CGA/GGA Joint Technical Advisory Committee

Meeting Agenda

February 9, 2024 | 1:00 p.m.
122 Old Highway 99W, Maxwell, CA 95955

Alternate Meeting Locations:
4485 Spring Meadows Circle, Flagstaff, AZ 86001

Public input is welcome in person or via Microsoft Teams

Microsoft Teams meeting
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***** Indicates an Action Item

1. **Call to Order, Roll Call, and Introductions**
2. **Approval of Minutes** (pg. 3)
    a. ***December 1, 2023 CGA/GGA Joint TAC Meeting Minutes (GGA TAC)** (pg. 4)
    b. ***January 12, 2024 CGA/GGA Joint TAC Meeting Minutes (CGA TAC, GGA TAC)**
3. **Period of Public Comment**

    At this time, members of the public may address the Technical Advisory Committee (TAC) Members regarding items that are not on the agenda but are of relevance. The TACs may not act on items not on the agenda.

4. **Announcement of April 12, 2024 CGA/GGA Joint TAC meeting cancellation** (pg. 9)
5. **Water Year 2023 Annual Report** (45 minutes) (pg. 10)
6. **Colusa Subbasin Groundwater Sustainability Plan (GSP)** (90 minutes) (pg. 63)
    a. ***Discussion and potential recommendations to GSAs on projects and management actions.**
    b. ***Discussion and potential recommendation to GSAs on Groundwater Level Sustainable Management Criteria.**
    c. ***Discussion and potential recommendation to GSAs on monitoring network**

and basis of Sustainable Management Criteria for land subsidence.

7. **Member Reports and Comments**
8. **Next meeting**
9. **Adjourn**

Note: Times listed on the agenda are for estimation purposes only.

A complete agenda packet, including back-up information, is available for inspection during normal business hours at 1213 Market Street, Colusa, CA 95932 or 225 N. Tehama St., Willows, CA 95988. The full agenda packet can also be found on the CGA and GGA websites: Agendas and Minutes 2023 | Colusa Groundwater Authority (CGA)
https://www.countyofglenn.net/dept/planning-community-development-services/water-resources/glenn-groundwater-authority/gga
In compliance with the Americans with Disability Act, if you require special accommodation to participate in this meeting, please contact the Carol Thomas Keefer, CGA Program Manager, at 650-587-7300 X17 or Glenn County Water Resources Division at 530-934-6540 prior to any meeting and arrangements will be made to accommodate you.

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 2. Approval of Minutes

Date: February 9, 2024

Background

The December 1, 2023 CGA/GGA Joint TAC Meeting minutes were approved by the CGA TAC on January 12, 2024. The GGA TAC was unable to take action due to lack of a quorum.

The January 12, 2024 CGA/GGA Joint TAC Meeting minutes are being prepared for review and will be distributed under separate cover.

Recommendation

GGA Action Only: Approve the December 1, 2023 CGA/GGA Joint TAC Meeting minutes.

CGA and GGA Action: Approve the January 12, 2024 CGA/GGA Joint TAC Meeting minutes.

Attachments

- December 1, 2023 CGA/GGA Joint TAC Meeting minutes (pg. 4)
- January 12, 2024 CGA/GGA Joint TAC Meeting minutes (will be distributed under separate cover)

COLUSA SUBBASIN

CGA/GGA Joint Technical Advisory Committee

MEETING MINUTES
December 1, 2023 | 1:00 p.m.

In Person Meeting Locations:

122 Old Highway 99W, Maxwell, CA 95955
4485 Spring Meadows Circle, Flagstaff, AZ 86001

Public participation was also available via Teams.

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1. Call to Order, Roll Call, and Introductions

Darrin Williams called the meeting to order at 1:13 p.m.

In Attendance:
Committee Members:
GGA: Shasta Banchio, Donald Bills, Emil Cavagnolo, Mark Lohse

CGA: Deke Dormer, Jim Wallace, Darrin Williams, Bill Vanderwaal (arrived 2:28)

Others in Attendance: Lisa Hunter (GGA Staff), Carol Thomas-Keefer and Denise Carter (CGA Staff), Katherine Klug, Jeff Davids and Grant Davids (Davids Engineering), Brandon Davison (DWR), Bill Davis, Pete Dennehy, Ryan Fulton, Casey Gudel, Arne Gustafson, Matt Hansen, Bruce Houdesheldt, Gene K. Lee, Christy Scofield, Susan Meeker

2. Approval of Minutes

a. ***May 12, 2023 CGA/GGA Joint TAC Meeting Minutes (GGA TAC Only)**
b. ***August 11, 2023 CGA/GGA Joint TAC Meeting Minutes (CGA TAC, GGA TAC)**

On motion made by Mr. Lohse, seconded by Mr. Cavagnolo, the GGA TAC approved the May 12, 2023 CGA/GGA Joint TAC Meeting Minutes on the following roll call vote:

AYES: Banchio, Bills, Cavagnolo, Lohse
NOES: None
ABSTAIN: None
ABSENT: Beynon, Deadmond

On motion made by Mr. Lohse, seconded by Mr. Cavagnolo, the GGA TAC approved the August 11, 2023 CGA/GGA Joint TAC Meeting Minutes on the following roll call vote:

AYES: Banchio, Bills, Cavagnolo, Lohse
NOES: None

ABSTAIN: None
ABSENT: Beynon, Deadmond

On motion made by Mr. Wallace, seconded by Mr. Dormer, the CGA TAC approved the August 11, 2023 CGA/GGA Joint TAC Meeting Minutes on the following roll call vote:

AYES: Dormer, Wallace, Williams
NOES: None
ABSTAIN: None
ABSENT: Vanderwaal

3. Period of Public Comment
None.

4. *Approval of 2024 Meeting Schedule
Ms. Lisa Hunter presented the draft meeting schedule for the Joint CGA/GGA Technical Advisory Committee for 2024. Ms. Carol Thomas-Keefer added that the committee may wish to consider adding some dates, beginning in January, in recognition of the effort that will be needed to complete the required revisions to the Groundwater Sustainability Plan (GSP) by April. Mr. Jim Wallace recommended adding the meeting dates of January 12 and April 12 to ensure that the Joint TAC would meet monthly to address work on the GSP revisions.

On motion made by Mr. Wallace and seconded by Mr. Dormer, the CGA TAC approved the 2024 Joint TAC meeting schedule with the addition of the meeting dates of January 12 and April 12, 2024.

AYES: Dormer, Wallace, Williams
NOES: None
ABTAIN: None
ABSENT: Vanderwaal

On motion made by Ms. Banchio and seconded by Mr. Cavagnolo, the GGA TAC approved the 2024 Joint TAC meeting schedule with the addition of the meeting dates of January 12 and April 12, 2024.

AYES: Banchio, Bills, Cavagnolo, Lohse
NOES: None
ABSTAIN: None
ABSENT: Beynon, Deadmond

5. Presentation: United States Bureau of Reclamation WaterSMART Grants
Mr. Gene K. Lee of the U.S. Bureau of Reclamation provided an informative presentation on the various types of WaterSMART grants available, including details on the various grant programs, types of qualifying projects, amounts of grant funding available and non-federal matching funds required, and timelines for submitting applications. Of the various types of WaterSMART grant programs, Mr. Lee stated he thought

the Drought Response Program and Cooperative Watershed Management Program would be most applicable to the Colusa Subbasin GSP projects. He provided a number of tips for preparing a successful application and noted that the most successful applications are those with projects that meet the goals of the program. Mr. Lee also advised the GSAs to begin work early on writing grant applications. Questions followed regarding environmental compliance assistance for grant projects. Mr. Lee also noted that about 25 percent of new WaterSMART applications received funding annually.

6. Discussion: Colusa Subbasin Groundwater Sustainability Plan Incomplete Determination

Ms. Thomas-Keefer reviewed DWR's recent determination of "Incomplete" for the Colusa Subbasin GSP, noting that DWR has identified the following specific deficiencies that must be addressed in a revised GSP. The recommended corrective actions include:

a) Re-evaluation of the overdraft conditions in the Subbasin using the most recent data, and include projects and management actions to mitigate projected overdraft;
b) Providing a more detailed explanation and justification of the sustainable management criteria for groundwater levels, particularly minimum thresholds and measurable objectives, and quantify the effects of those criteria on beneficial uses; and
c) Providing a more detailed explanation and justification of sustainable management criteria, monitoring method, and projects and management actions related to land subsidence.

Ms. Thomas-Keefer added that the revised GSP must be submitted by April 23, 2024. In preparation, CGA and GGA staff have requested a proposal from Davids Engineering to prepare the GSP revisions. The CGA board met earlier this week and approved the task order agreement as well as the Phase 1 task, which includes obtaining feedback from the GSAs to guide changes to management criteria. The GGA board will consider this agreement at its upcoming meeting.

Chair Williams then expressed frustration with the requirement to reevaluate overdraft conditions based on most recent data rather than historic data, since recent data shows a narrow snapshot of water use and conditions. Mr. Jeff Davids, Davids Engineering, added clarification, noting that DWR is considering the overall change in storage along with continuing evidence of subsidence in key areas, and is requiring the GSAs to better identify how those issues will be addressed and mitigated. Discussion followed regarding DWR's comments and expectations in the revisions. In response to Chair Williams' question, Mr. Davids stated that his firm is assisting various other basins with "Incomplete" or "Inadequate" determinations, include Chowchilla, Madera, Kern Groundwater Authority, and several other local subbasins in coordination with Luhdorff & Scalmanini. He noted that domestic well mitigation and demand management are common issues that the GSPs must address. Ms. Katie Klug, Davids Engineering, added that meetings with DWR staff will assist CGA and GGA in understanding the extent to which the GSAs must address the deficiencies and what timeframes will be acceptable for implementing certain management criteria. She also stated that, in working with various other basins that have received "Inadequate" determinations, she believes that achieving DWR's approval and remaining within DWR's oversight will ultimately be less stringent than having the State Water Resources Control Board assume control.

Additional discussion followed regarding domestic well mitigation, with questions regarding depth, age and condition of impacted wells, appropriate percentage of wells that could be impacted under specific

minimum thresholds, and level of required mitigation. Ms. Klug stated that this was a common concern in other GSPs under revision, and the matter of domestic well mitigation should be further discussed with DWR in developing the Plan revisions. Ms. Hunter suggested that any questions for DWR from TAC members should be addressed to her or to Ms. Thomas-Keefer so they could be included in those discussions. Several meetings with DWR were expected, probably on a monthly basis between December and March or April. The Joint TAC would also continue to review the proposed GSP revisions and provide feedback and recommendations to the GSA boards and to Davids Engineering over the next few months.

7. Discussion: Prioritization of Technical Tasks through Groundwater Sustainability Plan five-year update

Ms. Hunter reported that the purpose of this agenda item was to continue the review that the committee began in May to assist the GSAs in prioritizing GSP implementation tasks; however, the TAC and the GSAs now have a new immediate focus in preparing the revisions to the GSP. Although many of the prioritized items will be required for compliance or will be changed or modified based on GSP revisions, Ms. Hunter recommended that this item be temporarily removed from the TAC agenda until the GSP has been updated and the prioritization of technical tasks can be re-evaluated. The committee concurred.

8. Update on Sustainable Groundwater Management Grant Application Feedback

Ms. Thomas-Keefer reported that the CGA and GGA chairs and staff met with DWR representatives to review the unsuccessful SGMA Round 2 Implementation grant application and received considerable feedback from DWR. Chair Williams stated that the meeting was lengthy and very informative, with DWR explaining various errors and omissions in the application, including use of an incorrect template and lack of appropriate maps and attachments. DWR also indicated that, just before the awards were made, the available grant funding was reduced by $69 million. Ultimately, DWR explained that the Colusa Subbasin project components were good, but errors and missing information reduced scores, and the grant process was so highly competitive that only the highest-scoring applications were successful.

Chair Williams also reported that DWR staff also underscored that the GSAs should work as best they could to update GSPs and remain under DWR's oversight, as State Board control would be much more stringent and potentially costly.

9. Update on Water Year 2023 Annual Report

Ms. Hunter reported that she and Ms. Thomas-Keefer are now meeting regularly with Davids Engineering on preparation of the 2023 Annual Report. Since the GSP work is being conducted at the same time, there is some common collection of data that will result in some cost savings. Ms. Hunter also added that DWR has released a new guidance document with a new template for annual reports, so the 2023 report will reflect this guidance and look somewhat different from the 2022 report.

10. Member Reports and Comments

Chair Williams reported that he has reviewed the 2023 California Water Plan update; he indicated that it is interesting reading. He also pointed out that there is minimal public participation in the local GSA board meetings, and he had looked into public outreach activities by other GSAs. He noted that some larger or more complicated basins had formed various committees or advisory groups to engage various community

stakeholder groups. Discussion followed regarding community engagement activities, and Ms. Denise Carter mentioned the potential for requesting outreach support through DWR's Facilitation Support Services. Ms. Hunter and Ms. Thomas-Keefer agreed that was an option, if the GSAs could identify the specific needs and assistance to request.

11. Next Meeting

The next meeting is scheduled for Friday, January 12, 2023.

12. Adjourn

The meeting was adjourned at 3:59 p.m.

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 4. Announcement of April 12, 2024 CGA/GGA Joint TAC meeting cancellation

Date: February 9, 2024

Background

The CGA/GGA Joint TAC approved the 2024 Meeting Schedule on December 1, 2023. Monthly meetings were expected to occur between January and April in order to provide timely input and recommendations on the Groundwater Sustainability Plan revisions. Reviewing the GSP revision schedule, it seems more prudent to hold a joint meeting of the CGA and GGA boards in mid-April rather than a CGA/GGA TAC meeting.

The April 12, 2024 CGA/GGA Joint TAC meeting is cancelled.

Recommendation

Information only.

Attachments

- None

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 5. Water Year 2023 Annual Report

Date: February 9, 2024

Background

The consultant team (Davids Engineering and Luhdorff & Scalmanini Consulting Engineers) has been working diligently to prepare the Colusa Subbasin 2023 Water Year Annual Report which is due April 1 , 2024.

The consultant team will provide a presentation to review the technical components of the report and receive feedback.

Recommendation

Hear presentation and provide feedback on the technical components of the Colusa Subbasin Water Year 2023 Annual Report.

Attachments

- Presentation (pg. 11)
- DRAFT Groundwater Storage Change Map (Spring 2022 to Spring 2023) (pg. 28)
- DRAFT Groundwater Elevation Contour Maps (Spring 2023 and Fall 2023) (pg. 29)
- DRAFT Subsidence Maps (Oct 2022 to Oct 2023, and Oct 2015 to Oct 2023) (pg. 31)
- DRAFT Table of Groundwater Level RMS Well Information and Measurements in 2023. (pg. 33)
- DRAFT Table of Groundwater Levels Relative to Sustainable Management Criteria at Groundwater Level RMS Wells. (pg. 36)
- DRAFT Groundwater Level Hydrographs at All Groundwater Level RMS Wells. (pg. 39)

DRAFT

CGA-GGA Joint TAC Meeting
DRAFT Annual Report Update

Water Year 2023 (Oct 2022 – Sept 2023)

Davids Engineering and LSCE

02/09/2024

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Luhdorff & Scalmanini Consulting Engineers

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Introductions

- Jeff Davids, PhD, PE (DE)
- Katie Klug, PhD (Davids Engineering or DE)
- Eddy Teasdale, PG, CHG (Luhdorff & Scalmanini or LSCE)
- Cab Esposito (LSCE)

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Agenda

- Overview
- Groundwater Conditions
- GSP Implementation Updates

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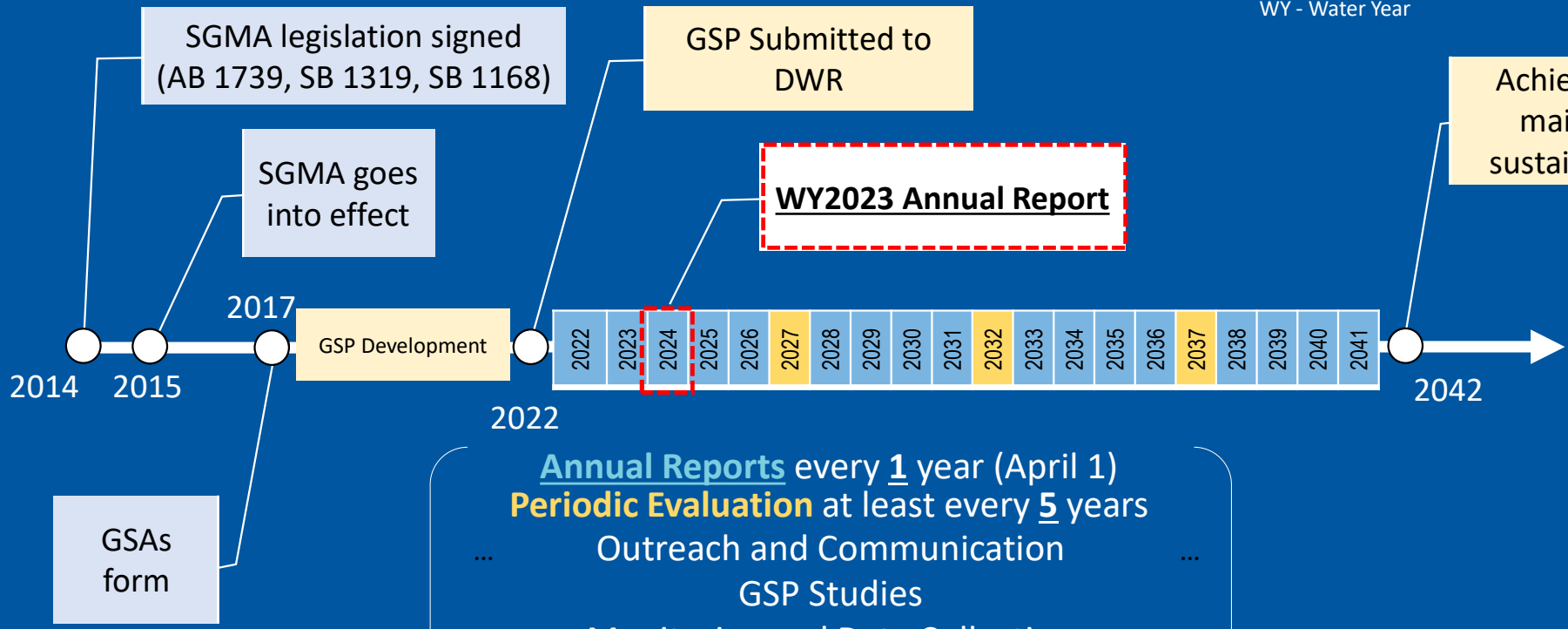
SGMA Implementation Timeline

Abbreviations:
AB - Assembly Bill
DWR - Department of Water Resources
GSA - Groundwater Sustainability Agency
GSP - Groundwater Sustainability Plan
SB - Senate Bill
SGMA - Sustainable Groundwater Management Act
WY - Water Year



Annual Reports every 1 year (April 1)
Periodic Evaluation at least every 5 years
... Outreach and Communication ...
GSP Studies
Monitoring and Data Collection
Projects and Management Actions

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Overview

- The **GSP is a dynamic planning document** that is guiding how groundwater will be managed over the next two decades (through 2042).
- GSP describes groundwater conditions and how groundwater management will avoid adverse impacts related to five sustainability indicators.
- GSP revisions are in progress (April 2024 deadline), effort is being coordinated with these Annual Report updates where possible.

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Annual Report Requirements (23 CCR §356.2)

- Updates on Groundwater Conditions
  - Groundwater Elevation (Hydrographs, Contour Maps)
  - Change in Groundwater Storage
- Water Supply and Water Use
  - Groundwater Extraction
  - Surface Water Supplies
  - Total Water Use
- Progress Toward Plan Implementation
  - Groundwater Conditions Related to Sustainable Management Criteria (SMC)
  - Projects and Management Actions

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Agenda

- Overview
- Groundwater Conditions
- GSP Implementation Updates

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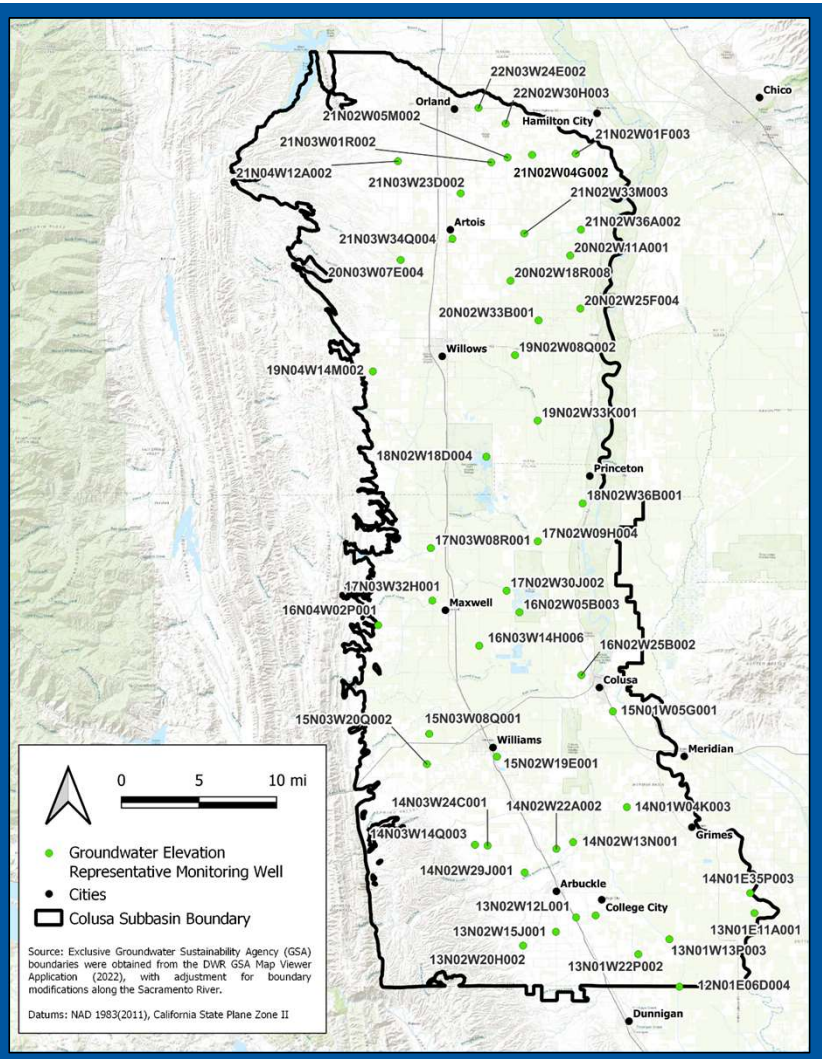
Groundwater Conditions

- Groundwater elevations (48 RMS* Wells)
  - Contour maps
  - Individual RMS well hydrographs
- Groundwater storage change
- Subsidence

*Representative Monitoring Sites



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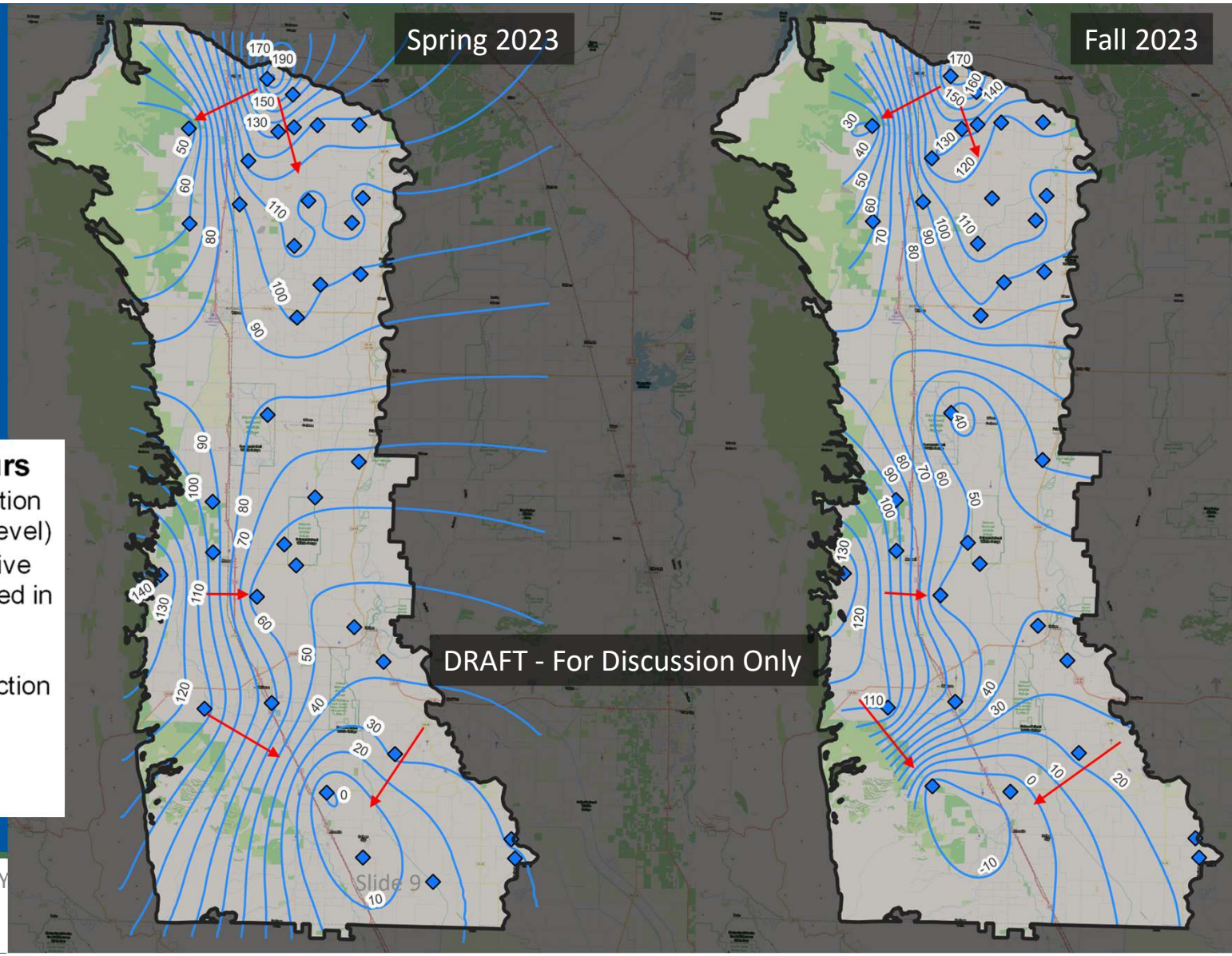
2023 Contours

- DRAFT for Discussion



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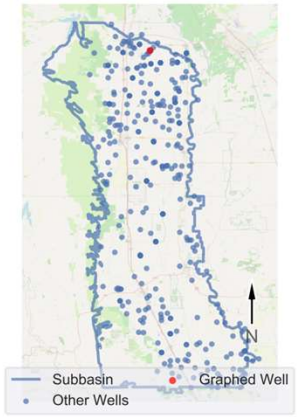
COLUSA Subbasin - State Well Number (SWN): 22N02W30H003M

Well Location Map



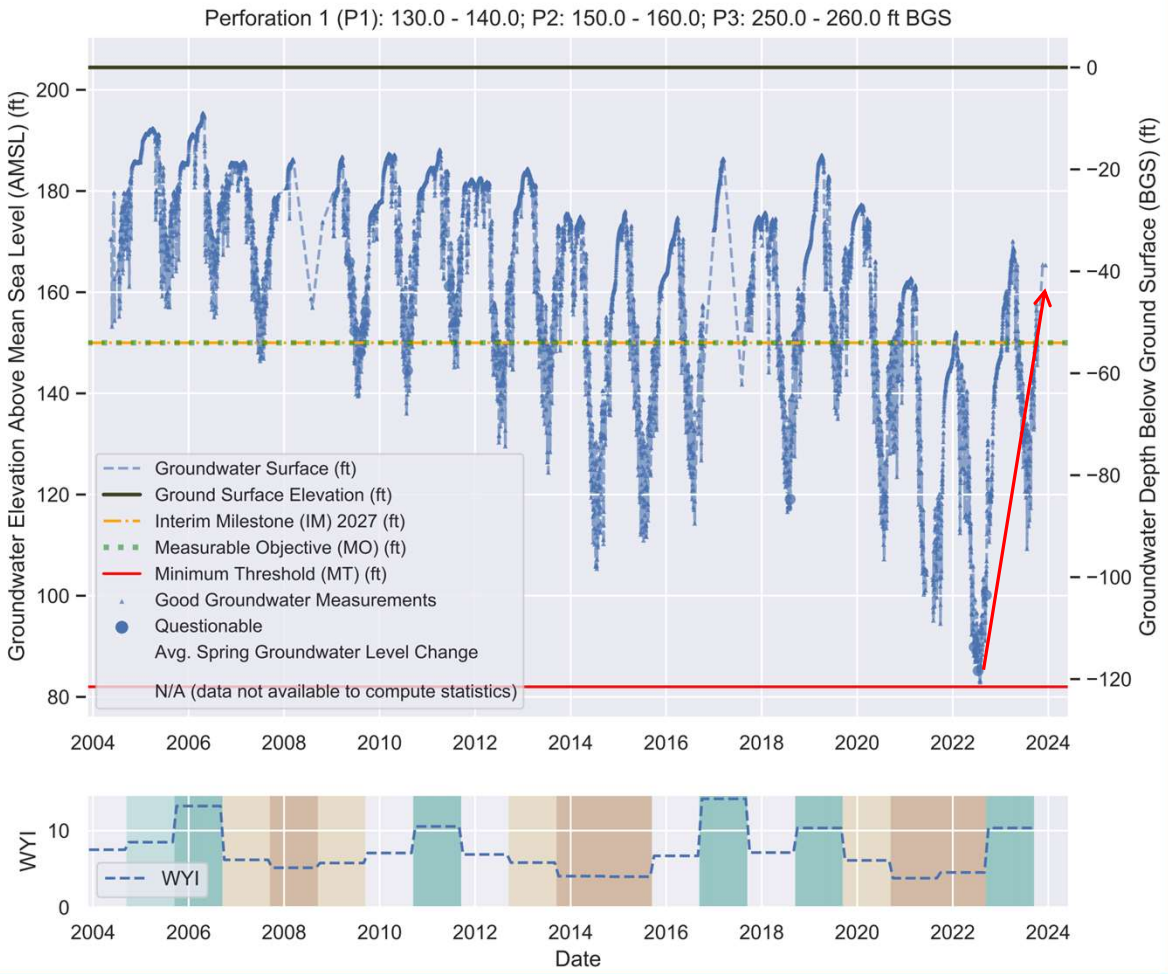
Sustainable Management Criteria:

IM (2027) = 150.0 ft AMSL
MO = 150.0 ft AMSL
MT = 82.0 ft AMSL

Minimum Threshold is 50% of Range Below Historical.

Sacramento Valley Water Year Index (WYI) shown on lower right. Meaning of colors defined below.

- Wet (W)
- Above Normal (AN)
- Below Normal (BN)
- Dry (D)
- Critical (C)



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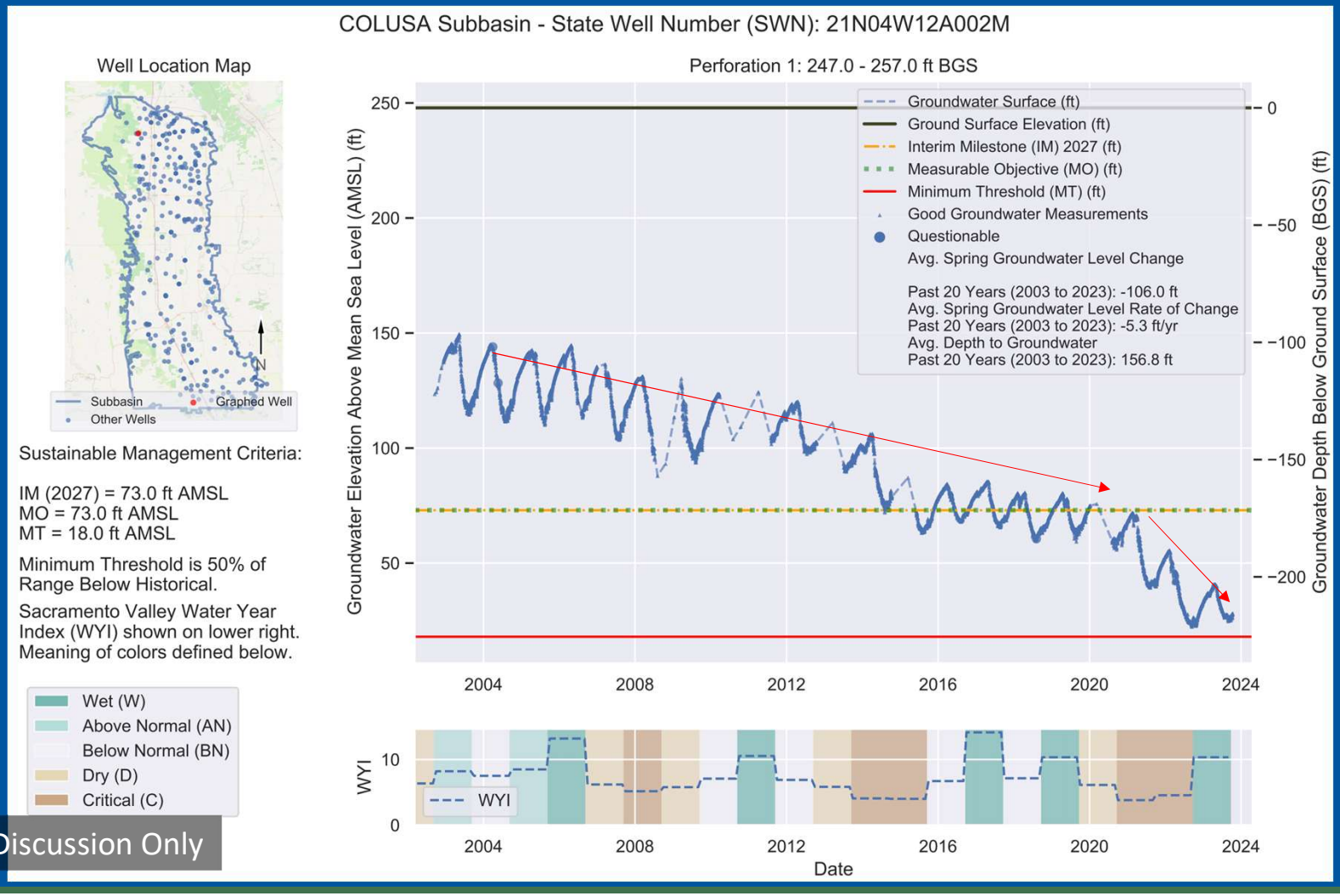

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Change in Groundwater Storage

- Estimated from GW Levels at RMS Wells
  - Measured spring-to-spring change in GW level
  - Calculated change in storage in surrounding polygon based on GW level and aquifer parameter.
  - Annual change in storage calculated for each polygon and summed across the Subbasin (1967-2023)
  - Cumulative change in storage calculated Subbasin-wide for 1967-2023.

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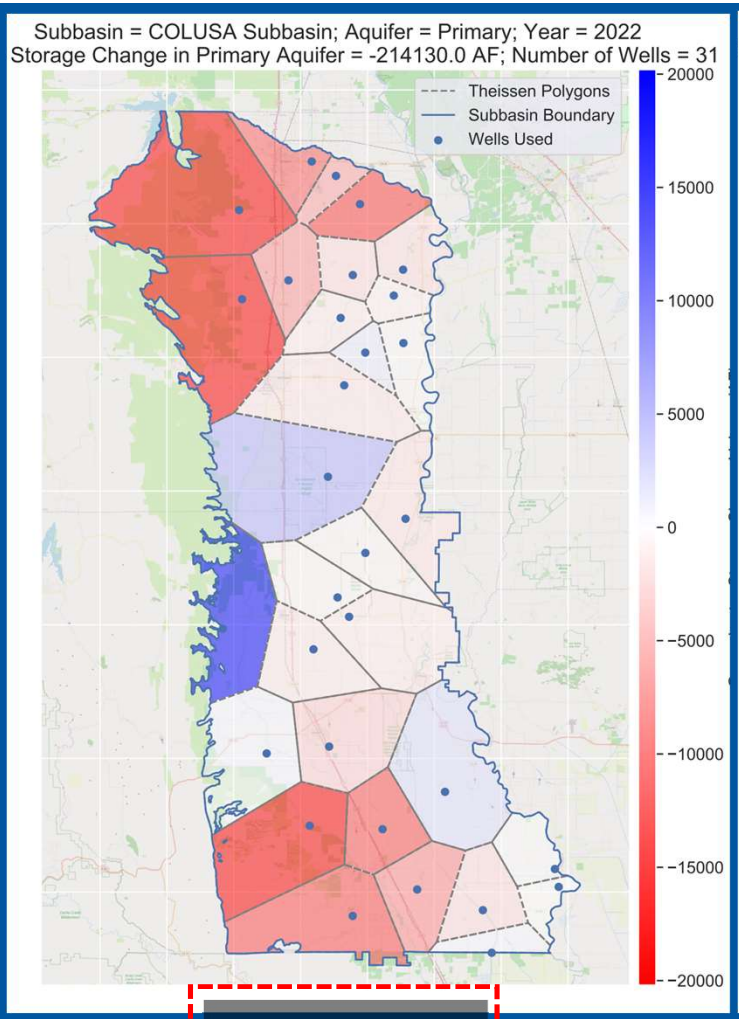
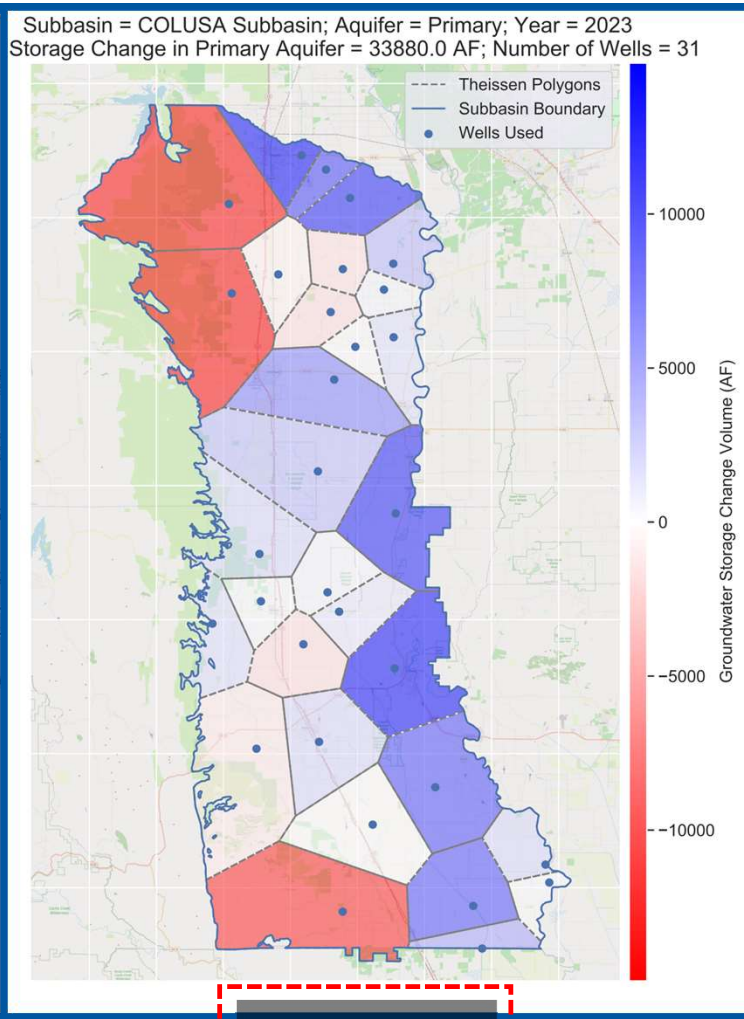


2022: -214 TAF



2022: +34 TAF

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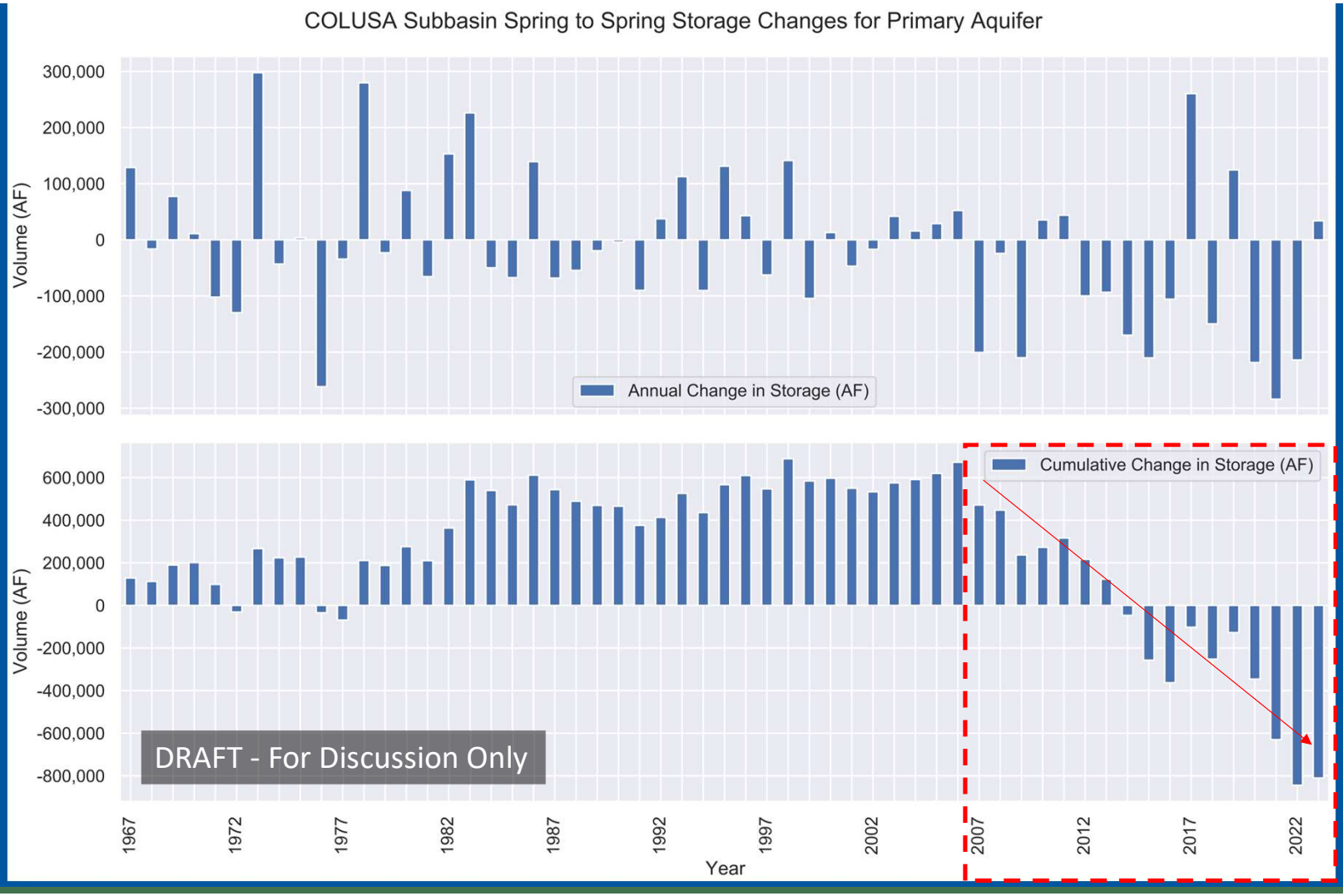
COLUSA Subbasin Spring to Spring Storage Changes for Primary Aquifer
Volume (AF)
300,000
200,000
100,000
0
-100,000
-200,000
-300,000
Annual Change in Storage (AF)
Volume (AF)
600,000
400,000
200,000
0
-200,000
-400,000
-600,000
-800,000
Cumulative Change in Storage (AF)
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1967
1972
1977
1982
1987
1992
1997
2002
2007
2012
2017
2022
Year

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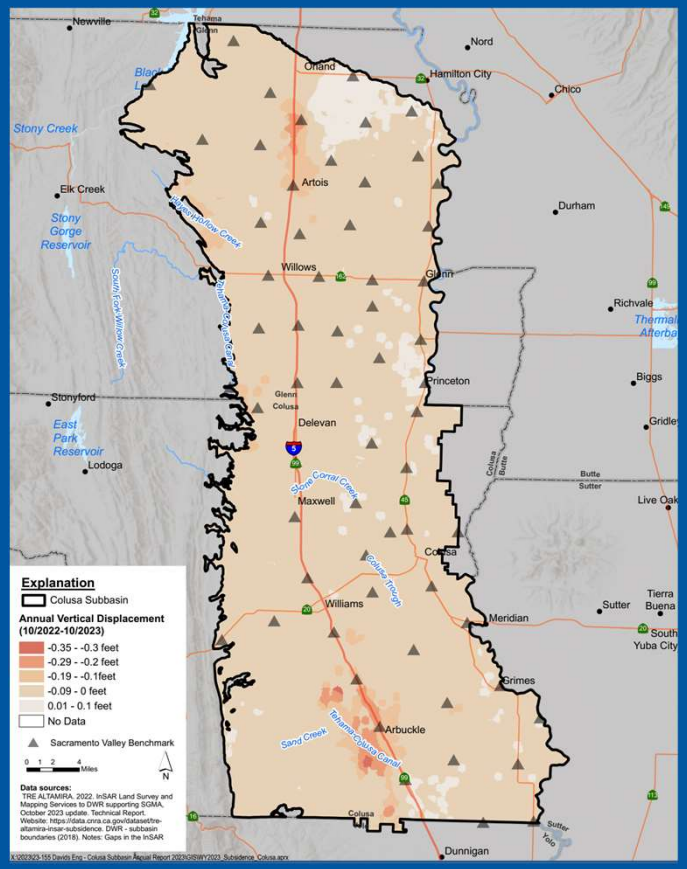
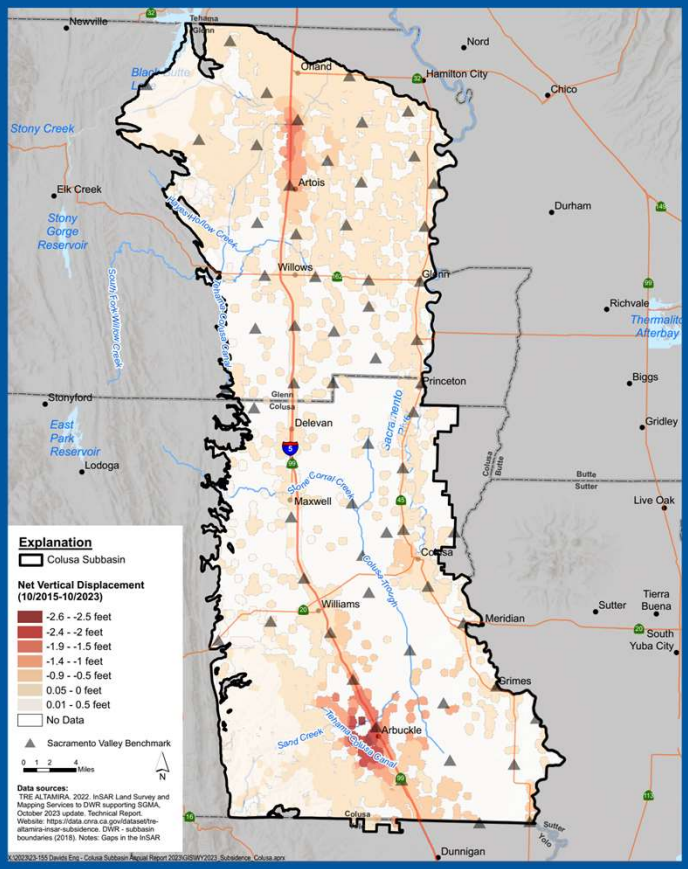
Subsidence

- GSP monitors land subsidence from the Sacramento Valley Benchmark Network
  - MT = 0.1 feet/year
  - Last surveyed 2017
- 10-15 benchmark sites near subsidence area
- *GSP revisions involving subsidence in progress*

Interferometric Synthetic Aperture Radar (InSAR)



Annual Vertical Displacement (2023)



Net Vertical Displacement (2015 - 2023)

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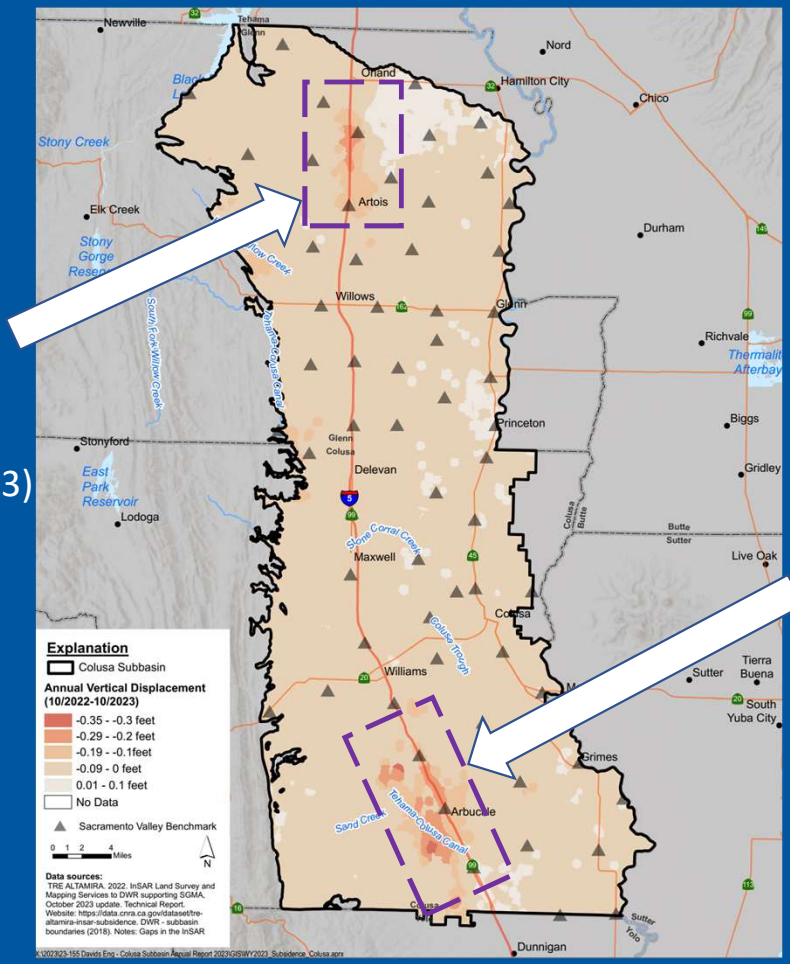
Subsidence

North of Willows/South of Orland

Max. = 0.4 feet (WY2020-WY2021)

Max. = 0.6 feet (WY2021-WY2022)

Max. = 0.2-0.3 feet (WY2022-WY2023)



Annual Vertical Displacement (2023)

Arbuckle Area

0.4 feet to 0.8 feet (WY2020 – WY2021)

Max. = 0.8-1.0 feet (WY2021 – WY2022)

Max. = 0.3-0.35 feet (WY2022-WY2023)

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Agenda

- Overview
- Groundwater Conditions
- GSP Implementation Updates

COLUSA SUBBASIN

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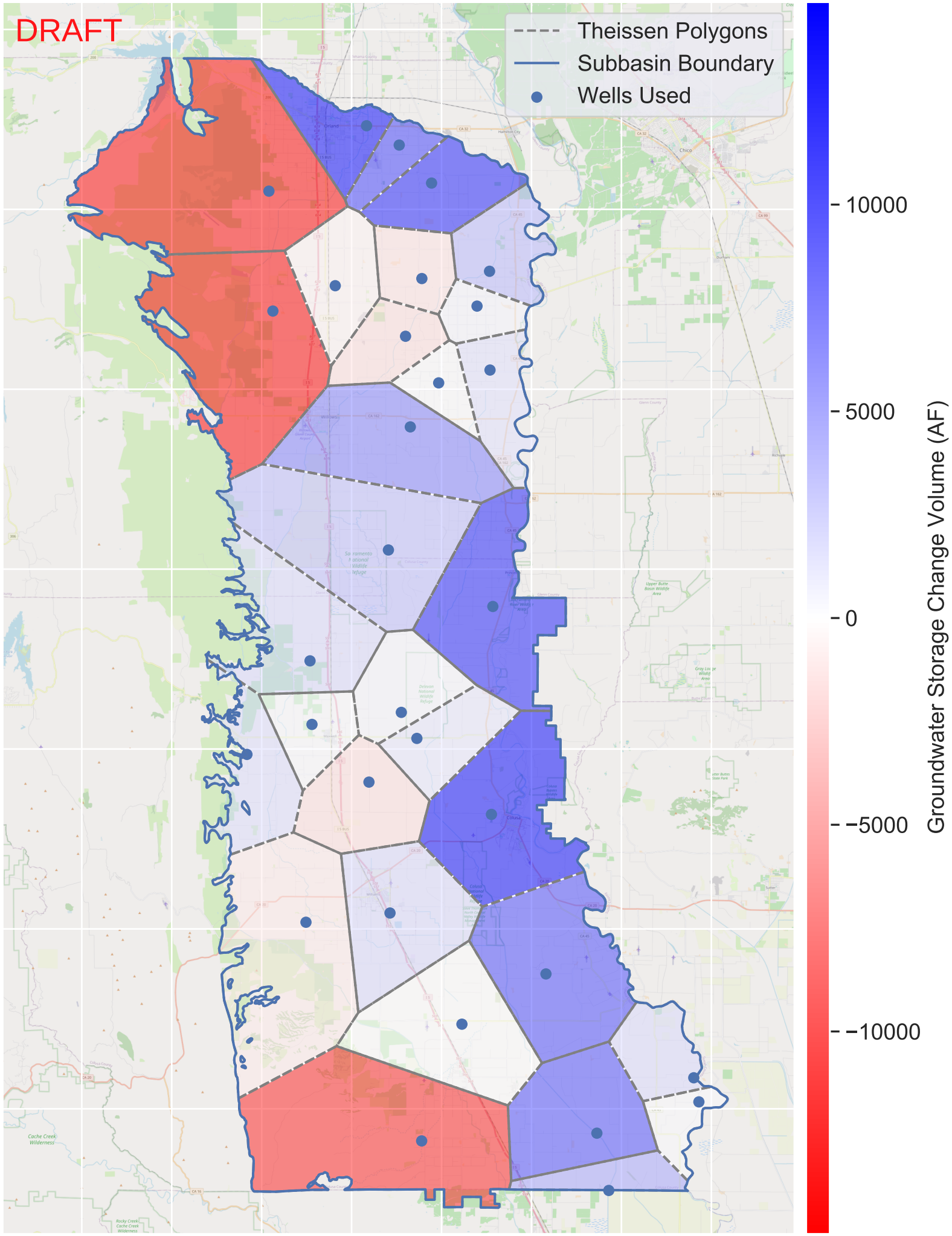
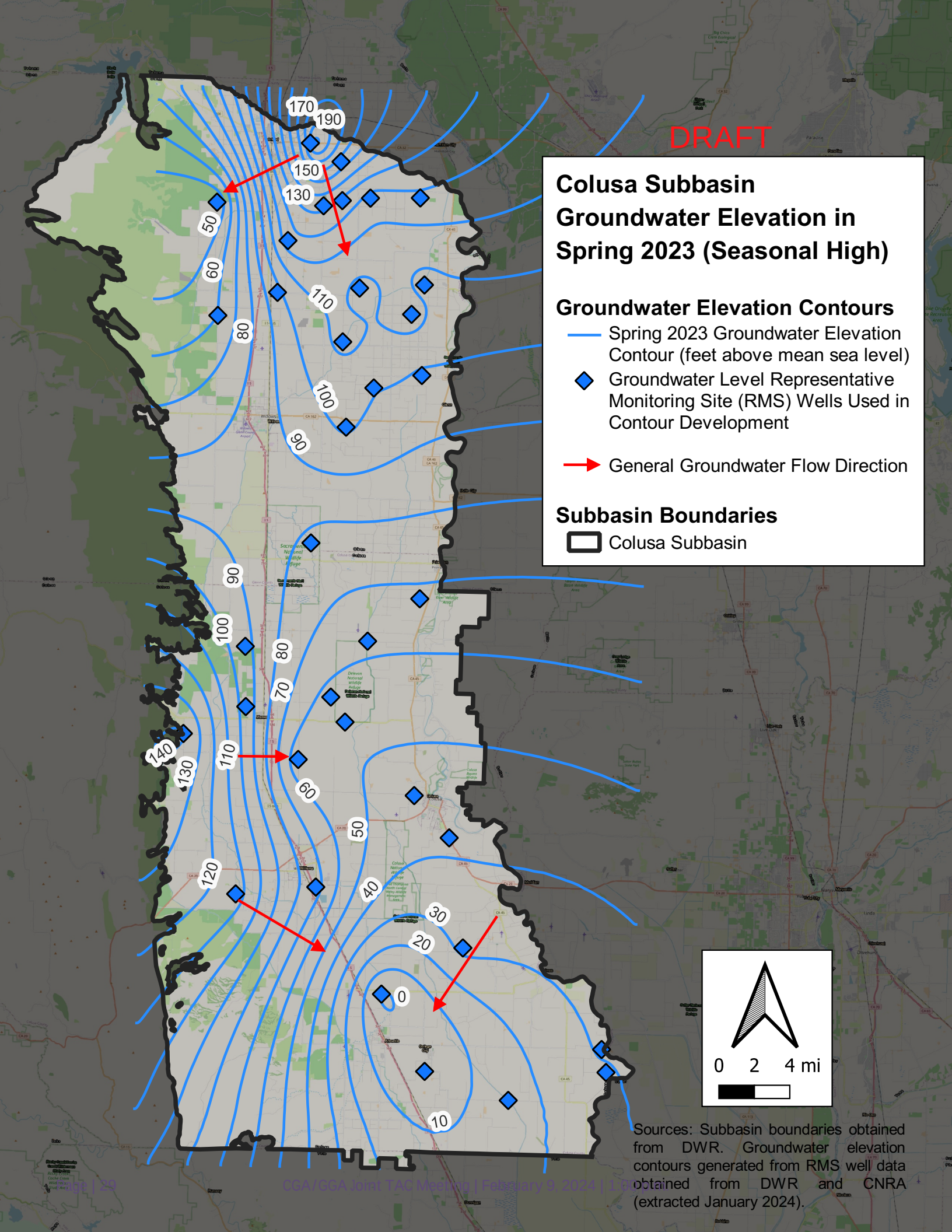
GSP Implementation Updates

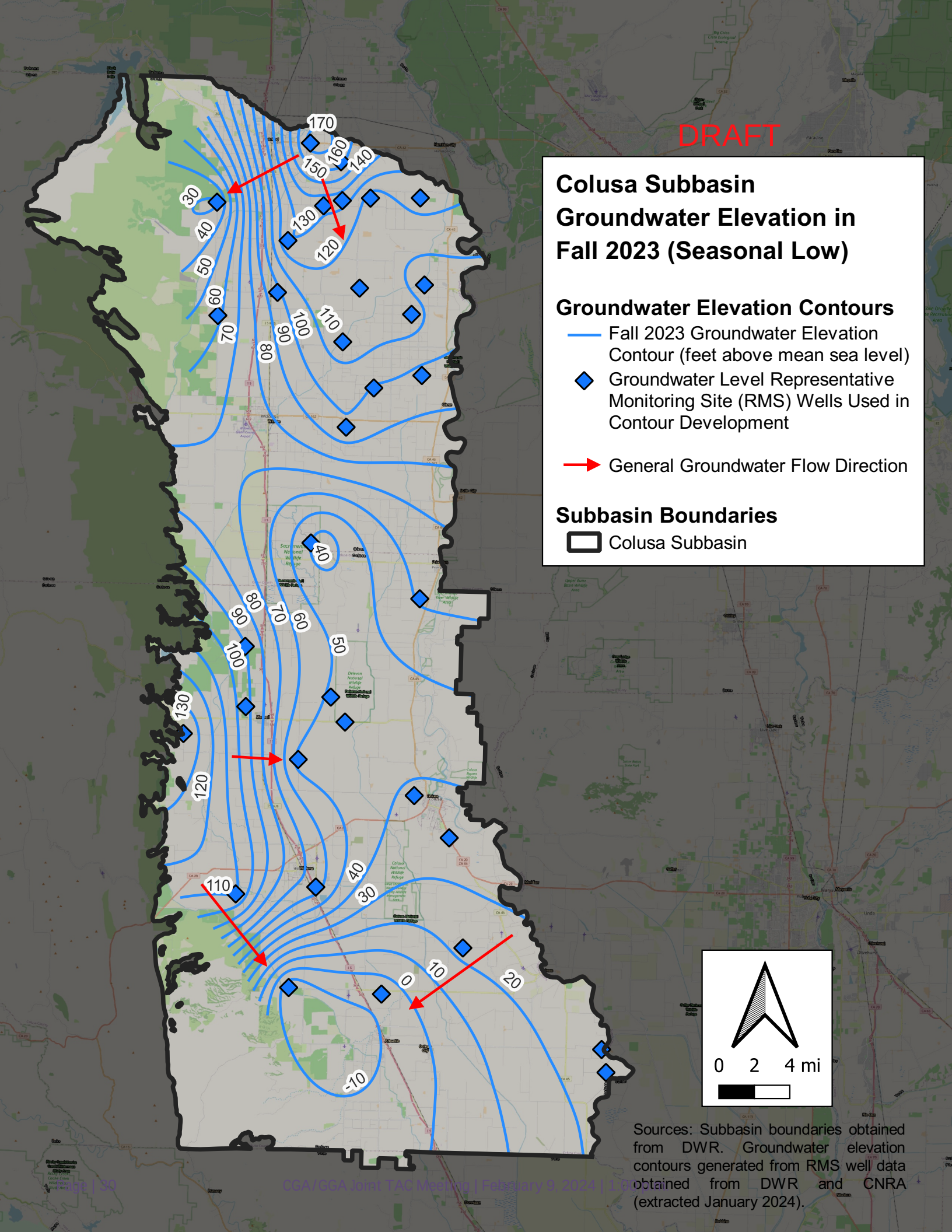
- Groundwater Levels at RMS Wells (48 wells total)
  - No wells below the MTs at the spring/fall measurements
  - 9 wells below the MOs at the spring measurement (seasonal high)
  - 11 out of 48 wells (23%) missing spring and/or fall 2023 data, mainly due to access issues
- Project and management action updates in progress with proponents
  - Annual Report updates
  - GSP Revision updates

Subbasin = COLUSA Subbasin; Aquifer = Primary; Year = 2023
Total Storage Change in Primary Aquifer = 33880.0 AF; Number of Wells = 31





Sources: Subbasin boundaries obtained from DWR. Groundwater elevation contours generated from RMS well data obtained from DWR and CNRA (extracted January 2024).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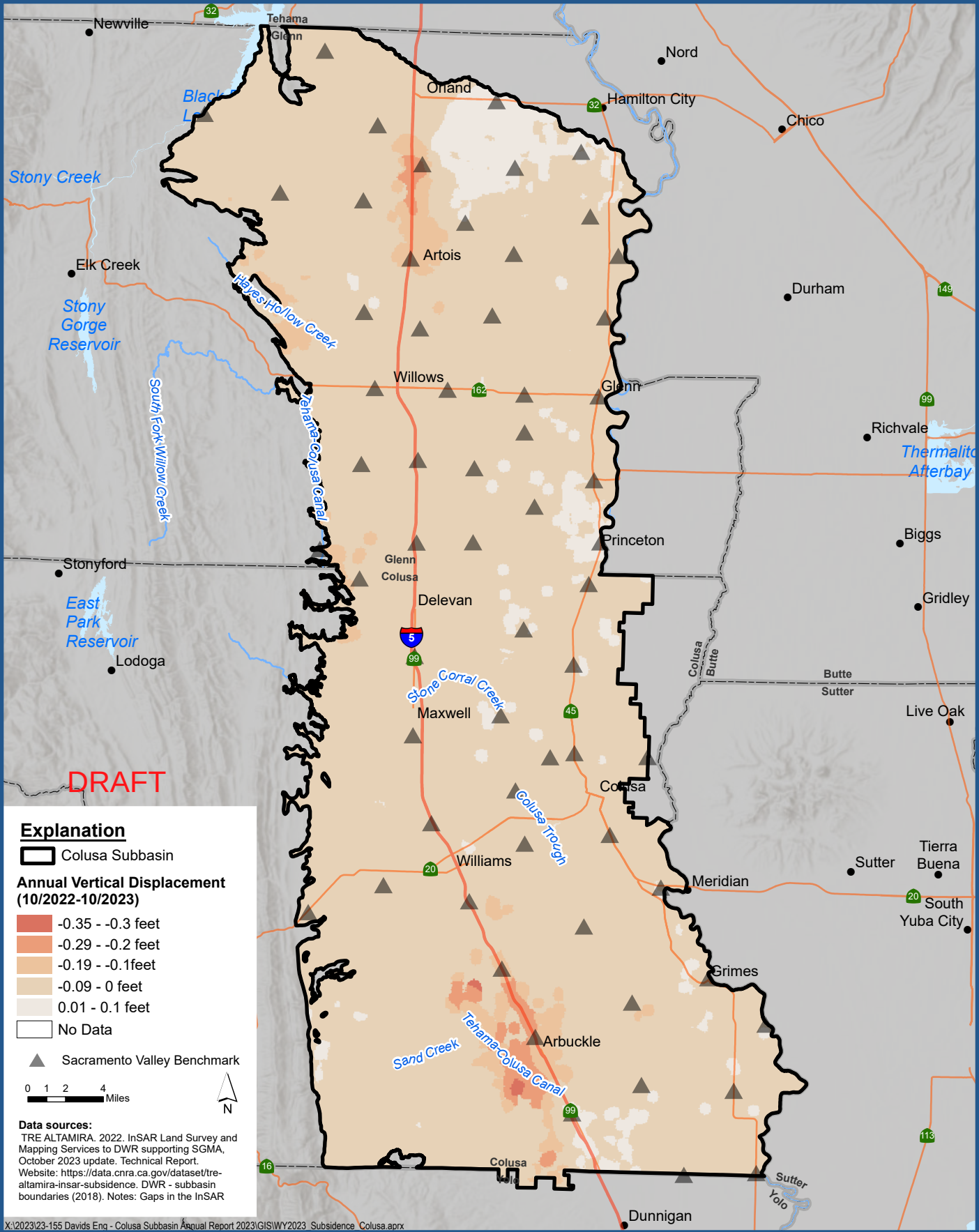
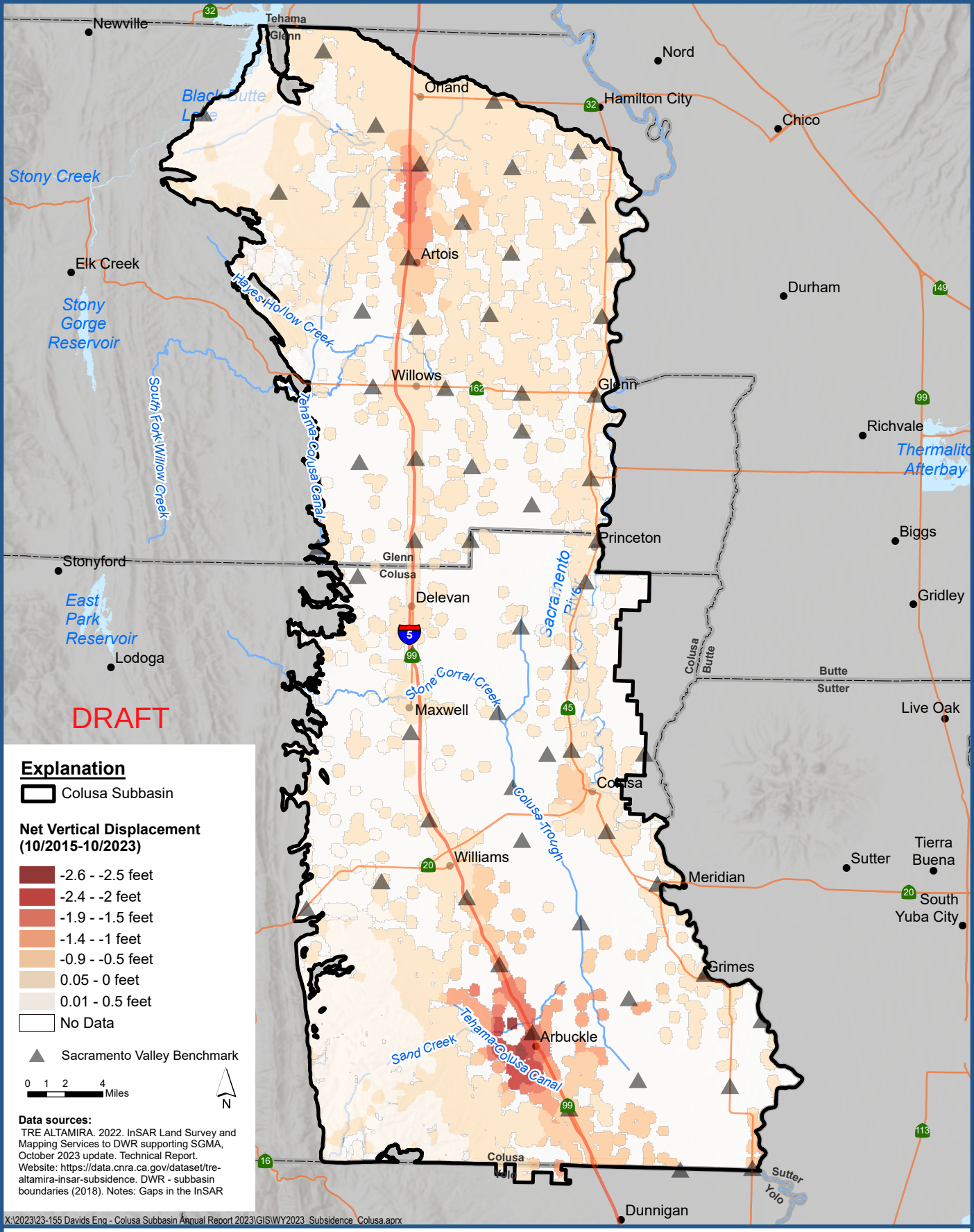
Colusa Subbasin Groundwater Elevation in Fall 2023 (Seasonal Low)
Groundwater Elevation Contours
Fall 2023 Groundwater Elevation Contour (feet above mean sea level)
Groundwater Level Representative Monitoring Site (RMS) Wells Used in Contour Development
General Groundwater Flow Direction
Subbasin Boundaries
Colusa Subbasin
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
0 2 4 mi
Sources: Subbasin boundaries obtained from DWR. Groundwater elevation contours generated from RMS well data obtained from DWR and CNRA (extracted January 2024).



Annual Vertical Displacement 2022 through 2023
Colusa Subbasin



Net Vertical Displacement 2015 through 2023
Colusa Subbasin

Table 1-2. Summary of Groundwater Level RMS Well Information and Measurements During Annual Report Year (2023).

State Well Number	Ground Surface Elevation (feet AMSL)[1]	Completed Well Depth (feet bgs)[2]	Screen Interval(s) (Top-Bottom) (feet bgs)	Spring 2023 GWE (feet AMSL)	Date of Spring 2023 GWE (feet AMSL)	Fall 2023 GWE (feet AMSL)	Date of Fall 2023 GWE (feet AMSL)	GSA
12N01E06D004	27.94	298	275-285	13.3	4/3/2023	-4.8	9/12/2023	CGA
13N01E11A001	31.8	145	136-158	28.1	4/3/2023	24.8	10/16/2023	CGA
13N01W07G001	90.47	180	108-180	1.0	4/3/2023	3.4	12/12/2023	CGA
13N01W13P003	32.23	355	271-278	17.0	4/3/2023	1.6	9/1/2023	CGA
13N01W22P002	60.46	236	196-236	Not Available	Not Available	Not Available	Not Available	CGA
13N02W12L001	135.49	Not Available	Not Available	Not Available	Not Available	-18.1	10/11/2023	CGA
13N02W15J001	212.52	362	270-362	Not Available	Not Available	Not Available	Not Available	CGA
13N02W20H002	342.58	320	200-260, 300-320	167.8	2/13/2023	178.5	10/16/2023	CGA
14N01E35P003	46.88	275	135-145, 215-225	32.5	4/3/2023	28.1	9/12/2023	CGA
14N01W04K003	37.43	73	46-70	32.7	4/3/2023	23.4	10/9/2023	CGA
14N02W13N001	62.45	392	104-392	Not Available	Not Available	14.0	10/11/2023	CGA
14N02W22A002	84.38	1050	1020-1030	2.5	4/30/2023	-12.0	9/12/2023	CGA
14N02W29J001	162.5	412	119-143, 152-158, 176-182, 198-208, 215-239, 264-276, 307.5-319.5, 334.5-349.5	Not Available	Not Available	Not Available	Not Available	CGA
14N03W14Q003	172.52	685	390-480, 500-590, 614-685	Not Available	Not Available	-18.1	10/10/2023	CGA
14N03W24C001	172.51	312	292-312	Not Available	Not Available	Not Available	Not Available	CGA

State Well Number	Ground Surface Elevation (feet AMSL)[1]	Completed Well Depth (feet bgs)[2]	Screen Interval(s) (Top-Bottom) (feet bgs)	Spring 2023 GWE (feet AMSL)	Date of Spring 2023 GWE (feet AMSL)	Fall 2023 GWE (feet AMSL)	Date of Fall 2023 GWE (feet AMSL)	GSA
15N01W05G001	47.42	140	75-140	41.9	4/3/2023	35.3	10/9/2023	CGA
15N02W19E001	87.46	334	162-182, 198-206, 262-274, 290-294, 310-334	73.7	4/5/2023	65.4	10/10/2023	CGA
15N03W08Q001	115	350	30-130, 250-350	Not Available	Not Available	Not Available	Not Available	CGA
15N03W20Q002	128.56	170	130-160	114.9	4/5/2023	111.5	10/10/2023	CGA
16N02W05B003	65	301	174-184, 246-256	54.6	4/5/2023	43.8	9/1/2023	CGA
16N02W25B002	55.42	274	254-274	46.1	4/4/2023	38.6	10/9/2023	CGA
16N03W14H006	65.7	378	295-305	54.0	4/30/2023	44.9	9/12/2023	CGA
16N04W02P001	162.53	203	112-203	141.3	4/4/2023	140.4	10/10/2023	CGA
17N02W09H004	67	302	250-260	62.4	4/4/2023	Not Available	Not Available	CGA
17N02W30J002	63.43	159	157-159	56.4	4/4/2023	48.6	10/10/2023	CGA
17N03W08R001	107.46	130	125-130	92.7	4/5/2023	90.4	10/16/2023	CGA
17N03W32H001	100.47	112	68-72, 104-112	95.3	4/4/2023	93.1	10/10/2023	CGA
18N02W18D004	82.43	266	246-256	75.8	4/6/2023	33.2	10/18/2023	GGA
18N02W36B001	75.4	410	88-128, 195-225, 240-340	67.9	4/4/2023	59.1	10/16/2023	CGA
19N02W08Q002	108.36	228	208-218	101.6	4/5/2023	98.7	10/10/2023	GGA
19N02W33K001	87.41	260	160-260	Not Available	Not Available	73.3	10/18/2023	GGA
19N04W14M002	185.83	65	45-55	Not Available	Not Available	Not Available	Not Available	GGA
20N02W11A001	125.4	90	70-90	123.5	4/30/2023	115.8	10/13/2023	GGA

State Well Number	Ground Surface Elevation (feet AMSL)[1]	Completed Well Depth (feet bgs)[2]	Screen Interval(s) (Top-Bottom) (feet bgs)	Spring 2023 GWE (feet AMSL)	Date of Spring 2023 GWE (feet AMSL)	Fall 2023 GWE (feet AMSL)	Date of Fall 2023 GWE (feet AMSL)	GSA
20N02W18R008	131.38	201	140-150, 70-180	114.7	4/30/2023	116.4	10/13/2023	GGA
20N02W25F004	102.2	85	55-65	99.2	3/23/2023	96.8	10/13/2023	GGA
20N02W33B001	105.41	320	100-120, 200-320	100.6	4/11/2023	99.3	10/13/2023	GGA
20N03W07E004	179.17	138	118-128	61.8	4/27/2023	56.4	9/3/2023	GGA
21N02W01F003	161.84	124	109-119	127.9	4/5/2023	125.3	10/12/2023	GGA
21N02W04G004	178.41	289	165-175, 269-279	125.5	4/5/2023	113.8	10/12/2023	GGA
21N02W05M002	188.93	153	122-132	144.6	4/22/2023	127.3	9/18/2023	GGA
21N02W33M003	149	171.1	140-150	107.2	4/3/2023	112.8	10/11/2023	GGA
21N02W36A002	135.39	145	120-140	107.1	4/6/2023	102.6	9/1/2023	GGA
21N03W01R002	203.32	255	235-245	143.0	4/5/2023	132.0	10/11/2023	GGA
21N03W23D002	204.76	191.5	142-152, 160-170	131.3	4/24/2023	127.6	9/3/2023	GGA
21N03W34Q004	166.65	80	60-70	97.6	4/6/2023	97.5	10/12/2023	GGA
21N04W12A002	247.88	278	247-257	40.8	4/6/2023	25.0	9/6/2023	GGA
22N02W30H003	204.43	275	130-140, 150-160, 250-260	170.1	4/5/2023	132.9	9/13/2023	GGA
22N03W24E002	230.51	195	130-150, 170-180	189.7	4/15/2023	175.6	10/13/2023	GGA

Table 6-2. Summary of Groundwater Levels Relative to Sustainable Management Criteria at Groundwater Level RMS Wells.

State Well Number	Minimum Threshold (MT)	Interim Milestone and Measurable Objective (IM, MO)	Spring 2023 Conditions			Fall 2023 Conditions			GSA	Status
			Groundwater Elevation (feet AMSL)	Difference relative to MT (feet AMSL)[2]	Difference relative to IM, MO (feet AMSL)	Groundwater Elevation (feet AMSL)	Difference relative to MT (feet AMSL)	Difference relative to IM, MO (feet AMSL)		
12N01E06D004	-108	-1	13.3	121.3	14.3	-4.8	103.2	-3.8	CGA	
13N01E11A001	-75	22	28.1	103.1	6.1	24.8	99.8	2.8	CGA	
13N01W07G001	-106*	-9	1.0	107.0	10.0	3.37	109.4	12.4	CGA	
13N01W13P003	-88	8	17.0	105.0	9.0	1.606	89.6	-6.4	CGA	
13N01W22P002	-124	26	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	CGA	Could not access due to thick oil. Last meas. 2016.
13N02W12L001	-72*	9	Not Available	Not Available	Not Available	-18.11	53.9	-27.1	CGA	No Spring measurement
13N02W15J001	-62*	61	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	CGA	New pump installed. Last meas. 2015.
13N02W20H002	95	174	167.8	72.8	-6.2	178.53	83.5	4.5	CGA	
14N01E35P003	-118	28	32.5	150.5	4.5	28.06	146.1	0.1	CGA	
14N01W04K003	-86	12	32.7	118.7	20.7	23.43	109.4	11.4	CGA	
14N02W13N001	-80	24	Not Available	Not Available	Not Available	13.95	94.0	-10.1	CGA	No Spring measurement
14N02W22A002	-126	84	2.5	128.5	-81.5	-11.955	114.0	-96.0	CGA	
14N02W29J001	-86*	22	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	CGA	Could not access due to well pumping. Last meas. 2017.
14N03W14Q003	-89*	-13	Not Available	Not Available	Not Available	-18.08	70.9	-5.1	CGA	Inaccessible in Spring

State Well Number	Minimum Threshold (MT)	Interim Milestone and Measurable Objective (IM, MO)	Spring 2023 Conditions			Fall 2023 Conditions			GSA	Status
			Groundwater Elevation (feet AMSL)	Difference relative to MT (feet AMSL)[2]	Difference relative to IM, MO (feet AMSL)	Groundwater Elevation (feet AMSL)	Difference relative to MT (feet AMSL)	Difference relative to IM, MO (feet AMSL)		
14N03W24C001	-5*	38	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	CGA	Could not access due to tape sticking downhole. Last meas. 2020.
15N01W05G001	-54	28	41.9	95.9	13.9	35.32	89.3	7.3	CGA	
15N02W19E001	-13	73	73.7	86.7	0.7	65.43	78.4	-7.6	CGA	
15N03W08Q001	43	107	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	CGA	No measurements in 2023
15N03W20Q002	60	113	114.9	54.9	1.9	111.49	51.5	-1.5	CGA	
16N02W05B003	-71	47	54.6	125.6	7.6	43.783	114.8	-3.2	CGA	
16N02W25B002	-25	30	46.1	71.1	16.1	38.62	63.6	8.6	CGA	
16N03W14H006	-94	51	54.0	148.0	3.0	44.92	138.9	-6.1	CGA	
16N04W02P001	63	139	141.3	78.3	2.3	140.43	77.4	1.4	CGA	
17N02W09H004	-52	56	62.4	114.4	6.4	Not Available	Not Available	Not Available	CGA	No Fall measurement
17N02W30J002	-119	44	56.4	175.4	12.4	48.63	167.6	4.6	CGA	
17N03W08R001	-13	88	92.7	105.7	4.7	90.36	103.4	2.4	CGA	
17N03W32H001	-38	92	95.3	133.3	3.3	93.07	131.1	1.1	CGA	
18N02W18D004	-80	62	75.8	155.8	13.8	33.23	113.2	-28.8	GGA	
18N02W36B001	-3	53	67.9	70.9	14.9	59.05	62.1	6.1	CGA	
19N02W08Q002	12	98	101.6	89.6	3.6	98.72	86.7	0.7	GGA	
19N02W33K001	21	71	Not Available	Not Available	Not Available	73.31	52.3	2.3	GGA	Possible oil in casing
19N04W14M002	46	151	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	GGA	Dry sediment at 50 feet

State Well Number	Minimum Threshold (MT)	Interim Milestone and Measurable Objective (IM, MO)	Spring 2023 Conditions			Fall 2023 Conditions			GSA	Status
			Groundwater Elevation (feet AMSL)	Difference relative to MT (feet AMSL)[2]	Difference relative to IM, MO (feet AMSL)	Groundwater Elevation (feet AMSL)	Difference relative to MT (feet AMSL)	Difference relative to IM, MO (feet AMSL)		
20N02W11A001	49	119	123.5	74.5	4.5	115.8	66.8	-3.2	GGA	
20N02W18R008	47	120	114.7	67.7	-5.3	116.37	69.4	-3.6	GGA	
20N02W25F004	37	97	99.2	62.2	2.2	96.8	59.8	-0.2	GGA	
20N02W33B001	31	100	100.6	69.6	0.6	99.31	68.3	-0.7	GGA	
20N03W07E004	31	100	61.8	30.8	-38.2	56.377	25.4	-43.6	GGA	
21N02W01F003	71	124	127.9	56.9	3.9	125.34	54.3	1.3	GGA	
21N02W04G004	51*	121	125.5	74.5	4.5	113.81	62.8	-7.2	GGA	
21N02W05M002	55	140	144.6	89.6	4.6	127.309	72.3	-12.7	GGA	
21N02W33M003	67	119	107.2	40.2	-11.8	112.76	45.8	-6.2	GGA	
21N02W36A002	24*	91	107.1	83.1	16.1	102.593	78.6	11.6	GGA	
21N03W01R002	48*	151	143.0	95.0	-8.0	131.97	84.0	-19.0	GGA	
21N03W23D002	84*	140	131.3	47.3	-8.7	127.551	43.6	-12.4	GGA	
21N03W34Q004	42	112	97.6	55.6	-14.4	97.53	55.5	-14.5	GGA	
21N04W12A002	18*	73	40.8	22.8	-32.2	25.016	7.0	-48.0	GGA	
22N02W30H003	82*	150	170.1	88.1	20.1	132.894	50.9	-17.1	GGA	
22N03W24E002	122*	176	189.7	67.7	13.7	175.63	53.6	-0.4	GGA	