

Yolo Subbasin Groundwater Agency Board of Directors Meeting Agenda

**Monday, March 18, 2024
3:00 p.m. to 5:00 p.m.**

Woodland Fire Station #3
1550 Springlake Court, Woodland, CA 95776

[Parking information](#)

The public may participate in the meeting remotely via Zoom using the following information:

Please join my meeting from your computer, tablet or smartphone.

<https://us06web.zoom.us/j/7847507621>

You can also dial in using your phone.

United States: +1 669 444 9171

Access Code: 784 750 7621

NOTICE TO PUBLIC

Public documents relating to any open session item listed on this agenda that are distributed to all or most of the members of the Board of Directors less than 72 hours before the meeting are available for public inspection in the customer service area of the Yolo Subbasin Groundwater Agency's Administrative Office at 34274 State Highway 16, Woodland 95695. The full agenda packet can also be found on www.yologroundwater.org.

In compliance with the Americans with Disability Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting please contact YSGA office at (530) 662-3211. Requests must be made as early as possible, and at least one full business day before the start of the meeting.

All items on the agenda will be open for public comment before final action is taken. Speakers are requested to restrict comments to the item as it appears on the agenda and stay within a three-minute time limit. The Chair has the discretion of limiting the total time for an item. Comments may also be submitted via email to info@yolosga.org prior to the meeting or via teleconference chat during the meeting.

- 3:00** **1. CALL TO ORDER AND DETERMINATION OF QUORUM**
- 3:05** **2. ADDING ITEMS TO THE POSTED AGENDA** -- In order to add an agenda item, it must fit into one of the following categories: a) A majority determination that an emergency (as designed by the Brown Act) exists; or b) A 4/5ths determination that the need to take action arose subsequent to the agenda being posted.
- 3:08** **3. PUBLIC FORUM** -- The Public may address the Yolo Subbasin Groundwater Agency Board of Directors on any item of interest not appearing on the agenda that is within the subject matter of the YSGA.

- 3:10** **4.** **CONSIDERATION: CONSENT ITEMS**, pages 3 to 39
- a. [Approve January 22, 2024 Board of Directors Meeting Minutes](#), pages 5-12
 - b. [Receive Fiscal Year 23/24 Financial Statements: 1/17/24-3/11/24](#), pages 13-20
 - c. [Receive minutes of Executive Committee: 1/12/24](#), pages 21-22
 - d. [Authorize Entering into Contract with Frame Surveying and Mapping](#), pages 23-39
- 3:15** **5.** **REPORT OF THE CHAIR AND EXECUTIVE OFFICER**, pages 40 to 52
Executive Officer report on activities since last Board meeting.
- 3:30** **6.** **PRESENTATION: GSA AUTHORITY**, page 53
Legal Counsel will present an overview on SGMA and GSA authority to implement a GSP.
- 4:00** **7.** **CONSIDERATION: 2-TIER WELL PERMIT REVIEW PROCEDURES**, pages 54 to 147
- a. Update on Draft 2-Tier Well Permit Review Process
 - b. [Approve Updated Well Permitting Procedures and Public Comment Period for Draft Technical Memorandum and Focus Areas Map](#), pages 57-147
- 4:50** **8.** **MEMBERS' REPORTS AND FUTURE AGENDA ITEMS** -- Yolo Subbasin
Groundwater Agency Members are invited to briefly report on current issues and recommended topics for future Yolo Subbasin Groundwater Agency Board of Directors meetings.
- 4:55** **9.** **NEXT MEETING** – May 20, 2024
- 5:00** **10.** **ADJOURNMENT**

Consideration of items not on the posted agenda includes items in the following categories: 1) majority determination that an emergency (as defined by the Brown Act) exists; or 2) a 4/5ths determination that the need to take action arose subsequent to posting of the agenda. I declare under penalty of perjury that the foregoing agenda was posted by March 15, 2024 and made available to the public during normal business hours at the following location: Woodland Fire Station #3 at 1550 Springlake Court, Woodland 95776 and YSGA's office at 34274 State Highway 16, Woodland 95695.

Kristin Sicke, Executive Officer

Yolo Subbasin Groundwater Agency Board of Directors
Meeting Agenda Report

MEETING DATE: March 18, 2024

AGENDA ITEM NO. 4

SUBJECT: Consideration: Consent Items

INITIATED OR BOARD INFORMATION
REQUESTED BY: STAFF ACTION: MOTION
 OTHER _____ RESOLUTION

ATTACHMENT YES NO

BACKGROUND

- a. *Approve the January 22, 2024 Regular YSGA Board of Directors Meeting Minutes*
Pursuant to Section 54957.5 of the Brown Act, copies of the draft minutes are available to the public at the Board meetings prior to their approval.

- b. *Receive Fiscal Year 2023-2024 Financial Statements: January 17 – March 11, 2024*
Receive financial statements for January 17-March 11, 2024.

- c. *Receive Minutes of YSGA Executive Committee*
Receive YSGA Executive Committee meeting minutes for January 12, 2024.

- d. *Authorize Entering into Services Agreement with Frame Surveying and Mapping*
The most recent monitoring event of the Yolo County Subsidence Network was completed in 2016 by Frame Surveying and Mapping in coordination with the Water Resources Association of Yolo County (WRA). Since then, DWR began releasing vertical deformation data through the satellite based InSAR dataset. The YSGA SGMA Implementation Grant application included a project to complete a ground-based GPS subsidence survey of the Yolo County Subsidence Network to ground-truth the InSAR dataset. This survey effort will also incorporate stations in the Capay Valley, which has historically not been included in previous monitoring events. This work will be fully funded by the SGMA Implementation Grant. Staff recommend the Board authorize the Executive Officer to execute a contract with Frame Surveying and Mapping in an amount not to exceed \$79,700.

RECOMMENDATION

- a. Recommend adoption of January 22, 2024 Regular Board meeting minutes with any corrections.
- b. This agenda item is for informational purposes only. No Board action is required.
- c. This agenda item is for informational purposes only. No Board action is required.
- d. Recommend entering into a services agreement with Frame Surveying and Mapping to complete a GPS subsidence survey of the Yolo County subsidence network.



Yolo Subbasin Groundwater Agency

Board of Directors Meeting Minutes

Monday, January 22, 2024

3:00 p.m. to 5:00 p.m.

**Woodland Fire Station #3
1550 Springlake Court, Woodland, CA 95695
(and via Zoom)**

1. CALL TO ORDER AND DETERMINATION OF QUORUM:

Meeting called to order at 3:00 p.m. by Lee Smith, Vice Chair.

Executive Officer Sicke conducted a roll call and determined a quorum was present.

The following Board members and (alternates) were in attendance:

City of Davis: Babu Vaitla

City of West Sacramento: Verna Sulpizio Hull (*Item 4 – end*)

City of Winters: Carol Scianna

City of Woodland: Mayra Vega

Dunnigan Water District: David Schaad, (Bill Vanderwaal*)

Esparto CSD: (Alex Lepley)

Reclamation District (RD) 108: Roger Cornwell (*Item 4 – end*), (Bill Vanderwaal*)

RD 307: James Johas

RD 537: Tom Ramos

RD 765: David Dickson, Jr.

RD 787: Dominic Bruno

RD 999: Tom Slater

RD 1600: Michele Clark

RD 2035: Kyriakos Tsakopoulos

Rumsey Water Users Association: (Mica Bennett)

Yolo County Flood Control & Water Conservation District (YCFC&WCD): Tom Barth (*Item 4 – end*), (Kristin Sicke)

UC Davis – Andrew Fulks

Cal Am Water – Dunnigan: Evan Jacobs

Colusa Drain Mutual Water Company: Lynnel Pollock

Yolo County Farm Bureau: Lee Smith

Environmental Representative: Ann Brice*

Absent: Madison CSD, RD 150, RD 730, Yocha Dehe Wintun Nation, Yolo County

*remote attendance, member was non-voting

**remote attendance, member provided just cause pursuant to AB 2449

2. **ADDING ITEMS TO THE POSTED AGENDA:** Nothing to report.
3. **PUBLIC FORUM:** Ben King reported on his findings regarding mercury, TDS, and chloride pollution sources in the Cache Creek and Colusa Basin watersheds. He believes the recently released 303(d) list report contains omissions about natural salt springs as a source of these pollutants. He provided written comments and sources to Kristin, which were distributed to the Board via email. Ricardo Amon's written comment was read out by Kristin. Ricardo commented regarding issues of excessive groundwater pumping in areas of special concern and recommended limiting pumping rates and establishing groundwater pricing policies. He referenced a petition at the following link: https://open.substack.com/pub/ricardoamon/p/please-halt-well-permits-in-historic?r=q3ow1&utm_campaign=post&utm_medium=web Ricardo's full public comment is attached at the end of the minutes.
4. **CONSIDERATION: CONSENT ITEMS**
 - a. Approve November 20 Board of Directors Meeting Minutes
 - b. Receive Fiscal Year 23/24 Financial Statements: 11/18/23-1/16/24
 - c. Receive minutes of Executive Committee: 11/14/23
 - d. Approve payment of bills

Action: Approve items 4a and 4d as presented.

Motion: RD 108 (Cornwell)

Second: City of Winters (Scianna)

Discussion: No further discussion.

Vote: Approved (roll call attached)

5. **REPORT OF THE CHAIR AND EXECUTIVE OFFICER**
 Kristin Sicke, Executive Officer, provided an overview of her report included in the agenda packet. Groundwater levels are much higher today than last year at this time. Data from the newly constructed multi-completion wells is now available on sgma.yologroundwater.org.

6. **PRESENTATION: GROUNDWATER ACCOUNTING PLATFORM**
 Mike Myatt, EDF, and John Burns, ESA, provided an informational presentation of the Groundwater Accounting Platform's purpose and capabilities.

Board discussion

Pollock: Is the field-level data accessible to the public? Burns: The platform requires sign-in and fields are only accessible to the owner and authorized personnel.

Jacobs: Accuracy of different data sources? Burns: Data sources are generally reporting 10-15% accuracy.

Vaitla: Does this tool have potential use in the well permitting process? Sicke: Yes, it could be used in the future, but further development is needed.

Sulpizio Hull: Who would be providing ongoing technical support to the growers? Burns: Depends on the GSA; he envisions an option for GSA staff support and ESA support.

Sicke: What is the funding model after the grant period? Burns: They will implement a subscription model for platform access.

Vaitla: What are the adoption rates across the state? Burns: The platform is still in pilot phase, but some pilot partners are beginning rollout.

Ben King commented on the importance of considering water quality when using the bank account analogy.

Pollock: Is this tool intended for a water district, or for the GSA? Sicke: She envisions that it can be useful for both.

7. CONSIDERATION: APPROVE ENTERING INTO CONTRACTS FUNDED BY SGMA IMPLEMENTATION GRANT

- a. Authorize Entering into Contracts with Stockholm Environment Institute and Leafbird Consulting
- b. Authorize Entering into Contract with Websoft Developers, Inc. for Database Upgrade Project
- c. Authorize Entering into Contract with Water and Land Solutions for the Yolo-Zamora (China Slough) Groundwater Recharge Pilot Project

Action: Approve items 7a through 7c as presented.

Motion: RD 108 (Cornwell)

Second: YCF&WCD (Barth)

Discussion: No further discussion.

Vote: Approved (roll call attached)

8. CONSIDERATION: 2-TIER WELL PERMIT REVIEW PROCEDURES

- a. Update on Draft 2-Tier Well Permit Review Process

Erik Cadaret, West Yost, provided an update on the revised well permit process.

Board discussion

Tsakopoulos: What is an example of high versus a low impact well? Cadaret: This would vary based on the site conditions, but an example would be a 100 gallons per minute (gpm) pumping capacity versus 2,000+ gpm.

Balasek: Does this approach consider where the water will be applied; i.e. previously unirrigated land?

Cadaret: Yes – this info would be considered during Tier 1.

Barth: The well design might not be known until a borehole is drilled – should a test hole be drilled between Tier 1 and Tier 2? Kristin provided clarification on test hole vs ag well permitting process, and expressed concerns about timing if test holes were required. Barth suggested that test holes not be required but could be a helpful option for the applicant to provide additional information.

Vaitla: If data is inadequate to evaluate the well, the permit should go directly to Tier 2 – avoid conflating no data with no issue. Does the lack of PG/PHG certification in Tier 1 pose a legal issue?

Sicke: Since the tool will be developed by a PHG, it should provide legal protection. Vaitla: There is an option for a waiver written up in draft procedures – what are the restrictions on that process? Sicke: This concept was written up before the new approach – the procedures will be amended. Vaitla: What is the status of the permits in the queue? Sicke: They are on hold pending these updated procedures.

Pollock: How is this process influenced by the Board of Supervisors? Sicke: She will be providing an update on February 13 to the Board of Supervisors. The Supervisors continue to advocate for a more immediate process.

Jacobs: Can the County grant some indemnity to the YSGA? Cadaret: Some counties have taken this approach. Kristin will confer with Cadaret about the other examples, and explore whether this is possible with Yolo County.

Public comment

Grant Davids confirmed that this 2-tier process is only within the delineated Focus Areas, and stressed the importance of providing clear criteria separating Tier 1 and Tier 2. Ben King questioned the viability of the model in the Dunnigan Hills.

Sicke agreed that the criteria needs to be clear to the public about how a well application will move from a Tier 1 analysis to a Tier 2 Hydrogeology Report in the Focus Areas. Sicke suggested that West Yost and the YSGA Team continue to revise the *Technical Memorandum* so that it is a comprehensive update and description of the 2-tier process prior to the Technical Memorandum and Focus Areas Map being released for a public comment process.

b. Approve Amendment of Professional Services Agreement with West Yost

Action: Approve item 8b as presented.

Motion: Dunnigan Water District (Schaad)

Second: RD 108 (Cornwell)

Discussion: No further discussion.

Vote: Approved unanimously (roll call attached)

c. Approve Draft 2-Tier Well Permit Review Process, Approve Public Comment Period for Draft Technical Memorandum and Focus Areas Map, and Authorize Drought Committee to Finalize Well Permit Review Procedures

Action: Approve item 4c as presented.

Motion: Colusa Drain MWC (Pollock)

Second: City of West Sacramento (Sulpizio Hull)

Discussion:

Director Schaad asked when the public review period would be? Would it need to be delayed to provide sufficient detail as requested by Mr. Davids? Sicke: Ideally, the public comment would end before March 18 to allow the Board to approve the final procedures at the next meeting. West Yost: To allow for sufficient detail, the timeline would likely need to be pushed a couple weeks.

Smith: Would the *Drought Contingency Planning Committee* be authorized to finalize these procedures?

General consensus was reached that the *Drought Contingency Planning Committee* could make decisions from here on out, with updates provided to the full Board.

Motion tabled.

Action: Approve the draft 2-Tier Well Permit Review Process; Authorize a public comment period for Focus Areas map and draft Technical Memorandum that includes definitions between Tier 1 and Tier 2; and Authorize the *Drought Contingency Planning Committee* to finalize the well permit review procedures.

Motion: Colusa Drain MWC (Pollock)

Second: City of Winters (Scianna)

Discussion: No further discussion.

Vote: Approved (roll call attached)

8. **MEMBERS' REPORTS AND FUTURE AGENDA ITEMS:** Andrew Fulks provided an update on the Arboretum Waterway Flood Protection and Habitat Enhancement Project. The project will enhance wetland habitat in the arboretum and improve water quality; the project has successfully gone out to bid.
9. **NEXT MEETING:** March 18, 2024
10. **ADJOURNMENT:** Vice Chair Lee adjourned the meeting at 4:57 p.m.

Respectfully submitted,



Kristin Sicke, Executive Officer

Buenos Dias, my name is ricardo amon, a Yolo County resident.

For the past few years, I have documented the comments and testimonies presented by community members regarding the environmental, social, and economic impact of excessive groundwater pumping in areas of special concern.

These are a few statements that we may agree with:

1. The hydrogeological protocol developed by YSGA to assess the environmental impact of drilling new wells in the focus areas, is greatly appreciated.
2. However, it is an insufficient measure to address "significant and unreasonable depletion of supply conditions."
3. Any new well will continue to expand the conversion of historic non-irrigated lands to water intensive tree and vine plantations that require year-round groundwater supplies.
4. Their demand for groundwater will continue to harden their impact on the aquifers, as the plantations grow and mature.
5. There is an urgency to reduce groundwater extraction from depleted aquifers.
6. YSGA has documented that Hungry Hollow and Dunnigan Hills have limited groundwater recharge potential with degraded watersheds.
7. There are no water budgets available to make informed decisions about sustainable yields for the focus area aquifers.

A few recommendations:

1. Slow down existing pumping rates and avoid increasing pumping capacity with new wells in historic non-irrigated lands.
2. Existing wells in the focus areas should be required to install pumping metering systems to assess extraction rates.
3. Like what they did in Pajaro Valley, YSGA could establish equitable tier-system-groundwater pricing policies to discourage excess pumping.

Please enter into the record this Change.org petition. Gracias. Ricardo

https://open.substack.com/pub/ricardoamon/p/please-halt-well-permits-in-historic?r=q3ow1&utm_campaign=post&utm_medium=web

	Agency	Name	Board/ Alternate	ATTENDANCE	VOTE - ITEM 4	VOTE - ITEM 7	VOTE - ITEM 8B	VOTE - ITEM 8C
1	City of Davis	Bapu Vaitla	Board	X	Aye	Aye	Aye	Aye
		Stan Gryczko	Alternate					
		Richard Tsai	Alternate					
2	City of West Sacramento	Verna Sulpizio Hull	Board	X <i>(Item 4-end)</i>	Aye	Aye	Aye	Aye
3	City of Winters	Carol Scianna	Board	X	Aye	Aye	Aye	Aye
		Kurt Balasek	Alternate	X				
		Wade Cowan	Alternate					
4	City of Woodland	Mayra Vega	Board	X	Aye	Aye	Aye	Aye
		Vicky Fernandez	Alternate					
5	Dunnigan Water District	David Schaad	Board	X	Aye	Aye	Aye	Aye
		Bill Vanderwaal	Alternate	X*				
6	Esparto CSD	Pierce Scott	Board					
		Alex Lepley	Alternate	X	Aye	Aye	Aye	Aye
7	Madison CSD	Leo Refsland	Board	X*	Absent	Absent	Absent	Absent
8	RD 108	Roger Cornwell	Board	X <i>(Item 4-end)</i>	Aye	Aye	Aye	Aye
		Bill Vanderwaal	Alternate	X*				
9	RD 150	Warren Bogle	Board	Absent	Absent	Absent	Absent	Absent
10	RD 307	James Johas	Board	X	Aye	Aye	Aye	Aye
		Karen Chesnut	Alternate					
11	RD 537	Tom Ramos	Board	X	Aye	Aye	Aye	Aye
12	RD 730	Jim Heidrick	Board	Absent	Absent	Absent	Absent	Absent
13	RD 765	David Dickson, Jr.	Board	X	Aye	Aye	Aye	Aye
		Doug Dickson, Sr.	Alternate					
14	RD 787	Dominic Bruno	Board	X	Aye	Aye	Aye	Aye
			Alternate					
15	RD 999	Tom Slater	Board	X	Aye	Aye	Aye	Aye
16	RD 1600	Michele Clark	Board	X	Aye	Aye	Absent	Absent
17	RD 2035	Kyriakos Tsakopoulos	Board	X	Abstain	Abstain	Abstain	Abstain
18	Rumsey Water Users Association	Ken Muller	Board					
		Mica Bennet	Alternate	X	Aye	Aye	Aye	Aye
19	Yocha Dehe Wintun Nation	Marc Fawns	Board	Absent	Absent	Absent	Absent	Absent
		Jim Etters	Alternate					
20	Yolo County	Mary Vixie Sandy	Board	Absent	Absent	Absent	Absent	Absent
		Angel Barajas	Alternate					
21	YCFC&WCD	Tom Barth	Board	X <i>(Item 4-end)</i>	Aye	Aye	Aye	Aye
		Kristin Sicke	Alternate	X				
22	UC Davis	Andrew Fulks	Board	X	Aye	Aye	Aye	Aye
		Kelli O'Day	Alternate					
23	Cal Am Water - Dunnigan	Evan Jacobs	Board	X	Aye	Aye	Aye	Aye
		Audie Foster	Alternate					
24	Colusa Drain MWC	Lynnel Pollock	Board	X	Aye	Aye	Aye	Aye
		Jim Wallace	Alternate					
25	Yolo County Farm Bureau	Lee Smith	Board	X	Aye	Aye	Aye	Aye
		Denise Sagara	Alternate					
26	Environmental Rep.	Ann Brice	Board	X*	Absent	Absent	Absent	Absent

*remote attendance, member was non-voting

**remote attendance, member provided just cause pursuant to AB 2449

Agency	Name	Attendance
<i>OTHER YSGA STAFF:</i>		
Executive Officer	Kristin Sicke	X
Legal Counsel	Rebecca Smith	X
YSGA Staff	Sarah Leicht	X
YSGA Staff	Nathan Fisher	X
West Yost	Erik Cadaret	X
West Yost	Ken Loy	X
<i>PUBLIC AND AGENCY STAFF:</i>		
CAFF	Dave Runsten	X
CA DWR	Nicholas Vadpey	X
Yolo County	Kimberly Hood	X
Yolo County	Elisa Sabatini	X
Yolo County	Jianmin Huang	X
	Ricardo Amon	X
Wild Wings CSA	Lachi Richards	X
Water & Land Solutions	Jenny Scheer	X
	Jim Mayer	X
Yolo RCD	Kate Reza	X
	Annie Main	X
	Jan Hushbeck	X
	Grant Davids	X
	Scott Steward	X
	Nick Edsall	X
	Ben King	X
	Cork McIsaac	X

Yolo Subbasin Groundwater Agency

Balance Sheet

As of March 11, 2024

	<u>Mar 11, 24</u>
ASSETS	
Current Assets	
Checking/Savings	
1000 · 1st Northern-Checking	24,000.00
1010 · 1st Northern-Savings	5,670.48
1020 · Yolo County Treasury	<u>1,073,223.24</u>
Total Checking/Savings	1,102,893.72
Accounts Receivable	
1100 · Accounts Receivable	<u>21,657.57</u>
Total Accounts Receivable	21,657.57
Other Current Assets	
1150 · Prepaid Insurance	492.25
1200 · Undeposited Funds	<u>3,250.25</u>
Total Other Current Assets	3,742.50
Total Current Assets	<u>1,128,293.79</u>
TOTAL ASSETS	<u>1,128,293.79</u>
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
2000 · Accounts Payable	<u>46,774.37</u>
Total Accounts Payable	46,774.37
Total Current Liabilities	<u>46,774.37</u>
Total Liabilities	46,774.37
Equity	
3000 · Unassigned Fund Balance	-24,000.00
3010 · Nonspendable Fund Balance	492.00
3300 · Assigned Fund Balance	24,000.00
3200 · Retained Earnings	943,164.79
Net Income	<u>137,862.63</u>
Total Equity	<u>1,081,519.42</u>
TOTAL LIABILITIES & EQUITY	<u>1,128,293.79</u>

Yolo Subbasin Groundwater Agency

Budget vs Actual

July 1, 2023 through March 11, 2024

	Jul 1, '23 - Mar 11, ...	Budget	% of Budget
Ordinary Income/Expense			
Income			
4000 · Member Contributions-Municipal	160,000.00	160,000.00	100.0%
4100 · Member Contributions-Rural	237,841.50	257,842.00	92.2%
4200 · Member Contributions-Affiliates	65,170.00	65,170.00	100.0%
4600 · Direct Contributions - IRWM Fee	7,157.57	7,157.00	100.0%
4700 · Well Permitting Regulatory Fees	5,913.81	10,000.00	59.1%
4900 · Interest Income	15,516.84	12,000.00	129.3%
Total Income	491,599.72	512,169.00	96.0%
Expense			
5100 · Bank & Other Fees	25.00	1,500.00	1.7%
5300 · Insurance-General & Auto	2,069.00	2,500.00	82.8%
5500 · Membership Dues	24,040.00	25,000.00	96.2%
7000 · Admin. Expenses	1,889.46	5,000.00	37.8%
7100 · Project Mgmt-SGMA Implementatio	129,292.56	260,000.00	49.7%
7125 · Buckeye Creek Recharge Project	0.00	8,863.00	0.0%
7200 · Consultant Services	66,369.75	200,000.00	33.2%
7300 · Legal Services	22,536.90	20,000.00	112.7%
7350 · Audit Services - Financial	7,800.00	15,300.00	51.0%
7400 · GSP - Related Consultant Costs	85,864.22	75,000.00	114.5%
7600 · YC Groundwater Monitor Program	10,070.00	90,000.00	11.2%
7700 · GSP Verif in Well Permit Review	3,780.20	10,000.00	37.8%
Total Expense	353,737.09	713,163.00	49.6%
Net Ordinary Income	137,862.63	-200,994.00	-68.6%
Net Income	137,862.63	-200,994.00	-68.6%

Yolo Subbasin Groundwater Agency
Statement of Cash Flows
 July 1, 2023 through March 11, 2024

	Jul 1, '23 - Mar 11, 24
OPERATING ACTIVITIES	
Net Income	137,862.63
Adjustments to reconcile Net Income to net cash provided by operations:	
1100 · Accounts Receivable	-21,657.57
2000 · Accounts Payable	-49,117.84
	67,087.22
Net cash provided by Operating Activities	67,087.22
Net cash increase for period	67,087.22
Cash at beginning of period	1,039,056.75
Cash at end of period	1,106,143.97

Yolo Subbasin Groundwater Agency
Profit & Loss
 July 1, 2023 through March 11, 2024

	Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 1 - 11, 24	TOTAL
Ordinary Income/Expense										
Income										
4000 · Member Contributions-Municipal	160,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	160,000.00
4100 · Member Contributions-Rural	237,841.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	237,841.50
4200 · Member Contributions-Affiliates	65,170.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65,170.00
4600 · Direct Contributions - IRWM Fee	0.00	0.00	0.00	0.00	7,157.57	0.00	0.00	0.00	0.00	7,157.57
4700 · Well Permitting Regulatory Fees	350.00	22.00	1,750.00	0.00	350.00	1,200.00	471.81	1,550.00	220.00	5,913.81
4900 · Interest Income	0.00	0.00	1.43	0.00	3,414.99	1.43	12,098.99	0.00	0.00	15,516.84
Total Income	463,361.50	22.00	1,751.43	0.00	10,922.56	1,201.43	12,570.80	1,550.00	220.00	491,599.72
Expense										
5100 · Bank & Other Fees	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	25.00
5300 · Insurance-General & Auto	492.25	100.00	0.00	0.00	1,476.75	0.00	0.00	0.00	0.00	2,069.00
5500 · Membership Dues	0.00	0.00	0.00	0.00	21,500.00	0.00	2,540.00	0.00	0.00	24,040.00
7000 · Admin. Expenses	15.84	3.15	496.51	46.95	291.44	1.26	908.46	125.85	0.00	1,889.46
7100 · Project Mgmt-SGMA Implementatio	591.25	0.00	65,968.81	0.00	0.00	0.00	58,862.50	3,870.00	0.00	129,292.56
7200 · Consultant Services	11,751.25	14,912.50	11,877.50	5,576.25	4,910.00	3,243.75	7,796.50	6,302.00	0.00	66,369.75
7300 · Legal Services	500.00	685.50	6,355.00	0.00	10,318.50	0.00	1,989.90	2,688.00	0.00	22,536.90
7350 · Audit Services - Financial	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,800.00
7400 · GSP - Related Consultant Costs	0.00	0.00	0.00	0.00	52,321.87	0.00	15,053.83	18,488.52	0.00	85,864.22
7600 · YC Groundwater Monitor Program	0.00	0.00	8,230.00	0.00	0.00	0.00	1,840.00	0.00	0.00	10,070.00
7700 · GSP Verif in Well Permit Review	0.00	0.00	1,333.80	0.00	0.00	0.00	2,446.40	0.00	0.00	3,780.20
Total Expense	21,150.59	15,701.15	94,261.62	5,623.20	90,843.56	3,245.01	91,437.59	31,474.37	0.00	353,737.09
Net Ordinary Income	442,210.91	-15,679.15	-92,510.19	-5,623.20	-79,921.00	-2,043.58	-78,866.79	-29,924.37	220.00	137,862.63
Net Income	442,210.91	-15,679.15	-92,510.19	-5,623.20	-79,921.00	-2,043.58	-78,866.79	-29,924.37	220.00	137,862.63

**Yolo Subbasin Groundwater Agency
A/P Aging Summary
As of March 11, 2024**

	<u>Current</u>	<u>1 - 30</u>	<u>31 - 60</u>	<u>61 - 90</u>	<u>> 90</u>	<u>TOTAL</u>
Downey Brand LLP	2,688.00	0.00	0.00	0.00	0.00	2,688.00
Leafbird Consulting, LLC	0.00	6,162.00	0.00	0.00	0.00	6,162.00
LedgerPro Bookkeeping	0.00	140.00	0.00	0.00	0.00	140.00
Luhdorff & Scalmanini	3,870.00	0.00	0.00	0.00	0.00	3,870.00
Richardson & Company LLP	0.00	0.00	0.00	7,800.00	7,500.00	15,300.00
West Yost	0.00	18,488.52	0.00	0.00	0.00	18,488.52
Yolo County Flood Control & WCD	125.85	0.00	0.00	0.00	0.00	125.85
TOTAL	<u>6,683.85</u>	<u>24,790.52</u>	<u>0.00</u>	<u>7,800.00</u>	<u>7,500.00</u>	<u>46,774.37</u>

**Yolo Subbasin Groundwater Agency
Transaction List by Date
January 17 through March 11, 2024**

Type	Date	Num	Name	Memo	Account	Cir	Split	Amount
Jan 17 - Mar 11, 24								
Deposit	01/17/2024			Deposit	1020 · Yolo County Treasury	X	4700 · Well Permitting Regulatory Fees	471.81
Bill Pmt -Check	01/22/2024	318	Yolo County Flood Control & WCD	Expenses 10/01/2023 - 12/31/2023	1000 · 1st Northern-Checking	X	2000 · Accounts Payable	-63,687.33
Bill	01/22/2024	595581	Downey Brand LLP	Services rendered through December 31, 2023	2000 · Accounts Payable		7300 · Legal Services	-1,848.00
Transfer	01/25/2024			Funds Transfer Request #2024-01-23	1020 · Yolo County Treasury	X	1000 · 1st Northern-Checking	-63,687.33
Payment	01/25/2024	19086	Reclamation District 150		1200 · Undeposited Funds	X	1100 · Accounts Receivable	1,073.25
Deposit	01/25/2024			County Included RD150 ACH Deposit With Transfer	1000 · 1st Northern-Checking	X	1200 · Undeposited Funds	1,073.25
Payment	01/29/2024	1010	Reclamation District 1600		1200 · Undeposited Funds		1100 · Accounts Receivable	1,731.00
Bill	01/31/2024	1973	Consero Solutions	Inv #1973 January services	2000 · Accounts Payable		7200 · Consultant Services	-4,392.50
Bill	01/31/2024	3324	LedgerPro Bookkeeping	Inv #3324 Jan svcs	2000 · Accounts Payable		7200 · Consultant Services	-560.00
Bill	01/31/2024	9268	Stockholm Environment Institute, Inc.	Costs for period November 1 to January 31, 2024	2000 · Accounts Payable		7400 · GSP - Related Consultant Costs	-2,650.50
Bill	01/31/2024	1	Leafbird Consulting, LLC	Costs for period January 1 - January 31, 2024	2000 · Accounts Payable		7200 · Consultant Services	-2,844.00
Deposit	02/15/2024			Deposit	1020 · Yolo County Treasury	X	4700 · Well Permitting Regulatory Fees	300.00
Bill	02/17/2024	2056977	West Yost	Professional services from January 6, 2024 to February 9,...	2000 · Accounts Payable		7400 · GSP - Related Consultant Costs	-18,488.52
Bill	02/17/2024	40814	Luhdorff & Scalmanini	Services rendered through December 31, 2023	2000 · Accounts Payable		7100 · Project Mgmt-SGMA Implement...	-3,870.00
Bill	02/17/2024	YSGA Expenses	Yolo County Flood Control & WCD	Copies & Postage 1/1 - 1/31/2024	2000 · Accounts Payable		7000 · Admin. Expenses	-115.21
Bill	02/20/2024	596619	Downey Brand LLP	Services rendered through January 31, 2024	2000 · Accounts Payable		7300 · Legal Services	-2,688.00
Bill Pmt -Check	02/21/2024	319	Consero Solutions	Inv #1973 January services	1000 · 1st Northern-Checking		2000 · Accounts Payable	-4,392.50
Bill Pmt -Check	02/21/2024	320	Downey Brand LLP		1000 · 1st Northern-Checking	X	2000 · Accounts Payable	-1,989.90
Bill Pmt -Check	02/21/2024	321	Leafbird Consulting, LLC	Costs for period January 1 - January 31, 2024	1000 · 1st Northern-Checking	X	2000 · Accounts Payable	-2,844.00
Bill Pmt -Check	02/21/2024	322	LedgerPro Bookkeeping	Inv #3324 Jan svcs	1000 · 1st Northern-Checking		2000 · Accounts Payable	-560.00
Bill Pmt -Check	02/21/2024	323	Stockholm Environment Institute, Inc.	Costs for period November 1 to January 31, 2024	1000 · 1st Northern-Checking		2000 · Accounts Payable	-2,650.50
Bill Pmt -Check	02/21/2024	324	West Yost		1000 · 1st Northern-Checking	X	2000 · Accounts Payable	-12,403.33
Transfer	02/21/2024			Funds Transfer Request # (Not Yet Submitted)	1020 · Yolo County Treasury	X	1000 · 1st Northern-Checking	-23,766.98
Deposit	02/22/2024			Deposit	1020 · Yolo County Treasury	X	4700 · Well Permitting Regulatory Fees	300.00
Deposit	02/23/2024			Deposit	1020 · Yolo County Treasury	X	4700 · Well Permitting Regulatory Fees	150.00
Deposit	02/27/2024			Deposit	1020 · Yolo County Treasury	X	4700 · Well Permitting Regulatory Fees	150.00
Deposit	02/28/2024			Deposit	1020 · Yolo County Treasury	X	4700 · Well Permitting Regulatory Fees	150.00
Bill	02/29/2024	2	Leafbird Consulting, LLC	Costs for period February 1 - February 29, 2024	2000 · Accounts Payable		7200 · Consultant Services	-6,162.00
Bill	02/29/2024	YSGA Expenses	Yolo County Flood Control & WCD	Copies & Postage 2/1 - 2/29/2024	2000 · Accounts Payable		7000 · Admin. Expenses	-10.64
Deposit	02/29/2024			Deposit	1020 · Yolo County Treasury		4700 · Well Permitting Regulatory Fees	500.00
Bill	02/29/2024	3341	LedgerPro Bookkeeping	Inv #3341 Feb svcs	2000 · Accounts Payable		7200 · Consultant Services	-140.00
Deposit	03/01/2024			Deposit	1020 · Yolo County Treasury		4700 · Well Permitting Regulatory Fees	220.00
Jan 17 - Mar 11, 24								

Yolo Subbasin Groundwater Agency
Open Invoices
 As of March 11, 2024

Type	Date	Num	P. O. #	Name	Terms	Due Date	Aging	Open Balance
Colusa Drain Mutual Water Comany								
Invoice	07/07/2023	2023-6		Colusa Drain Mutual Water Comany	50% Invoice Due Date	01/27/2024	44	5,000.00
Total Colusa Drain Mutual Water Comany								5,000.00
Reclamation District 2035								
Invoice	07/07/2023	2023-16		Reclamation District 2035	50% Invoice Due Date	01/27/2024	44	9,500.00
Total Reclamation District 2035								9,500.00
Water Resources Association								
Invoice	11/15/2023	2023-28		Water Resources Association	Upon Account Closure	02/23/2024	17	7,157.57
Total Water Resources Association								7,157.57
TOTAL								21,657.57

Yolo Subbasin Groundwater Agency Upcoming Cash Requirements

	Type	Date	Num	Name	As of March 11, 2024	Memo	Due Date	Aging	Open Balance
Current									
	Bill	02/17/2024	40814	Luhdorff & Scalmanini		Services rendered through December 31, 2023	03/18/2024		3,870.00
	Bill	02/17/2024	YSGA Expenses	Yolo County Flood Control & WCD		Copies & Postage 1/1 - 1/31/2024	03/18/2024		115.21
	Bill	02/20/2024	596619	Downey Brand LLP		Services rendered through January 31, 2024	03/21/2024		2,688.00
	Bill	02/29/2024	YSGA Expenses	Yolo County Flood Control & WCD		Copies & Postage 2/1 - 2/29/2024	03/30/2024		10.64
Total Current									<u>6,683.85</u>
1 - 30									
	Bill	02/17/2024	2056977	West Yost		Professional services from January 6, 2024 to Febr	02/27/2024	13	18,488.52
	Bill	02/29/2024	3341	LedgerPro Bookkeeping		Inv #3341 Feb svcs	02/29/2024	11	140.00
	Bill	02/29/2024	2	Leafbird Consulting, LLC		Costs for period February 1 - February 29, 2024	03/10/2024	1	6,162.00
Total 1 - 30									<u>24,790.52</u>
31 - 60									
Total 31 - 60									
61 - 90									
	Bill	07/01/2023	FY2023	Richardson & Company LLP		Audit services not to exceed \$7,800.00 for FY 2023	12/31/2023	71	7,800.00
Total 61 - 90									<u>7,800.00</u>
> 90									
	Bill	06/30/2023	FY2022	Richardson & Company LLP		Audit services for FY2022 not to exceed \$7,500	06/30/2023	255	7,500.00
Total > 90									<u>7,500.00</u>
TOTAL									<u><u>46,774.37</u></u>

Current Cash Balance {Checking Only}	24,000.00
Ending Cash Balance After Paying Bills Actually Owed	(7,474.37)
Desired Reserve in Checking/Savings (Per Assigned Fund Balance)	24,000.00
Ending Cash Reserve or (Transfer Needed)	(31,474.37)

*Richardson invoices not yet received - Audit not yet complete
Dated to reflect consistency with reporting years*

Yolo Subbasin Groundwater Agency
MINUTES of Executive Committee (EC) Meeting
January 12, 2024, 12:00 p.m. – 1:00 p.m.
Hosted at YCFC&WCD Headquarters
34274 State Highway 16, Woodland

Present: Lee Smith, Dave Schaad, Kristin Sicke, Dotty Pritchard, Kurt Balasek, Sarah Leicht, Elisa Sabatini (phone)

1. **Call to Order:** Meeting was called to order by Lee Smith at 12:01 pm.
2. **Adding Items to the Posted Agenda:** Nothing to add.
3. **Public Comment:** No comments.
4. **Administrative Items (Sicke):**
 - a) November 14, 2023 meeting minutes were approved with correction (*Kurt not in attendance, Carol was*).
 - b) Reviewed financials: FY 2023-2024: 11/9/23 – 1/11/24: Financials were provided with the agenda packet.
 - c) Approve Purchase of 2023 Land Use Data from Land IQ: A staff report was provided with the agenda packet. The Committee directed staff to also obtain an estimate for evapotranspiration data.
 - d) Payments to approve: Payments were provided with the agenda packet.

Cameron and Kristin are still working on closing out the WRA account. David: Is the Buckeye Creek item still ongoing? Lee: Expenditure is tracking well below budgeted on some items – do we anticipate meeting these amounts or remaining under? Kristin: we are keeping the Buckeye Creek item open in case additional YSGA assistance is requested; upcoming invoices will put us closer to 50% expenditure on major budget items. The Committee also discussed how expenditures related to the SGMA Implementation Grant will be tracked.

David Schaad moved to approve administrative items a) and c) which was seconded by Kurt Balasek and approved unanimously.

5. **Update on YSGA GSP Implementation Actions:** Discussion Item (Sicke)
 - a) Water Conditions Update: Surface water supply is growing, and districts have a positive outlook for the year ahead.
 - b) Grant Funding Opportunities: Staff continue to track the Regional Resilience program.
 - c) Ad Hoc Drought Contingency Planning Committee: Kristin summarized the developed 2-tier approach that was discussed at the most recent meeting. The Committee discussed the new approach and the issues of land subsidence and legal liability.
 - d) Ad Hoc Committee for Reconsideration of Expense Allocation: Kristin had a meeting with Directors Barth, Schaad, and Smith and Legal Counsel Rebecca Smith about how to proceed with the fee study. Some scenarios need to be worked up as strawmen proposals for the Finance Committee's review prior to a discussion at a Board of Directors meeting.

Yolo Subbasin Groundwater Agency
MINUTES of Executive Committee (EC) Meeting
January 12, 2024, 12:00 p.m. – 1:00 p.m.
Hosted at YCFC&WCD Headquarters
34274 State Highway 16, Woodland

7. **Draft Agenda Items for January 22, 2024 Board of Directors Meeting**
- a) Consent Items:
 - i. Meeting Minutes
 - ii. Financials
 - b) Executive Officer Report
 - c) DWR / NCWA Update
 - d) CA Water Data Consortium: Groundwater Accounting Platform
 - e) Consideration: Approve Entering into Contracts funded by SGMA Implementation Grant
 - i. Approval of SEI and Leafbird Consulting Contracts
 - ii. Approval of Websoft Contract
 - iii. Approval of Land and Water Solutions Contract
 - f) Consideration: Approval of the “2-Tier Well Permit Review Procedures” and Public Comment Period
 - i. Approval of West Yost Agreement Amendment
8. **Other Updates & Future Executive Committee Agenda Items:** Nothing to report.
9. **Next Executive Committee Meeting Date:** February 21, 2024
10. **Adjourned** at 1:10 pm.

Respectfully submitted,



Kristin Sicke
Executive Officer



March 1, 2024

Kristin Sicke
 Yolo Subbasin Groundwater Agency
 34274 State Highway 16
 Woodland, CA 95695

Dear Kristin:

In response to your request, I am prepared to perform a survey of the 60 monitoring stations in the Yolo County subsidence network for an estimated fee of **\$79,700.00**. The survey will be performed in accordance with the specifications set forth in the draft NOAA Technical Memorandum NOS NGS 92 (Classifications, Accuracy Standards, and General Specifications for GNSS Geodetic Control Surveys using OPUS Projects), which replaces the NGS 58/NGS 59 guidelines previously used to position the marks in the Yolo network. The classification for this project will be Secondary, which is designed to produce a 3 cm ellipsoid height accuracy at the 95% confidence level. Attached are a detailed project description, budget, rate sheet, and technical exhibits.

Payment terms will be net 30 days from date of invoice, which will be provided monthly and upon project completion.

If the foregoing is acceptable to you, please sign and date where indicated below and return a copy of this agreement to me (scanned/mailed is acceptable). Please contact me if you have any questions.

Regards,

Jim Frame

As required by law: (1) You are hereby notified that Jim Frame is licensed by the State of California Board for Professional Engineers, Land Surveyors and Geologists, license number LS 5435. (2) Any changes to the scope of work set forth above must be negotiated separately. (3) This contract may be terminated by either party upon 30 days written notice; payment for work already completed will be required upon termination.

Terms accepted and work authorized by: _____
Kristin Sicke Date

**Yolo Subsidence Network 2024 Monitoring Event
Budget**

Item	Estimated Cost
Technical plan development	\$3,000.00
Reconnaissance	\$15,000.00
Update station descriptions	\$5,000.00
Observation plan preparation	\$900.00
Equipment rental	\$800.00
NRTK observations	\$35,000.00
Long-duration observations	\$3,000.00
Mileage	\$1,000.00
Data management & processing	\$5,000.00
Subsidence comparisons	\$1,000.00
Reporting	\$4,500.00
Administration	\$4,500.00
Meetings	\$1,000.00
Estimated total	\$79,700.00



FRAME
 609 A Street
 530.756.8584

SURVEYING & MAPPING
 Davis, CA 95616
 framesurveying.com

HOURLY CHARGE RATES
 Effective January 1, 2024

Survey Field Work

2-person field crew (with vehicle and equipment)	\$ 280.00
1-person field crew	\$ 230.00

Field work rates shown are portal-to-portal and pertain to normal business hours. Add \$50.00 per hour for work beyond 8 hours on a weekday and for all work on weekends and holidays.

Survey Office Work

Boundary research and analysis, data reduction and compilation:	\$ 210.00
Dispute resolution and litigation support (portal-to-portal):	\$ 420.00
Administrative:	\$ 130.00

Other Charges

Mileage:	Current IRS rate.
Materials:	Cost + 10%
Agency fees:	Cost + 10%
Subcontractors:	Cost + 15%

Yolo County Subsidence Network 2024 Reobservation

Project Description

Introduction

The Yolo County Subsidence Network was initiated in 1999 with 42 stations distributed throughout the majority of the county. Its purpose was to establish baseline ground station heights against which future observations could be compared in order to assess the distribution and extent of land subsidence in the county. The network was expanded to 53 ground stations and observed in 2002, was expanded again to 55 ground stations and observed in 2005. In 2008 the DWR Sacramento Valley project incorporated the Yolo County stations. The Yolo network was again observed in 2016, and the Sacramento Valley Network (including Yolo) was observed again by DWR in 2017.

All of the observation events described above were executed in accordance with NOAA NGS 58 and NGS 59 documents, which prescribed multiple long-duration observation sessions at each local station. In recent years the National Geodetic Survey (NGS) has been developing replacement specifications for the NGS 58 and NGS 59 documents with an eye toward using 5-minute real-time positioning observations in conjunction with the NGS OPUS Projects tool, which uses the NOAA CORS Network (NCN) to align the project with the federal horizontal and vertical datums. The new specifications, in near-final draft form, are set forth in NOS NGS 92, and it is those specifications that are proposed for use in this project. The procedures described in NGS 92 allow a substantial cost reduction when compared to the NGS 58/NGS 59 approach.

NGS 92 describes 3 classifications of network accuracy: Primary, Secondary and Local. The Secondary classification has a 3 cm ellipsoid height accuracy at the 95% confidence level, and is the classification proposed for this project. In order to achieve this result, 3 each 5-minute observations using a Network RTK (NRTK) system must be obtained at each ground station. The observations must be spaced at least 3 hours apart in time, and at least 1 must be taken on a different day. Specific processing and adjustment results must be achieved in order to accept a given observation, and rejected observations must be repeated until the threshold results are obtained.

OPUS Projects

OPUS is an acronym for the NGS Online Positioning User Service. Using a web interface, it allows users to upload a GNSS observation file, which is then processed in conjunction with data from multiple NCN stations to obtain a position with an estimated accuracy. OPUS Projects is another web-based NGS tool that extends the capabilities of OPUS by incorporating the user data into a true network adjustment, which substantially improves the accuracy estimates of the positioning results. Until recently, OPUS Projects was limited to long-duration observation files, but with the introduction of OPUS Projects version 5, the ability to incorporate Real-Time Kinematic (RTK) and Network Real-Time Kinematic (NRTK) vectors was added. This allows the NRTK data that will be collected in this project to be incorporated into a network adjustment along with NCN data, producing 3 cm accuracy for the ellipsoid heights at the 95% confidence level.

Reconnaissance

The initial field task of the 2024 survey is to conduct reconnaissance of the network stations to determine their status. Although it is expected that most stations will be usable (but see the section on new stations below), it is possible that one or more stations will need to be replaced or offset. A modest budget item has been included for this possibility.

New Stations

The network diagram (Appendix A) shows 7 new stations, although "new" in this context warrants some explanation. All 7 are new in the sense that none exist yet in the NGS Integrated Data Base (IDB). However, only 4 of these – PLEA, WAPT, WIL1, and YAPT – have never been observed as part of the Yolo Subsidence Network.

PLEA is an entirely new station located on the Pleasants Valley Road bridge over Putah Creek west of Winters.

WIL1 is a replacement for MADZ, which was obliterated during construction of the Highway 16 roundabout in Madison. Caltrans transferred an elevation via level from MADZ to WIL1 in 2017 prior to demolition of the intersection, so the height history of MADZ has been preserved.

WAPT and YAPT are replacements for WOOD and YCAP, respectively. The latter 2 stations are located within the secured perimeters of the Woodland-Watts and Yolo County airports, respectively. Access to WOOD and YCAP involve time-consuming screening and scheduling procedures, which reduces the usefulness of these stations. Moving these stations outside the fenced airport perimeters will simplify future monitoring events.

The other 3 "new" stations are offset marks that were previously established for the purpose of making terrestrial ties to original stations that are no longer suitable for satellite observations due to tree growth. These 3 stations are FRE2 (established in 2016 as an offset for station FREMONT), GAF2 (established in 2016 as an offset for station GAFFNEY), and ALH1 (established in 2017 as an offset for station ALHAMBRA). As in past surveys, terrestrial ties from these offset stations will be made to their nearby counterparts during the course of the 2024 survey in order to perpetuate the ellipsoid height records of the original stations.

The network diagram also shows 3 stations that, while not new, have not been part of the Yolo network before: BROO, GUIN and RUMS. All 3 of these stations are in the Capay Valley. They were established by Caltrans in 2004, and are already in the IDB.

Equipment

The NRTK observations will be performed with a Trimble R8-3 GNSS receiver with integrated antenna. Trimble 400SSi receivers with Zephyr Geodetic antennas will be used for the long-duration observations at WOOD and YCAP. Terrestrial ties from offset marks to obscured stations will be obtained using a GeoMax Zoom80 2-second robotic total station.

Observation Plan

In order for field operations to move through the project efficiently and still achieve the required time separations, project stations have been organized into 7 groups: 6 groups of 9 stations each, 1 group of 8 stations, and 1 group of 6 stations. (See Appendix A, Network Diagram.) Note that all station in the network have been assigned a 4-character identifier for ease of reference. The full station names and their 4-character IDs are shown in the Station List (Appendix B). For Groups 1 through 6, 2 groups will be observed per day, with the Group order swapped on the following day, i.e. Day 1 observations will start at station RUMS at the northwest end of Group 1 and proceed southeast and northeast to station DRAI, then move to station HERS at the north end of Group 2 and proceed to station FERR. Day 2 observations will commence at Group 2 station HERS and move through station FERR, then proceed to Group 1 station RUMS and move through station DRAI. Group 7 will be observed twice on Day 4 from north to south, delaying the start of the second round as necessary to ensure a 3-hour separation. A detailed observation schedule is shown in Appendix C.

Airport Station Observation Procedures

In order to transfer the heights from WOOD to WAPT, and YCAP to YAPT, the procedure will be as follows:

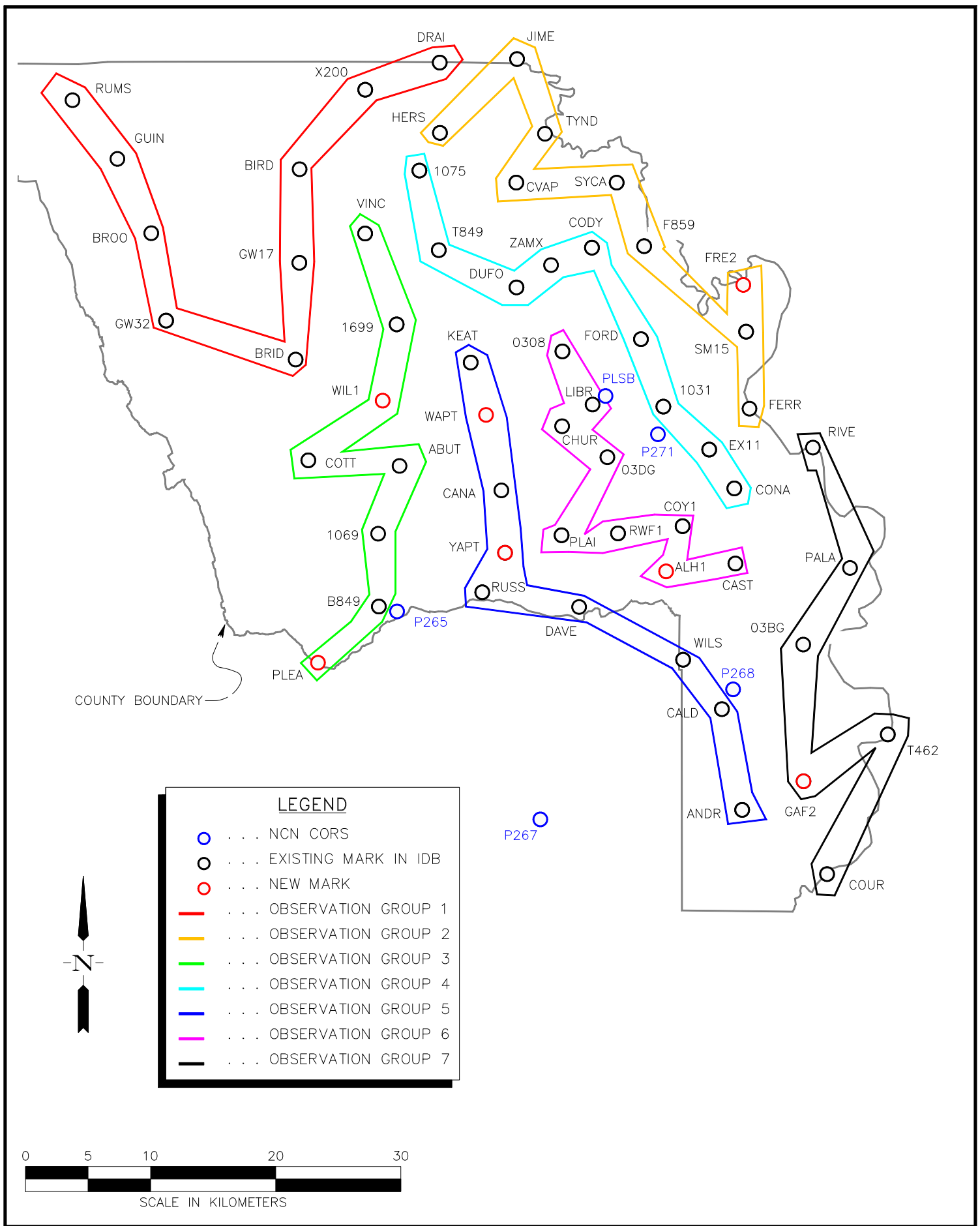
1. Take an NRTK observation on WOOD.
2. Set up a tripod with receiver and antenna and begin a long-duration observation at WOOD. This equipment will be left unattended.
3. Proceed to WAPT.
4. Take an NRTK observation at WAPT.
5. Proceed to YCAP.
6. Take an NRTK observation at YCAP.
7. Set up a tripod with receiver and antenna and begin a long-duration observation at YCAP. This equipment will be left unattended.
8. Proceed to YAPT.
9. Take an NRTK observation at YAPT.
10. Return to WOOD and tear down the setup after a minimum of 4 hours observation time.
11. Take an NRTK observation at WOOD.
12. Return to YCAP and tear down the setup after a minimum of 4 hours observation time.
13. Take an NRTK observation at YCAP.

Data Processing and Adjustment

Unlike prior network monitoring surveys, the 2024 survey will perform almost all processing and adjustment within OPUS Projects. This will ensure that the quality of the results meet NGS specifications. Although setting up the project and uploading the data to OPUS Projects is not trivial, the automated processing and adjustment provided by the tool significantly reduces the amount of office time required to produce reliable results. A modest additional effort will allow the 2024 positions to be published as datasheets in the IDB, which is accessible to the public. Exceptions will be the legacy stations ALHA, FREM and GAFF, the heights for which will be transferred from the offset stations to the legacy stations. This transfer data is suitable for subsidence monitoring purposes, but not for inclusion in the IDB.

Reporting

Upon conclusion of the data adjustment and analysis, a project report will be prepared that includes the OPUS Projects results and a comparison of ellipsoid heights between the 2017 and 2024 monitoring events.



Appendix B – Station List

Station Name	4-Char ID	NGS PID
169	1699	JS2170
ABUT	ABUT	AI5050
ALH1	ALH1	(NONE)
ANDREW	ANDR	AE9864
B 849	B849	JS2151
BIRD	BIRD	AI5052
BRIDGE	BRID	AI5053
BROOKS	BROO	DH6511
CALDWELL	CALD	AE9863
CANAL	CANA	AI5054
CASTRO AZ MK RESET	CAST	JS4556
CHURCH	CHUR	AI5055
CODY	CODY	AI5056
CONAWAY	CONA	AI5057
COTTON	COTT	AI5058
COURTLAND	COUR	JS4311
COY DUMP	COY1	AI5059
CVAP 02	CVAP	AI5060
DAVEPORT	DAVE	JS4617
DRAIN	DRAI	AI5061
DUFOUR	DUFO	JS2239
EX-1	EX11	AI5073
F 859 RESET	F859	AI5062
FERRY	FERR	JS2338
FORD RM 2	FORD	AI5046
FRE2	FRE2	(NONE)
GUINDA	GUIN	DH6512
GAF2	GAF2	(NONE)
GWM 17	GW17	JT0105
GWM 32	GW32	JT0026
HERSHEY	HERS	AI5064
HPGN CA 03 08	0308	JS4668
HPGN D CA 03 BG	03BG	AC9219
HPGN D CA 03 DG	03DG	AC9223
JIMENO RM 4	JIME	AI5047
KEATON	KEAT	AI5065
LIBRARY	LIBR	AI5066
P 1031	1031	JS2344
P 1075	1075	JS2130
PALA	PALA	DH6510

Appendix B – Station List

PLAINFIELD	PLAI	AI5068
RIVER	RIVE	AI5069
RUMSEY	RUMS	DH6513
RUSSELL RANCH 2	RUSS	AC9893
RWF1	RWF1	DK4487
SM NO 15	SM15	AI5070
SYCAMORE	SYCA	AI5071
T 1069	1069	JS2157
T 462	T462	JS1556
T 849	T849	JS2177
TYNDALL	TYND	AI5072
VINCOR	VINC	DE9127
WAPT	WAPT	(NONE)
WILLOW	WIL1	(NONE)
WILSON	WILS	AE9857
WOODPORT	WOOD	JS3886
X 200 RESET	X200	JS2144
YOLO CO AP BASE LINE PT 6	YCAP	DE9129
YAPT	YAPT	(NONE)
ZAMX	ZAMX	AI5074

Appendix C
Observation Schedule

DAY 1									
GROUP 1	RUMS	GUIN	BROO	GW32	BRID	GW17	BIRD	X200	DRAI
GROUP 2	HERS	JIME	TYND	CVAP	SYCA	F859	FRE2	SM15	FERR
DAY 2									
GROUP 3	PLEA	B849	1069	ABUT	COTT	WIL1	1699	VINC	
GROUP 4	1075	T849	DUFO	ZAMX	DOCY	FORD	1031	EX11	CONA
DAY 3									
GROUP 5	ANDR	CALD	WILS	DAVE	RUSS	YAPT	CANA	WAPT	KEAT
GROUP 6	308	LIBR	CHUR	03DG	PLAI	RWF1	COY1	ALH1	CAST
DAY 4									
GROUP 7	RIVE	PALA	03BG	GAF2	T462	COUR			
GROUP 7	RIVE	PALA	03BG	GAF2	T462	COUR			
DAY 5									
GROUP 2	HERS	JIME	TYND	CVAP	SYCA	F859	FRE2	SM15	FERR
GROUP 1	RUMS	GUIN	BROO	GW32	BRID	GW17	BIRD	X200	DRAI
DAY 6									
GROUP 4	1075	T849	DUFO	ZAMX	DOCY	FORD	1031	EX11	CONA
GROUP 3	PLEA	B849	1069	ABUT	COTT	WIL1	1699	VINC	
DAY 7									
GROUP 6	308	LIBR	CHUR	03DG	PLAI	RWF1	COY1	ALH1	CAST
GROUP 5	ANDR	CALD	WILS	DAVE	RUSS	YAPT	CANA	WAPT	KEAT
DAY 8									
GROUP 7	RIVE	PALA	03BG	GAF2	T462	COUR			

Appendix C
Observation Schedule (continued)

DAY 9									
GROUP 1	RUMS	GUIN	BROO	GW32	BRID	GW17	BIRD	X200	DRAI
GROUP 2	HERS	JIME	TYND	CVAP	SYCA	F859	FRE2	SM15	FERR
DAY 10									
GROUP 3	PLEA	B849	1069	ABUT	COTT	WIL1	1699	VINC	
GROUP 4	1075	T849	DUFO	ZAMX	DOCY	FORD	1031	EX11	CONA
DAY 11									
GROUP 5	ANDR	CALD	WILS	DAVE	RUSS	YAPT	CANA	WAPT	KEAT
GROUP 6	308	LIBR	CHUR	03DG	PLAI	RWF1	COY1	ALH1	CAST

Height Transfer for WOOD/WAPT and YCAP/YAPT

DAY 12									
NRTK	WOOD	WAPT	YCAP	YAPT					
STATIC	WOOD		YCAP						

Classifications

The Standards define the following 3 *Classifications of Network and Local Accuracy* for GNSS geodetic control surveys which will be submitted to NGS for review and publication.

Table 1 - Classifications of Network and Local Accuracy

	Description	PRIMARY	SECONDARY	LOCAL
1.1	Ellipsoid Height (cm) *	2 cm	3 cm	5 cm
1.2	Horizontal (cm) *	1 cm	1.5 cm	2.5 cm
1.3	Orthometric Height (cm) *	3 cm	4 cm	6 cm

* Network Accuracy is stated at the 95% confidence level

Standards for each Observation Method

Table 4 - Standards for Observation Requirements by Method

	Requirement	PRIMARY	SECONDARY	LOCAL
4.1	Requirements for ALL METHODS - Repeat occupations and offset time	Offset sessions/occupations by 3 to 21 hours.		
4.2	Requirements for OPUS PP - Required TOTAL Static GNSS Observation Time (T) - Recommended GNSS Session Durations	T = 20 hours (for 0 to 200 km) Requires at least 2 sessions, with at least 1 session on a different day (2) 10 hour sessions or (3) 7 hour sessions or (4) 5 hour sessions	T = 8 hours (for 0 to 200 km) T = 6 hours (for 0 to 150 km) T = 4 hours (for 0 to 100 km) Requires at least 2 sessions. (2) 4 hour sessions (2) 3 hour sessions (2) 2 hour sessions	T = 4 hours (for 0 to 200 km) Requires at least 2 sessions. (2) 2 hour sessions

Standards for each Observation Method

Table 4 - Standards for Observation Requirements by Method (continued)

4.3	Requirements for GVX PP - Number and duration of sessions	3 sessions 60 minutes each (for 0 to 25 km) 90 minutes each (for 25 to 50 km) Requires at least 1 session on a different day.	3 sessions 30 minutes each (for 0 to 25 km) 60 minutes each (for 25 to 50 km)	3 sessions 15 minutes each (for 0 to 25 km) 30 minutes each (for 25 to 50 km)
4.4	Requirements for GVX NRTK - Number and duration of occupations	(6) 5 minutes Requires at least 3 occupations on a different day.	(3) 5 minutes	(3) 5 minutes
4.5	Requirements for GVX SRTK - Number and duration of occupations	Not allowed	(5) 5 minutes Requires at least 2 occupations on a different day.	(4) 5 minutes Requires at least 1 occupation on a different day.

Standards for Network Design

Table 5 – Standards for Network Design

	Requirement	PRIMARY	SECONDARY	LOCAL
5.1	All HUBS are NCN CORS	Yes.		
5.2	Distance between HUBS	100 km minimum, 400 km maximum.		
5.3	Project includes 3 or more NCN CORS	1 local NCN CORS used as HUB (0 to 200 km) plus 1 or more nearby NCN CORS (0 to 300 KM) plus 1 or more distant NCN CORS (400-800 km)		
5.4	Project includes 1 or more OPUS PP verified passive marks as checkpoints (GVX Validation Stations)	Yes, if GVX vectors are uploaded to the Project.		

Standards for Network Design

Table 5 – Standards for Network Design (continued)

5.5	Longest OPUS PP Vector from HUB to mark (excluding from HUB to NCN CORS)	200 km (for T = 20 hrs)	200 km (for T = 8 hrs) 150 km (for T = 6 hrs) 100 km (for T = 4 hrs)	200 km (for T = 4 hr)
5.6	Longest GVX Vector - GVX PP - GVX NRTK - GVX SRTK	50 km 40 km Not allowed	50 km 40 km 10 km	50 km 40 km 20 km
5.7	Maximum Number Of Vector Steps In A Vector Chain	2 vector steps, consisting of: 1 OPUS derived vector, plus 1 GVX vector.		
5.8	Minimum Spacing Distance Between Adjacent Marks	1000 meters	500 meters	100 meters
5.9	Timeliness of Projects	Start to end of observations = 12 months End of observations to date of submission = 6 months		

Yolo Subbasin Groundwater Agency Board of Directors

Meeting Agenda Report

MEETING DATE: March 18, 2024

AGENDA ITEM NO. 5

SUBJECT: Report of the Chair and Executive Officer

INITIATED OR BOARD INFORMATION
REQUESTED BY: STAFF ACTION: MOTION
 OTHER _____ RESOLUTION

ATTACHMENT YES NO

BACKGROUND

The YSGA Chair and Executive Officer will provide either an oral or written report on recent activities.

A written report from the YSGA Executive Officer is attached.

RECOMMENDATION

This agenda item is for informational purposes only. No Board action is required.

Date: March 15, 2024
To: YSGA Board of Directors
From: Kristin Sicke, Executive Officer
Subject: Report of the Executive Officer

Recommendation

For informational purposes only. No Board action required.

Background

Following is an update to the Board of Directors of the YSGA on activities and issues related to the ongoing implementation of the Sustainable Groundwater Management Act (SGMA). This report should be considered as a summary document so that Board members and other interested parties can quickly read about the general activities taking place between YSGA Board meetings. Board members should feel free to contact me at any time for more detail or with ideas and/or questions that they might have regarding the program.

Since the January 22, 2024 meeting of the YSGA Board of Directors the following activities have taken place.

Program Administration

One meeting was held by the YSGA Executive Committee (EC) on February 21, 2024. The EC, consisting of Lee Smith, David Schaad, Kurt Balasek, Mary Vixie Sandy, and Executive Officer Kristin Sicke, discussed logistical issues related to YSGA administration and the implementation of the Groundwater Sustainability Plan (GSP). The Committee discussed administrative items, the ongoing development of the tiered well permit review procedures, and grant funding opportunities.

As a follow-up to the January 22, 2024 Board meeting, the YSGA *Ad Hoc Drought Contingency Planning Committee* met on March 11, 2024 to review the technical memo developed by West Yost for the 2-tier well permit review process.

YSGA staff continue to coordinate with stakeholders and to schedule and participate in community meetings for ensuring successful outreach during GSP implementation. Staff also continue to communicate with Solano Subbasin GSA, N. American Subbasin, Sutter Subbasin, and Colusa Groundwater Authority on data/information sharing and project opportunities, as well as other GSAs and Counties on their well permitting activities.

The Yolo Groundwater website <http://yologroundwater.org> was updated as needed. A calendar of current events is posted to the website.

Program Implementation

- GSP Public Outreach
 - Ongoing correspondence with concerned stakeholders, well drillers, and well applicants to answer questions about SGMA and the revised well permitting process.

- Projects and Management Actions
 - YSGA staff, with Water & Land Solutions, hosted a meeting with landowners along the China Slough to review progress made on the China Slough Rehabilitation Project and solicit feedback/concerns from landowners in the project vicinity.
 - Coordinated with Yolo County in the well permitting process in accordance with Executive Orders N-7-22 and N-3-23
 - Received approved well permits and reviewed pending well permits from Yolo County's Environmental Health Division
- Data Management/Website Updates
 - Worked with Websoft developers to begin updates to the WRID and yologroundwater.org websites
- Monitoring Network
 - Continued implementation of citizen science program for individual well monitoring
 - Staff are in the process of installing real-time monitoring equipment on the three new multi-completion wells on the west side of the Subbasin. Staff have been completing bi-weekly measurements in the interim, and the data is available to view online at sgma.yologroundwater.org.
 - Worked with Frame Surveying and Mapping to develop scope of work and schedule for land-based subsidence survey
 - Continued expansion of the monitoring network: adding voluntary monitoring wells at Roads 17A & 95, the Binning Tract north of Davis, and Road 45 northwest of Guinda.
- Focus Areas
 - Participated in various meetings with West Yost to review the draft hydrogeologist report guidelines and develop a tiered approach to report requirements.
- Drought Response
 - Participated in planning meetings related to the [SB 552](#) County Drought Plan
- GSP Annual Report
 - Gathered and processed data on sustainable management criteria for groundwater levels, water quality, land subsidence, and interconnected surface waters.
 - Gathered data from member entities on surface water diversions, groundwater extraction, and land use.
 - Processed 2022 LandIQ dataset to revise acreage of young orchards in the groundwater model from 2014-2022
 - YSGA staff, along with Vishal Mehta of Leafbird Consulting and Chuck Young of Stockholm Environment Institute, met with several prominent Yolo County growers to discuss ET estimates and irrigation practices.
 - Processed 2023 LandIQ dataset, completed initial model run, and continued model calibration efforts.

Program Outreach

Staff participated in a number of meetings/workshops/discussions related to SGMA and groundwater recharge and protection, which include the following:

1. Participated in Yolo County Irrigated Lands Program (January 22-24; Director Sagara and Sicke)
2. Participated in the Solano Groundwater Workshop (January 23; Fisher)

3. Staff assisted with the filming of sustainable groundwater management practices for the Farming for Our Future video series in coordination with the Center for Land-Based Learning and Bright Coast Productions (January 25, February 16; Leicht and Fisher)
4. Hosted meeting with China Slough landowners to discuss the Yolo-Zamora Groundwater Recharge Project (January 31; Sicke, Leicht, and Fisher)
5. Hosted meeting with Yolo Subbasin water users to QA/QC ET satellite data (February 6; Sicke, Leicht, and Fisher)
6. Participated in ACWA's State Legislative Committee meetings (February 9 and March 1; Sicke)
7. Meetings with The Nature Conservancy to explore methodology to improve monitoring of groundwater dependent ecosystems and interconnected surface water (February 13; Sicke, Leicht, and Fisher)
8. Participated in Groundwater Accounting and Data Reporting Pilot meeting (February 15; Fisher)
9. Meeting with Supervisor Mary Vixie Sandy to Discuss Groundwater (February 20; Sicke)
10. Hosted YSGA Executive Committee Meeting (February 21; Directors Balasek, Schaad, Smith, and Vixie Sandy; Sicke, Leicht, and Fisher; Sabatini)
11. Participated in the California Irrigation Institute Conference (February 26-27; Sicke, Leicht, and Fisher)
12. Participated in Capay Valley Watershed Meeting (February 27; Directors Muller and Bennett; and Sicke)
13. Participated in the 2024 NCWA Water Leaders Program (February 28; Sicke, Leicht, and Fisher; Sabatini)
14. Coordination Meetings with Yolo County Environmental Health Division (February 29 and March 12; Sicke, Leicht, and Fisher and Sabatini)
15. Hosted YSGA *Ad Hoc Drought Contingency Planning Committee* (March 11; Committee members; Sicke, Leicht, and Fisher)
16. Met with USDA Sustainable Agricultural Water Systems Unit (SAWS) to discuss ET estimation and GSP Implementation/modeling support (March 12; Leicht and Fisher)
17. YSGA staff and West Yost met with County staff and LSCE to communicate progress made on developing hydrogeologist report guidelines (March 12; Sicke, Leicht, and Fisher)
18. Represented Yolo County in Westside Sacramento IRWM Coordinating Committee Meeting (March 13; Leicht)
19. Met with City of Woodland staff and USDA SAWS Unit to discuss proposed groundwater recharge project (March 14; Sicke, Leicht, and Fisher)

Other Items of Note

YCFC&WCD's temporary permit was issued by the State Water Board on March 11, 2024, allowing for the diversion of winter flood flows from Cache Creek for groundwater recharge as part of the District's Winter Water Recharge project. Dunnigan Water District was issued a temporary permit on February 1, 2024; however, the conditions of the permit are not conducive to optimizing recharge events.

DWR released the following documents:

[Depletions of Interconnected Surface Waters: An Introduction](#)

[Groundwater Well Permitting: Observations and Analysis of Executive Orders N-7-22 and N-3-23](#)

DWR recommends enactment of the following statutory concepts to replace the provisions of EO N-3-23 paragraph 4 and to ensure continued advancement toward a reliable groundwater supply for the future. The statutory language consists of four components:

1. Require Disclosures: One of the key facets of the EOs is the provision for improved coordination between LEAs and GSAs. This report identified that improved communication and disclosure to the public about pending well permit applications will improve transparency. Statutory provisions should be

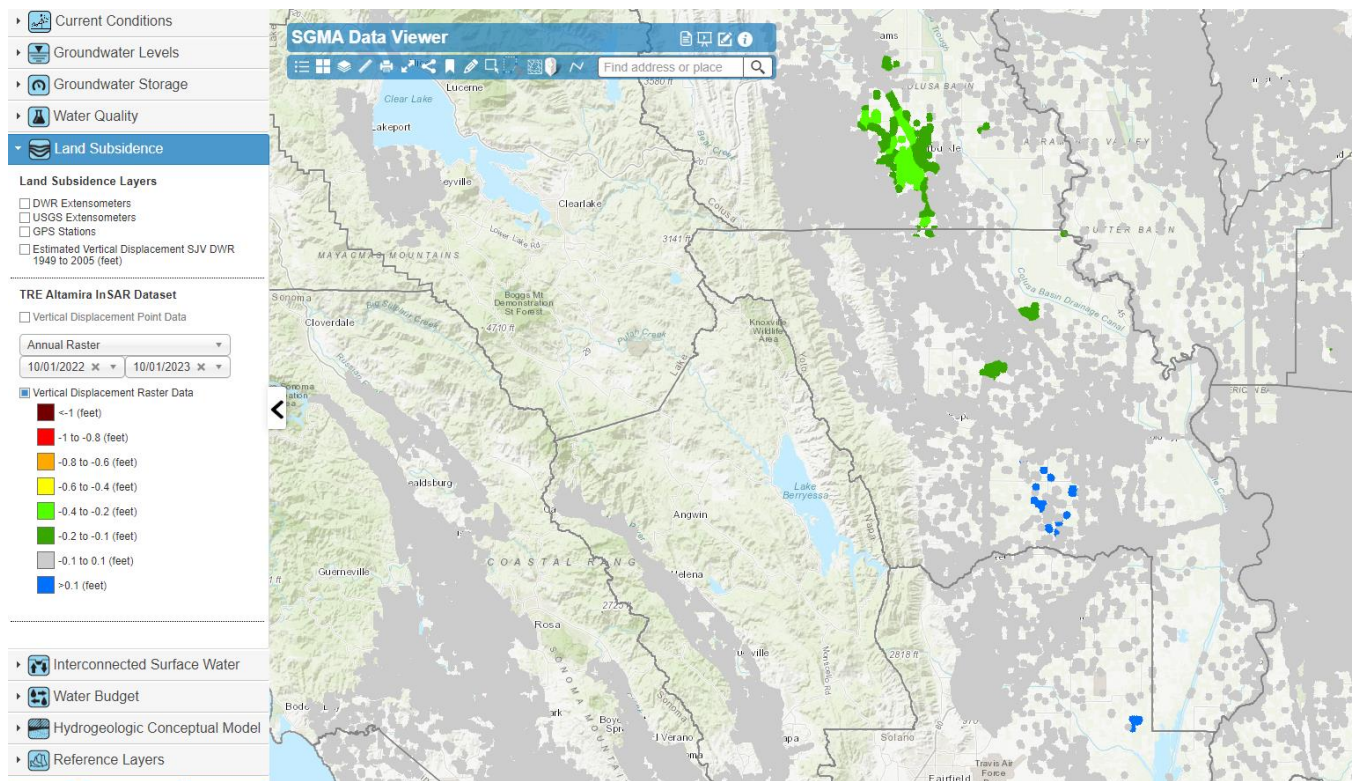
enacted that provide public disclosure of well permit applications and collaboration between LEAs and GSAs.

2. Set Minimum Standards: Statutorily set well spacing and well depth standards to reduce future impacts to community supplies and domestic wells. The prohibition of new well permits in areas where subsidence impacts are occurring will minimize or eliminate subsidence and impacts to critical infrastructure.

3. Exempt Certain Discrete Types of Wells and Procedures: Exempt certain domestic wells based on size and volume as well as small, public supply wells.

4. Establish Applicability of Requirements: The previous provisions are applicable within all groundwater basins, as defined in the Department’s California’s Groundwater (Bulletin 118). There should be standards of applicability or exemption set for basins with low- and very low-priority designations (those with optional GSAs and GSPs) or in non-alluvial areas.

DWR released the October 2023 InSAR Land Subsidence Data on [SGMA Data Viewer](#), which is also provided as a screenshot below. YSGA staff are working through the schedule for a 2024 GPS ground-based survey for the Yolo Subbasin (included in Component 2 of the SGMA Implementation grant funding award).



Current Groundwater Conditions

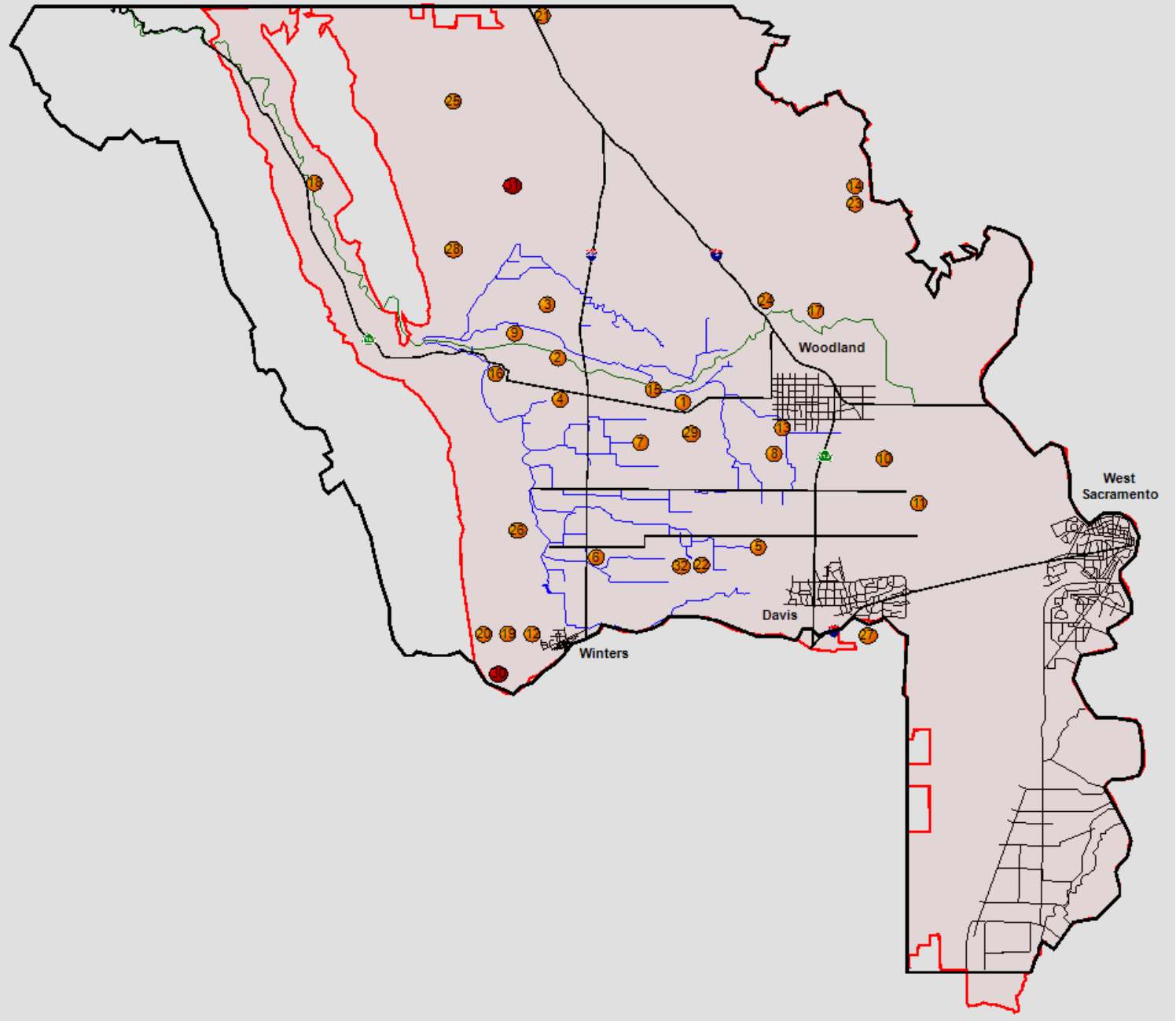
Groundwater levels are steadily recovering throughout the continuous monitoring network following the end of an unallocated irrigation season, which saw much less drawdown than in 2021 and 2022 due to the availability of surface water supplies in 2023. Additionally, rainfall and runoff in the first quarter of 2024 is offering needed recharge opportunities. When compared to last year’s elevations (as shown on the historical depth to water table

below), this March's water levels are on average 11.6 feet higher. When compared to 2015 elevations, this January's groundwater levels are on average 11.7 feet higher.

Included below are the following graphics that illustrate the current groundwater conditions and monitoring efforts.

1. A location map of the 32 real-time monitoring locations currently operating in the Yolo Subbasin (Well 30 is a continuous datalogger site).
2. A table showing historical groundwater elevations on a specific date (March 12, 2024 in this example).
3. A tiled hydrograph of the real-time monitoring wells illustrating depth to water for March 12, 2023 to March 12, 2024.
4. The fall 2023 hydrograph of average groundwater levels based on 62 monitored wells throughout the Yolo Subbasin (the Representative Monitoring Wells). These measurements are normally taken twice annually, once in the spring when groundwater levels are at their highest and again in the fall when groundwater levels are at their lowest. Spring 2024 measurements will likely be completed the first or second week of April, dependent on spring rains.

Well Monitoring
Continuous



- SCADA Links
- Comparison Trends
- Comparison Table

Legend

Real-Time Site	●
Data Logger Site	●
YSGA	—
County	—

Well Monitoring

SCADA Links

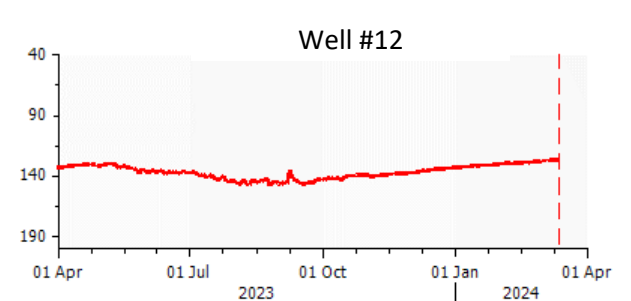
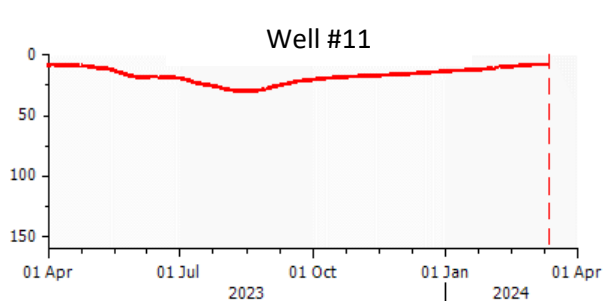
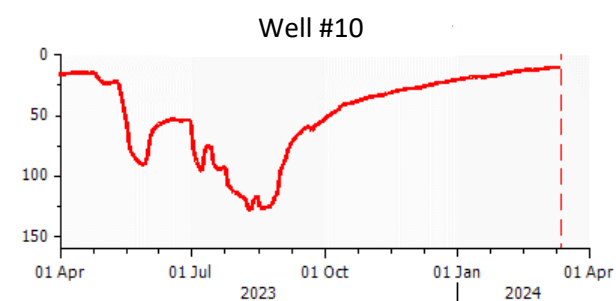
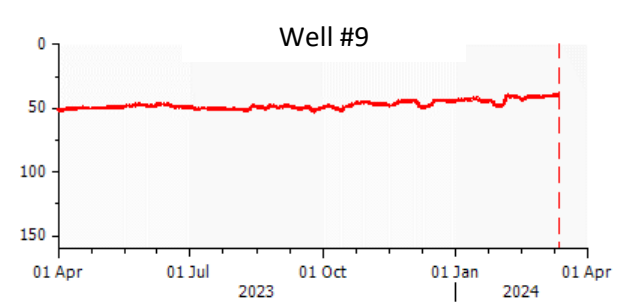
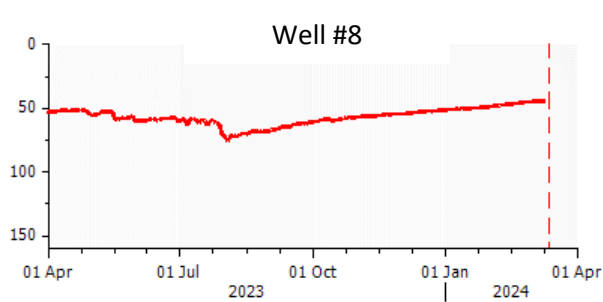
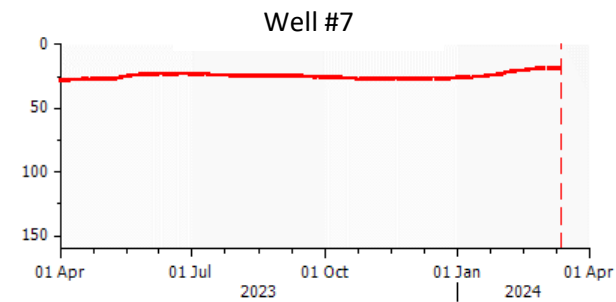
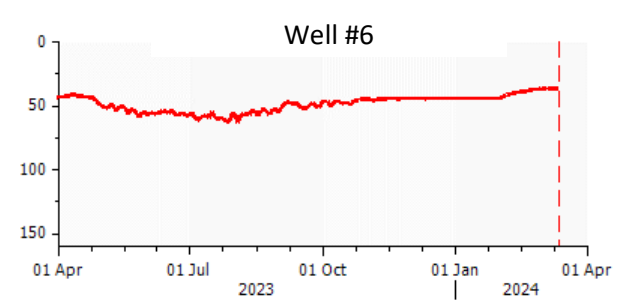
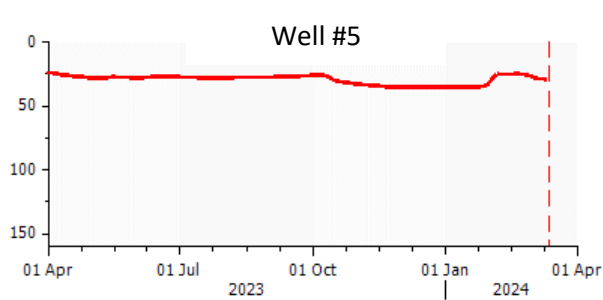
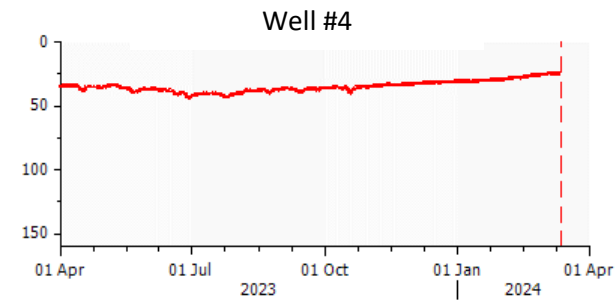
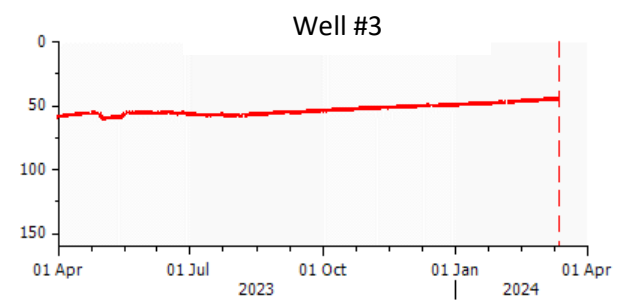
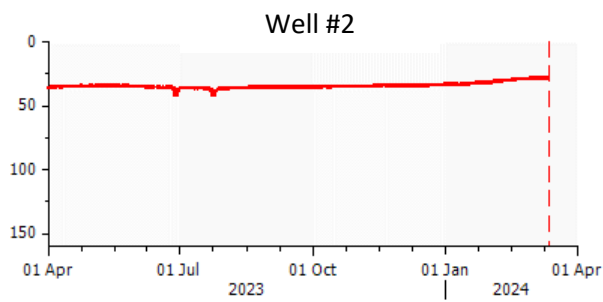
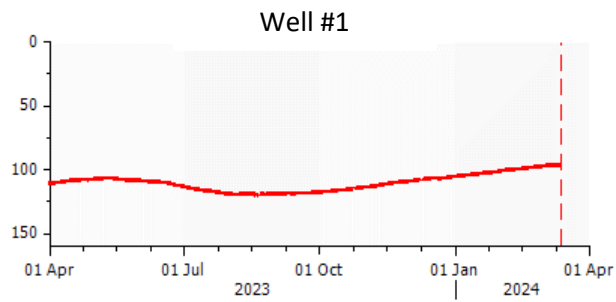
Well Map

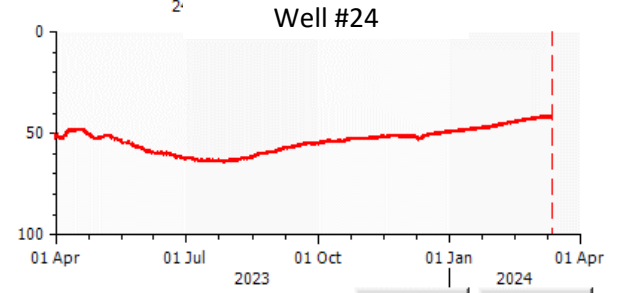
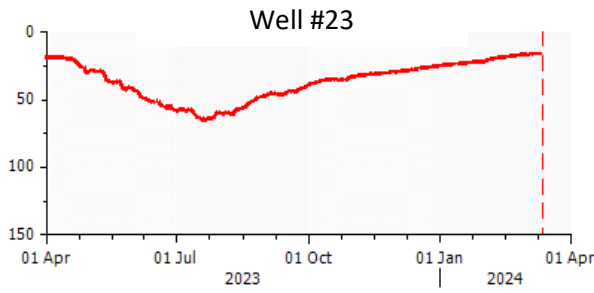
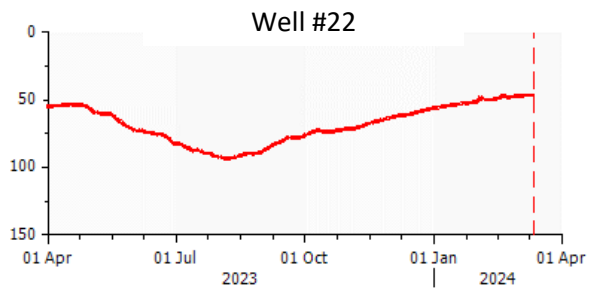
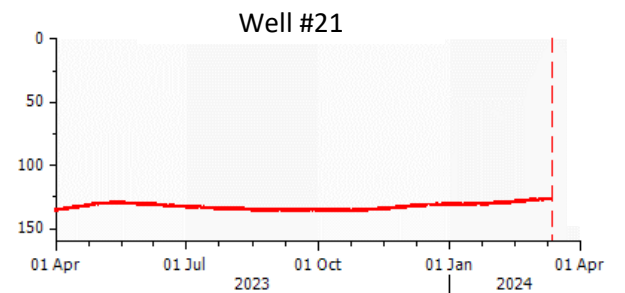
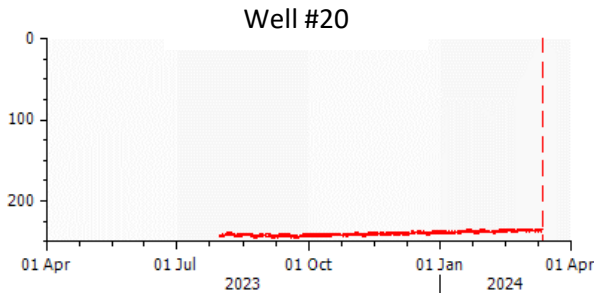
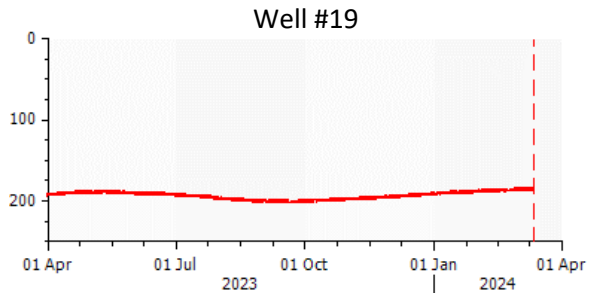
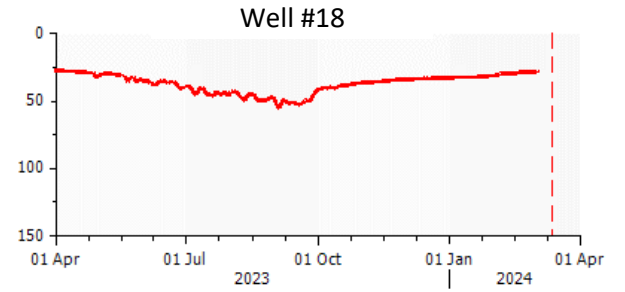
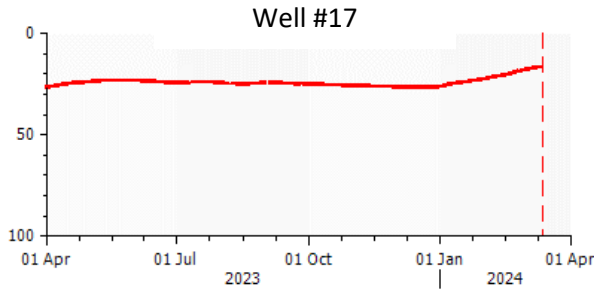
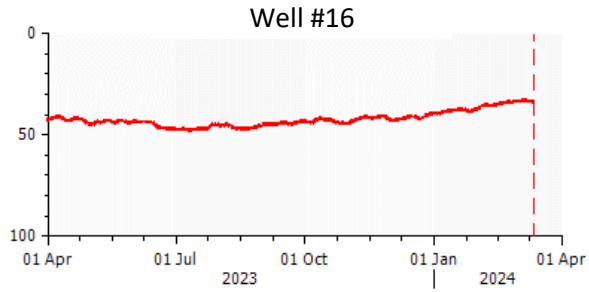
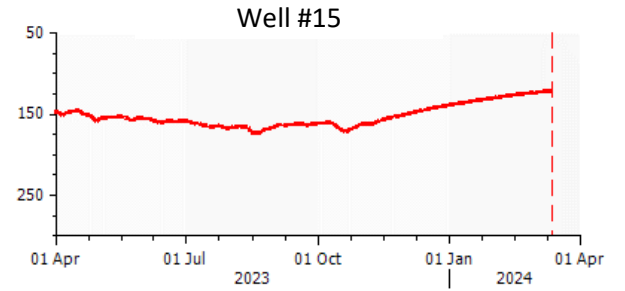
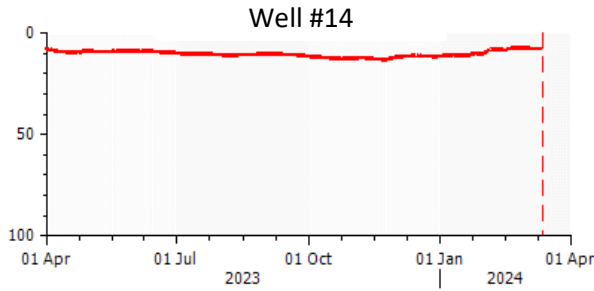
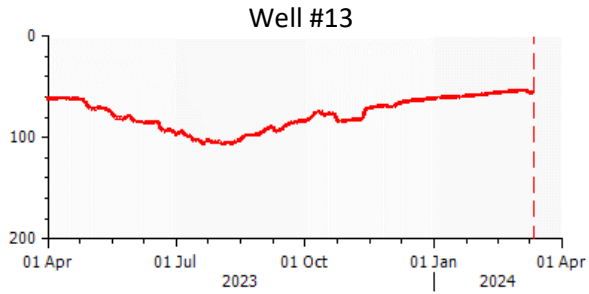
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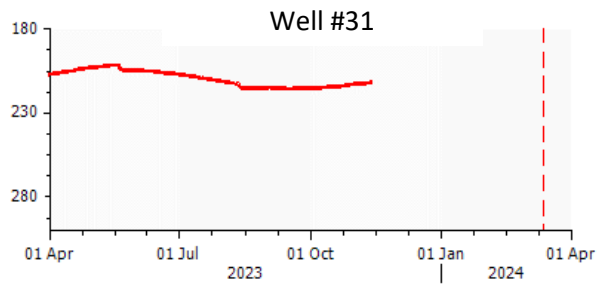
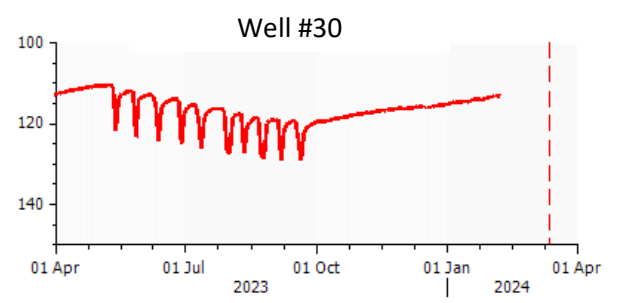
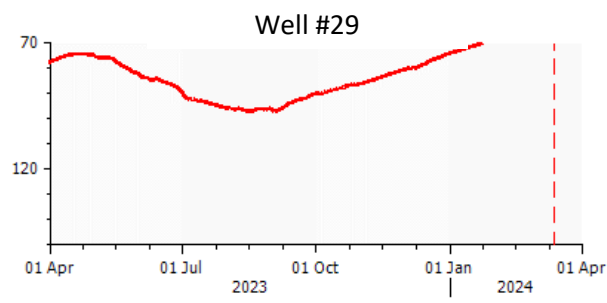
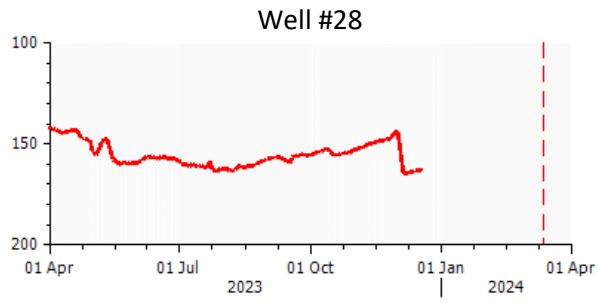
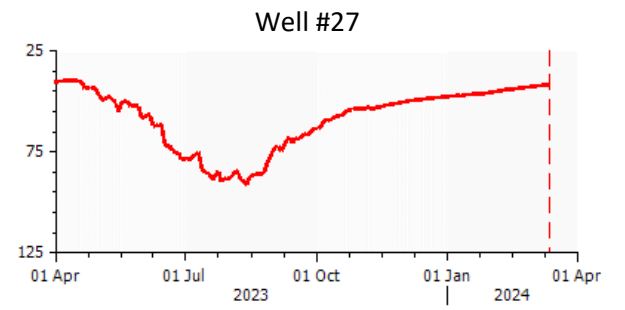
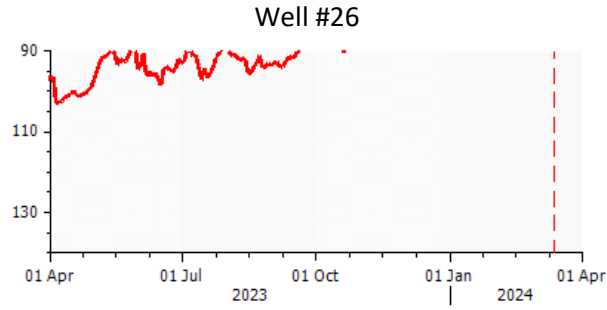
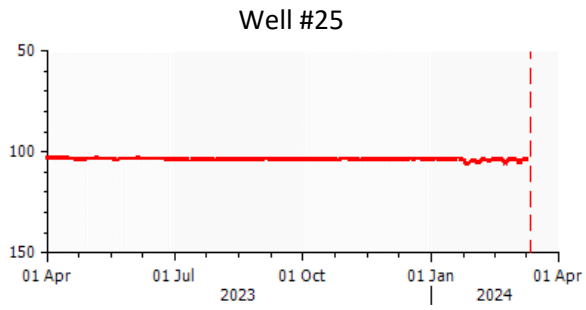
03/12

Depth to Water Historical Comparison
(Daily Average DTW in feet)

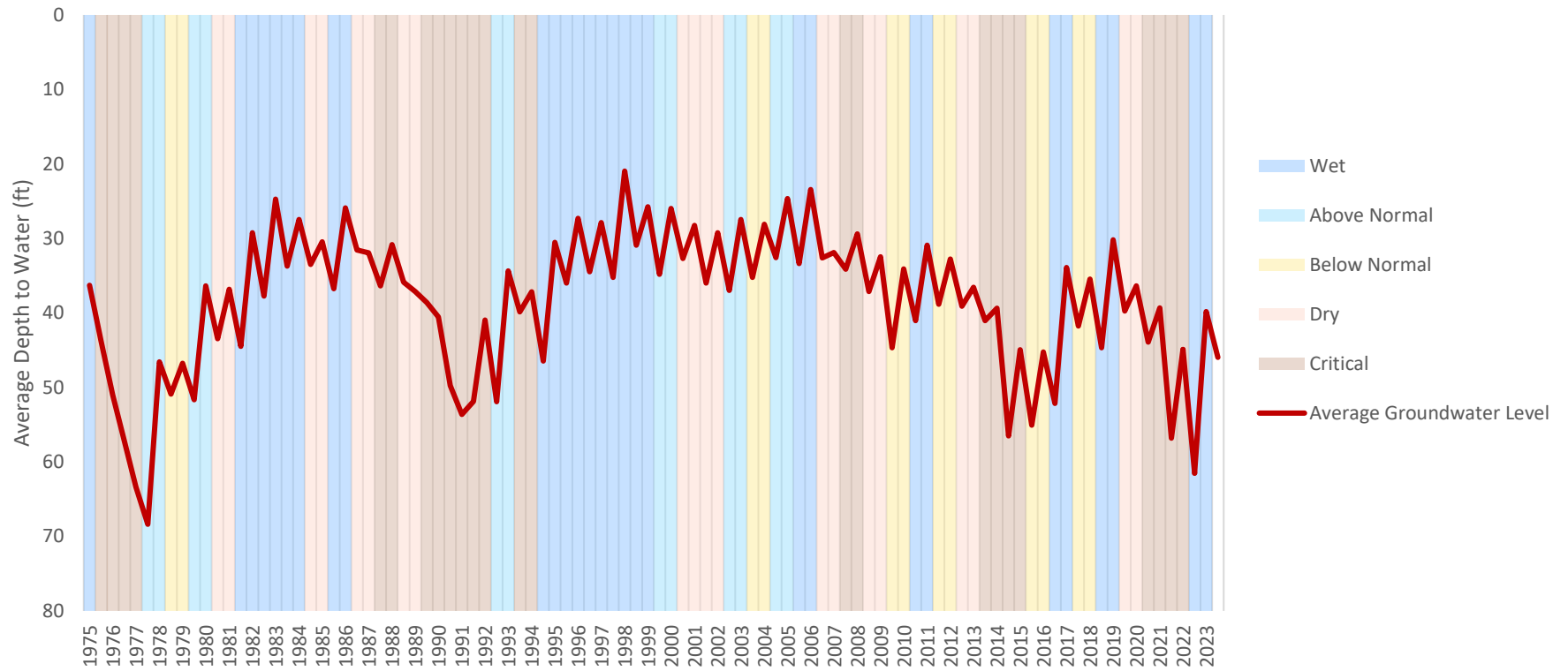
Well	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Δ 2023 - 2024	Δ 2015 - 2024
1.	77.6	79.5	79.4	92.2	101.0	103.7	90.5	89.9	91.1	86.9	95.9	113.4	114.5	96.0	18.5	5.0
2.	28.9	30.1	33.1	36.2	39.3	40.2	23.7	30.1	24.8	30.0	32.0	37.3	40.0	27.7	12.3	11.6
3.	42.1	39.6	40.1	51.0	58.8	59.1	38.8	40.2	38.0	40.1	44.6	59.5	62.1	44.1	18.0	14.7
4.	24.8	27.5	24.8	31.6	42.8	39.0	21.2	27.2	18.7	33.2	32.4	37.5	38.3	24.6	13.7	18.2
5.		21.3	23.2	29.8	33.3	39.3	12.3	28.2	8.6	23.3	30.0	37.9	30.3	29.1	1.2	4.2
6.		44.4	35.3	42.0	50.6	53.2	26.0	36.2	20.9	42.0	41.9	57.3	50.2	36.4	13.9	14.2
7.				32.2	32.2	33.7	16.4	21.1	14.4	19.7	26.1	31.7	31.9	18.6	13.3	13.6
8.				49.5	60.1	62.7	47.3	42.4	36.9	40.2	46.6	64.6	57.4	46.0	11.4	14.1
9.				49.6	56.2	57.9	37.4	40.6	34.6	42.4	47.6	54.3	57.9	39.8	18.1	16.4
10.					24.4	26.3	12.0	12.1	9.0	13.0	18.4	29.7	19.9	10.4	9.5	14.0
11.					11.2	12.1	5.5	8.7	5.4	9.5	12.6	14.7	9.9	7.7	2.1	3.5
12.									112.8	108.8	119.0	134.4	135.7	126.7	9.0	
13.								53.8	47.3	52.3	60.2	76.1	65.9	55.9	10.0	
14.									6.6	9.4	10.8	11.4	9.6	7.6	2.1	
15s.									33.8	37.0	45.8	44.0	40.8	35.2	5.7	
15d.									102.5	109.4	126.3	161.0	152.0	120.8	31.2	
16.									33.8	36.0	36.2	46.4	46.3	33.8	12.5	
17.										20.5	26.8	30.4	29.6	16.3	13.2	
18.										40.1	36.6	41.5	30.8			
19.										166.0	175.3	187.2	194.8	185.1	9.7	
20.														237.2		
21.											127.4	135.8	138.3	126.2	12.2	
22.												67.2	58.4	46.6	11.8	
23.												42.7	22.3	21.1	1.2	
24.												62.4	56.7	41.6	15.1	
25.													102.7	105.0	-2.3	
26.													102.8	74.5	28.3	
27.													43.7	41.9	1.8	
28.													143.4			
29.													84.0			
30.													114.2			
31.													211.9	191.8	20.2	
32.														105.9		







Yolo Subbasin Average Groundwater Representative Wells - Depth by Season (62 Wells)



September 2022 Average Depth to Water ~ 62 feet
October 2023 Average Depth to Water ~ 46 feet

Of Note:

- Fall 1975 to Fall 1977 Drawdown ~ 25 feet
- 2014 Drawdown from Spring to Fall ~ 17 feet
- 2019 Drawdown from Spring to Fall ~ 9.5 ft
- 2022 Drawdown from Spring to Fall ~ 17 feet
- 2023 Drawdown from Spring to Fall ~ 6 feet

Executive Order N-7-22 and N-3-23 Well Permitting Update

Pursuant to paragraph 9 of [Executive Order N-7-22](#) and [Executive Order N-3-23](#), YSGA must review certain well permit applications covered by the Executive Orders, and provide written verification to the County's Environmental Health Division that the proposed well application is consistent with the Yolo Subbasin GSP before the County may issue a permit.

YSGA staff has continued to work with Yolo County's Environmental Health (YCEH) Division and assisted in the development of a questionnaire form requesting additional data and information from the permit applicant to ensure appropriate evaluation consistent paragraph 9 requirements. YSGA staff reviewed YCEH's draft Technical Memorandum for implementing a temporary agricultural well permitting procedure that considers the appropriate setbacks to ensure nearby wells are not impacted. The final YCEH Technical Memorandum was released on December 14, 2022 and can be reviewed [here](#).

As of March 14, 2024 and since April 1, 2022:

- 93 well permit applications have been transferred from YCEH for YSGA written verification
- 3 applications were revised to Domestic Wells
- 1 well permit application was technically located in the Solano Subbasin (outside of the Yolo Subbasin, but in the County boundaries)
- Of the 89 relevant well permit applications
 - ✓ 30 replacement well permits have received YSGA written verification
 - 1 replacement well was then revised to a new well and re-introduced into the queue
 - ✓ 33 new well permit applications have received YSGA written verification
 - ✓ 26 new well permit applications are currently in the queue
 - 7 applications pending receipt of a completed questionnaire from the applicant
 - 19 applicants submitted completed questionnaires and are currently under review
 - Of the permits under review, 15 are located within a proposed Focus Area

**Yolo Subbasin Groundwater Agency Board of Directors
Meeting Agenda Report**

MEETING DATE: March 18, 2024

AGENDA ITEM NO. 6

SUBJECT: Presentation: Groundwater Sustainability Agency Authority Overview

INITIATED OR BOARD

INFORMATION

REQUESTED BY: STAFF

ACTION: MOTION

OTHER _____

RESOLUTION

ATTACHMENT YES NO

BACKGROUND

Legal Counsel will provide an overview on SGMA and the authority that Groundwater Sustainability Agencies have for implementing a Groundwater Sustainability Plan.

RECOMMENDATION

This agenda item is for informational purposes only. No Board action is required.

Yolo Subbasin Groundwater Agency Board of Directors
Meeting Agenda Report

MEETING DATE: March 18, 2024

AGENDA ITEM NO. 7

SUBJECT: Consideration: 2-Tier Well Permit Review Procedures

INITIATED OR BOARD

INFORMATION

REQUESTED BY: STAFF

ACTION: MOTION

OTHER _____

RESOLUTION

ATTACHMENT YES NO

BACKGROUND

a. Update on Draft 2-Tier Well Permit Review Process

In March 2022, Governor Newsom issued [Executive Order N-7-22](#), setting certain requirements for well permit issuance in light of California’s on-going drought. The Order required, in relevant part, that before issued a well permit, the permitting authority must obtain a written verification from the Groundwater Sustainability Agency that:

- The groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in the GSP for that area; and
- The groundwater extraction by the proposed well would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan.

Separately, the permit-issuing agency must make a determination that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure. In February 2023, those requirements were extended and modified by [Executive Order N-3-23](#). These requirements do not apply to domestic wells producing less than 2 acre-feet annually; wells that will exclusively provide groundwater to public water supply system; or certain wells that are replacing facilities that had been acquired by eminent domain.

- In May 2022, YSGA adopted [Resolution No. 22-01](#), authorizing the Executive Officer to develop and implement Well Permit Procedures that were consistent with the requirements of the Order.
- At the September 2023 Board meeting, YSGA adopted [Resolution No. 23-01](#), directing staff to establish a timeline and general parameters for updated Well Permit Review Procedures to be considered and ultimately adopted by the YSGA Board. The Resolution stated that a

draft map depicting regions potentially requiring specially attention would be included in the updated Well Permit Procedures, as well as a description of the characteristics meriting that special designation, and the process for including lands within these maps.

- At the October 27, 2023 Special Board meeting, the YSGA Board received a presentation from West Yost on the delineation of the Focus Areas, and released the Draft Focus Areas Map for public comment.
- At the November 20 Meeting, the Board received public comment on the map, voted to approve the Focus Areas Map, and discussed the drafted criteria for hydrogeologic reports within the Focus Areas. The Board requested that staff and West Yost reconvene the *Ad Hoc Drought Contingency Planning Committee (Drought Committee)* to discuss a potential tiered process for moving forward with the review of new agricultural well permit applications in the [Focus Areas](#).
- At the January 22, 2024 Board meeting, West Yost reviewed the outline for a two-tier process, and the Board directed staff to draft a technical memo detailing this process that clearly delineates the reasoning for a well application to move from Tier 1 to Tier 2.

The *Ad Hoc Drought Contingency Planning Committee (Drought Committee)* was convened once more on March 11, 2024 and received the following updated two-tiered proposal for well applications within the Focus Areas:

- i. Tier 1 – YSGA completes a hydrogeologic evaluation and impact assessment of the well design and details provided by the well applicant in the Tier 1 Analysis Form. This will include extracting aquifer properties from the YSGA’s Groundwater Model unique to the location and depth of the proposed well, and an assessment of groundwater level impacts using analytical methods.
 - a. If there are no sustainability concerns identified in respect to impacts on groundwater levels at nearby monitoring wells, water quality, interconnected surface waters, and land subsidence, then the YSGA will provide Yolo County Division of Environmental Health with written verification for the well permit application.
 - b. If there are sustainability concerns identified by any of the above indicators, then the YSGA will request that the applicant advance to Tier 2 and complete a Hydrogeology Report.
- ii. Tier 2 – YSGA will request the applicant focus the Hydrogeology Report on the sustainability indicators of concern and relate the analysis to the Yolo Subbasin GSP sustainable management criteria and minimum thresholds. Additionally, a Professional Geologist or Certified Hydrogeologist will certify that the proposed well complies with the Executive Order.
 - a. If the prepared report provides evidence that alleviates the concerns around groundwater levels, water quality, and/or subsidence that arose in Tier 1, the YSGA will issue written verification of the well application.

- b. If one or more indicators remain a concern to the YSGA, the YSGA will document these concerns and request a meeting with the well applicant to discuss options to bring the well into compliance with the EO.

Staff will provide a brief presentation on the updated 2-tier well permit review process and the expected next steps for the public comment process and finalizing the *Technical Memorandum*.

b. Approve Updated Well Permitting Procedures and Public Comment Period for Draft Technical Memorandum and Focus Areas Map

YSGA staff request approval from the Board to advance the proposed two-tier well permit review procedures for implementation in the Focus Areas. Public comments received on the draft Focus Areas delineation asked for a combined review period to comprehensively evaluate the Focus Areas, permit review procedures, and hydrogeology report criteria at the same time. For this reason, YSGA staff recommend proceeding with a public comment review period of the draft 2-Tier Well Permit Review *Technical Memorandum* and the Focus Areas Map in March 2024. Additionally, staff recommend the Board adopt the Well Permit Review Procedures.

Legal Counsel Rebecca Smith will provide a brief presentation on the Well Permit Review Procedures.

RECOMMENDATION

- a. This agenda item is for informational purposes only. No Board action is required.
- b. YSGA staff request that the Board approve the updated Draft 2-Tier Well Permit Review Process, authorize the public comment period for the Draft *Technical Memorandum* and Focus Areas Map, and adopt the Well Permit Review Procedures.

TECHNICAL MEMORANDUM

DATE: March 14, 2024
SENT VIA: EMAIL
Project No.: 1105-80-23-01

TO: Kristin Sicke, PE
Yolo Subbasin Groundwater Agency
34274 State Highway 16
Woodland, CA 95695

FROM: Ken Loy, PG, CHG, CEG
Erik Cadaret, PG
Anna Reimer, PG

REVIEWED BY: Ken Loy, PG, CHG, CEG

SUBJECT: Delineation of Focus Areas Map and Guidelines and Evaluation Criteria for Hydrogeologist Reports to Address Executive Orders N-7-22 Paragraph 9 and N-3-23 Paragraph 4 through a Tiered Review Process

INTRODUCTION

West Yost prepared this Technical Memorandum (TM) for the Yolo Subbasin Groundwater Agency (YSGA) to support the development and implementation of procedures to comply with Governor's Executive Order N-7-22 (EO) issued on March 28, 2022, and Governor's Executive Order N-3-23 (EO-2) issued on February 13, 2023. Paragraph 9 of the EO and Paragraph 4 of the EO-2 (collectively, EOs) describe requirements for permitting new or replacement water wells.

Yolo County Community Services Department, Environmental Health Division (County) is responsible for well permitting in Yolo County. YSGA is the Groundwater Sustainability Agency (GSA) for the Yolo Subbasin and is responsible for the sustainable management of groundwater in accordance with the Sustainable Groundwater Management Act (SGMA). Most of the Yolo Subbasin is within Yolo County¹.

Based on feedback from the YSGA Board and Drought Contingency Planning Committee in November and December of 2023, a tiered review process was proposed to achieve economies of scale, reduce the

¹ The Yolo Subbasin extends into small areas of Solano County, including a 3.8-square-mile area bounded by Miner Slough at its southeastern corner and a 2-square-mile area of the UC Davis. (The Solano Subbasin extends into the County in three small areas (4.8 square miles, total) to the south of Davis and are related to the jurisdiction of two reclamation districts.) (Yolo Subbasin Groundwater Agency 2022 Groundwater Sustainability Plan, Yolo County, CA, adopted January 2022).

cost and time burden on well applicants, and reasonably factor in the impact of the pumping capacity of the proposed well. The tiered review process contains two tiers. A Tier 1 analysis would be completed by YSGA staff to evaluate a well application and identify any concerns that may indicate noncompliance with the EO. If one or more concerns are identified in Tier 1, a well applicant would be required to perform a Tier 2 analysis. A Tier 2 analysis requires a well applicant to provide supplemental information in a Hydrogeologist's Report prepared by a licensed and qualified professional geologist (PG) or hydrogeologist (CHG).² The proposed tiered approach would only apply to wells within Focus Areas identified by the YSGA. For any wells outside of the YSGA Focus Areas, a Hydrogeologist's Report will be required by the County if an application does not meet the County's proposed minimum separation distance requirement from existing neighboring wells³.

PURPOSE AND INTENDED USE

The purpose of this TM is to document:

- Delineation of Focus Areas within the Yolo Subbasin

Requirements, Guidance, and Evaluation Criteria for the Tiered Analysis

The YSGA may evaluate a Hydrogeologist's Report according to the proposed criteria and consult with the County to support compliance with the applicable sections of the EOs. The YSGA may contract a third-party PG or CHG to support the review of Hydrogeologist Reports if the YSGA does not have a PG or CHG on staff to review Hydrogeologist Reports upon receiving a Hydrogeologist Report associated with a well permit. This may also apply to the County if the County does not have a qualified PG or CHG on staff to review Hydrogeologist Reports.

Applications for wells of certain types and capacities are exempted, as described below. The proposed process may be revised based on feedback from the YSGA and County Boards, staff, stakeholders, and members of the public.

ORGANIZATION

This TM is organized in the following sections:

- Requirements and Background
- Modifications to the County Well Permitting Process
- Focus Area Requirements
- Other Requirements
- Overview of Tiered Review Process
- Tier 1 Analysis

² Must be currently licensed in California. Professional geologists must be able to furnish documentation demonstrating a minimum of two years of experience designing and assessing the impacts of water wells if requested by the YSGA.

³ Certain wells are exempted as described in the Modifications to the County Well Permitting Process section.

- Tier 2 Analysis
- Proposed Implementation

Supporting information is provided in the following appendices:

- Appendix A – Governor’s Executive Order N-7-22
- Appendix B – Governor’s Executive Order N-3-23
- Appendix C – YSGA Adopted Resolution No. 22-01
- Appendix D – YSGA Adopted Resolution No. 22-02
- Appendix E – YSGA Well Permit Application Acknowledgement
- Appendix F – YSGA Tier 1 Well Permit Review Form
- Appendix G – Yolo County Temporary Well Permitting Procedures to Address Executive Order N-3-23⁴
- Appendix H – YSGA Adopted Resolution No. 23-01
- Appendix I – Technical Data and Methods for Delineating Focus Areas
- Appendix J – Tier 2 Well Permit Review Form
- Appendix K – YSGA Tiered Approach Flow Chart

REQUIREMENTS AND BACKGROUND

The EO and EO-2 are provided in Appendices A and B. Paragraph 4 of EO-2 replaces Paragraph 9 of the EO and defines requirements to be addressed before the County issuing a well permit. Paragraph 4a of EO-2 prohibits the County from issuing a permit for a new well or alteration of an existing well unless YSGA provides written verification that extraction of groundwater from the new or altered well would not:

- Be inconsistent with any sustainable management program in the adopted Yolo Subbasin GSP⁵
- Decrease the likelihood of achieving a sustainability goal for the Yolo Subbasin.

Paragraph 4b prohibits the County from issuing a permit for a new well or alteration of an existing well without first determining that extraction of groundwater from the new or altered well is not likely to:

- Interfere with the production and functioning of existing nearby wells, and
- Cause subsidence that would adversely impact or damage nearby infrastructure.

Paragraph 4 of EO-2 also defines exemptions. The exemptions are:

- Wells producing less than two acre-feet per year for individual domestic water use

⁴ LSCE, 2023, Yolo County Temporary Well Permitting Procedures to Address Executive Order N-3-23, prepared for Yolo County Department of Community Services, Environmental Health Division, December 23, 2023.

⁵ https://www.yologroundwater.org/files/acff83c75/YoloGSP_Adopted.pdf

- Public supply system wells as defined in Health & Safety Code § 116275
- Replacement wells that would produce an equivalent quantity of water as the existing well that has been acquired by eminent domain or acquired while under threat of condemnation

Since the issuance of the EOs, YSGA has adopted two resolutions (No. 22-01, Appendix C; No. 22-02, Appendix D) that define the procedures to comply with the EO and a cost recovery fee schedule for verification and review of well permit applications related to the EO. Additionally, YSGA has adopted (September 12, 2023) a resolution (No. 23-01, Appendix H) that documents the proposed process for memorializing an update to the YSGA's procedures for complying with the EO. The YSGA has also created an Agricultural Well Application Acknowledgement form (Appendix E) that is required to be completed by well applicants to verify they acknowledge the powers the YSGA may exercise, limitations of the YSGA's verification of a well permit, indemnify the YSGA from legal liability, and collects additional information from the well applicant about the well and its intended use. The County assisted the YSGA in creating a Tier 1 Well Permit Review form (Appendix F) that well applicants are required to fill out to provide additional detail for the YSGA to better understand the purpose of an existing well's proposed alteration/modification and proposed new well's construction, use, and pumping capacity.

As of March 2024, YSGA has reviewed 89 well permit applications and provided written verification to the County for 60 of these applications. In recent years, domestic well owners in some areas of the Yolo Subbasin have expressed concerns over declining groundwater levels and dry wells, and some have reported collapsed well casings. Concerns about the permitting of agricultural wells near domestic wells have resulted in domestic well owners speaking at County Board of Supervisors and YSGA Board of Directors meetings or writing letters to the YSGA and the County requesting greater oversight over well permitting.

MODIFICATIONS TO THE COUNTY WELL PERMITTING PROCESS

YSGA is not the well permitting authority for the groundwater basin. Still, YSGA has groundwater management responsibilities in the basin and is required by the EOs to provide specific verifications to the County in connection with the County's well permit-issuance process. Given that relationship, YSGA is closely coordinating with the County in planning for EO compliance.

The County retained Luhdorff and Scalmanini, Consulting Engineers (LCSE) to develop modifications to the County's well permitting procedure to address the County's responsibilities under Paragraph 9b of the EO (which is now superseded by Paragraph 4b of EO-2). LSCE's TM was adopted in December 2022, and consequently revised in December 2023, is provided in Appendix G. Like the processes identified in this TM, the County well permitting process requires supplemental Hydrogeologist Reports to support the County's separate findings under the EOs. Table 1 lists the County's minimum well separation distances and thresholds that would trigger a Hydrogeologist Report to be completed by the well applicant.

Table 1. Minimum Well Separation Distances	
Pumping Capacity, gpm	Minimum Well Separation Distance, ft
Wells Within the Valley Floor Areas ⁶ of the County	
< 500	250
500 – 1,000	500
1,000 – 1,500	1,000
1,500 – 2,000	2,000
> 2,000	Report Required
Wells in the Upland Areas ⁷ of the County	
< 15	500
15 – 100	1,000
> 100	Report Required
<i>Source: LSCE, 2022</i>	

Under the County’s requirements, for proposed wells within the Valley Floor Areas⁶ with pumping capacities greater than 2,000 gallons per minute (gpm) or within the Upland Areas⁷ with pumping capacities greater than 100 gpm (Figure 2), a Hydrogeologist Report must be completed by a licensed professional geologist or hydrogeologist to determine if the well is unlikely to interfere with the function and operation of nearby wells and is unlikely to cause land subsidence that would adversely impact or damage nearby infrastructure.

The YSGA will rely on the Hydrogeologist Report guidelines defined in this TM to evaluate Hydrogeologist Reports forwarded by the County for the YSGA’s review for well applications that fall outside of the Focus Areas. However, because there is some overlap between the YSGA and County in evaluating well applications relative to EO-2, YSGA has identified additional criteria intended to support its issuance of verifications as described in the following sections.

⁶ Valley Floor Areas are designated by the County as synonymous with the Yolo Subbasin.

⁷ Upland Areas are designated by the County as areas in Yolo County but not within the Yolo Subbasin. Upland Areas are generally in the Coast Range west of the Yolo Subbasin.

FOCUS AREAS REQUIREMENTS

The YSGA retained West Yost to help delineate Focus Areas within the Yolo Subbasin. Figure 1 shows the draft Focus Areas delineation map. The Focus Areas map was reviewed and approved for release for public comment by the YSGA Board on October 27, 2023. The YSGA delineated Focus Areas within the Yolo Subbasin where:

- Groundwater levels in Spring 2023 were below the minimum thresholds (MTs) defined in the Yolo Subbasin Groundwater sustainability Plan (GSP).
- Groundwater levels have declined more than 25 feet over 10 years (Spring 2013 – Spring 2023). Note: Two wells within the Subbasin where there was a decline of more than 25 feet over 10 years were in areas where the Tehama Formation was absent at the surface and where no other wells within the vicinity experienced the same (or greater) level of decline. These two wells were excluded to prevent delineation of an area around a single well point, which would not appropriately represent a broader area of groundwater decline.
- Dry wells and citizen concerns are reported.
- Domestic well densities are high. A 2,000-foot buffer which corresponds to the County's maximum setback distance requirement (Table 1) was added around areas of high domestic well density.
- Small water systems are present.
- Permeability and recharge potential is low.
- Groundwater data are limited.

Under the YSGA's proposed verification process, permit applications for new wells or well alterations resulting in increases in pumping capacity would be subject to the following requirements if they are within the Focus Areas and not exempt under the EOs:

- If the proposed well is anticipated to pump less than 100 gpm or have a well casing diameter of 6 inches or less, YSGA would not require any additional information or analysis and would proceed to provide written verification to the County.
- If the proposed well is anticipated to pump greater than 100 gpm or have a well casing diameter greater than 6 inches, YSGA will perform a Tier 1 analysis. Based on the results from the Tier 1 analysis, the well applicant may be required to perform a Tier 2 analysis which would include the preparation and submission of a Hydrogeologist's Report as part of the YSGA's verification process in the County well permitting process.

YSGA staff created a web page⁸ that allows well applicants to assess if a proposed well is located within a Focus Area. Appendix I provides detailed documentation describing the technical data and methods used to delineate the Focus Areas map.

⁸ <https://portal.giscloud.com/map/2496272/ysga-draft-focus-areas>

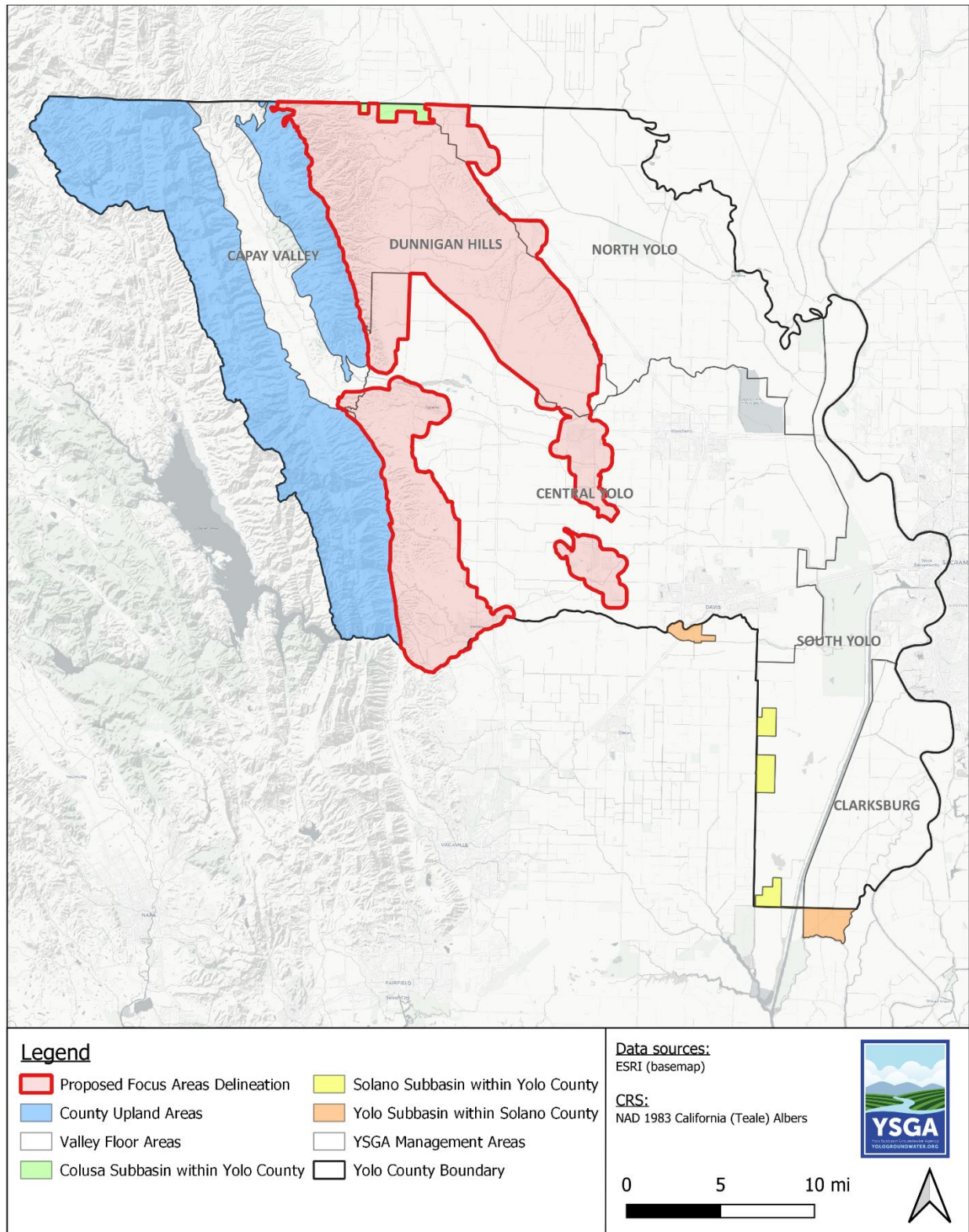


Figure 1. Proposed Delineated Focus Areas Relative to County Defined Valley Floor and Upland Areas.

OTHER REQUIREMENTS

The YSGA will require well applicants that proceed with well construction after permit issuance to submit the following information to the County for forwarding to YSGA:

- Geophysical logs for wells and borings exceeding 200 feet in depth within the Yolo Subbasin (including outside of the Focus Areas) within 30 calendar days of conducting the geophysical logging⁹. The YSGA will not use the geophysical log to dictate well design, methods for drilling, or well construction.
- Final ‘as built’ well construction diagram produced by a C-57 well drilling contractor, PG, or CHG prepared using the well diagram template in Appendix J.
- Completed DWR Well Completion Report¹⁰ signed by applicant’s C-57 well drilling contractor. The WCR shall document the well drilling contractor’s test pumping results, including pumping rate, pumping duration, static groundwater level, pumping groundwater level, and the date of the test pumping. The WCR must be submitted to the YSGA for all wells completed within the Yolo Subbasin within 60 calendar days of well completion.

This information will be used by the YSGA and County to verify well permit application information is relatively consistent with what was proposed and to document aquifer stratigraphy, hydraulic properties, the capacity of the new or altered well, and the well casing diameter size and other well construction information. The YSGA understands that there may be a need based on what is encountered during drilling to modify the well design (e.g. add an additional 10 feet of well screen; add an additional 5-foot layer of bentonite; etc.) and that the final construction of the well may deviate from the proposed well design provided in the application. Note that constructed well is expected to have the same well casing diameter size as what was proposed on the application.

OVERVIEW OF TIERED REVIEW PROCESS

For a proposed well located with the Focus Areas (Figure 1), the well applicant would be required to provide information required for the YSGA’s Tier 1 analysis. The information required for the Tier 1 analysis would be requested from the applicant after filing a well permit application with the County and once the YSGA has determined the well is located in a Focus Area. YSGA staff would then complete the Tier 1 analysis to determine possible issues with complying with the EO. The information required by the YSGA Tier 1 Well Permit Review Form (Appendix F) consists of the following.

Location of Proposed Well or Alteration to Existing Well

The location of the proposed well or alteration to existing well shall contain the following information:

⁹ Geophysical logs must include at minimum, short- and long-normal resistivity, single-point resistivity, spontaneous potential, and caliper logs.

¹⁰ Well completion reports must have the following sections filled out with the best available information: well owner, planned use and activity, well location, borehole information, water level and yield of completed well, geologic log (with detailed descriptions), casings, annual material, borehole specifications, and certification statement.

- Well location map that shows roads, neighboring landowners, existing water infrastructure, and wells within a 1-mile radius. Geographic information may be obtained using Google Earth, GIS software, or printed map information. Neighboring well information may be obtained from DWR's Online System for Well Completion Reports (OSWCR) and visual verification of possible wells through aerial imagery.
- GPS coordinates (Datum: WGS 1984) for latitude and longitude in degrees and decimal minutes to five decimal places (e.g., 38.67030, -121.87109).

Description of Proposed Well or Alteration to Existing Well Project

The description in this section shall contain the following information:

- Proposed new well or alteration to existing well
- Purpose of the well
- A description of conjunctive use features offsetting pumping demands (surface water diversions, recharge credits, etc.) and estimated volumes. If this information is not provided, YSGA will assume the applicant is not using surface water to offset pumping at the well.
- Planned pumping capacity and operating schedule incorporating conjunctive use estimates. If this information is not provided, YSGA will only use the pumping rate and assumed pumping schedule provided on the form to estimate pumping at the well.
- Planned start and completion of drilling dates

Design of Proposed Well or Existing Well to be Altered

The following information shall be included, in addition to what is included in the Yolo County Well Permit Application:

- Depth and diameter of the pilot borehole
- Screened intervals and slot size
- Sand pack interval and grain size
- Pump intake depth

The YSGA acknowledges that some of this information may either be duplicative or not known at the time of preparing and submitting the YSGA Tier 1 Well Permit Review Form (Appendix F). This information should be provided upon completion of a well as described in the Other Requirements section (page 8).

Well Permit Review Process

Upon receiving this information from the well applicant, YSGA staff would follow the proposed tiered review process (Appendix K).

For wells located outside of designated Focus Areas, YSGA verification will be issued upon completion of the initial review of the well permit application transferred from the County.

For well permits within a YSGA Focus Area, Tier 1 analysis would be completed by YSGA staff to identify any concerns that may indicate possible noncompliance with the EO. If one or more concerns are

identified in Tier 1, YSGA would notify the well applicant in writing that a Tier 2 analysis is required. The YSGA in their written notification would provide the well applicant a summary of the YSGA's Tier 1 findings, a copy of this TM that includes the Hydrogeologist Report guidelines, and a request for the well applicant to prepare and submit a Hydrogeologist Report addressing the YSGA's identified concerns. A Hydrogeologist Report is required to be prepared by a PG or CHG registered in California.

YSGA staff would evaluate the Hydrogeologist Report for compliance with the guidelines below and its responsiveness to the YSGA's concerns. If the YSGA finds the Hydrogeologist Report is incomplete or does not adequately address the concerns identified by the YSGA, YSGA will notify the well applicant in writing. The applicant may request a meeting with the YSGA staff to discuss options to address the YSGA's concerns and identify a path forward for the well application's verification.

All wells within Yolo County will be required to meet the County's minimum setback separation requirements or complete a Hydrogeologist Report, as outlined in LSCE's TM (LCSE, 2023).

TIER 1 ANALYSIS

This section describes the tools, guidelines, and evaluation criteria the YSGA will use to conduct the Tier 1 analysis.

Tools

YSGA staff will use the best available information and tools to conduct the Tier 1 analysis. These will include information and tools developed to prepare the YSGA Groundwater Sustainability Plan (GSP) and annual reports such as YSGA's groundwater database, DWR's SGMA Data Viewer, DWR's Well Completion Report Map Application, published reports, and other relevant information. Key elements of the GSP include:

- Basin Setting Section - documents the hydrogeologic conceptual model, groundwater conditions, water budget, and management areas for the Yolo Subbasin
- Sustainable Management Criteria (SMC) Section - documents the undesirable results and SMCs for the relevant sustainability indicators
- Monitoring Networks Section - documents the monitoring network and data sources
- Projects and Management Actions (PMAs) Section - documents the PMAs that may be affected by pumping from new or altered wells
- GSP Appendices - document the Yolo Subbasin Groundwater-Surface Water Model, groundwater dependent species, potential impacts to domestic wells, and PMAs.

Additional information may be obtained from online resources, Yolo County Flood Control and Water Conservation District (YCFCWCD), and YSGA records that may include supplemental data on groundwater levels, land subsidence (InSAR), well completion reports, and YCFCWCD surface water availability and deliveries.

YSGA staff will assess the drawdown caused by pumping in the proposed new well or proposed altered well using the USGS groundwater model WTAQ Version 1.3¹¹. WTAQ is a computer program that implements the analytical solution for drawdown due to pumping in a confined or unconfined aquifer from a partially or fully penetrating well in a homogenous, anisotropic aquifer. The program provides drawdown results at discrete points in time and space. WTAQ is available for public use and can be downloaded from the USGS website¹².

YSGA staff will use the proposed location, depth, diameter, and pumping rate of the proposed well to simulate drawdown of groundwater levels due to the proposed pumping. The hydraulic properties (hydraulic conductivity and storage coefficient or specific yield) will be obtained from the calibrated Yolo Subbasin Groundwater-Surface Water Model based on the location and depth of the proposed well. The drawdown simulated using WTAQ will be used, along with other relevant information, to conduct a weight-of-evidence assessment of the proposed well or well alteration project using the criteria listed below.

Guidelines and Evaluation Criteria

YSGA staff will use the tools described above to perform a high-level hydrogeologic evaluation of the wells location and perform an impact assessment using the provided information from the well application and the YSGA Tier 1 Well Permit Review Form (Appendix F). The guidelines YSGA staff will use to perform each are described below.

Hydrogeologic Evaluation

Using the tools described above, YSGA staff will perform a high-level hydrogeologic evaluation at the location of the well that is anticipate being completed within 1 – 2 hours per application. The following will be identified:

- Tables summarizing:
 - Hydrogeologic units and primary aquifers that are expected to be encountered during drilling to an anticipated total depth. This table will also include the hydraulic parameters (i.e., transmissivity and storage coefficient) and confining conditions (unconfined or confined) of hydrogeologic units penetrated by the well.
 - Total depths, screen interval depths, usage (e.g., agricultural, domestic, etc.) and capacities, of existing wells within a 2,000-foot radius of the proposed well.
- Maps or charts of groundwater conditions showing:
 - Anticipated depths to groundwater based on the historic range.
 - Anticipated gradient (magnitude and direction).
 - Proximity to hydraulic barriers to groundwater flow (e.g., geologic faults or folds).

¹¹ Barlow, P.M. and Moench, A.F., 1999, WTAQ - A computer program for calculating drawdowns and estimating hydraulic properties for confined and water-table aquifers: U.S. Geological Survey Water-Resources Investigations Report 99-4225.

¹² <https://water.usgs.gov/water-resources>.

- Proximity to natural surface water features and man-made canals.
- Historical measurements of subsidence and locations of critical infrastructure within a 1-mile-radius of the proposed well.
- Locations of wells within a 1-mile radius.

Impact Assessment

Using the tools and results from the hydrogeologic evaluation, YSGA will perform an impact assessment that is anticipated to be completed within 1 hour per application. The impact assessment will first quantify the magnitude and extent of the drawdown at the proposed well's primary production depth interval(s) up to 5,000 feet from the proposed location. Using this information, each of the following will be quantified and evaluated as follows:

- Anticipated impacts on groundwater levels at neighboring wells and groundwater in storage.
 - If no wells exist, or the only existing wells are owned by the applicant, then no concern will be noted.
 - If neighboring wells exist and are not solely owned by the applicant, the drawdown will be evaluated relative to the primary production depth of the well and any neighboring wells or Representative Monitoring Well (RMW) based on the following:
 - Does the operation of the new well lower groundwater levels below the Minimum Threshold (MT) at the nearest RMW?
 - Does the operation of the new well lower groundwater levels by more than 10% of the historical range at the nearest monitoring well (including domestic)?

If the drawdown is calculated to impact the MT at the nearest RMW or be greater than 10% of the historical range at the nearest monitoring well, then the well would be noted to have a possible negative impact on neighboring wells and a Tier 2 analysis is necessary.

- Anticipated conjunctive use.
 - If the well is located on a parcel that has historically received surface water from the YFCWCD or another surface water provider, YSGA will assume surface water is used at the parcel to offset pumping at the well.
 - If the well has not historically received surface water from YFCWCD or another surface water provider, YSGA will not assume any surface water will be used at the parcel to offset pumping at the well.
- Anticipated impacts on nearby interconnected surface waters.
 - If no interconnected surface waters exist within 2,000 feet of the well, then no concern will be noted.
 - If interconnected surface waters exist within 2,000 feet of the well and drawdown from the well is anticipated to trigger depletion of interconnected surface water MTs for the area, then the well would be noted to have possible negative impacts to interconnected surface waters and a Tier 2 analysis is necessary.
- Anticipated impacts on TDS concentrations in the targeted aquifer(s).

- If no historical/known elevated TDS concentrations exist within the aquifer (or aquifers) targeted by the well, then no concern will be noted.
- If historical/known elevated TDS concentrations exist within the targeted aquifer (or aquifers) and drawdown at the well may cause migration of elevated TDS concentrations such that it would negatively impact water quality and trigger the MT for TDS, then the well would be noted to have possible negative water quality impacts and a Tier 2 analysis is necessary.
- Anticipated impacts on land subsidence.
 - If the well is not located in an area that is experiencing subsidence based on InSAR data or is not located near critical infrastructure, then no concern is noted.
 - If the well is in an area that is experiencing subsidence in exceedance of the MT based on InSAR data, then the well would be noted to have possible negative land subsidence impacts and a Tier 2 analysis is necessary.

If one or more of these criteria are noted to necessitate a Tier 2 analysis, YSGA would notify the well applicant as described above in the Review Process section.

TIER 2 ANALYSIS

The purpose of the Tier 2 analysis is to resolve YSGA concerns identified in the Tier 1 analysis by conducting a more thorough evaluation of the proposed well or well alteration project. The Tier 2 analysis would require a Hydrogeologist's Report to be prepared by a PG or CHG of the well applicant's choosing, accompanied by the YSGA Tier 2 Well Permit Review Form (Appendix J), and submitted to the YSGA. The Hydrogeologist's Report would be required to document information, analysis, conclusions, and recommendations fully addressing the concerns YSGA staff identified in the Tier 1 analysis. This section describes the suggested tools and guidelines the well applicant's consultant would use to conduct the Tier 2 analysis to the YSGA's standards and the evaluation criteria the YSGA would follow to evaluate the results from the Tier 2 analysis. The Tier 2 guidelines presented in this section may be used by well applicants who are not located within the Focus Areas identified by the YSGA and do not meet the County's setback criteria.

Tools

Tools that may be used by the well applicant's consultant per their discretion may include, but are not limited to, the following tools:

- Analytical models including Theis, Cooper-Jacob, Theis Unconfined, Hantush, Hantush and Jacob, and Moench. USGS groundwater model WTAQ Version 1.3 may be used.
- Numerical models including GSFLOW, MODFLOW, and IWFM.

The most recent version of the YSGA's calibrated model files will be provided upon request.

Guidelines and Evaluation Criteria

Hydrogeologist Report Guidelines for Well Applicant

The following guidelines will be used by the well applicant's consultant to prepare a Hydrogeologist Report.

Hydrogeologist's Report Findings Summary Form

The YSGA Tier 2 Well Permit Review Form (Appendix J) shall be completed by the well applicant's consultant. The information provided in the form shall fully and adequately summarize the results of the Hydrogeologist's Report. **The complete Hydrogeologist's Report will be included as an attachment to the summary form.**

The content of the Hydrogeologist's Report is described below.

Cover Page

The cover page shall contain the following information:

- Site Address
- APN
- Date Submitted
- Seal and signature by PG or CHG registered with the state of California

Introduction

The introduction section of the Hydrogeologist's Report shall contain information to familiarize the reviewer with the property owner's information, the location of the well, and a description of the proposed well project.

Hydrogeologic Evaluation

The hydrogeologic evaluation section of the Hydrogeologist's Report shall contain the following information:

- Descriptions of the expected geologic formations to be encountered during drilling to an anticipated total depth.
- Description of the expected hydrogeologic unit, primary aquifers, and aquitards that are designated in the Yolo Subbasin GSP.
- Groundwater conditions as shown on a map and in tables.

Impact Assessment

The impact assessment section of the Hydrogeologist's Report shall address the concerns identified by the YSGA staff during their Tier 1 analysis, including the following categories of concerns:

- Impacts on Groundwater Levels in Neighboring Wells and Groundwater in Storage
- Impacts on Nearby Interconnected Surface Waters
- Impacts on Aquifer Water Quality

- Impacts on Inelastic Land Subsidence

Hydrogeologist Report Findings

The Hydrogeologist Report Findings section of the Hydrogeologist’s Report shall include a statement that, in the opinion of the PG or CHG, the well permit application complies or does not comply with EO-2 Section 4a and 4b where the proposed new well or alteration to existing well would not:

- Be inconsistent with any sustainable management program in the adopted YSGA GSP, and
- Decrease the likelihood of achieving a sustainability goal for the basin.

Also, the Hydrogeologist Report Findings section of the Hydrogeologist’s Report shall include a statement that, in the opinion of the consultant, the well permit application complies or does not comply, as required by the County well permitting process, with EO-2 Section 4b where the proposed well would not likely:

- Interfere with the production and functioning of existing nearby wells, and
- Cause subsidence that would adversely impact or damage nearby infrastructure.

In the event the findings from the Hydrogeologist’s Report do not conclude that the well permit complies with the EOs, the well applicant and their PG or CHG are encouraged to request a consultation with YSGA and County staff to assess possible changes to the well permit application to achieve compliance.

References

The references section shall include all reference material used in the Hydrogeologist’s Report and follow APA formatting¹³.

Appendices

The appendices shall include all materials that are necessary to fully and adequately support the findings and conclusions of the Hydrogeologist’s Report.

Tier 2 Analysis Guidelines and Evaluation Criteria for YSGA

The following guidelines and evaluation criteria will be used by YSGA staff to evaluate the results from the Hydrogeologist Report.

EO-2 Section 4a (GSA)

1. Does the Hydrogeologist’s Report follow all guidelines in this TM, including the Hydrogeologist’s Report Findings Summary Form?
 - a. If not, document deficiencies and provide the well applicant with comments to be addressed in an amended application and Hydrogeologist Report.
2. Does the Hydrogeologist’s Report validate the information provided on the Hydrogeologist’s Report Findings Summary Form?

¹³<https://www.bibliography.com/apa/apa-reference-page-examples-and-format-guide/#APA%20Reference%20Page>

- a. If not, rely on the information provided in the Hydrogeologist’s Report, document the inconsistencies, and provide the well applicant with comments to be addressed in an amended application and Hydrogeologist Report.

When these two criteria are met, proceed with the following evaluations.

Sustainable Management Criteria, Sustainability Goals, and Management Actions

1. **Groundwater Levels at Neighboring Wells and Groundwater in Storage:** Does the well have the potential to trigger a chronic lowering of groundwater level/reduction in groundwater storage MT at the nearest RMW or cause a decline in groundwater levels greater than 10% of the historical range at the nearest monitoring well? Will surface water be used to offset groundwater pumping?
2. **Degraded Water Quality:** Does the well have the potential to cause migration of TDS concentrations such that it may negatively impact water quality at nearby wells, including the nearest RMW?
3. **Land Subsidence:** Does the well have the potential to exacerbate the rate or extent of inelastic land subsidence near critical infrastructure?
4. **Depletion of Interconnected Surface Water:** Does the well have the potential to trigger depletion of interconnected surface water MT?
5. **Sustainability Goal:** Does the well have the potential to negatively impact the YSGA’s ability to achieve the sustainability goal?
6. **Management Actions:** Does the well have the potential to negatively impact the YSGA’s ability to implement management actions?

If all of these are found to be not of concern to the YSGA, YSGA will issue written verification of the well application and notify the County and well applicant. If one or more of these are found to be of concern to the YSGA, YSGA will document the results of their evaluation and contact the well applicant to request a meeting to discuss possible options to bring the well into compliance with the EO. Note: The YSGA has summarized the GSP SMCs and Programs and Sustainability Goals in Tables 2 and 3, respectively.

EQ-2 Section 4b

The County will review well permit applications and evaluate the following criteria:

2. Is the well likely to interfere with the production and functioning of existing nearby wells?
Note: this is not solely the responsibility of the County to evaluate as it does relate to the YSGA’s responsibility to sustainably manage the basin and avoid undesirable results related to the chronic lowering of water levels sustainable management criterion.
- Is the well likely to cause subsidence that would adversely impact or damage nearby infrastructure? Note: this is not solely the responsibility of the County to evaluate as it does relate to the YSGA’s responsibility to sustainably manage the basin and avoid undesirable results related to the land subsidence sustainable management criterion.

Table 2. Yolo Subbasin GSP (Submitted January 2022) Sustainable Management Criteria.

Sustainable Management Criteria (SMC)	Description	Undesirable Result	Minimum Thresholds	
Chronic Lowering of Groundwater levels	The point at which significant and unreasonable impacts over the planning and implementation horizon, as determined by depth or elevation of groundwater, affect the reasonable beneficial use of, and access to, groundwater by overlying users.	Occurs when the MT criteria is exceeded in 51 percent or more of representative monitoring wells in two MAs.	Capay Valley	A well violates the minimum threshold when the groundwater elevation exceeds the historic (pre-2016) minimum elevation in the period of record of each Representative Well in two consecutive fall measurements.
			Dunnigan Hills	
			Central Yolo	
			South Yolo	A well violates the minimum threshold when the groundwater elevation exceeds the historic minimum elevation in the period of record (pre-2016) of each Representative Well plus 20 percent of the depth between the historic maximum and historic minimum elevation for the period of record (pre-2016) of the Representative Well in two consecutive fall measurements.
			North Yolo	
Clarksburg	NA due to limited data			
Reduction in Groundwater Storage	The point at which significant and unreasonable impacts over the planning and implementation horizon, as determined by the amount of groundwater storage in the Yolo Subbasin, affect the reasonable and beneficial use of, and access to, groundwater by overlying users. In the Subbasin groundwater elevations serve as a proxy for groundwater storage.	GW Levels used as proxy. See Chronic Lowering of GW Levels Undesirable Results.	Capay Valley	See Chronic Lowering of GW Levels MTs
			Dunnigan Hills	
			Central Yolo	
			South Yolo	
			North Yolo	
			Clarksburg	
Degraded Groundwater Quality	The point at which water quality is degraded to the extent of causing significant and unreasonable impacts from groundwater management actions in the Yolo Subbasin, that affect the reasonable and beneficial use of, and access to, groundwater by overlying users.	An undesirable result occurs when the MT criteria is exceeded in 50 percent or more of representative monitoring wells monitored for total dissolved solids.	Capay Valley	A representative monitoring well violates the minimum threshold when the TDS concentration exceeds 1,000 ppm over a three (3) year rolling average.
			Dunnigan Hills	
			Central Yolo	
			South Yolo	
			North Yolo	
			Clarksburg	
Land Subsidence	The point at which the rate and extent of subsidence in the Subbasin causes significant and unreasonable impacts to surface land uses or critical infrastructure.	An undesirable result occurs when the MT value is exceeded over 25 percent of the management or sub-MA in three (3) or more management or sub-MAs in the same reporting year.	Capay Valley	TBD
			Dunnigan Hills	1.8 cm/yr
			East Central Yolo	3.0 cm/yr
			West Central Yolo	1.8 cm/yr
			South Yolo	0 cm/yr
			North Yolo	3.0 cm/yr
			Clarksburg	0 cm/yr
Depletion of Interconnected Surface Water	The point at which significant and unreasonable impacts to the surface waters affect the reasonable and beneficial use of those surface waters by overlying users, including associated ecosystems.	An undesirable result occurs when the Minimum Threshold is exceeded in over 50 percent of the interconnected surface water representative monitoring wells in two (2) or more interconnected surface water MAs in the same reporting year. Note: An interconnected surface water management zone will be considered an “undesirable result watch area” when 50 percent or more of the representative monitoring wells (RMWs) in that management zone exceed their minimum threshold value.	Lower Cache Creek	The recurrence of the spring (March-May) average measurement for 1975 to present at the RMWs at least one spring in every seven (7) years.
			Upper Cache Creek	Equal to the minimum elevation for the period of record at the RMW, exceeded in 2 consecutive years.
			Putah Creek	
			Lower Sacramento River	Exceedance of the historic minimum elevation in the period of record of each RMW plus 20 percent of the depth between the historic maximum and historic minimum elevation for the period of record of the RMW in 2 consecutive years.
			Upper Sacramento River	

Table 3. Yolo Subbasin GSP (Submitted January 2022) Programs (Management Actions) and Sustainability Goals

Management Action/Project Number	Management Action/Project Name	Description	Relevant Sustainability Indicators Affected			
			Groundwater Levels	Groundwater Quality	Land Subsidence	Interconnected Surface Water-Groundwater
MA 1	Continued and Improved Groundwater Monitoring Program	Several groundwater monitoring programs exist within the Yolo Subbasin. Efforts to aggregate these monitoring programs include the Yolo County Water Resources Information Database (WRID) and DWR’s Water Data Library. The WRID also receives well water level data from the cooperating agencies, monitoring about 550 wells distributed Countywide semi-annually. Most groundwater level data received or collected in the WRID is submitted to the state’s Water Data Library. Existing programs monitor both water quality and water levels. Continuing to monitor groundwater conditions in the Yolo Subbasin is a critical component of a sustainable future. Improvements can be made to the current program by expanding monitoring efforts into data gaps, improving coordination between programs, and ensuring sustainable funding of monitoring efforts.	X	X	X	X
MA 2	Continue coordination efforts with other management and monitoring entities	Coordination efforts are ongoing related to groundwater management and monitoring in the Yolo Subbasin. Continuing these coordination efforts will yield better information and allow for a collaborative and conjunctive decision-making process. This includes evaluation of well permit applications and working with Yolo County in the well permitting process.	X	X	X	X
MA 3	Subsidence Monitoring Program	Continue to investigate subsidence and causes of subsidence in the Yolo Subbasin.			X	
MA 4	Preparedness through Increased Groundwater Recharge and Managed Aquifer Recharge Projects	This project encompasses all efforts to increase groundwater recharge in the Yolo Subbasin. This includes diversion of winter flows for groundwater recharge, increased groundwater infiltration from precipitation, aquifer storage and recovery projects, for example. Increased groundwater recharge efforts and winter diversions may result in creation of seasonal wetlands in some scenarios. YCFC&WCD proposes to divert winter flows from Cache Creek into the canal system to increase groundwater recharge. Groundwater recharge and recovery is central to good conjunctive management of surface and groundwater resources. Currently, by YCFC&WCD policy, 160 miles of surface water canals remain unlined, providing summertime groundwater recharge services that benefit the aquifer and riparian habitat. The recharged groundwater is used by beneficial users in the Subbasin. Utilizing TNC’s Multi-Benefit Recharge Project Methodology Guidance Document will help make these projects successful. Managed wetlands within the Subbasin already provide multi-benefit recharge services, and increased coordination with wetland managers will provide opportunity for information sharing and potential managed aquifer recharge projects. Additional methods of groundwater recharge that will be considered include flood water and drain flows in the Yolo Bypass, drain flows in the Colusa Basin Drain, and application of irrigation water more than crop evapotranspiration needs.	X		X	
MA 5	Conjunctive Water Use Program	This conjunctive water use project envisions using a variety of methods (recharge/recovery, off-stream storage and canal system modernization) to effectively store and conjunctively use groundwater in the District's service area. The new water that will be developed can be used to the benefit of agriculture, environmental and municipal interests. A significant amount of work has already been completed on this project including establishment of a groundwater monitoring program.	X			
MA 6	Increased outreach and information sharing of groundwater resources and knowledge within the Yolo Subbasin	Information sharing, collaboration, and communication will be an important part of groundwater sustainability in the Yolo Subbasin. This project will convey information, best practices, funding opportunities, data, and observations to as wide of a group as possible. This project relates to the Communication and Engagement Plan that the YSGA has created for the Yolo Subbasin.	X	X	X	X

Table 3. Yolo Subbasin GSP (Submitted January 2022) Programs (Management Actions) and Sustainability Goals

Management Action/Project Number	Management Action/Project Name	Description	Relevant Sustainability Indicators Affected			
			Groundwater Levels	Groundwater Quality	Land Subsidence	Interconnected Surface Water-Groundwater
MA 7	Domestic Well Impact Mitigation Program	The YSGA is working to create a domestic well impact mitigation program to mitigate any potential impacts to domestic well users. This program will identify potential funding sources for both temporary and permanent domestic water solutions in cases where domestic well users are impacted due to changing groundwater conditions as a result of groundwater management actions. The minimum thresholds and measurable objectives established in this document are generally protective of domestic well users in the Yolo Subbasin. The Domestic Well Impact Mitigation Program will provide resources and information in cases where management actions result in impacts to domestic well users.	X			
MA 8	Surface Water Monitoring Program	There is no coordinated Countywide surface water monitoring program at present. However, on-going monitoring programs are in-place on various waterways, and a large number of smaller temporary investigations have occurred over the years. These individual surface water monitoring efforts need to be consolidated to improve the value of the data for implementation of actions identified in this GSP.	X	X	X	X
MA 9	Management Consideration of Grey Areas in the Yolo Subbasin	During the formation of the GSA for the Yolo Subbasin, the eligible entities were identified based on SGMA’s definition. Irrigated areas outside of water or irrigation district service areas were known as “white areas” since they did not have an eligible entity (other than the County) to form or become a GSA. The YSGA was formed in June 2017, with Yolo County serving as a member of the JPA to cover these “white areas”. The YSGA now has the authority and responsibility for this area; however, there is still no formal mechanism for receiving revenues for SGMA implementation, which has made these areas slightly complicated, or now known as “grey areas”. There is a desire for the YSGA to work closely with landowners in these “grey areas” to assess the best solution for implementing the GSP and ensuring future sustainability. Ideas for these areas include, annexing the property into an existing irrigation or reclamation district (as an “Area B” or an Improvement District); creating or forming a new water district; or simply implementing a countywide assessment for all properties in the Yolo Subbasin.	X	X	X	X
MA 10	Coordination Efforts with Land Use Planning Entities	The YSGA and member entities will work on an as-needed basis with Yolo County and municipalities within the Yolo Subbasin to promote the sustainable use and protection of groundwater resources including GDEs and interconnected surface water bodies. These coordination efforts will include inputs to general plan updates in the future	X	X	X	X
MA 11	Continued Investigation of subsurface geology and aquifer properties in the Yolo Subbasin	There are portions of the Yolo Subbasin where the geologic properties of the aquifer are well understood. Alternatively, there are areas where geologic conditions are not well described or understood. This Management Action would work to improve geologic information in areas of the subbasin where the aquifer is poorly described. This includes looking at existing geologic cross-sections, AEM surveys, and investigation of driller's reports.	X	X	X	X
MA 12	Coordinated Response to Minimum Threshold Exceedances	The YSGA will coordinate responses to minimum threshold exceedances. When a single well minimum threshold is exceeded, the YSGA will verify the exceedance, analyze causes and trends, and evaluate mitigation. When multiple wells exceed minimum thresholds, causes and trends will be evaluated by MA entities and potential mitigation actions (projects and management actions) will be identified. When wells exceed the minimum threshold for a MA, causes and trends will be evaluated, potential mitigation actions (projects and management actions) will be evaluated and a plan for implementation will be developed. This will involve basin-wide coordination.	X	X	X	X

Table 3. Yolo Subbasin GSP (Submitted January 2022) Programs (Management Actions) and Sustainability Goals

Management Action/Project Number	Management Action/Project Name	Description	Relevant Sustainability Indicators Affected			
			Groundwater Levels	Groundwater Quality	Land Subsidence	Interconnected Surface Water-Groundwater
GSP Sustainability Goals						
<ol style="list-style-type: none"> 1. Achieve sustainable groundwater management in the Yolo Subbasin by maintaining or enhancing groundwater quantity and quality through the implementation of projects and management actions to support beneficial uses and users. 2. Maintain surface water flows and quality to support conjunctive use programs in the Subbasin that promote increased groundwater levels and improved water quality 3. Operate within the established sustainable management criteria and maintain sustainable groundwater use through continued implementation of a monitoring and reporting program 4. Maintain sustainable operations to maintain sustainability over the implementation and planning horizon 						

PROPOSED IMPLEMENTATION

Yolo County's well permitting process requires Hydrogeologist's Reports for proposed new wells or alteration of existing wells if they are not exempt from the EOs and fall into either of the following categories:

- Wells that are located in the Upland areas that are intended to pump greater than 100 gpm.
- Wells that are located in Valley Floor areas that pump greater than 2,000 gpm.

Hydrogeologist Reports submitted to the County in support of its well permitting process will also be available to YSGA to support its verification efforts under the EOs. This TM presented the proposed guidelines that well applicant may use to prepare Hydrogeologist Reports, and evaluation criteria the YSGA and County reviewers may use to evaluate Hydrogeologist Reports to verify compliance with the EOs.

Some wells subject to the County's Hydrogeologist Report requirement will fall within YSGA's proposed Focus Areas, while others will not. For wells that are located within the YSGA's proposed Focus Areas, the following would apply:

- If the proposed well is anticipated to pump less than 100 gpm or have a well casing diameter of 6 inches or less, YSGA would not require any additional information or analysis and would proceed to provide written verification to the County.
- If the proposed well is anticipated to pump greater than 100 gpm or have a well casing diameter greater than 6 inches, YSGA will perform a Tier 1 analysis. Based on the results from the Tier 1 analysis, the well applicant may be required to perform a Tier 2 analysis which would include the preparation and submission of a Hydrogeologist's Report as part of the YSGA's verification process in the County well permitting process.

The delineation of Focus Areas within the Yolo Subbasin may be updated by the YSGA from time to time to adapt to changing groundwater conditions or improved data in the region. Updated Focus Area maps will be circulated for public review and comment prior to their adoption by the YSGA.

This proposed implementation process will accomplish the following:

- Enable the YSGA to fulfill its obligations defined in Paragraph 9 of the EO and Paragraph 4 of EO-2
- Address citizen concerns related to declining groundwater levels, possible interference with domestic wells, and dry wells by providing additional review
- Provide additional data to the YSGA to better understand the subsurface aquifer system and well construction information throughout the basin
- Support the YSGA in adaptively managing the Yolo Subbasin in response to changing groundwater conditions

Governor's Executive Order N-7-22

DRAFT

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER N-7-22

WHEREAS on April 12, 2021, May 10, 2021, July 8, 2021, and October 19, 2021, I proclaimed states of emergency that continue today and exist across all the counties of California, due to extreme and expanding drought conditions; and

WHEREAS climate change continues to intensify the impacts of droughts on our communities, environment, and economy, and California is in a third consecutive year of dry conditions, resulting in continuing drought in all parts of the State; and

WHEREAS the 21st century to date has been characterized by record warmth and predominantly dry conditions, and the 2021 meteorological summer in California and the rest of the western United States was the hottest on record; and

WHEREAS since my October 19, 2021 Proclamation, early rains in October and December 2021 gave way to the driest January and February in recorded history for the watersheds that provide much of California's water supply; and

WHEREAS the ongoing drought will have significant, immediate impacts on communities with vulnerable water supplies, farms that rely on irrigation to grow food and fiber, and fish and wildlife that rely on stream flows and cool water; and

WHEREAS the two largest reservoirs of the Central Valley Project, which supplies water to farms and communities in the Central Valley and the Santa Clara Valley and provides critical cold-water habitat for salmon and other anadromous fish, have water storage levels that are approximately 1.1 million acre-feet below last year's low levels on this date; and

WHEREAS the record-breaking dry period in January and February and the absence of significant rains in March have required the Department of Water Resources to reduce anticipated deliveries from the State Water Project to 5 percent of requested supplies; and

WHEREAS delivery of water by bottle or truck is necessary to protect human safety and public health in those places where water supplies are disrupted; and

WHEREAS groundwater use accounts for 41 percent of the State's total water supply on an average annual basis but as much as 58 percent in a critically dry year, and approximately 85 percent of public water systems rely on groundwater as their primary supply; and

WHEREAS coordination between local entities that approve permits for new groundwater wells and local groundwater sustainability agencies is important to achieving sustainable levels of groundwater in critically overdrafted basins; and

WHEREAS the duration of the drought, especially following a multiyear drought that abated only five years ago, underscores the need for California to redouble near-, medium-, and long-term efforts to adapt its water management and delivery systems to a changing climate, shifting precipitation patterns, and water scarcity; and

WHEREAS the most consequential, immediate action Californians can take to extend available supplies is to voluntarily reduce their water use by 15 percent from their 2020 levels by implementing the commonsense measures identified in operative paragraph 1 of Executive Order N-10-21 (July 8, 2021); and

WHEREAS to protect public health and safety, it is critical the State take certain immediate actions without undue delay to prepare for and mitigate the effects of the drought conditions, and under Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this Proclamation would prevent, hinder, or delay the mitigation of the effects of the drought conditions.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes, including the California Emergency Services Act, and in particular, Government Code sections 8567, 8571, and 8627, do hereby issue the following Order to become effective immediately:

IT IS HEREBY ORDERED THAT:

1. The orders and provisions contained in my April 21, 2021, May 10, 2021, July 8, 2021, and October 19, 2021 Proclamations remain in full force and effect, except as modified by those Proclamations and herein. State agencies shall continue to implement all directions from those Proclamations and accelerate implementation where feasible.
2. To help the State achieve its conservation goals and ensure sufficient water for essential indoor and outdoor use, I call on all Californians to strive to limit summertime water use and to use water more efficiently indoors and out. The statewide Save Our Water conservation campaign at SaveOurWater.com provides simple ways for Californians to reduce water use in their everyday lives. Furthermore, I encourage Californians to understand and track the amount of water they use and measure their progress toward their conservation goals.
3. By May 25, 2022, the State Water Resources Control Board (Water Board) shall consider adopting emergency regulations that include all of the following:
 - a. A requirement that each urban water supplier, as defined in section 10617 of the Water Code, shall submit to the Department of Water Resources a preliminary annual water supply and demand assessment consistent with section 10632.1 of the Water Code no later than June 1, 2022, and submit a final annual water

supply and demand assessment to the Department of Water Resources no later than the deadline set by section 10632.1 of the Water Code;

- b. A requirement that each urban water supplier that has submitted a water shortage contingency plan to the Department of Water Resources implement, at a minimum, the shortage response actions adopted under section 10632 of the Water Code for a shortage level of up to twenty percent (Level 2), by a date to be set by the Water Board; and
- c. A requirement that each urban water supplier that has not submitted a water shortage contingency plan to the Department of Water Resources implement, at a minimum, shortage response actions established by the Water Board, which shall take into consideration model actions that the Department of Water Resources shall develop for urban water supplier water shortage contingency planning for Level 2, by a date to be set by the Water Board.

To further conserve water and improve drought resiliency if the drought lasts beyond this year, I encourage urban water suppliers to conserve more than required by the emergency regulations described in this paragraph and to voluntarily activate more stringent local requirements based on a shortage level of up to thirty percent (Level 3).

- 4. To promote water conservation, the Department of Water Resources shall consult with leaders in the commercial, industrial, and institutional sectors to develop strategies for improving water conservation, including direct technical assistance, financial assistance, and other approaches. By May 25, 2022, the Water Board shall consider adopting emergency regulations defining "non-functional turf" (that is, a definition of turf that is ornamental and not otherwise used for human recreation purposes such as school fields, sports fields, and parks) and banning irrigation of non-functional turf in the commercial, industrial, and institutional sectors except as it may be required to ensure the health of trees and other perennial non-turf plantings.
- 5. In order to maximize the efficient use of water and to preserve water supplies critical to human health and safety and the environment, Public Resources Code, Division 13 (commencing with section 21000) and regulations adopted pursuant to that Division are hereby suspended, with respect to the directives in paragraphs 3 and 4 of this Order and any other projects and activities for the purpose of water conservation to the extent necessary to address the impacts of the drought, and any permits necessary to carry out such projects or activities. Entities that desire to conduct activities under this suspension, other than the directives in paragraphs 3 and 4 of this Order, shall first request that the Secretary of the Natural Resources Agency make a determination that the proposed activities are eligible to be conducted under this suspension. The Secretary shall use sound discretion in applying this Executive Order to ensure that the suspension serves the purpose of accelerating conservation projects that are necessary to address impacts of the drought, while at the same time

protecting public health and the environment. The entities implementing these directives or conducting activities under this suspension shall maintain on their websites a list of all activities or approvals for which these provisions are suspended.

6. To support voluntary approaches to improve fish habitat that would require change petitions under Water Code section 1707 and either Water Code sections 1425 through 1432 or Water Code sections 1725 through 1732, and where the primary purpose is to improve conditions for fish, the Water Board shall expeditiously consider petitions that add a fish and wildlife beneficial use or point of diversion and place of storage to improve conditions for anadromous fish. California Code of Regulations, title 23, section 1064, subdivisions (a)(1)(A)(i)-(ii) are suspended with respect to any petition that is subject to this paragraph.
7. To facilitate the hauling of water for domestic use by local communities and domestic water users threatened with the loss of water supply or degraded water quality resulting from drought, any ordinance, regulation, prohibition, policy, or requirement of any kind adopted by a public agency that prohibits the hauling of water out of the water's basin of origin or a public agency's jurisdiction is hereby suspended. The suspension authorized pursuant to this paragraph shall be limited to the hauling of water by truck or bottle to be used for human consumption, cooking, or sanitation in communities or residences threatened with the loss of affordable safe drinking water. Nothing in this paragraph limits any public health or safety requirement to ensure the safety of hauled water.
8. The Water Board shall expand inspections to determine whether illegal diversions or wasteful or unreasonable use of water are occurring and bring enforcement actions against illegal diverters and those engaging in the wasteful and unreasonable use of water. When access is not granted by a property owner, the Water Board may obtain an inspection warrant pursuant to the procedures set forth in Title 13 (commencing with section 1822.50) of Part 3 of the Code of Civil Procedure for the purposes of conducting an inspection pursuant to this directive.
9. To protect health, safety, and the environment during this drought emergency, a county, city, or other public agency shall not:
 - a. Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to the Sustainable Groundwater Management Act and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability

Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan; or

- b. Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

This paragraph shall not apply to permits for wells that will provide less than two acre-feet per year of groundwater for individual domestic users, or that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code.

10. To address household or small community drinking water shortages dependent upon groundwater wells that have failed due to drought conditions, the Department of Water Resources shall work with other state agencies to investigate expedited regulatory pathways to modify, repair, or reconstruct failed household or small community or public supply wells, while recognizing the need to ensure the sustainability of such wells as provided for in paragraph 9.
11. State agencies shall collaborate with tribes and federal, regional, and local agencies on actions related to promoting groundwater recharge and increasing storage.
12. To help advance groundwater recharge projects, and to demonstrate the feasibility of projects that can use available high water flows to recharge local groundwater while minimizing flood risks, the Water Board and Regional Water Quality Control Boards shall prioritize water right permits, water quality certifications, waste discharge requirements, and conditional waivers of waste discharge requirements to accelerate approvals for projects that enhance the ability of a local or state agency to capture high precipitation events for local storage or recharge, consistent with water right priorities and protections for fish and wildlife. For the purposes of carrying out this paragraph, Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division, and Chapter 3 (commencing with section 85225) of Part 3 of Division 35 of the Water Code and regulations adopted pursuant thereto are hereby suspended to the extent necessary to address the impacts of the drought. This suspension applies to (a) any actions taken by state agencies, (b) any actions taken by local agencies where the state agency with primary responsibility for the implementation of the directives concurs that local action is required, and (c) permits necessary to carry out actions under (a) or (b). The entities implementing these directives shall maintain on their websites a list of all activities or approvals for which these provisions are suspended.
13. With respect to recharge projects under either Flood-Managed Aquifer Recharge or the Department of Water Resources Sustainable

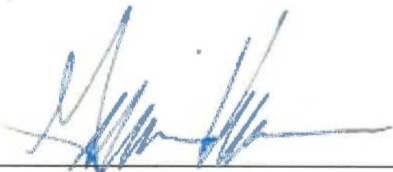
Groundwater Management Grant Program occurring on open and working lands to replenish and store water in groundwater basins that will help mitigate groundwater conditions impacted by drought, for any (a) actions taken by state agencies, (b) actions taken by a local agency where the Department of Water Resources concurs that local action is required, and (c) permits necessary to carry out actions under (a) or (b), Public Resources Code, Division 13 (commencing with section 21000) and regulations adopted pursuant to that Division are hereby suspended to the extent necessary to address the impacts of the drought. The entities implementing these directives shall maintain on their websites a list of all activities or approvals for which these provisions are suspended.

14. To increase resilience of state water supplies during prolonged drought conditions, the Department of Water Resources shall prepare for the potential creation and implementation of a multi-year transfer program pilot project for the purpose of acquiring water from willing partners and storing and conveying water to areas of need.
15. By April 15, 2022, state agencies shall submit to the Department of Finance for my consideration proposals to mitigate the worsening effects of severe drought, including emergency assistance to communities and households and others facing water shortages as a result of the drought, facilitation of groundwater recharge and wastewater recycling, improvements in water use efficiency, protection of fish and wildlife, mitigation of drought-related economic or water-supply disruption, and other potential investments to support short- and long-term drought response.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 28th day of March 2022.



GAVIN NEWSOM
Governor of California

ATTEST:

SHIRLEY N. WEBER, PH.D.
Secretary of State

Governor's Executive Order N-3-23

DRAFT

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER N-3-23

WHEREAS on April 21, 2021, May 10, 2021, July 8, 2021, and October 19, 2021, I proclaimed States of Emergency due to drought conditions that continue today and exist across California; and

WHEREAS climate change continues to intensify the impacts of droughts on our communities, environment, and economy, and these impacts continue to affect groundwater basins, local water supplies, and ecosystems, resulting in continuing drought in the State; and

WHEREAS the ongoing drought continues to have significant, immediate impacts on communities with vulnerable water supplies, farms that rely on irrigation to grow food and fiber, and fish and wildlife that rely on stream flows and cool water; and

WHEREAS early, substantial rains in October and December 2021 gave way to the driest January-February-March period in over 100 years in California, leading the October 2021 to September 2022 water year to end with statewide precipitation at 76 percent of average, with statewide reservoir storage at 69 percent of average, and with Lake Oroville—the State Water Project's largest reservoir—at 64 percent of average; and

WHEREAS in January 2023, the State experienced one of the wettest three-week periods on record, yielding a snowpack that was at 205 percent of average on February 1, 2023, yet to date February has been drier than average; and

WHEREAS the current snowpack has not reduced stresses upon the State's water resources, including low storage levels, depleted aquifers, and diminished local water supplies; and

WHEREAS the State can expect continued swings between extreme wet and extreme dry periods that can present risks of severe flooding and extreme drought in the same year; and

WHEREAS California must adapt to a hotter, drier future in which a greater share of rain and snowfall during the wetter months will be absorbed by dry soils, consumed by plants, and evaporated into the air, leaving less water for communities, species, and agriculture; and

WHEREAS the frequency of hydrologic extremes experienced in the State is indicative of an overarching need to continually reexamine policies to promote resiliency in a changing climate; and

WHEREAS Californians continue to make progress conserving water, with urban water users conserving 17.1 percent statewide in December 2022 compared to December 2020 and agricultural producers continuing to invest in more efficient irrigation; and

WHEREAS despite this progress, the uncertainty of precipitation during the remainder of the winter and spring, and the potential of dry conditions next

winter and of drought conditions extending to a fifth year, make it necessary for the State to continue water-conservation measures and drought-resilience actions to extend available supplies, protect water reserves, and maintain critical flows for fish and wildlife; and

WHEREAS as directed in "California's Water Supply Strategy: Adapting to a Hotter, Drier Future," the State plans to stretch water supplies by storing, recycling, de-salting, and conserving the water it will need to keep up with the increasing pace of climate change; and

WHEREAS multiple regions of the State, such as the Klamath Basin and the Colorado River system, face severe water shortage conditions, and groundwater basins in the Central Valley continue to be depleted from years of drought and overdraft; and

WHEREAS groundwater use accounts for 41 percent of the State's total water supply on an average annual basis but as much as 58 percent in a critically dry year, and approximately 85 percent of public water systems rely on groundwater as their primary supply; and

WHEREAS capturing and storing storm and snowpack runoff underground to recharge aquifers is an important strategy to help regions stabilize water supplies in the face of hydrologic extremes; and

WHEREAS state agencies have created streamlined permitting pathways to enable groundwater recharge that augments natural aquifer recharge, while protecting the environment and other water users, but more opportunities exist to facilitate groundwater recharge; and

WHEREAS coordination between local entities that approve permits for new groundwater wells and local groundwater sustainability agencies is important to achieving sustainable levels of groundwater in critically overdrafted basins; and

WHEREAS to protect public health and safety, it is critical the State take certain immediate actions without undue delay to prepare for and mitigate the effects of the drought conditions, and under Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this Order would prevent, hinder, or delay the mitigation of the effects of the drought conditions.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes, including the California Emergency Services Act, and in particular, Government Code sections 8567, 8571, and 8627, do hereby issue the following Order to become effective immediately:

IT IS HEREBY ORDERED THAT:

1. The orders and provisions contained in my State of Emergency Proclamations dated April 21, 2021, May 10, 2021, July 8, 2021, and October 19, 2021, and Executive Orders N-10-21 (July 8, 2021) and N-7-22 (March 28, 2022), remain in full force and effect, except as modified by those proclamations and orders and herein. State agencies shall

continue to implement all directions from those proclamations and orders and accelerate implementation where feasible.

2. To maximize the extent to which winter precipitation recharges underground aquifers, the Department of Water Resources, the State Water Resources Control Board (Water Board), and the Department of Fish and Wildlife shall continue to collaborate on expediting permitting of recharge projects and shall work with local water districts to facilitate recharge projects.
3. Paragraph 4 of my State of Emergency Proclamation dated May 10, 2021 and Paragraph 4 of my State of Emergency Proclamation dated July 8, 2021 are withdrawn, and each is replaced with the following text:

To ensure adequate water supplies for purposes of health, safety, the environment, or drought resilient water supplies, the Water Board shall consider modifying requirements for reservoir releases or diversion limitations in Central Valley Project or State Water Project facilities to: (i) conserve water upstream later in the year in order to protect cold water pools for salmon and steelhead, (ii) enhance instream conditions for fish and wildlife, (iii) improve water quality, (iv) protect carry-over storage, (v) ensure minimum health and safety water supplies, or (vi) provide opportunities to maintain or to expand water supplies north and south of the Delta. The Water Board shall require monitoring and evaluation of any such changes to inform future actions. For any actions taken pursuant to this paragraph and any approvals granted in furtherance of this paragraph, Water Code Section 13247 and Public Resources Code, Division 13 (commencing with Section 21000) and regulations adopted pursuant to that Division are suspended. Nothing in this Paragraph affects or limits the validity of actions already taken or ongoing under Paragraph 4 of my May 10, 2021 Proclamation or Paragraph 4 of my July 8, 2021 Proclamation.

4. Paragraph 9 of Executive Order N-7-22 is withdrawn and replaced with the following text:

To protect health, safety, and the environment during this drought emergency, a county, city, or other public agency shall not:

- a. Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to the Sustainable Groundwater Management Act and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan; or

- b. Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

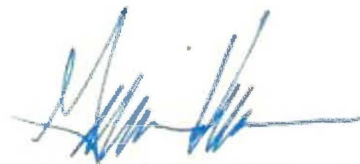
This Paragraph shall not apply to permits for wells (i) that will provide less than two acre-feet per year of groundwater for individual domestic users, (ii) that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code, or (iii) that are replacing existing, currently permitted wells with new wells that will produce an equivalent quantity of water as the well being replaced when the existing well is being replaced because it has been acquired by eminent domain or acquired while under threat of condemnation.

5. No later than April 28, 2023, state agencies shall send me their recommendations for what further actions, if any, are necessary for on-going emergency drought response, and their views on whether any existing provisions in my proclamations and executive orders related to the drought emergency are no longer needed to prepare for and mitigate the effects of the drought conditions.

IT IS FURTHER ORDERED that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have
hereunto set my hand and caused
the Great Seal of the State of
California to be affixed this 13th day
of February 2023.



GAVIN NEWSOM
Governor of California

ATTEST:

SHIRLEY N. WEBER, PH.D.
Secretary of State

YSGA Adopted Resolution No. 22-01

DRAFT

**RESOLUTION NO. 22-01
OF THE
BOARD OF DIRECTORS OF THE
YOLO SUBBASIN GROUNDWATER AGENCY**

***IN THE MATTER OF:* AN EMERGENCY RESOLUTION ESTABLISHING YOLO SUBBASIN GROUNDWATER AGENCY’S PROCEDURES FOR COMPLIANCE WITH EXECUTIVE ORDER N-7-22 PARAGRAPH 9 REGARDING GROUNDWATER WELL PERMITS**

WHEREAS, the Yolo Subbasin Groundwater Agency (“YSGA”) is a joint powers authority established and existing pursuant to a Joint Exercise of Powers Agreement dated and effective June 19, 2017 and the Joint Exercise of Powers Act, Cal. Government Code section 6500 *et seq.*; and

WHEREAS, on August 29, 2014, the California Legislature passed comprehensive groundwater legislation contained in SB 1168, SB 1319 and AB 1739. Collectively, those bills, as subsequently amended, enacted the Sustainable Groundwater Management Act (“SGMA”). SGMA became effective on January 1, 2015; and

WHEREAS, pursuant to SGMA, YSGA is the Groundwater Sustainability Agency for the Yolo Subbasin of the Sacramento Valley Groundwater Basin, California Department of Water Resources Basin No. 5-21.67 (“Subbasin”); and

WHEREAS, on October 19, 2021, pursuant to Executive Order N-10-21, Governor Gavin Newsom proclaimed a State of Emergency “to exist in the State due to drought in the remaining counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Francisco, and Ventura, such that the drought state of emergency is now in effect statewide”; and

WHEREAS, on March 28, 2022, Governor Newsom issued Executive Order N-7-22, which reaffirms the State of Emergency proclaimed in October 2021 and orders that said proclamation and related proclamations “remain in full force and effect”; and

WHEREAS, paragraph 9 of Executive Order N-7-22 provides:

“9. To protect health, safety, and the environment during this drought emergency, a county, city, or other public agency shall not:

a. Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to the Sustainable Groundwater Management Act and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability

Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan; or

b. Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure. This paragraph shall not apply to permits for wells that will provide less than two acre-feet per year of groundwater for individual domestic users, or that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code.”; and

WHEREAS, in light of the State of Emergency declared pursuant to Executive Order N-10-21 and reaffirmed in Executive Order N-7-22, and in light of the directives of paragraph 9 of Executive Order N-7-22, the Board of Directors of YSGA finds and determines that it is necessary and appropriate for YSGA to develop, adopt and implement procedures for compliance with paragraph 9 of Executive Order N-10-21, as set forth in this Resolution.

NOW, THEREFORE, BE IT RESOLVED:

1. The Executive Officer and his or her designee (“Executive Officer”), of YSGA is hereby delegated full authority to develop, adopt and implement written procedures (hereinafter “Well Permit Procedures”) for YSGA compliance with paragraph 9 of Executive Order N-10-21. The Well Permit Procedures shall be consistent with the terms and conditions of this Resolution.
2. The Executive Officer of YSGA shall report in writing to the YSGA Board of Directors on a monthly basis regarding all activities and actions undertaken pursuant to the Well Permit Procedures.
3. The Well Permit Procedures and the delegation of authority contained in this Resolution shall remain in full force and effect until termination of the drought emergency described in Executive Orders N-10-21 and N-7-22.
4. In the event of any modification of paragraph 9 of Executive Order N-7-22, the YSGA Board of Directors shall consider whether modification of this Resolution or the Well Permit Procedures is warranted.
5. With respect to any request or application for alteration or replacement of an existing groundwater well within the Subbasin, for which no increase in total groundwater pumping by the altered or replaced well is contemplated, the Executive Officer, and his or her designee, shall expedite review of such request or application and shall apply a rebuttable presumption that (i) groundwater extraction by the proposed altered or replaced well would be consistent with the sustainable groundwater management program established in the YSGA Groundwater Sustainability Plan for the Subbasin; and (ii) groundwater extraction by the proposed altered or replaced well would not decrease the likelihood of achieving a sustainability goal for the Subbasin. The Executive Officer shall review all relevant evidence submitted by any interested party in connection with the request or application and shall determine whether the evidence presented is

sufficient to overcome the rebuttable presumption set forth in this paragraph 5. The Executive Officer shall then determine, based on all evidence submitted, whether the written verifications contemplated in paragraph 9.a of Executive Order N-7-22 will be made by YSGA and shall communicate such determination, in writing, promptly to the County of Yolo.

6. With respect to any request or application to approve a permit for a new groundwater well or for alteration of an existing well, in which an increase in total groundwater pumping by the altered or replaced well is contemplated, the Executive Officer shall make a preliminary determination as to whether (i) groundwater extraction by the proposed well would be inconsistent with the sustainable groundwater management program established in the Yolo Subbasin Groundwater Sustainability Plan for the Subbasin; or (ii) that groundwater extraction by the proposed well would decrease the likelihood of achieving a sustainability goal for the Subbasin. If the Executive Officer's preliminary determination is to answer either item (i) or (ii) in the affirmative, the Executive Officer shall immediately contact the County requesting additional data and information and provide the applicant with an opportunity to submit additional supporting documentation for the purpose of demonstrating that the well would address the preliminary determination stated above (i) and (ii). If additional information is submitted, the Executive Officer shall consider it fully and fairly. The Executive Officer shall then determine, based on all evidence submitted, whether the written verifications contemplated in paragraph 9.a of Executive Order N-7-22 will be made by YSGA and shall communicate such determination, in writing, promptly to the County of Yolo; *provided* that if the Executive Officer determines that (i) groundwater extraction by the proposed well would be inconsistent with the sustainable groundwater management program established in the Yolo Subbasin Groundwater Sustainability Plan for the Subbasin; or (ii) groundwater extraction by the proposed well would decrease the likelihood of achieving a sustainability goal for the Subbasin, the Executive Officer shall convene a meeting of the YSGA Ad Hoc Drought Contingency Planning Committee ("Drought Committee") to review the Executive Officer's determination and, if appropriate, recommend additional analyses to be completed by the applicant. The Drought Committee shall have full and final authority to determine the nature and scope of any additional analyses to be completed by the applicant.

7. The determinations made by the Executive Officer in accordance with paragraphs 5 and 6 of this Resolution shall be final for all purposes.

8. The Board of Directors of YSGA hereby finds that the adoption of this Resolution and the implementation of the Well Permit Procedures are exempt from the California Environmental Quality Act ("CEQA") under CEQA Guidelines sections 15261(a) and 15301 as a part of an ongoing pre-CEQA project and the continued operation of existing facilities. Furthermore, the Program is exempt under Water Code Section 1729 and as emergency projects under Public Resources Code Sections 21080(b)(3) and 21080(b)(4) and CEQA Guidelines Section 15269(c). The Executive Officer is authorized and directed to prepare and process an appropriate Notice of Exemption.

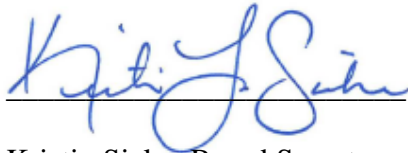
Certification of Secretary

The undersigned hereby certifies that the foregoing resolution was duly adopted by the Board of Directors of YSGA at a special meeting held on May 6, 2022, by the following vote:

AYES (15): City of Davis, City of West Sacramento, Dunnigan Water District, Madison CSD, RD 108, RD 307, RD 537, RD 730, RD 787, RD 999, Yocha Dehe Wintun Nation, Yolo County, YCF&WCD, Cal Am Water – Dunnigan, Yolo County Farm Bureau

NOES (1): Esparto CSD

ABSENT (10): City of Winters, City of Woodland, RD 150, RD 765, RD 1600, RD 2035, Rumsey Water Users Association, UC Davis, Colusa Drain MWC, and Environmental Representative – Ann Brice



Kristin Sicke, Board Secretary

Dated: May 6, 2022

YSGA Adopted Resolution No. 22-02

DRAFT

**RESOLUTION NO. 22-02
OF THE
BOARD OF DIRECTORS OF THE
YOLO SUBBASIN GROUNDWATER AGENCY**

***IN THE MATTER OF:* ADOPTING A COST RECOVERY FEE SCHEDULE FOR
VERIFICATION AND REVIEW OF WELL PERMIT
APPLICATIONS PURSUANT TO EXECUTIVE ORDER N-7-22**

WHEREAS, the Yolo Subbasin Groundwater Agency (“YSGA”) is a joint powers authority established and existing pursuant to a Joint Exercise of Powers Agreement dated and effective June 19, 2017 and the Joint Exercise of Powers Act, Cal. Government Code section 6500 *et seq.*; and

WHEREAS, on August 29, 2014, the California Legislature passed comprehensive groundwater legislation contained in SB 1168, SB 1319 and AB 1739. Collectively, those bills, as subsequently amended, enacted the Sustainable Groundwater Management Act (“SGMA”). SGMA became effective on January 1, 2015; and

WHEREAS, pursuant to SGMA, YSGA is the Groundwater Sustainability Agency for the Yolo Subbasin of the Sacramento Valley Groundwater Basin, California Department of Water Resources Basin No. 5-21.67 (“Subbasin”); and

WHEREAS, on October 19, 2021, pursuant to Executive Order N-10-21, Governor Gavin Newsom proclaimed a State of Emergency “to exist in the State due to drought in the remaining counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Francisco, and Ventura, such that the drought state of emergency is now in effect statewide”; and

WHEREAS, on March 28, 2022, Governor Newsom issued Executive Order N-7-22, which reaffirms the State of Emergency proclaimed in October 2021 and orders that said proclamation and related proclamations “remain in full force and effect”; and

WHEREAS, paragraph 9 of Executive Order N-7-22 imposes new review and verification requirements on the issuance of certain well permits and directs that well permitting authority may not issue a permit for well covered in the Order without first obtaining written verification from the Groundwater Sustainability Agency managing the basin regarding the proposed wells’ consistent with the Groundwater Sustainability Plan and potential impact on neighboring wells; and

WHEREAS, Yolo County is the permitting authority and the Environmental Health Division receives all well permit application requests; and

WHEREAS, consistent with the requirements of the Order, YSGA adopted Resolution No. 2022-01, directing the development of procedures to provide the necessary review and verifications to the County during the well permitting process; and

WHEREAS, the cost of providing this verification and review is approximately \$150 for each replacement well permit and \$350 for each new well permit covered under the Order; and

WHEREAS, the provision of these review and verification services are a recoverable cost of implementing this regulatory program, and the proposed fees do not exceed the cost of providing these services.

NOW, THEREFORE, BE IT RESOLVED:

1. The Board of Directors of YSGA adopts a Cost Recovery Fee schedule of \$150 per replacement well permit verification and review; and \$350 per new well permit verification and review, to be invoiced to the County in connection with each review.
2. YSGA staff shall provide regular reports on the costs of providing these review and verification services, and will provide recommendations to the Board of Directors regarding any proposed modification of the fee schedule necessary to adequately and equitably recover these costs.
3. This fee schedule applies to all projects for which verification and review by YSGA is required under the Order, effective with those projects undergoing the verification process on or after July 1, 2022.
4. The Yolo County Environmental Health Division and Board of Supervisors are authorized to include these charges in their Master Fee Schedule for purposes of accounting for and collecting charges associated with well permit issuances under the Order.
5. YSGA staff are hereby authorized and directed to take such other and further actions as may be necessary or appropriate to implement the intent and purposes of this resolution.

Certification of Secretary

The undersigned hereby certifies that the foregoing resolution was duly adopted by the Board of Directors of YSGA at a regular meeting held on June 20, 2022, by the following vote:

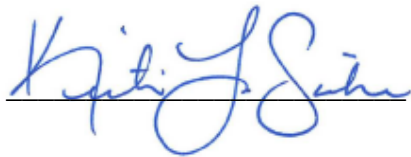
AYES: City of Davis, City of West Sacramento, City of Winters, City of Woodland, Dunnigan

Water District, RD 108, RD 150, RD 307, RD 537, RD 787, RD 999, Yocha Dehe Wintun Nation, Yolo County, Cal Am Water – Dunnigan, Colusa Drain MWC, Environmental Representative – Ann Brice

NOES: Esparto CSD

ABSENT: Madison CSD, RD 730, RD 765, RD 1600, RD 2035, Rumsey Water Users Association, UC Davis, Yolo County Farm Bureau

RECUSAL: YCFC&WCD



Kristin Sicke, Board Secretary

Dated: June 20, 2022

Well Permit Acknowledgement

DRAFT

YSGA -- AGRICULTURAL WELL PERMIT APPLICATION ACKNOWLEDGEMENT

_____ I acknowledge that the Sustainable Groundwater Management Act requires that a groundwater sustainability agency (GSA) manage groundwater in the Yolo Subbasin and the Yolo Subbasin Groundwater Agency (YSGA) is the GSA with groundwater management authority over the land subject to Application # _____.

_____ I acknowledge that the YSGA has the authority to limit extractions within the Yolo Subbasin including extractions from any well permitted pursuant to Application # _____.

_____ I acknowledge that a well permit issued by the County does not guarantee the extraction of any specific amount of water now or in the future.

_____ I acknowledge that the Yolo Subbasin GSP monitors groundwater conditions with designated representative monitoring wells minimum thresholds and measurable objectives and agree that my groundwater use will comply with these requirements.

_____ I acknowledge the YSGA cannot guarantee the maintenance of any defined water level or level of water quality in the Yolo Subbasin.

_____ I acknowledge the YSGA is not responsible for or otherwise liable for any costs, investments or payments related to any groundwater well permitted pursuant to Application # _____, including pumping fees, costs related to well failure, well deepening, increased maintenance, replacement, or operational costs.

_____ I agree to use available surface water prior to utilizing the well permitted pursuant to Application # _____.

_____ I agree to hold the YSGA and the County harmless and indemnify the YSGA and the County for any liability stemming from or related to the County issuing a well permit in response to Application # _____.

By acknowledging and initialing the above provisions, _____ agrees the above ACKNOWLEDGEMENT will be incorporated into the terms and conditions of any well permit issued pursuant to Application # _____.

Signature of Landowner Date Application #

The groundwater monitoring network includes private wells throughout the Yolo Subbasin. Please provide your email address here if you are interested in discussing the potential inclusion of your well in the groundwater monitoring network. We will contact you with more details if your well is located in an area that would be useful to add to the existing network.

Email address: _____

Tier 1 Well Permit Review Form

DRAFT



Tier 1 Well Permit Review Form

Yolo Subbasin Groundwater Agency
34274 State Highway 16, Woodland CA 95695
530-662-3211 wellpermits@yolosga.org

Permit Number: _____

**designates a required field*

Project Description

Location of Proposed Well

Provide the well location*: _____
(decimal degrees to 5 decimal places; e.g., 38.67030, -121.87109)

Purpose of new well or alteration to existing well

Describe the project purpose*:

Will the proposed well increase the amount of groundwater used on the parcel?*

- Yes No Unsure

Explain*:

Planned crop*: _____ Acres planted/to be planted*: _____

Estimated drilling schedule

Start date: _____ Completion Date: _____

Proposed Well Operation

Will conjunctive use of surface water occur on the parcel? *

- No Yes - if so: Source: _____ Amount (AF/year): _____

Extraction Information

Planned GPM*: _____ Planned AF/yr extraction*: _____

Operating schedule

Provide the planned pumping at the well in hours per week for each month in a typical year. If this information is not provided, YSGA will use an assumed pumping schedule to estimate impacts of the well.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hours pumped per week												

Design of Proposed Well or Existing Well to be Altered

The YSGA acknowledges that some of this information may not be known at the time of preparing and submitting this form. If not provided here, this information should be provided upon completion of the well.

Pilot Borehole

Depth (ft): _____ Diameter (in): _____

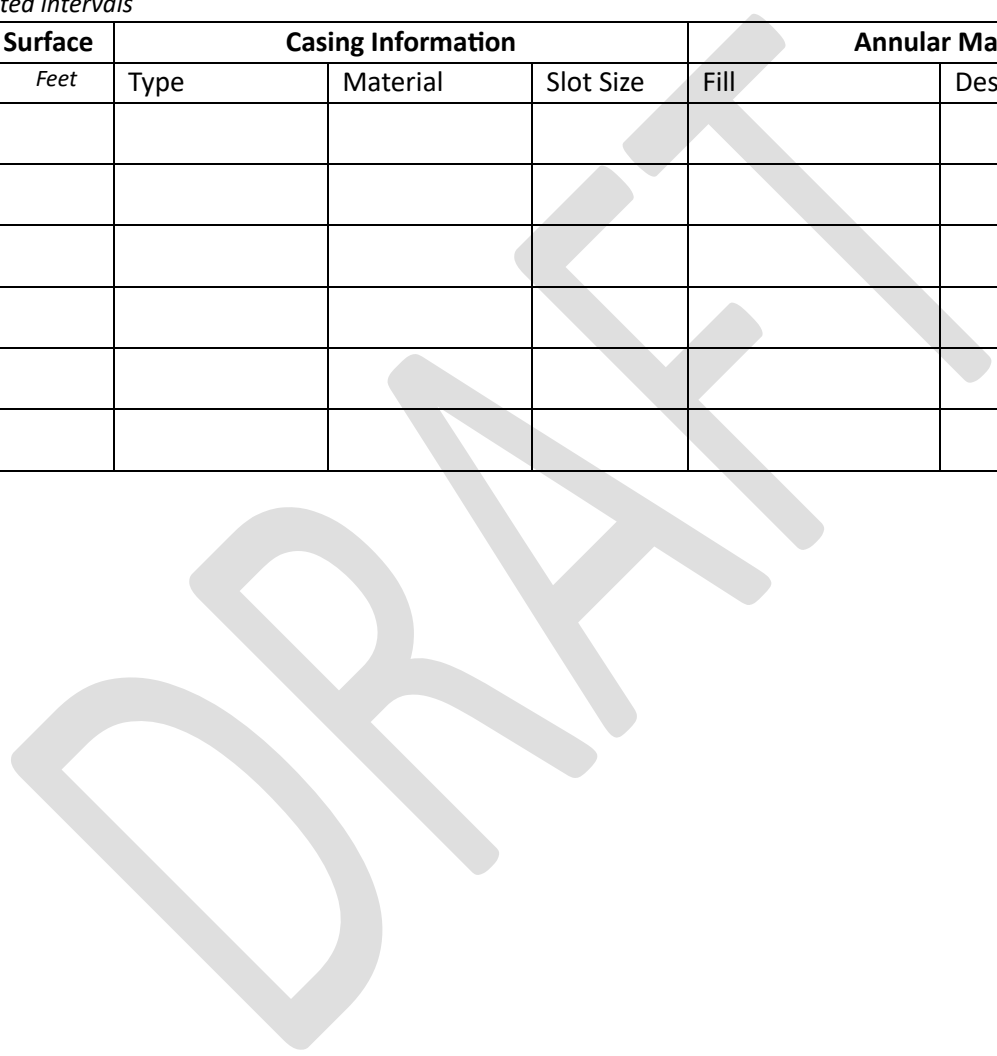
Pump Information

Pump intake depth (ft): _____

Well Design

Include perforated intervals

Depth from Surface			Casing Information			Annular Material	
Feet	To	Feet	Type	Material	Slot Size	Fill	Description



Yolo County Temporary Well Permitting Procedures to
Address Executive Order N-3-23

DRAFT



Technical Memorandum

DATE: December 20, 2022 (updated December 15, 2023) PROJECT: 23-1-120

TO: Yolo County Department of Community Services, Environmental Health Division
Jianmin Huang
April Meneghetti
Elisa Sabatini

FROM: Luhdorff and Scalmanini, Consulting Engineers
Nick Watterson, PG, CHG
Matt Sturdivant
Vicki Kretsinger Grabert

SUBJECT: **YOLO COUNTY TEMPORARY WELL PERMITTING PROCEDURES TO ADDRESS EXECUTIVE ORDER N-3-23**

1. INTRODUCTION

This Technical Memorandum (TM) was prepared for Yolo County Community Services Department, Environmental Health Division by Luhdorff and Scalmanini, Consulting Engineers to support the County's development and implementation of temporary, modified water well permitting procedures to comply with the Governor's Executive Order (EO) N-7-22 issued on March 28, 2022 and replaced by EO N-3-23 on February 13, 2023¹. Included in Section 4 of EO N-3-23 are requirements that prior to issuing a new well permit, all well permit applications (with limited exceptions) must be evaluated and a determination must be made that (A) the proposed well is consistent with any applicable Groundwater Sustainability Plan (GSP) and (B) the well will not likely interfere with the operation and function of existing nearby wells or likely cause land subsidence that impacts nearby infrastructure.

- A. Section 4A of the EO specifies that well permit applications in medium or high priority groundwater basins or subbasins subject to the Sustainable Groundwater Management Act (SGMA) must be reviewed by the local Groundwater Sustainability Agency (GSA) to ensure it is not inconsistent with the GSP for the subbasin or basin where the well is planned.
- B. Section 4B of the EO states that a permit cannot be issued without first determining that the extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

¹ EO N-7-22 was replaced with EO N-3-23 on February 13, 2023, although all key elements of Section 9 of the original EO (N-7-22) were unchanged and are still in effect under Section 4 in the new EO (N-3-23).

Yolo County is the well permitting entity for all areas of the County. This TM presents proposed modifications to the County's well permitting procedure to specifically address the County's responsibilities, as the well permitting entity, under Section 4B in the EO. EO N-3-23 and N-7-22 are included as attachments to this TM. All modified well permitting procedures outlined in this TM are in addition to existing County procedures and regulations relating to well permit application review and issuance.

2. BACKGROUND

Yolo County overlaps three groundwater subbasins of the Sacramento Valley Groundwater Basin with additional areas outside of any groundwater basin. Groundwater basins and subbasins in California have been delineated by the Department of Water Resources (DWR) to coincide with the extent of unconsolidated geologic materials of alluvial origin. The groundwater subbasins overlapping the County include the Yolo Subbasin with small areas within the Solano and Colusa Subbasins. The Yolo and Colusa Subbasins are designated as high priority subbasins by DWR and the Solano Subbasin is a medium priority subbasin. The area of the County within the Yolo, Solano, and Colusa Subbasins are referred to in this Technical Memorandum as the "Valley Floor areas" of the County. The County also includes areas in the western part of the County that are outside of any designated groundwater basin or subbasin. The areas outside of the Valley Floor areas of the County are referred to as "Upland areas" of the County in this document. **Figure 1** presents the groundwater subbasin boundaries in relation to the County and highlights the areas referred to as Valley Floor areas and Upland areas in this document.

The unconsolidated sediments that occur within the Valley Floor areas of the County have potential to store and yield large quantities of groundwater. The geologic materials in the Valley Floor areas consist primarily of unconsolidated alluvial sediments ranging from fine-grained clay to coarser-grained sands and gravels. Because these materials are unconsolidated, they also have potential to compact when the groundwater pore pressure is reduced (such as occurs when groundwater levels decline) within these materials. Most historical land subsidence and potential for future land subsidence in the County are attributable to this mechanism of compaction of unconsolidated sediments within the Valley Floor areas. The consolidated geologic materials comprising the Upland areas of the County have very little or no potential for compaction and any associated land subsidence.

The Yolo, Solano, and Colusa Subbasins have developed GSPs that address undesirable results related to sustainability indicators consisting of groundwater levels, groundwater storage, groundwater quality, land subsidence, and interconnected surface water. The GSAs within each of the three subbasins in the County are responsible for implementing the GSP covering their jurisdiction and managing groundwater in a manner that is consistent with the GSP. The GSPs have defined sustainable management criteria (SMC) including minimum thresholds, measurable objectives, and undesirable results for all applicable sustainability indicators. The GSAs in the three subbasins have the authority and responsibility to ensure groundwater management is sustainable in the subbasins and undesirable results are avoided including through implementation of management actions and projects, as needed. Management actions available for GSAs to implement could include demand management efforts such as limitations on groundwater pumping or incentives for reducing pumping and can also include augmentation of water supplies through enhanced recharge or other projects.

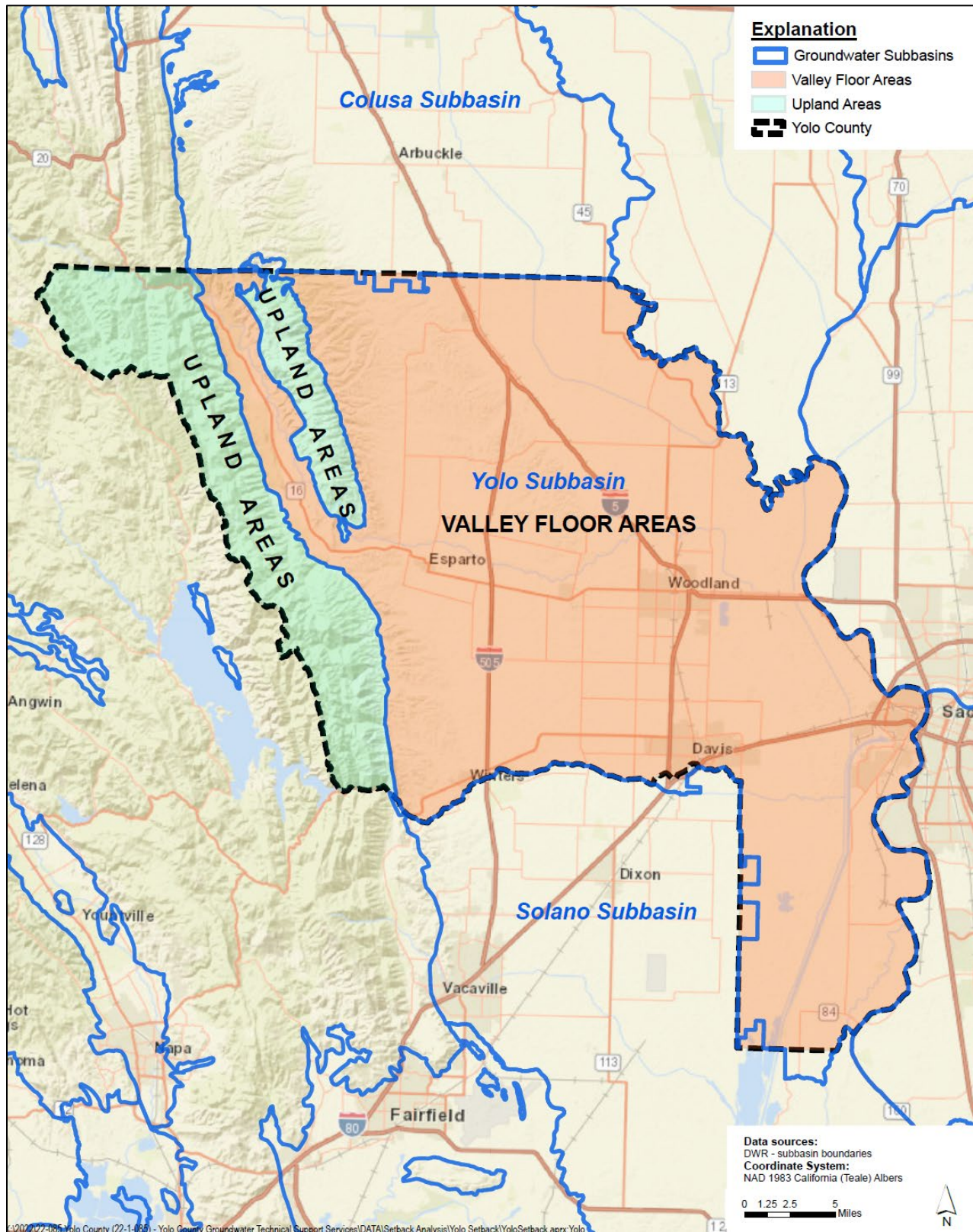


Figure 1. Map of Groundwater Subbasins Overlapping Yolo County

3. OVERVIEW OF PROCESS FOR REVIEWING WELL PERMIT APPLICATIONS FOR COMPLIANCE WITH EO N-3-23

Well permit applications will first be evaluated to determine if the proposed well is exempt from the additional EO well permitting process. Wells producing less than two acre-feet per year for individual domestic water use and public supply system wells are exempt from the EO. Monitoring wells or other wells not intended for extraction of groundwater, are also exempt from the EO well permitting procedures. As indicated in the EO, well permit applications for the construction or alteration of other types of wells with the purpose of extracting groundwater (production wells) for non-domestic or non-public supply uses, including but not limited to agricultural (irrigation) and industrial uses, are subject to the EO. Permit applications for conversion of a well from any of the exempt uses or well types to a non-exempt use or well type are also subject to the EO. In accordance with Section 4A of the EO, all new well permit applications for non-exempt wells located within the Valley Floor areas of the County will be provided to the respective GSA to complete a determination regarding whether the proposed well permit is consistent with the GSP. The County will review all non-exempt well permit applications for compliance with Section 4B. In addition, all well permit renewals for non-exempt wells are subject to compliance with the County's well permitting procedures established to address the EO, as described in this TM. The County will not issue well permits until applications have met the requirements of Section 4B of the EO, as described below, and until the County has received written verification from the responsible GSA that the well is not inconsistent with the applicable GSP.

4. WELLS EXEMPT FROM COMPLIANCE WITH EO SECTION 4B

The following well applications are exempt from compliance with the EO well permitting process because they are explicitly exempted in the EO or because they are unlikely to interfere with the operation of nearby wells or cause land subsidence.

- Wells producing less than two acre-feet per year for individual domestic water use on the same parcel as the well; domestic water uses include those non-commercial uses associated with a residential dwelling and related yard, garden and barnyard uses, and small personal crops within the same parcel as the residential dwelling.
- Public supply system wells as defined in Health & Safety Code § 116275.
- Monitoring wells or other wells not intended for extraction of groundwater.
- Replacement production wells meeting the requirements for exemption herein.
- Minor alterations of production wells meeting the requirements for exemption herein.

With respect to permit applications for replacement production wells and minor alterations of production wells, additional Environmental Health well permit application requirements and review procedures for determining compliance with EO Section 4B will not be applied to such permits. The continued production of groundwater at a proposed well site in a manner consistent with previous operation of the well being replaced or modified is unlikely to interfere with the operation and function of nearby wells or cause land subsidence that impacts nearby infrastructure. The future operation of all wells within the Valley Floor areas of the County are subject to potential management actions implemented by GSAs to manage groundwater and ensure groundwater sustainability is maintained and undesirable results, including those related to land subsidence, are avoided.

Replacement Production Wells

A replacement production well is defined as a production well that is intended to replace an existing active production well. A replacement well must have similar construction characteristics (e.g., same or smaller casing size, similar proposed depth, similar screen interval) and groundwater production as the well it is replacing. A replacement well must be located within 200 feet of, and on the same parcel as, the well it is replacing and must not be located closer to existing nearby wells than the well it is replacing. To be considered a replacement well under the County's permitting process, the well being replaced must have been in active use for at least one year during the most recent five years and the applicant must certify and adequately demonstrate the recent active use of the well through supporting documentation (e.g., electrical or power records, pumping/flowmeter records, maintenance records). Production wells that will increase total groundwater pumping relative to the well they are replacing are not exempt from the additional compliance requirements of EO Section 4B. If records of the construction details for well depth and screen interval are not available for a well being replaced, the applicant should make reasonable efforts to obtain the information through downhole investigative methods including tagging the total completed depth of the well or other methods. Replacement production wells within the Yolo Subbasin must also be reviewed by the Yolo Subbasin Groundwater Agency (YSGA) pursuant to paragraph 5 of the YSGA's Resolution No. 22-01. Replacement wells within the Colusa and Solano Subbasins are subject to review in accordance with permitting procedures adopted by the respective GSAs for these areas. Formal abandonment and destruction of wells being replaced must be conducted within six (6) months of the completion date (date of final inspection) of the replacement well and shall be performed in accordance with County requirements for well destructions.

Applicants seeking a permit for a replacement well must complete Exhibit C.

Minor Production Well Alterations

Minor alterations to production wells are modifications to the well structure that are not intended to increase the discharge rate for the well or significantly alter the depth interval from which groundwater is extracted with the well. Minor alterations may include activities such as installing casing liners, patches, or other work although such work must not modify the well in a manner that increases the total groundwater pumping. Applications for permits for minor well alterations will be subject to review by the YSGA pursuant to paragraph 5 of the YSGA's Resolution No. 22-01 for wells within the Yolo Subbasin and in accordance with permitting procedures adopted by the respective GSAs in the Colusa and Solano Subbasins.

5. WELLS SUBJECT TO COMPLIANCE WITH EO SECTION 4A AND 4B (NON-EXEMPT WELLS)

Procedure for GSA Verification Required by EO Section 4A

Section 4A of the EO prohibits the County from issuing a permit for non-exempt wells unless the respective GSA provides written verification that the extraction of groundwater from the proposed non-exempt well would not: (i) be inconsistent with an adopted sustainable management program, and (ii) decrease the likelihood of achieving a GSA sustainability goal. Accordingly, the County submits well permit applications to the respective GSA to review. Applicants must comply with all applicable verification requirements of the GSA. Most of the County is within the Yolo Subbasin and well permits in the Yolo Subbasin will be referred to the YSGA for evaluation. If the applicable GSA includes best

management or other proposed conditions for the well as part of its written verification, the County will include those requirements as conditions to the well permit to ensure compliance with the EO.

Procedure to Address EO Section 4B (1): Determining Well is Not Likely to Interfere with Existing Wells

Well permit applications subject to the EO, including for new production wells (not replacement production wells, as defined on the prior page) and production wells or well alterations considered beyond the definition herein of the replacement production wells or minor well alterations, must be determined unlikely to interfere with the function and operation of existing nearby wells to comply with EO Section 4B(1). There are two ways by which an applicant can demonstrate that a proposed new well or well alteration work is unlikely to interfere with the function and operation of nearby wells: 1) meeting minimum separation distance from existing nearby wells, or 2) submitting a report by a professional geologist or hydrogeologist (licensed in the State of California) including associated information concluding that the proposed well or well alteration work will not interfere with the function and operation of nearby wells. Existing wells owned by the applicant located on the same parcel as the proposed well or on a parcel adjacent to the parcel with the proposed well are exempt from the minimum well separation distance requirement.

The County requires minimum well separation distances for ensuring proposed new wells or well alterations are unlikely to interfere with the function and operation of nearby wells. **Table 1** presents these minimum required distances from nearby active wells according to the proposed well pumping capacity and proposed well location (i.e., Valley Floor areas versus Upland areas).

Table 1. Minimum Well Separation Distances

Pumping Capacity (gallons per minute)	Minimum Well Separation Distance (feet)
<i>Wells Within the Valley Floor Areas of the County</i>	
<500	250
500-999	500
1000-1499	1000
1500-1999	2000
≥2000	Report Required
<i>Wells in the Upland Areas of the County</i>	
<15	500
15-99	1000
≥100	Report Required

For proposed wells within the Valley Floor areas with design pumping capacities greater than or equal to 2,000 gallons per minute, a report completed by a licensed professional geologist or hydrogeologist is required to conclude the well is unlikely to interfere with the function and operation of nearby wells. For proposed wells in the Upland areas with design pumping capacities greater than or equal to 100 gallons per minute a report by licensed professional geologist or hydrogeologist will be required. If the location of the proposed new well or well alteration does not meet the minimum separation distances from existing wells presented in **Table 1**, the applicant may submit a report prepared by a licensed professional geologist or hydrogeologist presenting site-specific information (e.g., aquifer properties) and analyses concluding that the well is unlikely to interfere with the function and operation of nearby wells.

For all non-exempt well permit applications, the applicant must submit a map and list of known active wells within a radial distance equal to the minimum separation distance required for the well (as presented in **Table 1**) plus 500 feet. The map should include the proposed well site with known nearby active domestic, public supply, agricultural/irrigation, industrial, or other groundwater production wells. Active wells include wells recently operated (within last five years) as production wells and equipped with an operational pumping and discharge assembly, or wells in the process of being prepared to be operated. The table listing known nearby wells must include the well type, latitude/longitude coordinates, distance from the proposed well site (in feet), and Assessor's Parcel Number (APN). Any wells owned by the applicant should be indicated on the map and list of nearby wells. The County will review the information on nearby wells provided by the applicant in conjunction with additional review of available well location information from Environmental Health's database to confirm the minimum well separation is satisfied. However, it is the responsibility of the applicant to investigate and confirm the accuracy and completeness of the list of nearby wells.

Applications relying on the submittal of a report by a licensed professional geologist or hydrogeologist to address the minimum separation distance requirement must include a map and list of known wells within the appropriate separation distance demonstrated in the report, plus an additional 500 feet. The report must also include technical analyses and justification for why the proposed separation distance is unlikely to impact the function and operation of nearby wells, in addition to addressing the requirements of EO Section 4B (i.e., interference with existing wells and subsidence). Such a report submitted to comply with Section 4B of the EO may be satisfied through submittal of a report for compliance with the GSA permit review/verification process (if required), so long as the technical analysis and justification provided in the report also comply with the County's requirements for addressing EO Section 4B, as described in this TM.

Procedure to Address EO Section 4B (2): Determining Well is Not Likely to Cause Land Subsidence

As described above, the principal cause of land subsidence in the Valley Floor areas of the County is the regional persistent lowering of groundwater levels and associated decreases in pore pressure in the groundwater system. Such conditions are a result of the aggregate groundwater extraction by many wells and are distinct from intermittent water level changes associated with seasonal fluctuations or localized pumping influences from a given individual well. The Upland areas of the County outside of the Sacramento Valley Groundwater Basin have hydrogeologic properties that make the occurrence of land subsidence caused by groundwater pumping very unlikely because of the consolidated nature of many of the geologic materials in these areas and limited thickness of any alluvial sediments in these parts of the County. For new well permit applications in Upland areas of the County where land subsidence

caused by groundwater pumping is very unlikely to occur because of the geologic setting, the well will be determined unlikely to cause land subsidence and no review of the well permit application for potential to cause land subsidence will be required.

The procedure for reviewing the compliance of new well permit applications with EO Section 4B(2) within the Valley Floor areas of the County will rely on the review of the GSA where the well is located. The GSAs are the local entities responsible for implementing the GSPs in the Valley Floor areas of the County. The GSPs include thresholds and metrics for undesirable results, including for land subsidence impacts on infrastructure. The objective of the GSPs is to avoid undesirable results. Therefore, if a well is determined to not be inconsistent with the applicable GSP, based on the review process established by the responsible GSA, the County will consider it to be unlikely to cause land subsidence that will damage nearby infrastructure.

Well Permit Term

All well permits (exempt and non-exempt wells) will continue to be valid for two years from the date of issuance while the EO is in effect due to delayed drilling times associated with the EO-required procedures. If a permittee cannot complete the permitted well within two years, and applies for an extension before the permit expires, the County may extend the permit for two additional years. As noted above, all non-exempt well permit renewals are subject to compliance with the County's EO well permitting procedures described in this TM.

OFFICE USE

Well Permit No: _____

EXHIBIT C

Replacement Well Application:

As the owner of the proposed replacement well for agricultural (irrigation), commercial or industrial uses, I hereby declare and acknowledge for myself, successors and assigns, that:

- Construction characteristics provided regarding the well being replaced, including but not limited to, casing size, well depth and screen interval, are accurate to the best of my knowledge.
- An application for a well abandonment permit for the well being replaced must be submitted and approved before the replacement well permit can be issued.
- The well that is being replaced will be properly abandoned in accordance with County requirements for well abandonment within six (6) months of the date of final inspection of the replacement well.
- The well being replaced has have been in active use for at least one (1) year in the five (5) years preceding the date this replacement well application form is received by the County. Relevant documents such as electrical or power records, pumping/flowmeter records or maintenance records that demonstrate the recent active use of the well being replaced must be submitted to substantiate this statement.

Please list the supporting documentation that demonstrates the recent active use of the well and submit a copy of the documentation with this form.

Please initial the box for each statement above and sign/date the Exhibit C below certifying the accuracy of these statements.

Well owner signature: _____ Date: _____

Printed Name: _____

Form created on 12/12/2023

YSGA Adopted Resolution No. 23-01

DRAFT

**RESOLUTION NO. 23-01
OF THE
BOARD OF DIRECTORS OF THE
YOLO SUBBASIN GROUNDWATER AGENCY**

***IN THE MATTER OF:* A RESOLUTION DIRECTING THE PREPARATION AND
IMPEMENTATION OF UPDATED WELL PERMIT REVIEW
PROCEDURES IN THE YOLO SUBBASIN GROUNDWATER
AGENCY**

WHEREAS, Yolo Sustainable Groundwater Agency is the Groundwater Sustainability Agency (“GSA”) for the Yolo Subbasin of the Sacramento Valley Groundwater Basin, California Department of Water Resources Basin No. 5-21.67 (“Subbasin”) and in that role is responsible for implementing the Sustainable Groundwater Management Act (“SGMA”) within the Subbasin; and

WHEREAS, pursuant to Executive Orders N-10-21 and N-7-22, Governor Gavin Newsom proclaimed a statewide State of Emergency due to drought conditions, and directed GSAs and local well permitting authorities to make certain findings before issuing permits for groundwater wells subject to those Orders; and

WHEREAS, Paragraph 9 of each Order provides that a county, city, or other public agency shall not:

“Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to [SGMA] and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan;” and

WHEREAS, paragraph 9 further provides that a county, city, or other public agency shall not:

“Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.”; and

WHEREAS, these requirements were renewed and clarified by Executive Order N-3-23, and are currently in effect; and

WHEREAS, Yolo County Department of Environmental Health is the local agency responsible for issuing groundwater well permits under the Executive Orders; and

WHEREAS, YSGA is the Groundwater Sustainability Agency responsible for providing the County with the written verifications required by the Orders, specifically, for determining that the proposed groundwater extraction “would not be inconsistent with any sustainable groundwater

management program” in the Subbasin’s GSP and “would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan;” and

WHEREAS, in May 2022 YSGA Board adopted Resolution No. 22-01, setting parameters for the development of Well Permit Procedures that would guide YSGA in making the findings required by Paragraph 9; and

WHEREAS, through the process of developing the Well Permit Procedures, YSGA has now identified certain areas where groundwater monitoring data is limited or incomplete (“data gap” regions), as well as areas where landowners have reported concerns regarding potentially decreasing groundwater levels (“Areas of Special Concern”); and

WHEREAS, staff require additional direction from the YSGA Board to develop a suitable review process to address these areas; and

WHEREAS, on September 12, 2023, the Yolo County Board of Supervisors announced its intention to impose 45-day moratorium on new agricultural well permits at their September 26, 2023 Board of Supervisors meeting to allow YSGA to address the Areas of Special Concern and data gaps in its Well Permit Procedures.

NOW, THEREFORE, BE IT RESOLVED:

1. As the exclusive Groundwater Sustainability Agency for the Yolo Subbasin, YSGA is responsible for and committed to achieving the sustainability goals set out in the GSP. Adoption of standardized Well Permit Procedures will support these sustainability goals, in that they will provide YSGA, permit applicants, and the public a clear framework for evaluating a permit application’s consistency with the GSP.
2. YSGA further recognizes that data gaps and localized groundwater conditions may sometimes require a specialized approach for particular portions of the basin; appropriately addressing these issues can assist the YSGA in its pursuit of basinwide sustainability.
3. YSGA staff are directed to prepare proposed Well Permit Procedures for consideration and review by the YSGA Board no later than November 20, 2023.
4. The Well Permit Procedures to be proposed to the Board will include, at a minimum:
 - An outline of the processes to be followed in YSGA’s issuance of the written verifications required by the Executive Orders.
 - A draft map depicting regions proposed to be identified as “Areas of Special Concern,” as well as a description of the characteristics that would trigger that special designation.
 - A draft map depicting regions of known gaps in groundwater monitoring data (“Data Gap Map”), identifying those portions of the basin where additional groundwater monitoring data is necessary to assist the YSGA in achieving the sustainability goals for the Subbasin.
 - Proposed standardized criteria for the hydrogeologist reports or other additional

supporting information that will be required in the “Areas of Special Concern” and “Data Gap” regions for new agricultural well permits.

- A proposed schedule for public review and comment on these materials.
5. In response to stakeholder requests and separate from the Well Permit Procedures, the *Ad Hoc Drought Contingency Planning Committee* is authorized to work with the Executive Officer and Legal Counsel to investigate the potential demand management strategies, including but not limited to voluntary allocation systems, in the designated “Areas of Special Concern.” The Committee’s findings will be reported back to the YSGA Board before the agency takes any binding action to implement such a system.
 6. No later than January 22, 2024, the Executive Officer, supported by Legal Counsel, will present a proposed structure and schedule for the implementation of Management Area Advisory Committees, which shall be tasked with providing feedback on unique regional groundwater concerns, as well as serving as a public advisory forum to inform the Board’s continued pursuit of the sustainability goals.

Certification of Secretary

The undersigned hereby certifies that the foregoing resolution was duly adopted by the Board of Directors of YSGA at a special meeting held on September 18, 2023, by the following vote:

AYES: City of Davis, City of West Sacramento, City of Winters, City of Woodland, Dunnigan Water District, Madison Community Services District, Reclamation District 108, Reclamation District 307, Reclamation District 537, Reclamation District 730, Reclamation District 765, Reclamation District 787, Reclamation District 999, Reclamation District 1600, Rumsey Water Users Association, Yocha Dehe Wintun Nation, Yolo County, Yolo County Flood Control and Water Conservation District, California American Water – Dunnigan, Yolo County Farm Bureau, and Environmental Representative – Ann Brice

NOES: None

ABSENT: Reclamation District 150, Reclamation District 2035, and Colusa Drain Mutual Water Company



Kristin Sicke, Board Secretary

Dated: September 18, 2023

Technical Data and Methods for Delineating Focus Areas

DRAFT

TECHNICAL DATA AND METHODS FOR DELINEATING FOCUS AREAS

This section provides an overview of the technical data and methods used to delineate Focus Areas in the Yolo Subbasin as shown on Figure 1 and how the Focus Areas are proposed to be applied in the County's well permitting process to comply with Paragraph 9 of the EO and Paragraph 4 of EO-2.

Technical Data

Technical data and information reviewed by West Yost and YSGA staff included groundwater levels, geologic and geomorphologic maps, reported citizen concerns on proximity and cumulative impact of agricultural wells to domestic wells and declining groundwater levels, domestic well density and small water systems, and reported dry wells. These data were reviewed in detail by West Yost and YSGA staff. Each data set is described in the following sections.

Appendix I

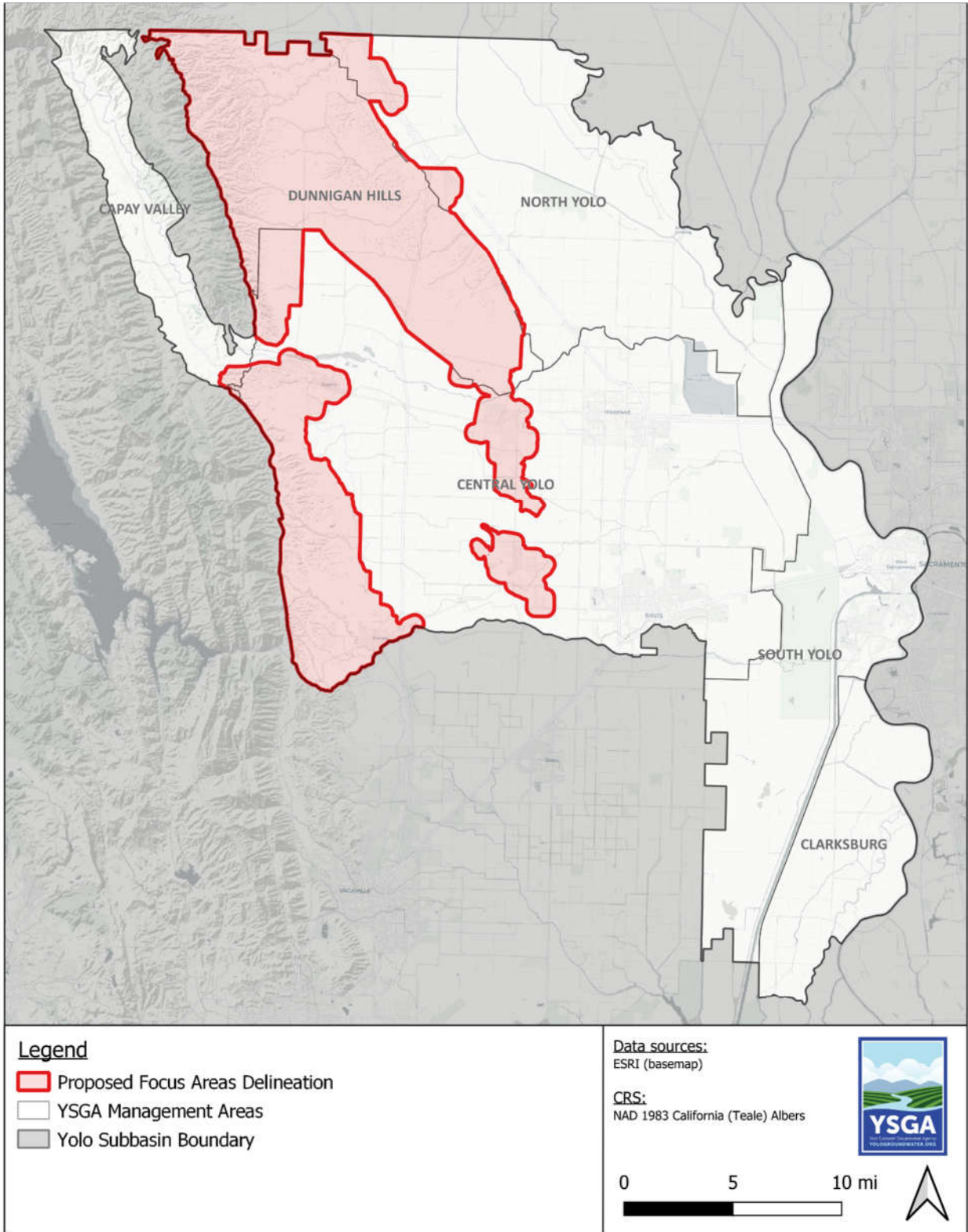


Figure 1. Proposed Delineated Focus Areas within the Yolo Subbasin.

Appendix I

Groundwater Levels and Monitoring Data

Groundwater levels from YSGA representative monitoring wells (RMWs) and other monitoring wells located within the Yolo Subbasin were reviewed to identify areas where significant declines in groundwater levels have occurred between 2013 to 2023, and where there was an exceedance of the MTs at RMWs in Fall 2023. Figure 2 shows the 10-year water level trends (Fall 2013-Fall 2023) in the available groundwater monitoring network. Figure 3 shows a map of the RMWs and corresponding MT status as of October 2023. There are some areas of the Yolo Subbasin with inadequate monitoring well density for the analysis of groundwater levels. Figure 4 illustrates the YSGA monitoring wells with at least 10 years of historic groundwater level data and highlights the areas of the Yolo Subbasin with inadequate data.

Appendix I

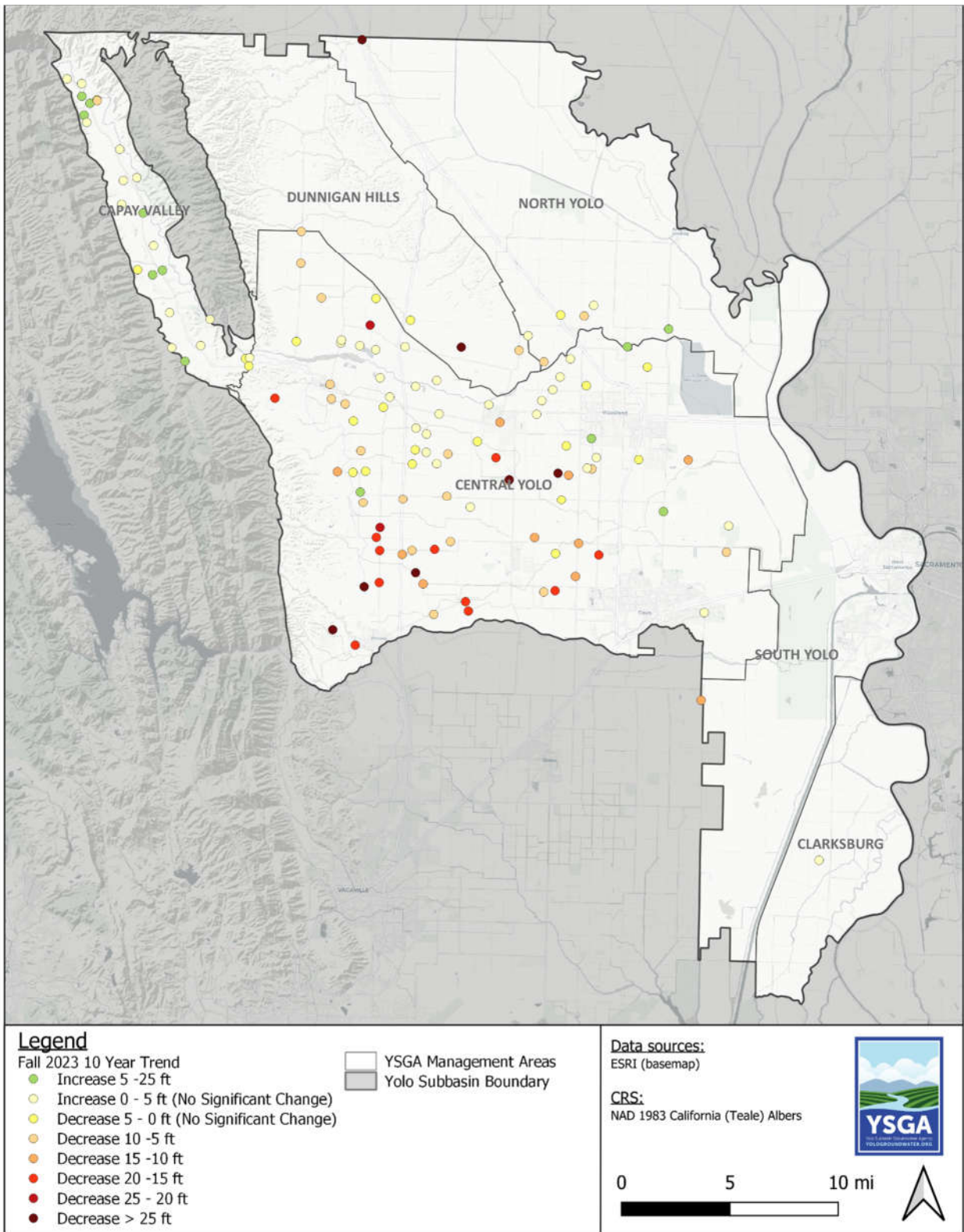


Figure 2. 10 -Year Change in Groundwater Levels from Fall 2013 to Fall 2023.

Appendix I

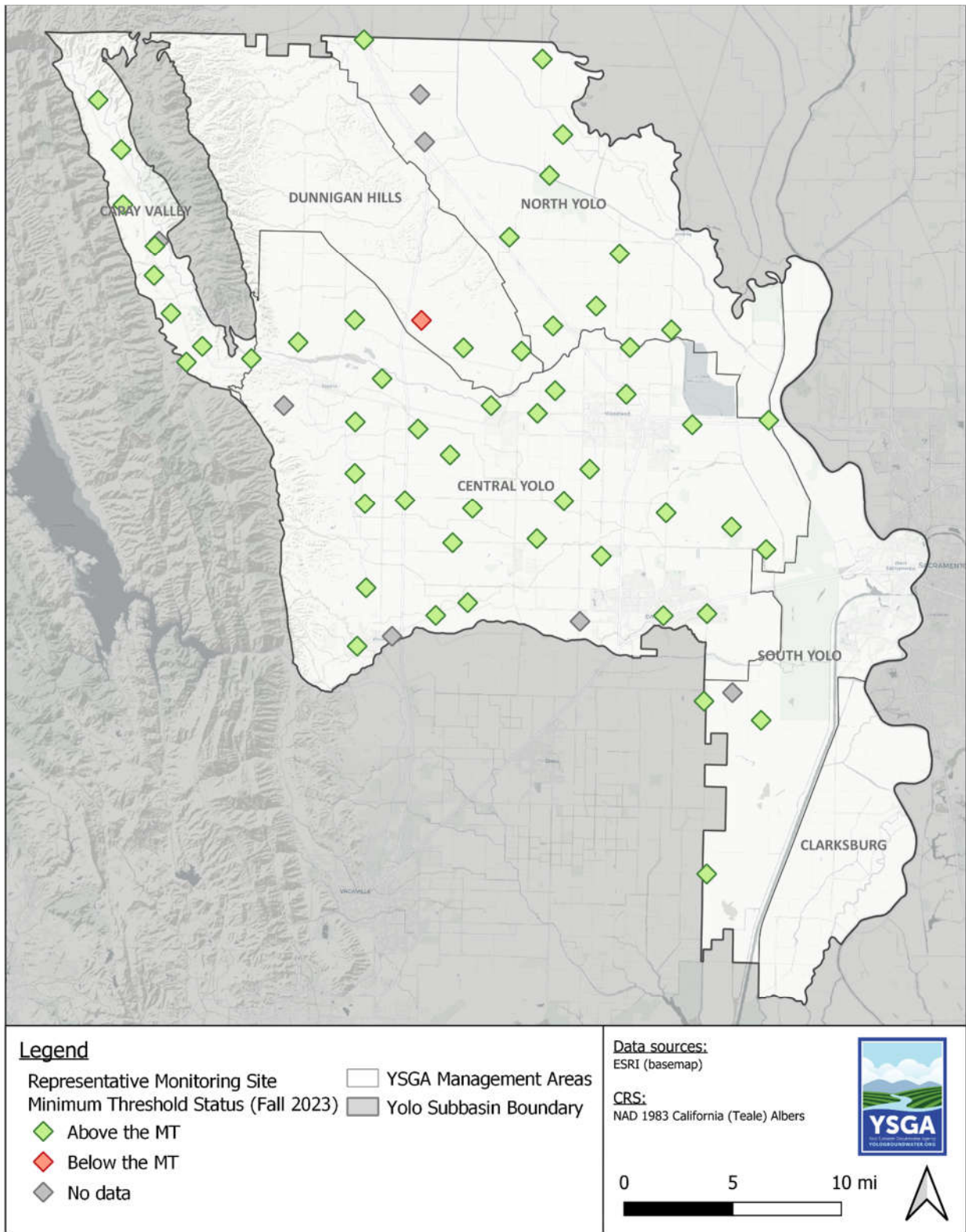


Figure 3. Representative Monitoring Wells and Minimum Threshold Status as of Fall 2023.

Appendix I

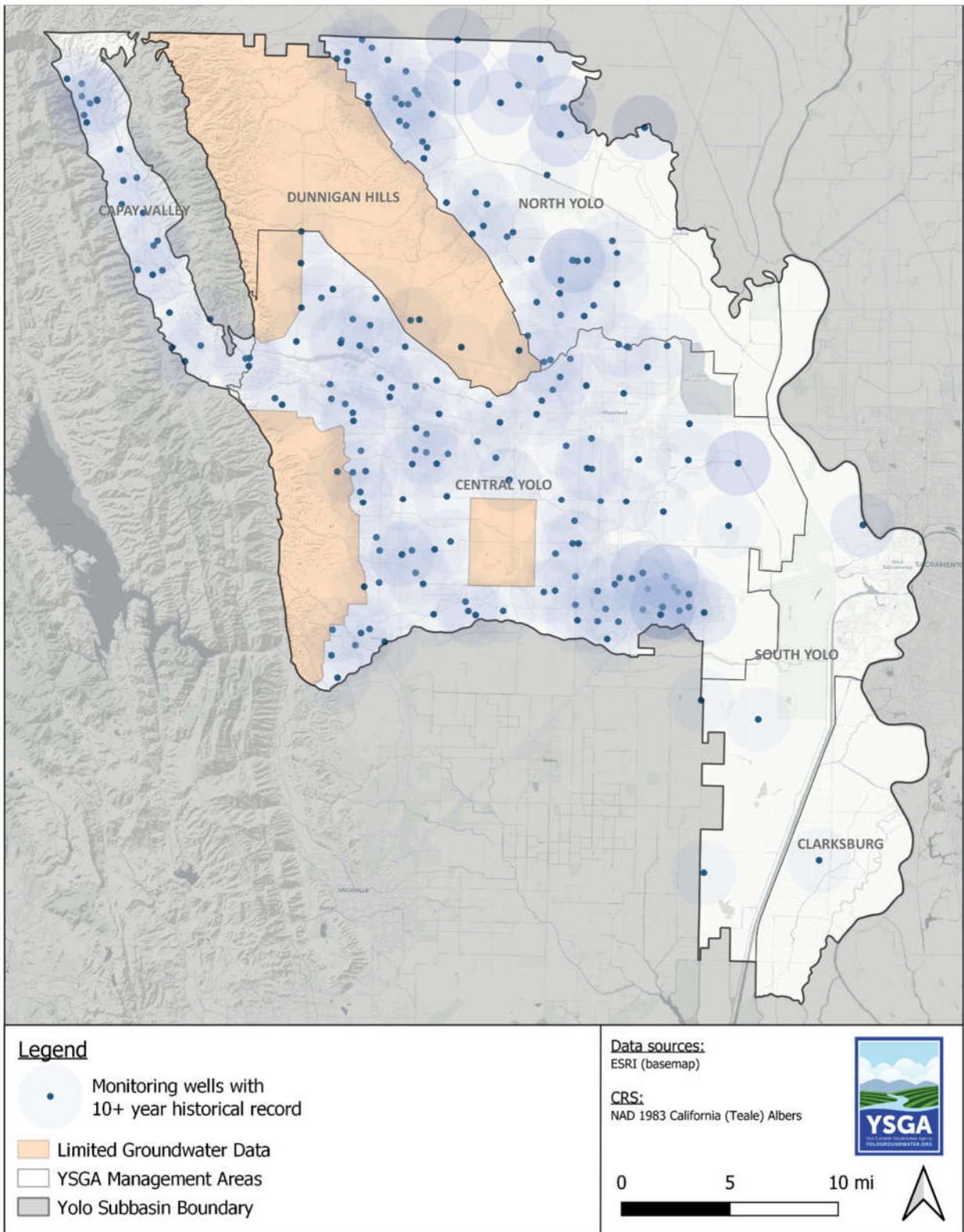


Figure 4. Areas within the Yolo Subbasin with Limited Groundwater Data.

Appendix I

Geologic and Geomorphology Maps

The Yolo Subbasin contains complex geologic and geomorphic features that affect aquifer permeability and recharge potential. Topographic, geologic, and geomorphic data were reviewed to assess the relative permeability and recharge potential throughout the Yolo Subbasin. Figures 5 and 6 show the topographic, geologic, and geomorphic features within the Subbasin. Areas where the Tehama Formation is present are typically associated with topographic highs and have low permeability and recharge potential relative to areas where younger alluvium deposits are present.

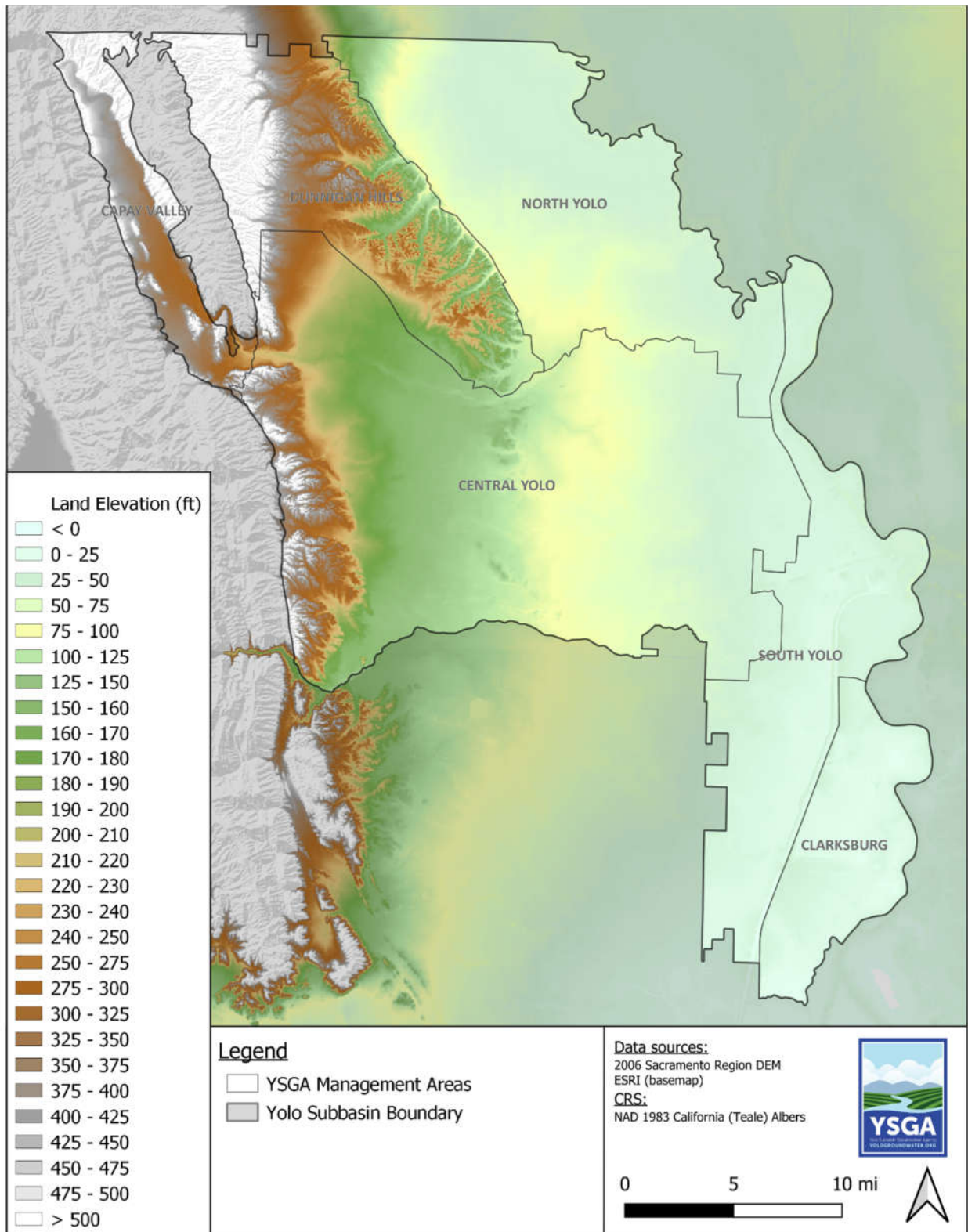


Figure 5. Topography of the Yolo Subbasin.

Appendix I

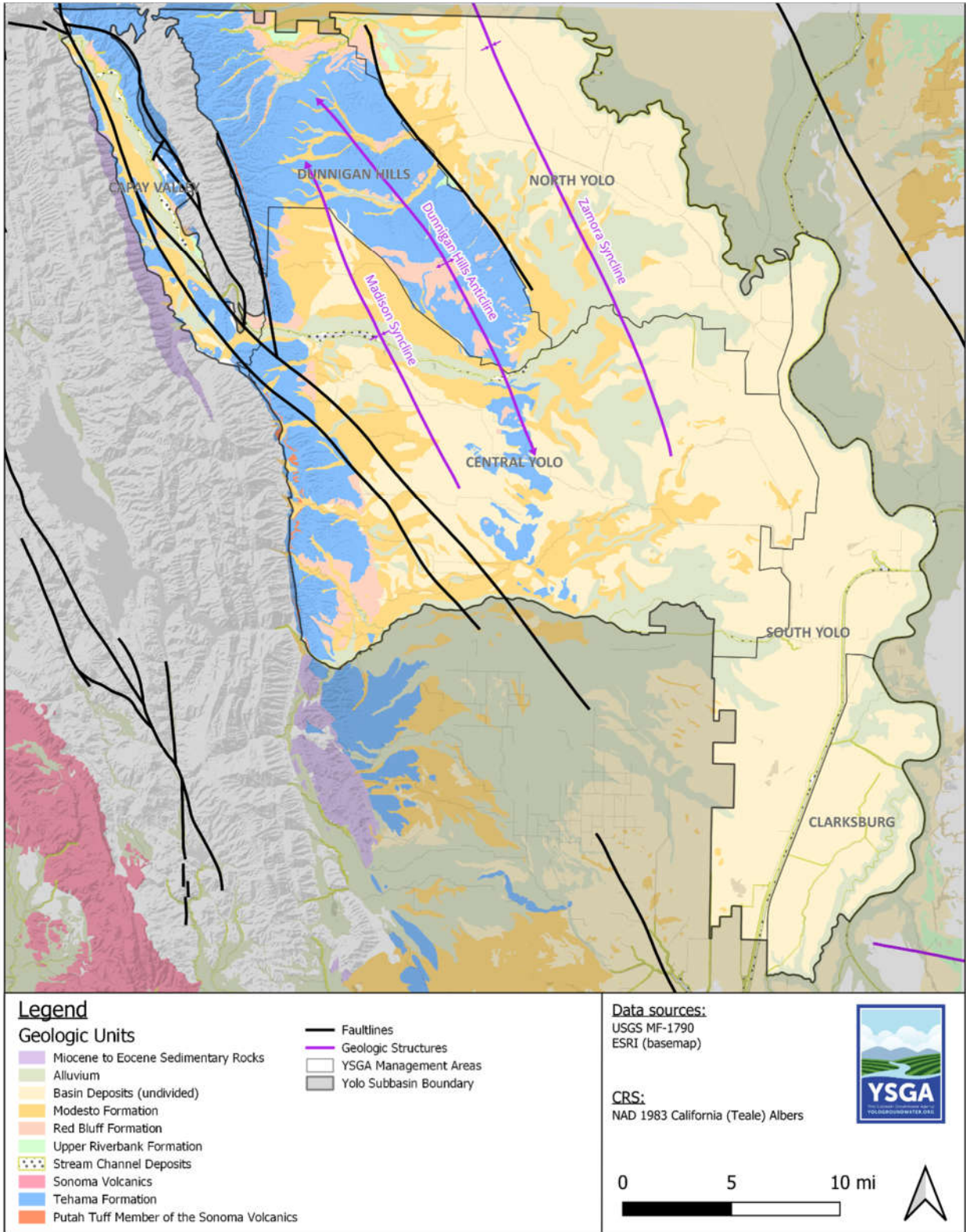


Figure 6. Geology of the Yolo Subbasin.

Appendix I

Reported Concerns on Declining Groundwater Levels

Areas where citizens have expressed concern to the YSGA & County include the following locations, shown in Figure 7 below:

1. Hungry Hollow area (County Roads 84A and 84B)
2. West of Winters (Golden Bear Estates)
3. Dunnigan Hills area (County Roads 20 and 92C)
4. Monument Hills/Hillcrest/Wild Wings CSA
5. West Plainfield/Corcoran Hill Lane
6. West of Davis (Cassidy Lane)
7. North of Zamora (County Road 91B)

Appendix I

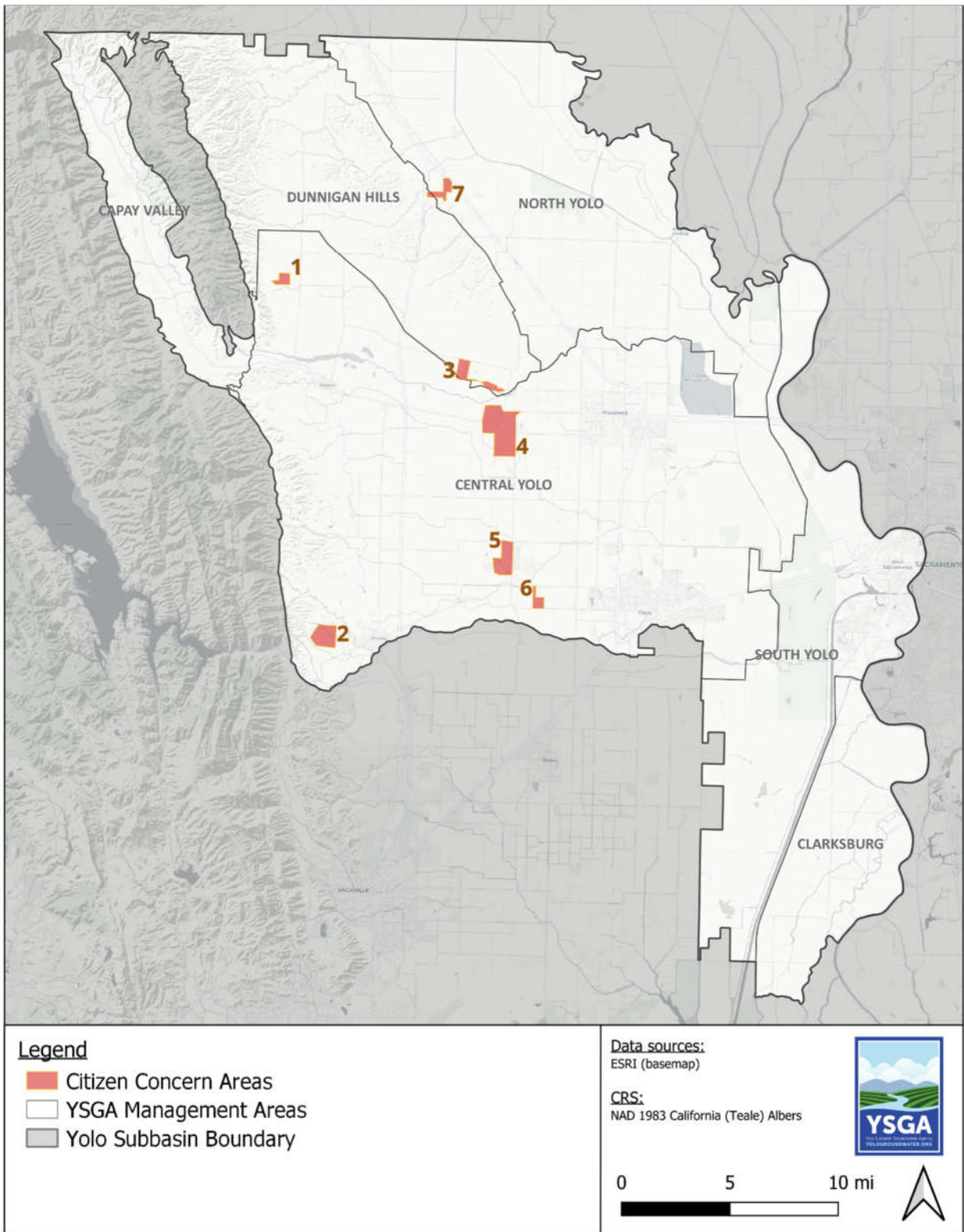


Figure 7. Citizen Concern Areas within the Yolo Subbasin.

Appendix I

Domestic Well Density and Small Water Systems

DWR's OSWCR¹ database was utilized to determine the areas within the Yolo Subbasin that contain a high density of domestic wells. Notable areas with high domestic well density include Dunnigan, Capay, and rural neighborhoods outside of Woodland, Winters, and Davis. Additionally, small public water systems were considered; notable groundwater dependent- public water systems include the City of Winters, El Rio Villa, Esparto, Wild Wings Community Service Area, and Rolling Acres Mutual Water Company. Figure 8 shows domestic well density and location of small water systems within the Yolo Subbasin.

¹ DWR Online System of Well Completion Reports (OSWCR) at <https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Completion-Reports>.

Appendix I

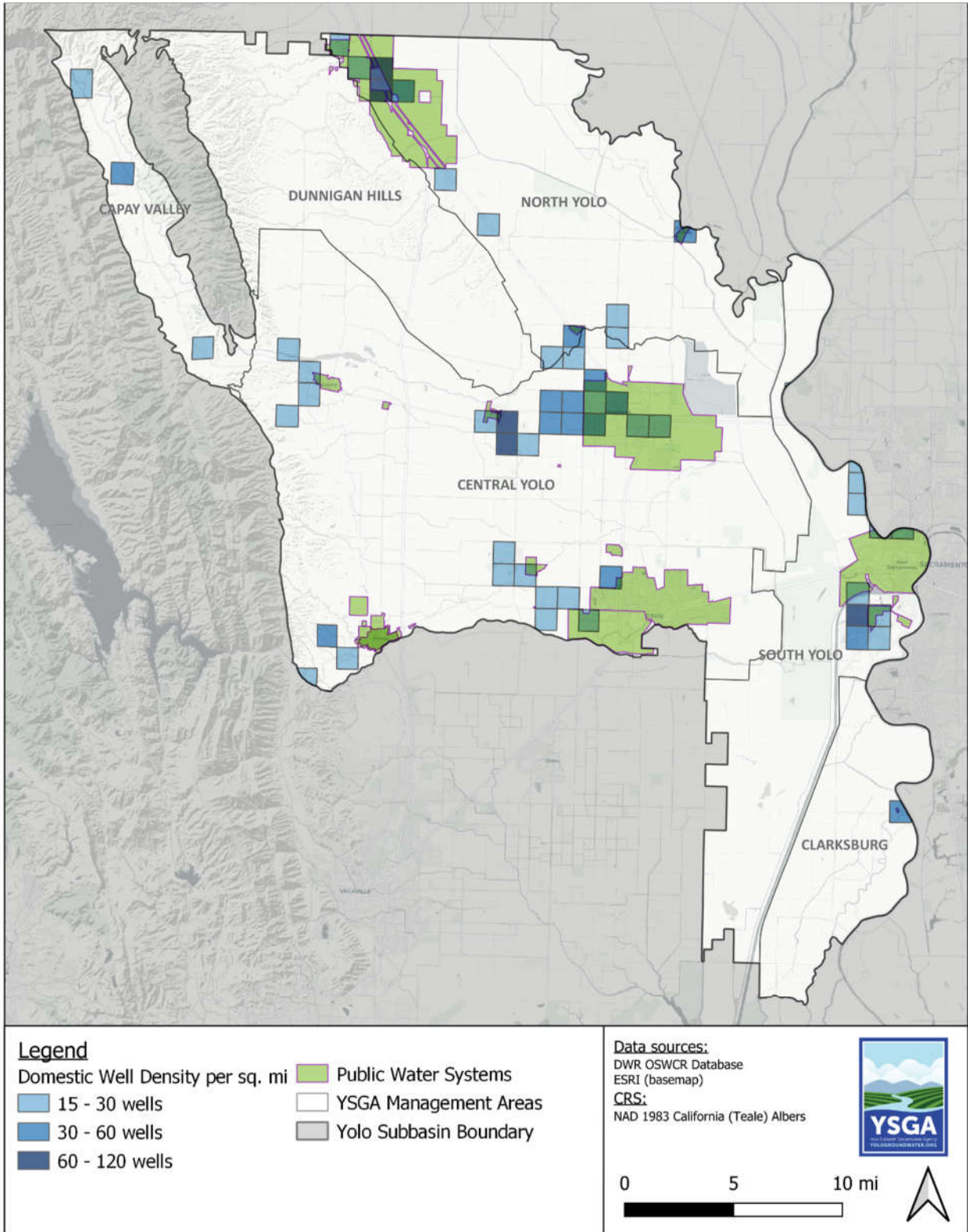


Figure 8. Domestic Well Density and Locations of Small Water Systems within the Yolo Subbasin.

Appendix I

Reported Dry Wells

During the 2021-2022 drought, the Yolo County Office of Emergency services received 54 dry domestic well reports. Dry domestic wells indicate that groundwater levels reached an all-time low over the life of the well, and therefore indicate an area of potential concern. The dry well reports shown in Figure 9 exclude reports that exhibited any of the following conditions:

- Water access was restored by lowering pump or other repair
- Wells with unknown depth
- Wells that have total depths shallower than historic low groundwater level (Fall 1977, where data is available)
- Water levels recovered sufficiently to restore well function

Appendix I

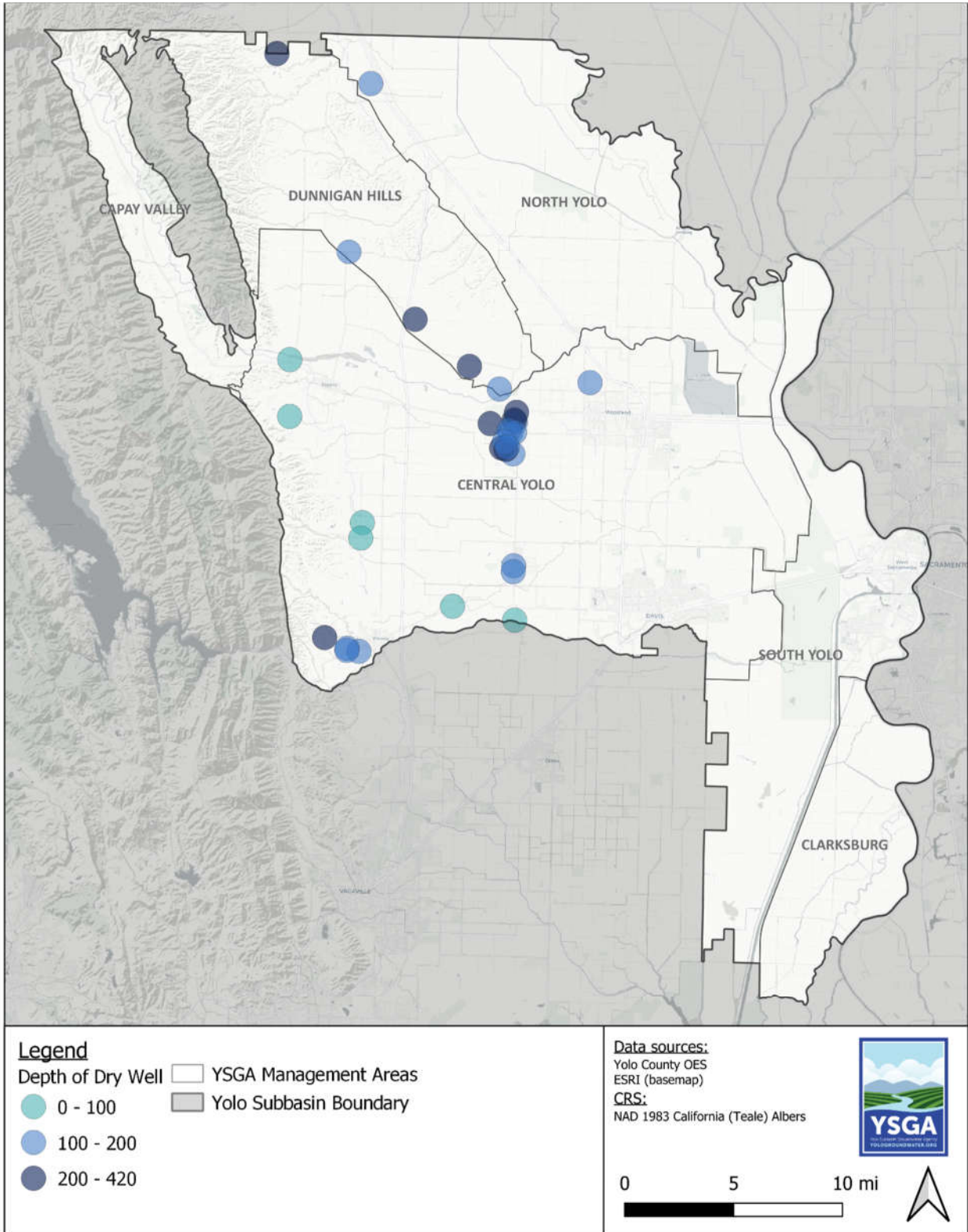


Figure 9. Location and Depth of Dry Wells within the Yolo Subbasin.

Appendix I

Methods for Delineating Focus Areas

Upon review of the data, West Yost worked closely with YSGA staff to delineate proposed Focus Areas. Preliminary Focus Area boundaries were identified based on the following primary factors:

- Greater than 25-foot decline in groundwater levels from 2013 to 2023 (Figure 2), or
- An exceedance of groundwater level minimum thresholds (MTs) in a representative monitoring well (RMW) that occurred in Fall 2023 (Figure 3), or
- Limited groundwater monitoring data (Figure 4), and/or
- Limited recharge potential and low permeability (Figure 6)

If the preliminary Focus Area boundaries were adjacent to or overlapping any of the below secondary factors, boundaries were expanded to include them. To account for uncertainty in coordinate accuracy of input datasets, the County's setback requirements for wells, and proximity to rural neighborhoods with high domestic well densities, a 2,000-foot buffer was added to the delineation in these areas:

- Reported concerns about declining groundwater levels in domestic wells (Figure 7), or
- Areas of dense domestic wells or groundwater dependent- small water systems (Figure 8), or
- Reported dry wells that have not experienced recovery in groundwater levels (Figure 9)

Considering these factors, the Focus Areas were delineated and shown on Figure 1.

Tier 2 Well Permit Review Form

DRAFT

Permit Application Number*: _____

YSGA Tier 2 Well Permit Review Form

Property Owner Information

Site Address: _____

Property Owner Name: _____

Mailing Address (if different than site address):

Phone Number: _____

Email: _____

Location of Proposed Well or Alteration to Existing Well

Latitude / Longitude: _____

PLSS Range and Quarter Section: _____

APN: _____

Description of Proposed Well or Alteration to Existing Well Project

Well permit application type (Select one): Proposed new well / Alteration to existing well

Purpose of well: _____

Permit Application Number*: _____

Planned pumping capacity and operating schedule: _____

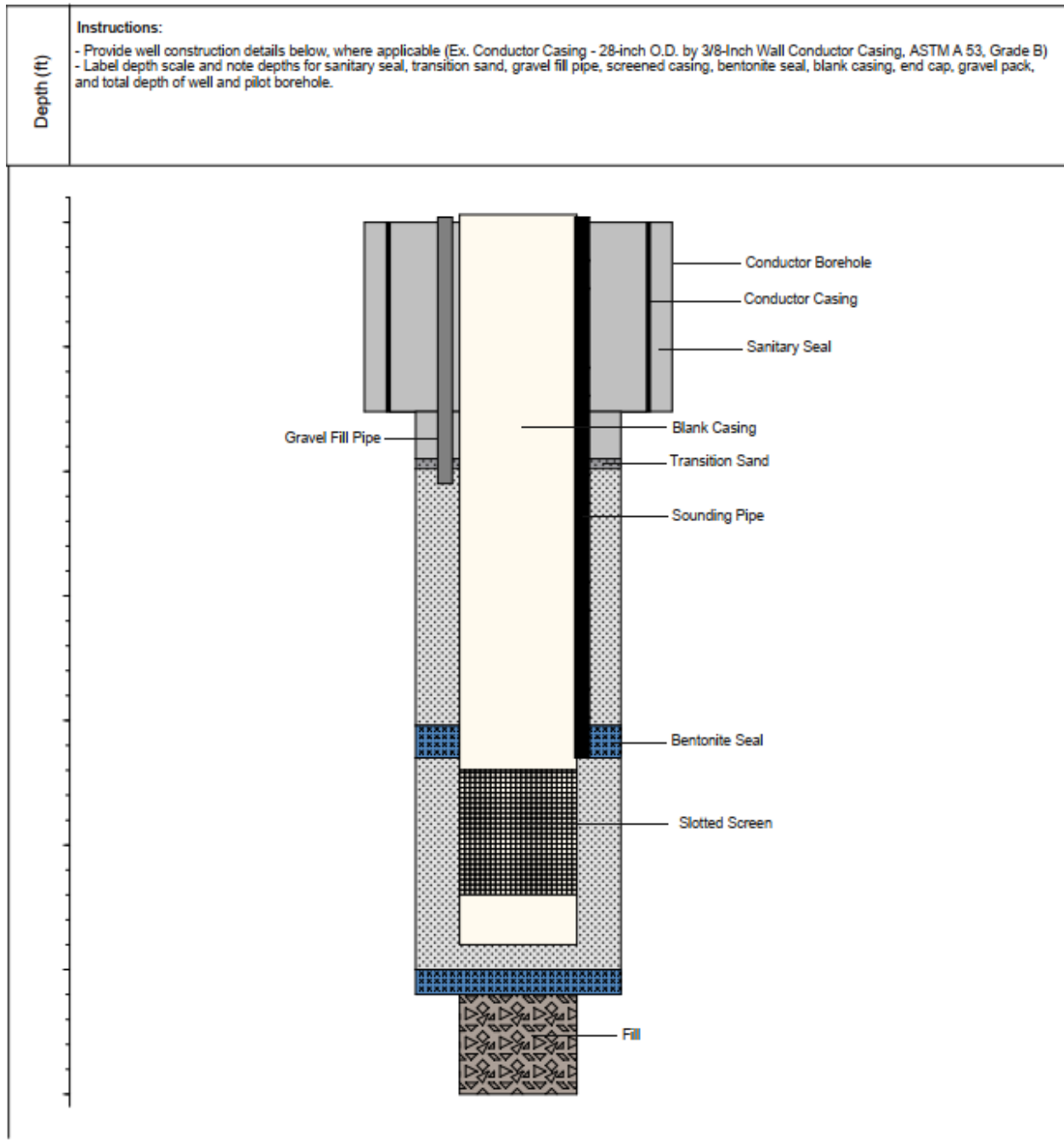
Project elements offsetting pumping demands: _____

Permitting and construction schedule: _____

Permit Application Number*: _____

Design of Proposed Well or Existing Well to be Altered

Well Construction Diagram Template



Drilling Contractor:
Date Started:
Date Ended:
Location (X & Y Coordinates):

Address:
Owner:

Permit Application Number*: _____

Hydrogeologic Evaluation

List the geologic formations anticipated to be encountered during drilling _____

Description of the hydrogeologic units, primary aquifers, and aquitards: _____

Summary of the groundwater conditions: _____

Permit Application Number*: _____

Impact Assessment

Summary descriptions for each of the following that apply

Methods used to analyze the wells impact: _____

Impacts on Groundwater Levels in Neighboring Wells and Groundwater in storage: _____

Impacts on Nearby Interconnected Surface Waters: _____

Impacts on Aquifer Water Quality: _____

Impacts on Land Subsidence: _____

Permit Application Number*: _____

Hydrogeologist Report Findings

The hydrogeologist report completed by **FIRST AND LAST NAME OF PG or CHG with COMPANY NAME** for well permit application No. **XXXX** submitted by **WELL OWNER NAME** located at **ADDRESS** was evaluated for compliance with the EO N-3-23 for both Section 4A and 4B based on the YSGA's Hydrogeologist Report Guidelines and associated EO Well Permitting policies. It's my professional judgement based on the analysis completed for this well permit application that the **WELL OR WELL ALTERATION** is:

- Likely to be compliant with Section 4A
- Likely to be compliant with Section 4B
- Likely to be not compliant as originally proposed with either Section 4A or 4B of the EO and a consultation with YSGA and County staff is requested to assess possible changes to well permit application.

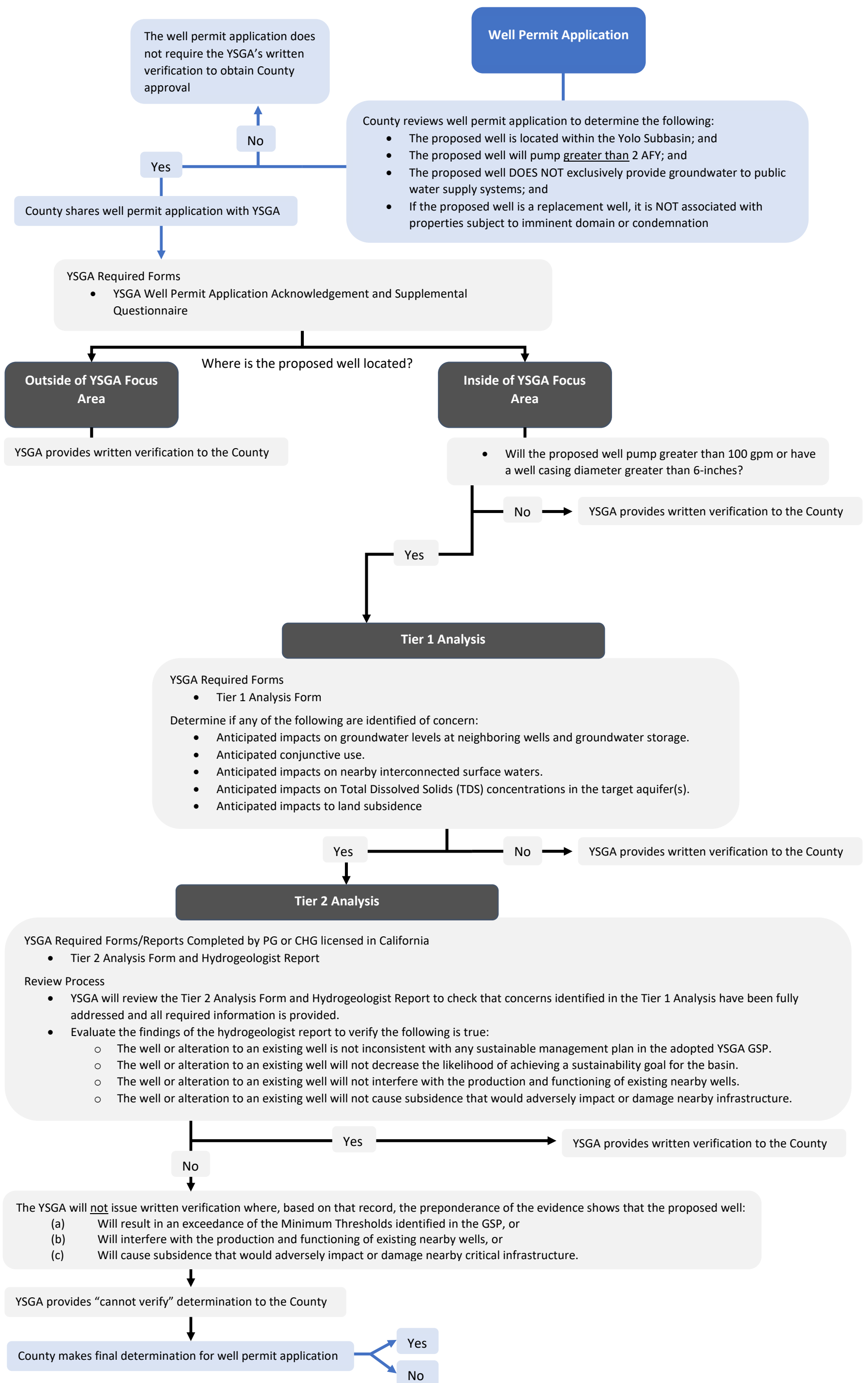
PG/CHG Stamp and signature

Attachment A – Hydrogeologist Report for Well Permit Application No. **XXXX**

YSGA Tiered Well Permit Review Process Flow Chart

DRAFT

YSGA Tiered Well Permit Review Process Flow Chart
DRAFT



Yolo Subbasin Groundwater Agency Well Permit Review Procedures

Adopted _____

Executive Orders N-7-22 and N-3-23 (EOs) require that, before a well permitting authority may issue a permit for certain new or modified wells, it must receive a written verification from the Groundwater Sustainability Agency (GSA) that:

- The groundwater extraction from the proposed well “would not be inconsistent with any sustainable groundwater management program established in the Groundwater Sustainability Plan” for that area; and
- The groundwater extraction by the proposed well “would not decrease the likelihood of achieving a sustainability goal for the basin”.

YSGA is not a well-permitting authority but is the GSA for its boundaries. Consistent with Resolution 23-01, this Policy establishes YSGA’s standards and processes for the issuance of verifications under the Executive Orders.

A. Application of Procedures

These procedures govern YSGA’s issuance of GSA verifications under the section 4(a) of the EOs. Domestic wells producing less than 2 acre-feet annually; wells that will exclusively provide groundwater to public water supply systems; and certain wells replacing facilities that had been acquired by eminent domain are exempt from under the EOs, and therefore not addressed in these Procedures. Verifications are based on the record before YSGA at the time of issuance, under the standards set forth in the EOs. They are not an endorsement of the current or future operating conditions of a given well; nor should the verification process impede or dictate the exercise of water rights within the subbasin. All wells, regardless of their verification status, may be subject to future enforcement or management actions under the GSP or other governing groundwater management regulations.

Exhibit A, *Delineation of Focus Areas Map and Guidelines and Evaluation Criteria for Hydrogeologist Reports to Address Executive Orders N-7-22 Paragraph 9 and N-3-23 Paragraph 4 through a Tiered Review Process*, is incorporated herein by reference and provides a technical overview of the standards governing the review of covered applications pursuant to these Procedures. The review process is intended to be iterative and collaborative; permit applicants are encouraged to contact the YSGA office with questions specific to their application or circumstances.

Finally, while every effort has been made to coordinate and streamline review within overlapping jurisdiction, YSGA is not a permit issuing authority and does not issue findings under Section 4(b). Applicants should refer to their relevant permitting agency for guidance related to those requirements, which are outside the scope of this document.

B. Focus Areas

YSGA has identified certain regions of the basin where, in the judgment of the agency, supplemental information should be submitted to support the EO Verification process. These regions are depicted in the attached Focus Area Map, which was adopted by the YSGA Board on November 18, 2023.

Inclusion in a “Focus Area” is not indicative of a particular region or well operation’s overall sustainability. Rather, the Focus Area Maps identify those sites in the Basin where local hydrogeology, data gaps, monitoring trends, or other considerations make it prudent for the agency to collect additional information from applicants prior to issuing a verification under the EOs.

The Focus Area Map is a standalone document intended to support YSGA in its efforts to sustainably manage the underlying groundwater basin. It may be adjusted from time to time by an action of the YSGA Board, following an opportunity for public comment and review of the proposed changes.

C. Review Procedures.

Upon receiving a well Permit Application from the County, YSGA staff shall conduct a preliminary review of the materials for completeness and to confirm the applicability of the EO. If the initial submittals are complete, YSGA staff will commence the review process. At all stages, if additional information is required to complete the review and verification process, the permit applicant will be notified directly.

1. Initial Review

In the initial review period, YSGA staff will review the Permit Application; any supplemental forms provided with the permit application; and existing YSGA records related to the representative monitoring well or other monitoring wells nearest to the proposed well location. Independent of these procedures, Yolo County’s well permitting process currently requires a Hydrogeologist Report for proposed new wells or alteration of existing wells within certain geographic and pumping capacities. Any report provided under this separate County requirement will be forwarded to YSGA for its review in issuing verifications under Section 4(a).

Verifications for wells or well alterations subject to the EO and located outside of designated Focus Areas will be issued promptly upon completion of the Initial Review. Applications situated within a Focus Area will proceed to Tier 1 Analysis, as described in further detail below.

2. Tier 1 Analysis

Well applications situated within a Focus Area will proceed to Tier 1 analysis as a matter of course; applications outside a Focus Area but otherwise flagged for further analysis during the Initial Review period will be notified by YSGA staff and provided an opportunity to complete the supplemental submittals required for Tier 1 analysis. These required materials are detailed in

the Technical Memorandum attached hereto as Exhibit A, and include supplemental information pertaining to property ownership, well location and description, and well design. YSGA staff will rely on these supporting materials to perform its initial Tier 1 analysis.

The evaluation criteria applicable to Tier 1 analyses set forth at Exhibit A, pages 10-13. Under these criteria, YSGA will prepare an initial assessments for:

- Anticipated impacts on groundwater levels at neighboring wells and groundwater storage.
- Anticipated conjunctive use.
- Anticipated impacts on nearby interconnected surface waters.
- Anticipated impacts on Total Dissolved Solids (TDS) concentrations in the target aquifer(s).
- Anticipated impacts to land subsidence.

If the triggering criteria identified in Exhibit A pages 13-16 are met, a Tier 2 analysis will be required.

3. *Tier 2 Analysis.*

In the event that a Tier 2 analysis is required, YSGA staff will directly notify the permit applicant. During the Tier 2 review process, permit applicants are responsible for engaging a PG or CHG licensed in California to prepare a Hydrogeologist's Report that complies with the requirements set forth by Exhibit A. Where the submitted report fails to comply with the requirements of Exhibit A, the applicant may be required to submit additional supporting information or address identified deficiencies prior to the YSGA proceeding with their final review.

In addition to the technical support criteria identified in Exhibit A, the Hydrogeologist's Report prepared under these Procedures must be signed by the PG or CHG and must include the following findings:

- The well or alteration to an existing well [*is/is not*] inconsistent with any sustainable management plan in the adopted YSGA GSP.
- The well or alteration to an existing well [*will/will not*] decrease the likelihood of achieving a sustainability goal for the basin.
- The well or alteration to an existing well [*will/will not*] interfere with the production and functioning of existing nearby wells.
- The well or alteration to an existing well [*will/will not*] cause subsidence that would adversely impact or damage nearby infrastructure.

YSGA will be entitled to rely on the accuracy of these and any other materials submitted by the permit applicant in issuing its required verifications. A permit applicant may petition the agency for a waiver from the Hydrogeologist Report requirements based on the unique circumstances surrounding that application. Requests for waivers will be presented to the Drought Contingency Planning Committee. A waiver from the Hydrogeologist's Report requirement only be granted

where, in the judgment of the agency, the preponderance of the evidence already before the agency supports the verification findings required by the EOs.

D. Verification Issuance.

The Permit Application together with its supplemental forms and materials; the Tier 1 analysis prepared by YSGA (if any); and the Hydrologists Report or other supplemental materials provided by the applicant under these Procedures will collectively form the record upon which YSGA will issue its verification under EO Section 4(a).

A verification will be issued where there is a reasonable basis in that record to support the agency's conclusion that the proposed well would not be inconsistent with the sustainable management plan for the Yolo GSP; and that proposed well would not decrease the likelihood of achieving a sustainability goal for the basin.

A verification will not be issued where, based on that record, the preponderance of the evidence shows that the proposed well:

- (a) Will result in an exceedance of the Minimum Thresholds identified in the GSP,
- (b) Will interfere with the production and functioning of existing nearby wells.
- (c) Will cause subsidence that would adversely impact or damage nearby critical infrastructure.

In all other cases, and in the absence of substantial evidence that the proposed well is otherwise inconsistent with the verification requirements of the EO, the verification will be forwarded to the well-permitting authority for consideration and processing.

In all cases, YSGA staff are empowered to issue a written verification based on the standards and processes provided herein. That verification may, but is not required to, include recommendations to the applicant and permit issuing authority intended to assist the well operator in continuing to operate in a manner that is not inconsistent with the GSP.

E. Reservation of Rights and Future Enforcement Actions.

Verifications issued under this Policy are intended to meet the procedural and substantive requirements of the EOs, based on the evidence before YSGA at the time of issuance. YSGA staff may refer any application to the Drought Contingency Planning Committee for further consideration and direction, consistent with the standards identified in this Policy.

Verifications issued under this policy are explicitly not a determination of underlying water rights; nor are they an affirmative declaration that a particular well's operations are sustainable now or under future conditions. YSGA reserves all rights to carry out appropriate enforcement and implementation of its groundwater sustainability programs within the basin as prescribed by the Sustainable Groundwater Management Act or other applicable laws and executive orders, including but not limited to actions involving facilities that have been the subject of verifications under these Procedures.