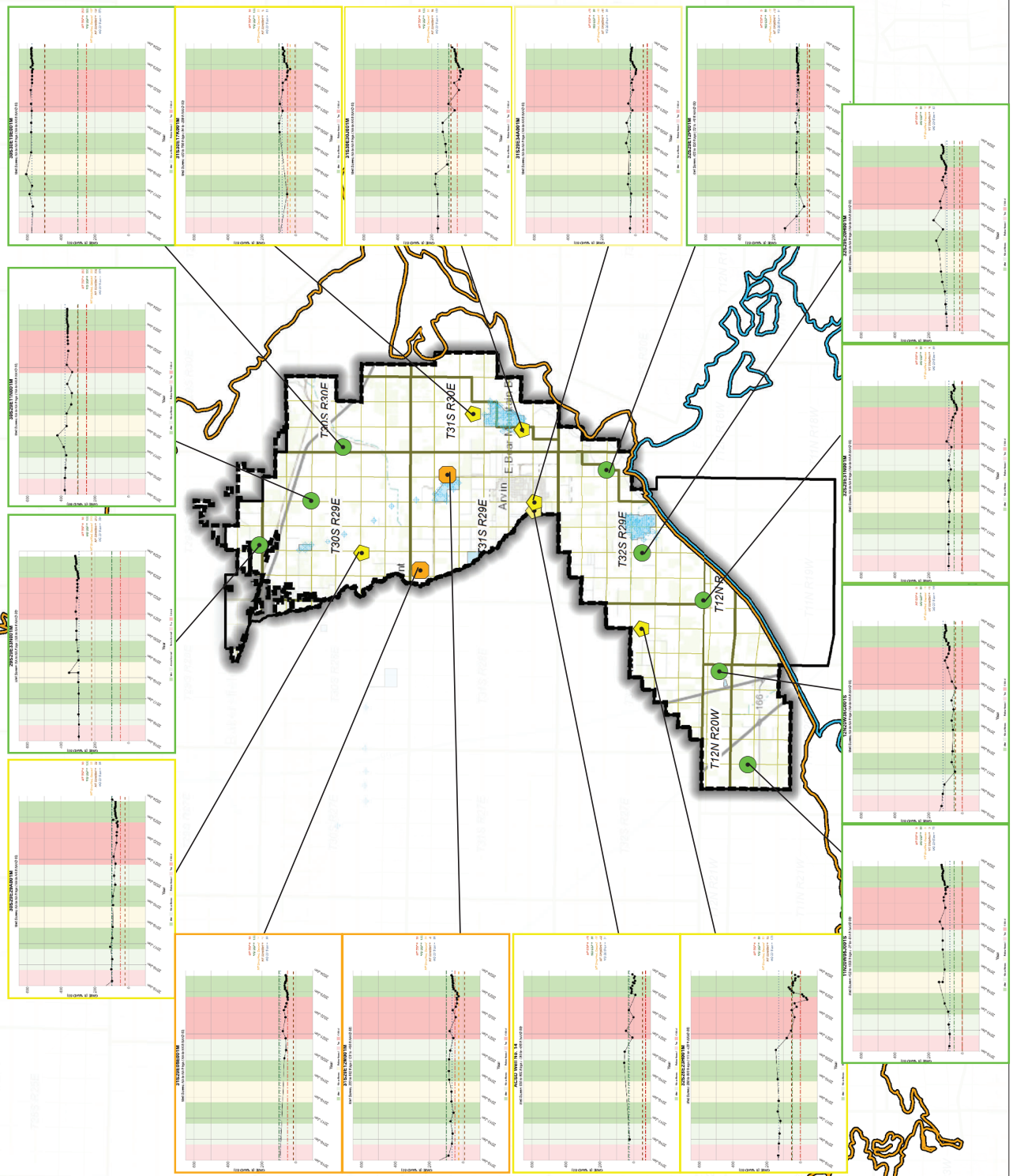
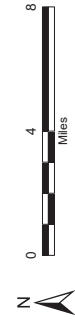
- Abbreviations**
- AEWSD = Arvin-Edison Water Storage District
 - DWR = California Department of Water Resources
 - ft msl = feet above mean sea level
 - GWE = groundwater elevation
 - MO = measurable objective
 - MT = minimum threshold
 - RMW = Representative Monitoring Well

Notes

1. All locations are approximate.
2. Groundwater elevations are in feet mean sea level.
3. Undesirable Results are deemed to occur if groundwater levels in 40% or more (7 or more) RMWs are below their respective MT for 4 consecutive bi-annual measurements (Spring and Fall).
4. All RMW status based on October 2023 measurements.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 November 2023.
2. Water level information obtained from AEWSD.



DRAFT

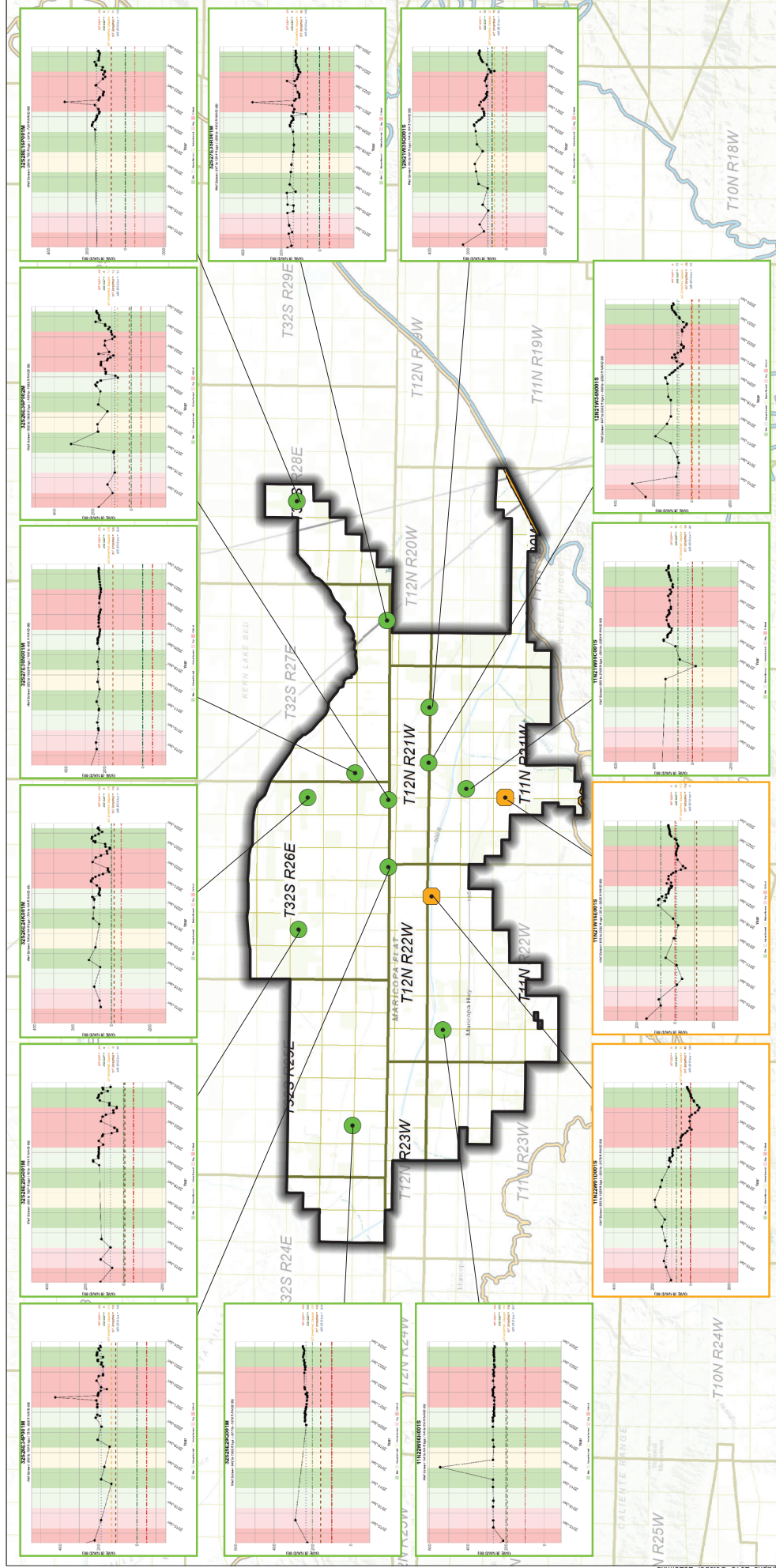
**Hydrographs in Representative Monitoring Wells
(Jan 2015 - October 2023)**

Arvin-Edison Water Storage District
Kern County, CA
October 2023
C20055.01



Figure 4

INTERIM FIGURE - FOR INFORMATIONAL PURPOSES ONLY



Legend

- Water Level Above MO (12 or 66%)
- Water Level Between MO and MT but Closer to MT (2 or 14%)
- Water Level Below MT (2 or 14%)
- Wheeler Ridge-Maricopa GSA
- Groundwater Subbasin
- Kern County (DWR 5-022.14)
- White Wolf (DWR 5-022.18)

Notes

- All locations are approximate.
- Groundwater elevations are in feet mean sea level.
- Undesirable Results are deemed to occur if groundwater levels in 40% or more (6 or more) RMWs are below their respective MT for 4 consecutive bi-annual measurements (Spring and Fall).
- All RMW status based on September 2023 measurements.

Abbreviations

- DWR = California Department of Water Resources
- ft msl = feet above mean sea level
- GSA = Groundwater Sustainability Agency
- MO = Measurable Objective
- MT = Minimum Threshold
- RMW = Representative Monitoring Well
- WRMWS = Wheeler Ridge-Maricopa Water Storage District

Hydrographs in Representative Monitoring Wells (January 2015 - October 2023)

Wheeler Ridge-Maricopa Water Storage District
Kern County, CA
October 2023
B70103.01

Figure 5

INTERIM FIGURE - FOR INFORMATIONAL PURPOSES ONLY



October 18, 2023

Kristin Pittack
Kern Subbasin Plan Manager
via email: kpittack@rinconconsultants.com

SCOPE OF WORK AND BUDGET FOR GSP DEVELOPMENT AND ONGOING SUBCOMMITTEE WORK

At the September 25, 2023, the Kern Subbasin Coordination Committee (CC) meeting, there was general consensus for developing a single Groundwater Sustainability Plan (GSP) format. A recommended format was developed, and members of the Technical Working Group (TWG) have volunteered lead authorship, support, and peer review for Subbasin-wide text in each chapter. This memo outlines the workflow and recommended review process for GSP development.

SCOPE OF SERVICES

GSP Format

Significant differences in the proposed GSP format – compared against previous submittals – is the single GSP format will read as if it were written by a single author. The objective is to demonstrate a coordinated and collaborative approach to addressing deficiencies using common methodologies to setting Sustainable Management Criteria (SMCs) and Undesirable Results (URs). To meet the Department of Water Resources (DWR) recommendation for a “well-explained Plan that will be implemented in a coordinated manner,” a set of organizing principals/themes have been developed and will be used throughout the Plan to employ a storytelling approach to explain how the Subbasin will achieve sustainability by 2040 (Kern Subbasin Inadequate Determination Letter, pg. 6, para. 1).

Subcommittees were formed to address deficiencies identified in the Incomplete and Inadequate determination letters. Additionally, since DWR will not require Inadequate basins to submit a periodic evaluation (5-year update) by January 2025, the TWG intends to address comments DWR and State Water Resources Control Board (State Board) made to neighboring Subbasins, and to fill data gaps – to the extent possible – called out in the 2020/22 GSPs (DWR, Periodic Evaluation Requirements for Inadequate Basins, May 2023).

Approach to Writing the GSP

To the extent possible, data and text from existing GSPs will be synthesized into each chapter. TWG members are asked to upload the Word format of the GSP area they represent to support this effort. It is acknowledged that there are several sections of the GSP that do not require significant attention/revisions. These sections will be completed by synthesizing text from the existing GSPs, or using text from one peer reviewed plan that the Subbasin agrees is most applicable/appropriate. For example:

- **Section 5. Description of the Plan Area** will be synthesized from existing plans.

- **Section 8.8. Interconnected Surface Water Systems** is anticipated to predominately be a copy/paste from the Olcese GSP.

To support consistency in writing styles, terminology, and use of acronyms and references, a style guide with definitions of common terminology will be developed for the TWG prior to drafting Sections. Examples of terminology consistency are:

- Will acronyms be spelled out at the beginning of each chapter, or its first use only?
- Will the Kern County Subbasin be referenced as KCS, Kern Subbasin, or the Subbasin?
- Will Management Areas be defined as GSA Boundary, Jurisdictional Boundary, or by land use type? How will we consistently label these different areas that are referenced throughout the different GSPs.

Working through minor issues like style and consistent terminology is expected to make the review and editing process easier and contribute to stylistic consistency. Other issues that need to be addressed with several different consulting firms preparing sections of the GSP are developing a common template for figures and creation of a Kern Subbasin logo to be used in these templates rather than a firm logo.

The TWGs six subcommittees are working in parallel to develop common data and methodologies for Subbasin-wide SMCs and/or URs. Since these are critical components of GSP development and SGMA implementation, these sections require thorough attention and engaged feedback from Managers and the CC. Due to the complexity of these topics, subcommittees will draft the GSP chapter content in advance of the GSP development schedule and will present it to the CC and Managers as the technical work is completed. The intention is to allow the Managers and CC more time to evaluate impacts to their area and provide feedback prior to the short review schedule for the GSP Chapters. This process applies to the following Sections:

1. SMCs and URs for Groundwater Levels, Subsidence, and Water Quality
2. Well Mitigation Program
3. Projects & Management Actions
4. Monitoring Network

The TWG has agreed upon a GSP outline that addresses key issues of the Subbasin and allows for a single GSP format that succinctly characterizes the Subbasin, including some of its unique geologic difference. The outline and approach to writing the GSP were developed with considerations for the recommended GSP structure from SWRCB staff feedback during the June 23 meeting. Comments noted during that meeting include:

- Staff were highly critical that Kern plans are overly complicated; the first submittal was ~30k pages; and redline edits were ~13k pages.
- Review duration will be a function of plan length and complexity. If the Subbasin wants the revised Plans reviewed before the public hearing, they need to be succinct, nearly identical, and easy to read.

- Emphasized strong preference for a single plan, and that if the Plan looks complex and is hard for staff to understand, “we’re going to assume its uncoordinated and inadequate” (Tina Leahy, June 23 meeting).
- SWRCB staff also commented that PMAs should include demand reduction as “Plan A” and Projects as “Plan B”.
- Legal team members recommended a very coordinated series of plans that all read exactly the same except for a small section at the end of each chapter that discusses local specifics. A staff member recommended explaining what is managed differently to achieve sustainability for local beneficial users, not why an area is different.

A set of themes – or organizing principles – that address deficiencies throughout the Plan will be introduced in the first Subbasin-specific sections. These organizing principles will be touched on at key points throughout the Plan to succinctly emphasize how the Subbasin will achieve sustainability. The following points explain themes/organizing principles and where they are first introduced.

1. **Coordination:** clear description of the Subbasin-wide efforts to coordinate the GSPs and SGMA implementation will be introduced in the *Introduction Section 1.2 Summary of Major Plan Updates*.
2. **5 Areas of the Subbasin:** This theme will be used to tell a story of the Subbasin geologic characteristics and explain the differences in each area. Dividing the Subbasin into 5 geographically defined areas that are named and discussed consistently through GSP, which should make it easy for State Board staff to interpret and enable Management Areas to succinctly describe why their management approach is appropriate to their area. The five areas will be described as Western Fold Belt, Eastern Basin Margin, Kern Fan, Northern Subbasin (North of Kern Fan), and Southern Subbasin (South of Kern Fan). Refer to Appendix B, Geographic Areas of the Kern Subbasin. *Description of the Plan Area, Section 5.2, Geological Areas of the Subbasin*.
3. **Subbasin Banking Programs.** Introduces Kern’s history of banking surface water, explains the different programs (banking, conjunctive use, in-lieu), how they operate, and the importance of these programs to sustainable groundwater management. *Description of the Plan Area, Section 5.4, Groundwater Banking*.
4. **Demand Management:** Focuses on a consistent message regarding overdraft conditions and addresses SWRCB staff comment “Plan A should be a demand reduction program while the GSAs work on Plan B, which is to increase supply” (SWRCB meeting 06/23/23). The proposed GSP provides a section for each Management Area to address the demand management and associated respective paths to sustainability. *Description of the Plan Area, Section 5.5, Water Resources Monitoring and Management Programs*.
5. **Beneficial Uses/Users:** Describes the stakeholders in the Subbasin, how GSAs are working collaboratively to avoid impacts to domestic and small community wells, and how to holistically address drinking water issues in the Subbasin through the Well Mitigation Program. *Introduction Section 1.2 Summary of Major Plan Updates*.

SCHEDULE AND WORKFLOW

The Next Steps Memo (September 1, 2023) provided an outline for subcommittee work that will be presented to the CC weekly: it is anticipated that feedback and direction will be provided to the TWG in response to the work presented. Subcommittee presentations are scheduled from October 2, 2023, through March 15, 2024. As the CC reaches consensus on subcommittee recommendations for SMCs and URs, the technical leads will prepare a preliminary draft chapter, which will then be incorporated into the draft GSP. Managers and CC will have another opportunity to review how comments and edits were addressed during the draft GSP review period. Subcommittees will share their preliminary drafts with the TWG for stakeholder/peer review, then finalize the chapters for discussion during the Managers meeting, then submit to the CC for review and comment.

The CC will begin reviewing and commenting on GSP chapters each week from December 15 through April 22, 2024. There will be overlapping deliverables between subcommittee preliminary drafts and GSP chapters. CC comments will be addressed by the subcommittees and/or TWG, then chapters will be finalized and compiled into the Subbasin Draft GSP. The compiled final draft will be provided for final review the week of April 22, 2024. Final comments will be due back to the TWG by April 26. The Public Draft GSP(s) is proposed to be released by May 1, 2024.

GSP development is intended to be an iterative process, led by TWG authors with engagement Managers during the weekly Managers meetings to support a more efficient process. Figure 1 presents a flow chart of the review process. A schedule with review dates by chapter is presented in Table 3.

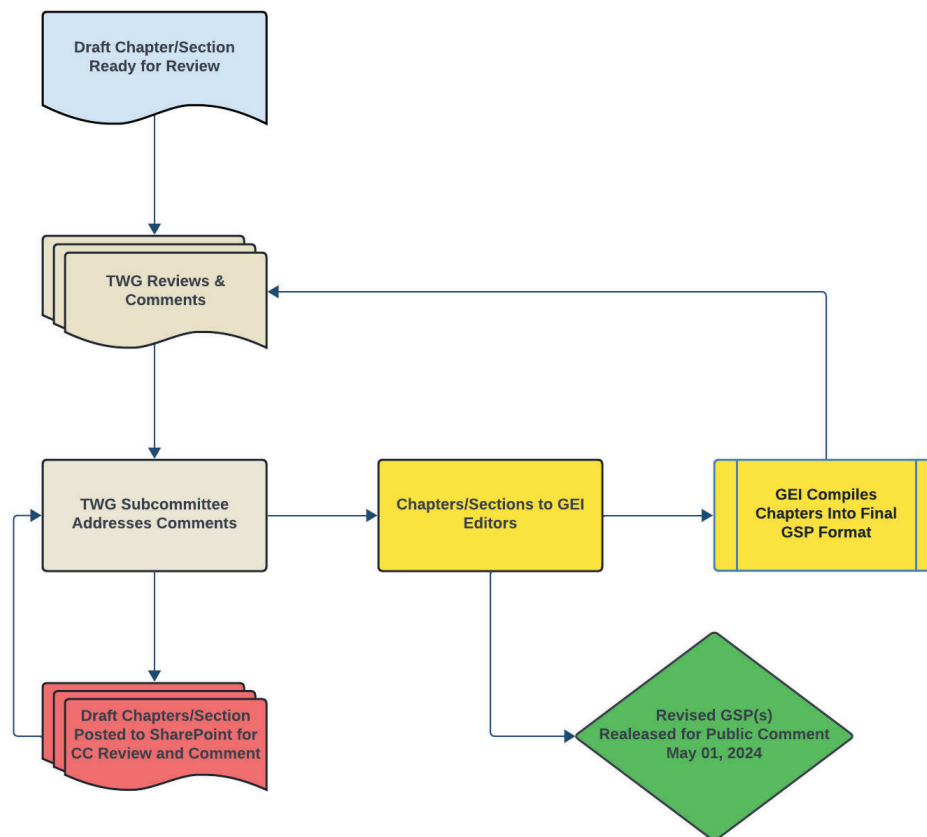


Figure 1. Workflow for GSP Review

BUDGET

The TWG discussed the GSP approach, division of labor, and how to differentiate work for the Subbasin and client. Based on consensus for the workflow, proposed GSP outline for Subbasin common chapters, and releasing a public draft on May 1, each consulting firm provided the estimated budget presented in Table 1. Labor costs for district managers who work in the TWG is presented in Table 2. Proposed budgets include Subbasin work as of October 1, 2023, through June 2024. The following assumptions were applied:

1. Subbasin Work is defined as subcommittee efforts focused on developing common data and methodologies for the GSP. Work performed for the Subcommittees, presented to the CC and State Water Board, and ultimately written into the GSP will be billed as a Subbasin effort. Additionally, subcommittee members will each serve as peer reviewers to the sections related to their subcommittees.
2. Client work is defined as participation in TWG meetings, reviewing and providing feedback on GSP sections as a stakeholder (not an author or subcommittee peer reviewer), providing GSA-specific data, attendance at CC or SWRCB meetings, and other forms of stakeholder participation.

Deliverables

- Single GSP for the Subbasin or common GSP section/chapter language that each GSA can add area-specific information, consistent with one of the four options presented.

Assumptions

- To complete work within the estimated budget and timeframe, it is important that the CC agree to work (edit/comment) on the GSP chapters using a shared portal (SharePoint or Teams channel) so that comments are made in a single document.
- GEI has budgeted for administrative support to provide a single point of contact assigned to managing the shared portal, maintain version control of the GSP chapters, technical references, editing/formatting, and general organization/management of GSP materials.
- GEI and EKI will collaborate on marketing support for developing Subbasin-wide communications materials and can support with coordinating and organizing local publications and/or outreach events.

Table 1. Consultant Budget Estimates for GSP Development

Firm	Lead Author of Sections & Subcommittee(s)	Proposed Budget
Todd Groundwater	Basin Setting, Water Budgets	235,000
	GWs and P/MA Subcommittees, Author GSP Plan Area, Basin Setting & HCM, GW Conditions, Water Budgets and Sustainable Yield	
EKI	SMCs and URs	280,000
	Lead on Groundwater Level SMCs and URs, Author GSP Executive Summary, Introduction, SMCs including URs, MTs, MOs, and Interim Milestones, and support with developing communications materials	
GEI Consultants	Coordination, GSP Authorship, Well Mitigation	315,348
	Pre-GSP Stylistic Support, Beneficial Uses and Users, Groundwater Quality, Groundwater Dependent Ecosystems, Water Budget Information, Management Areas, Plan Implementation, and Administrative Coordination & Marketing Supporting	
Luhdorff & Scalmanini	Monitoring Network	113,328
	Unified approach to Monitoring Network and identify/incorporate RMWs for each SMC	
Aquilogic	CA Aqueduct Subsidence	65,000
	Subsidence Lead for CA Aqueduct & SMCs, GWL SMCs subcommittee, GSP authorship and technical review	
Intera	FKC Subsidence	85,400
	Subsidence Lead for FKC & SMCs, GWL SMCs subcommittee, GSP authorship and technical review	
Woodard & Curran	Banking Programs	55,600
Consultants Estimated Total		\$1,149,676

Table 2. District Labor Costs for GSP Development

Firm	Lead Author of Sections & Subcommittee(s)	Estimated Cost
Dan Bartel	PMA Lead, Well Mitigation Support	35,000
Jon Parker	Groundwater Banking Lead, Well Mitigation Support	0
Vanessa Yap	Subsidence at FKC, Monitoring Network	26,737
District Labor Total		\$61,737

Table 3. Review Schedule for GSP Development

Chapters/Sections	Draft to TWG	Draft to CC	CC Review Complete
Chapters 1 - 4: Purpose, Sustainability Goal, Agency Information, GSP Organization	12/04/23	12/18/23	12/29/23
Chapter 5: Plan Area, Introduce Organizing Themes, Land Use Elements, Communications	12/18/23	01/08/24	01/22/24
Chapters 6 - 8: Basin Setting, Hydrogeological Conceptual Model, Groundwater Conditions	01/08/24	01/24/24	02/16/24
Chapter 9: Water Budget	01/22/24	02/16/24	03/01/24
Chapter 10: Management Areas	02/19/24	02/28/24	03/08/24
Chapters 11 - 15: SMCs	03/04/24	03/13/24	03/22/24
Chapters 16 - 17: Monitoring Network and PMAs	03/11/24	03/20/24	03/25/24
Chapter 18: Plan Area	03/18/24	03/27/24	04/03/24
Executive Summary	04/01/24	04/10/24	04/17/24
Final Draft	04/22/24		04/26/24
Release Public Draft, Submit to State Board and DWR			Wednesday, May 1, 2024

Proposed Replacement for Arvin GSA RMW-012 (32S29E20H001M)

State Well ID: **32S29E20L001M**

Parcel: 446-042-19

Landowner: Sapphire Prop Holdings (operated by Grimmway)

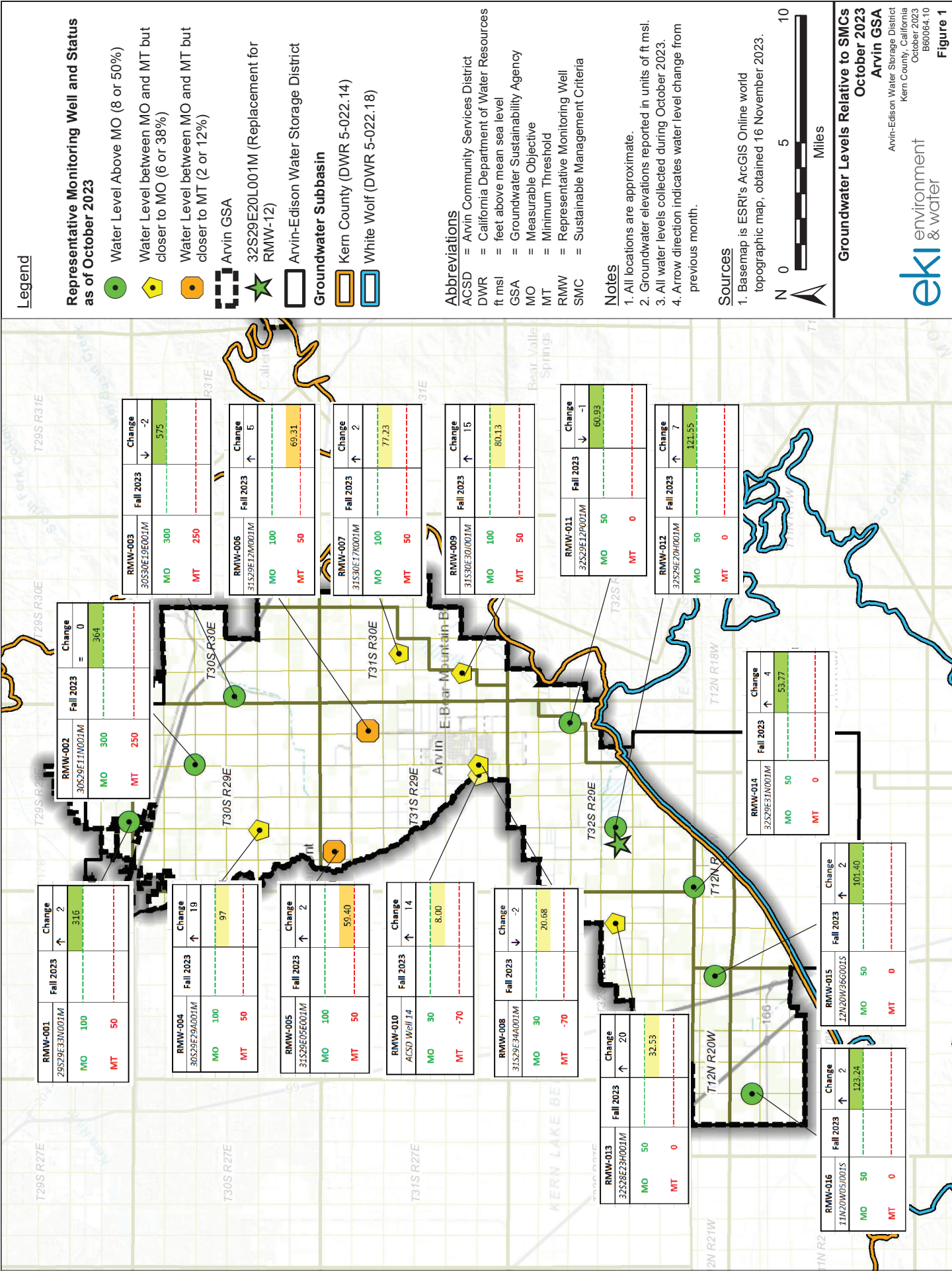
Total Well Depth: 751 feet below ground surface (ft bgs)

Top of Screen: 300 ft bgs

Bottom of Screen: 734 ft bgs (estimated)

Considerations for RMW Replacement:

- Any well used as a SGMA representative monitoring well **needs to have known construction details.**
 - **Owner has provided total depth and top of screen, and a decent estimate of bottom of screen depth (i.e., ~734 ft bgs based on encountered depth to fill).**
 - **There is no available Well Completion Report**
 - **Video-log recently completed for existing RMW-12 indicated a shallower top of screen (~184 ft bgs). A casing failure was observed at ~368 ft bgs in this well.**
- The location and distribution of RMWs **ideally gives good consistent spacing and coverage**, without large gap areas or too much clustering.
 - **This well is located approximately 0.55 miles from existing RMW-12 that it would replace, and therefore provides nearly the same spatial network coverage.**
- RMWs should not be pumping wells; **dedicated monitoring wells are highly preferable.**
 - **This well has already been converted to a monitoring well.**
- A **long historical record of water level data is preferred**, but not 100% necessary
 - **This well is actively monitored by AEWSD and has historical bi-annual spring and fall water level data from spring 2011 through fall 2023**
- RMWs should have **access secured in perpetuity.**
 - **This well is operated by the same entity as the well it would replace, so access is not anticipated to be an issue.**



Legend

Representative Monitoring Well and Status as of October 2023

- Water Level Above MO (8 or 50%)
- ⬠ Water Level between MO and MT but closer to MO (6 or 38%)
- ⬠ Water Level between MO and MT but closer to MT (2 or 12%)
- Arvin GSA
- ★ 32S29E20L001M (Replacement for RMW-12)
- Arvin-Edison Water Storage District
- Groundwater Subbasin**
- Kern County (DWR 5-022.14)
- White Wolf (DWR 5-022.18)

Abbreviations

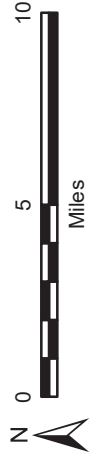
- ACSD = Arvin Community Services District
- DWR = California Department of Water Resources
- ft msl = feet above mean sea level
- GSA = Groundwater Sustainability Agency
- MO = Measurable Objective
- MT = Minimum Threshold
- RMW = Representative Monitoring Well
- SMC = Sustainable Management Criteria

Notes

1. All locations are approximate.
2. Groundwater elevations reported in units of ft msl.
3. All water levels collected during October 2023.
4. Arrow direction indicates water level change from previous month.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 16 November 2023.



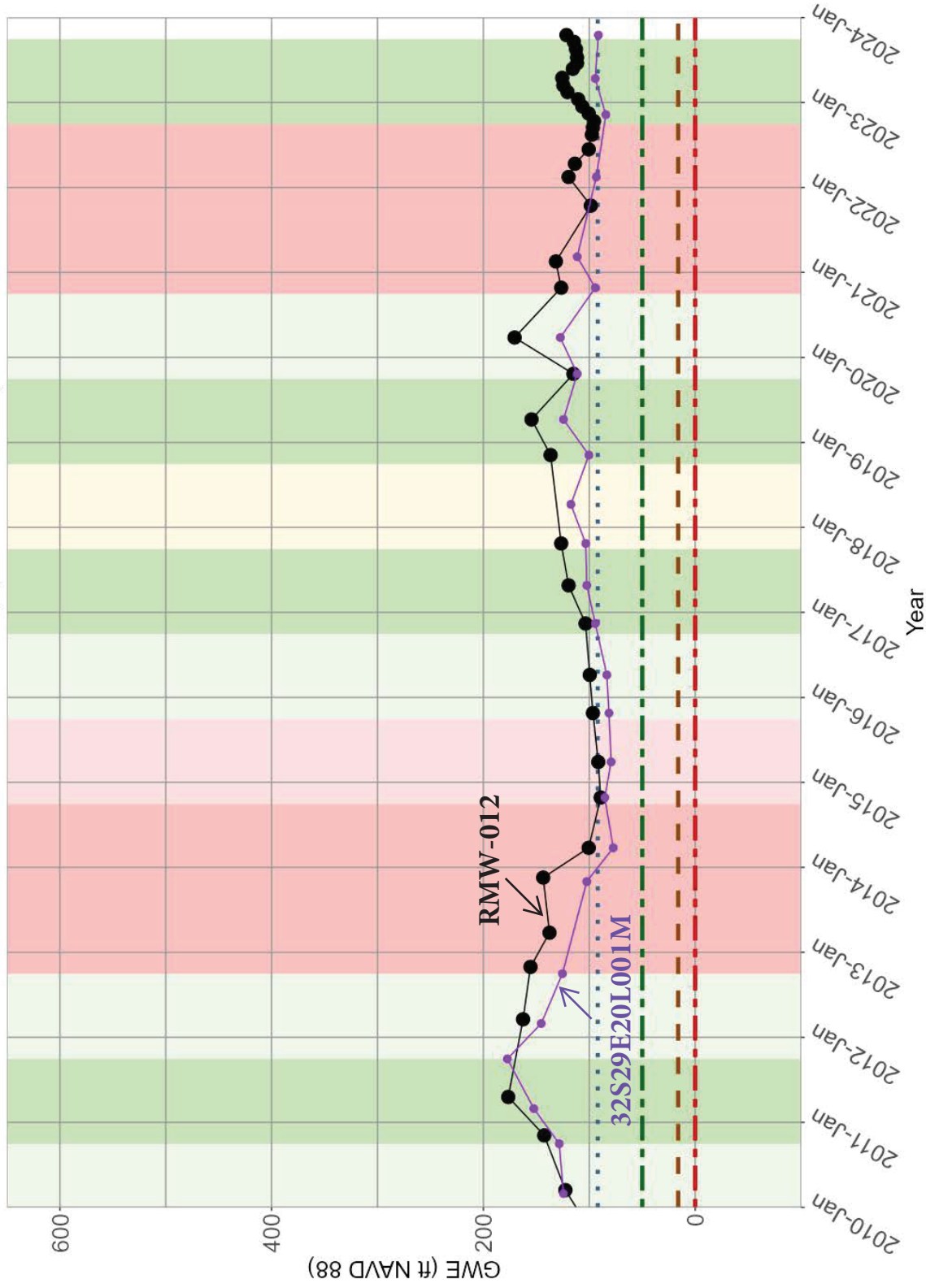
Groundwater Levels Relative to SMCs
October 2023
Arvin GSA
 Arvin-Edison Water Storage District
 Kern County, California
 October 2023
 B60064.10

Figure 1

INTERIM FIGURE - FOR INFORMATIONAL PURPOSES ONLY

32S29E20H001M

Well Screen: NA to NA ft bgs (NA to NA ft NAVD 88)



32S29E20L001MX
MT GSP = 0
MO GSP = 50
MT Simplified, Capped = 16
MT 2015 low = 92

