



AGENDA

**Regular Meeting of the
Cuyama Basin Water District
Wednesday, December 29, 2021 at 3:30 p.m. at**

**Cuyama Valley Family Resource Center
4689 Highway 166, New Cuyama, CA 93254**

NOTE: PARTICIPATION BY TELECONFERENCE

Subject to the Board's approval of Resolution 2021-006, the District will hold its regular Board of Directors meeting by teleconference.

There will be an option for the public to attend the meeting in-person subject to the capacity limits imposed by the Family Resource Center. Everyone in attendance must be vaccinated and will be required to wear a mask, sit six (6) feet apart, and sign a questionnaire regarding their health status the day of the meeting.

Call (559) 512-2821, PIN 543 727 190 then #

- 1. Call to Order**
- 2. Pledge of Allegiance**
- 3. Roll Call**
- 4. Consideration of Resolution 2021-006, authorizing initial teleconference meeting.**
- 5. Self-Introductions**
- 6. Public Comment**—This portion of the meeting is set aside to provide the public an opportunity to bring to the attention of the Board members matters within the jurisdiction of the Board and which are not on today's agenda. No action will be taken on any matter discussed during this portion of the meeting. The total time allotted for this portion of the meeting may be limited and to no more than 5 minutes for each speaker.
- 7. Minutes**
 - a. November 17, 2021 Board Meeting Minutes – Board Approval Needed**
- 8. Financial Report**
 - a. YTD Financial Report and Accounts Payable – Board Approval Needed**
 - b. 2021 Assessments Status Report**

9. Management/Administration

- a. Status Report

10. Groundwater Sustainability Agency (GSA) for Cuyama Basin

- a. Status Report on Cuyama Basin Groundwater Sustainability Agency
- b. Discussion and potential action to appoint a new GSA Alternate Director
- c. Review potential CBGSA Agenda items and consider action providing any recommendations regarding agenda items.
- d. EKI update on Technical Components

11. New Business—requests for items to be placed on next agenda

12. Announcements

- a. Next meeting January 26, 2022
- b. Future meetings: February 23, 2022
 March 23, 2022

13. Closed Session

Government Code Section 54956.9 Anticipated Litigation
Number of Potential Cases: One

14. Closed Session Item

- a. Report action taken in Closed Session required by Government Code Section 54956.9 (d) (2)

15. Adjournment

Americans with Disabilities Act of 1990: Under this act, a qualifying person may request the District provide a disability-related modification or accommodation in order to participate in any public meeting of the District. Such assistance includes alternative formats for the agendas and agenda packets used for any public meetings of the District. Requests for assistance shall be made in person, via telephone, or in written form to Matt Klinchuch at 661-616-5900, or mklinchuch@ppeng.com. Requests must be received at least 48 hours prior to a public meeting.

Acronyms*

AF	Acre-Feet
BMP	Best Management Practice
CBGSA	Cuyama Basin Groundwater Sustainability Agency
CBWD	Cuyama Basin Water District
CCSD	Cuyama Community Services District
CEQA	California Environmental Quality Act
CFS	cubic feet per second
CVGB	Cuyama Valley Groundwater Basin
DAC	Disadvantaged Community (80% CA MHI)
DWR	Department of Water Resources
ET	Evapotranspiration
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HCM	Hydrogeologic Conceptual Model
ILRP	Irrigated Lands Regulatory Program
JPA	Joint Powers Authority
LAFCo	Local Agency Formation Commission
MOU	Memorandum of Understanding
PSP	Proposed Solicitation Package
SBCWA	Santa Barbara County Water Agency
SDAC	Severely Disadvantaged Community (60% CA MHI)
SGMA	Sustainable Groundwater Management Act of 2014
SWRCB	State Water Resources Control Board
USGS	United States Geological Survey

*More to be added as necessary

BEFORE THE BOARD OF DIRECTORS OF
CUYAMA BASIN WATER DISTRICT

IN THE MATTER OF:

Resolution No. 2021-006

**RESOLUTION INITIALLY AUTHORIZING REMOTE TELECONFERENCE
MEETINGS UNDER AB 361**

WHEREAS, meetings of the Board of Directors (“Board”) of Cuyama Basin Water District (“District”) and its committees are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the District’s legislative bodies conduct their business;

WHEREAS, Government Code section 54953(e), as amended by Assembly Bill 361 (2021) (“AB361”), signed by the Governor on September 16, 2021, provides for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, the District wishes to invoke the provisions of AB361 to authorize teleconference meetings subject to the modified standard of Government Code section 54953(e);

NOW, THEREFORE, BE IT RESOLVED that:

Section 1. Findings. The Board hereby finds as follows:

- (a) As required by Government Code section 54953(e)(1), a proclaimed state of emergency exists under the California Emergency Services Act, as declared by the Governor on March 4, 2020.
- (b) State or local officials have imposed or recommended measures to promote social distancing.
- (c) The Board has considered the circumstances of the state of emergency.
- (d) The state of emergency directly impacts the ability of the members to meet safely in person.

Section 2. Procedures for Teleconference Meetings. The District and its committees shall hold teleconference meetings pursuant to the requirements of Government Code section 54953(e).

Section 3. Effective Date. This resolution shall take effect immediately upon its adoption.

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Section 4. Renewal. Pursuant to Government Code section 54953(e)(3), the District will reconsider the state of emergency every 30 days.

PASSED AND ADOPTED by the Board of Directors of Cuyama Basin Water District on December 29, 2021, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

I HEREBY CERTIFY that the foregoing resolution is the resolution of said District as duly passed and adopted by said Board of Directors on December 29, 2021.

WITNESS my hand and seal of said Board of Directors, December 29, 2021.

Secretary of the Board of Directors



MEETING MINUTES
Regular Meeting of the
Cuyama Basin Water District

Wednesday, November 17, 2021, at 3:30 p.m.

NOTE: Board & Public Participation by Teleconference Only

BOARD MEMBERS PRESENT:

Derek Yurosek, President
Jane Wooster
Matt Vickery

BOARD MEMBERS ABSENT:

Byron Albano, Vice-President
Lorena Stoller, Treasurer

AUDIENCE MEMBERS PRESENT:

Matt Klinchuch, CBWD GM
Alan Doud, CBWD Counsel
Brad DeBranch, CBWD Secretary
Jeff Shaw, EKI
Danhira Millan
Jim Menzies
Brenton Kelly
Dan Wilke
Dan Clifford

1. **Call to Order** – President Yurosek called the meeting to order at 3:37 p.m.
2. **Pledge of Allegiance** – Completed
3. **Roll Call** – Present: Directors Vickery, Wooster and Yurosek. Absent: Director Albano and Stoller. Board quorum present.
4. **Consideration of Resolution 2021-005, authorizing initial teleconference meeting.**
 - a. A motion was made by Director Vickery and seconded by Director Wooster to approve Resolution 2021-005. The motion was unanimously carried.
5. **Self-Introductions** – All audience members were introduced.
6. **Public Comment** – No public comment received.
7. **Minutes**
 - a. A motion was made by Director Vickery and seconded by Director Wooster to approve the October 27th, 2021 Regular Meeting Minutes. The motion was unanimously carried.

8. Financial Report

- a. YTD Financial Report & Accounts Payable – An overview of the current financial report and accounts payable was provided by General Manager. A motion was made by Director Wooster and seconded by Director Vickery to accept and pay the Accounts Payable for October 2021. The motion was unanimously carried.
- b. 2021 Assessments Status Report – CBWD has received approximately 91% of landowner assessments for 2021. General Manager to follow up with the largest landowners with outstanding assessments.

9. Management/Administration

- a. Review and Accept FY 2020 Audit – An overview and presentation of the draft audit report was provided by Danhira Millan, a representative from BHK. A motion was made by Director Wooster and seconded by Director Vickery to accept the draft audit report for 2020. The motion was unanimously carried.

10. Announcements

- a. Next meeting: December 29, 2021
- b. Future meetings: January 26, 2022

11. Adjournment - Meeting was adjourned by Director Yurosek at 4:10 p.m.

Respectfully Submitted

**Brad DeBranch, Secretary
Cuyama Basin Water District**

Cuyama Basin Water District - 2021 Income, Expenses, & Budget Performance (As of 12/22/2021)

CATEGORY	CODE	DESCRIPTION	January	February	March	April	May	June	July	August	September	October	November	December	Total	Budget	Budget Remaining	% of Budget
Income																		
	1000	2020 District Assessment	10,247.26	-	-	-	-	-	-	-	-	-	-	-	214,736.59	218,545.00	3,808.41	98%
		2021 District Assessment	-	-	-	68,055.50	62,227.85	5.31	49.51	2,964.07	3,322.81	4.62	30,257.17	-	166,886.84	176,250.00	9,363.16	95%
	1100	Interest - Savings/Money Market/Etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
	2000	Miscellaneous Payments	310,974.00	-	-	-	-	-	-	-	-	-	-	-	310,974.00	-	(310,974.00)	#DIV/0!
		Santa Barbara Co. Tax Bill (2019 Assessment)	-	-	-	16,118.13	0.05	267.11	-	-	-	1,002.72	-	-	34,582.35	34,941.25	358.90	99%
		Santa Barbara Co. Tax Bill (2020 Assessment)	-	-	-	-	-	-	-	-	-	-	-	-	-	3,877.99	3,877.99	0%
		San Luis Obispo Co. Tax Bill (2019 Assessment)	152.80	-	-	-	143.27	19.66	55.35	-	-	-	109.63	-	480.71	370.80	(109.91)	130%
		San Luis Obispo Co. Tax Bill (2020 Assessment)	-	-	-	-	-	-	-	-	-	-	-	-	-	524.04	524.04	0%
		Ventura Co. Tax Bill (2019 Assessment)	-	22.59	-	-	-	-	-	-	-	-	-	-	22.59	22.54	(0.05)	100%
		Ventura Co. Tax Bill (2020 Assessment)	-	-	-	-	-	-	-	-	-	-	-	-	-	18.06	18.06	0%
Total Income		321,374.06	22.59	-	84,173.63	62,371.17	292.08	104.86	2,964.07	3,322.81	1,007.34	30,366.80	-	512,946.49	216,004.68	(296,941.81)	237%	
Expense																		
	3000	Manager - General District	1,666.00	3,379.00	3,938.88	5,463.64	2,630.00	3,510.70	4,208.88	3,190.98	2,595.13	2,560.60	744.68	-	33,888.49	35,000.00	1,111.51	97%
	3100	Accounting & Auditing Services	-	-	-	-	-	-	-	1,900.00	1,540.00	1,910.00	-	-	5,350.00	5,350.00	-	100%
	3200	Bank Service Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%
	3300	Insurance	250.00	-	6,271.00	-	-	-	-	-	-	-	-	-	6,521.00	6,500.00	(21.00)	100%
	3400	Legal Services	1,386.50	678.50	2,629.20	1,331.25	1,652.00	4,985.50	7,532.29	3,865.88	1,492.10	2,475.60	1,108.42	-	29,137.24	50,000.00	20,862.76	58%
	4000	Manager - SGMA Activities	1,738.00	2,468.00	4,898.00	3,002.00	2,054.00	3,239.00	3,081.00	3,160.00	1,738.00	2,370.00	2,923.00	-	30,671.00	50,000.00	19,329.00	61%
	5000	Data Collection	-	-	-	-	-	-	-	-	-	-	-	-	-	20,000.00	20,000.00	0%
	6000	Technical Studies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
	7000	Groundwater Sustainability Plan (GSP) Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
	8000	Groundwater Sustainability Plan (GSP) Implementation	-	5,625.62	-	-	15,963.60	-	-	31,918.28	-	18,849.55	13,585.23	-	85,942.28	151,300.00	65,357.72	57%
	9000	Miscellaneous Expenses	-	25.00	-	-	-	-	-	50.00	50.00	50.00	50.00	-	50.00	275.00	9,400.00	9,125.00
Total Expenses		5,040.50	12,176.12	17,737.08	9,796.89	22,299.60	11,735.20	14,872.17	44,085.14	7,415.23	28,215.75	18,361.33	50.00	191,785.01	327,550.00	135,764.99	59%	
Net Income		316,333.56	(12,153.53)	(17,737.08)	74,376.74	40,071.57	(11,443.12)	(14,767.31)	(41,121.07)	(4,092.42)	(27,208.41)	12,005.47	(50.00)	321,161.48	(111,545.32)			
Monthly Bank Balance (month end)		1,287,098.40	1,270,464.18	1,268,149.18	1,346,672.19	1,379,792.44	1,378,753.27	1,341,821.89	1,332,110.92	1,277,513.46	1,278,568.98	1,284,163.15						

Cuyama Basin Water District - YTD Budget Variance Report (As of 12/22/2021)

CATEGORY	DESCRIPTION	2021 Budget	Actual (YTD)	Budget Variance
Income				
	2021 District Acreage Assessment	\$176,250	\$166,887	-\$9,363
	Interest Earnings - Savings/Money Market/Etc.	\$0	\$0	\$0
	Miscellaneous Member Payments	\$39,755	\$346,060	\$306,305
	Total Income	\$216,004.68	\$512,946.49	\$296,941.81
Expense				
	Manager - General District	\$35,000	33,888.49	-\$1,112
	Accounting & Auditing Services	\$5,350	5,350.00	\$0
	Bank Service Charges	\$0	-	\$0
	Insurance	\$6,500	6,521.00	\$21
	Legal Services	\$50,000	29,137.24	-\$20,863
	Manager - SGMA Activities	\$50,000	30,671.00	-\$19,329
	Data Collection	\$20,000	-	-\$20,000
	Technical Studies	\$0	-	\$0
	Groundwater Sustainability Plan (GSP) Development	\$0	-	\$0
	Groundwater Sustainability Plan (GSP) Implementation	\$151,300	85,942.28	-\$65,358
	Miscellaneous Expenses	\$9,400	275.00	-\$9,125
	Total Expenses	\$327,550.00	\$191,785.01	-\$135,764.99
	Net Income	-\$111,545.32	\$321,161.48	\$432,706.80

Cuyama Basin Water District
 Accounts Payable - Ready for Approval
 December 2021

Num	Date	Name	Account	Paid Amount
1169	12/3/2021	Young-Wooldridge	2003562 - Valley Repub	
			3400 Legal	-\$1,108.42
TOTAL				-\$1,108.42
1170	12/17/2021	eki - environment & wate	2003562 - Valley Repub	
			8000 GSP Implementa	-\$13,585.23
TOTAL				-\$13,585.23
1171	12/21/2021	Provost & Pritchard Cons	2003562 - Valley Repub	
			3000 Manager - Gener	-\$744.68
			4000 Manager - SGMA	-\$2,923.00
TOTAL				-\$3,667.68
1172	12/29/2021	CV Family Resource Cent	2003562 - Valley Repub	
			9000 Misc. Expenses	-\$50.00
TOTAL				-\$50.00



THE LAW OFFICES OF

A LIMITED LIABILITY PARTNERSHIP • EST. 1939
 1800 30TH STREET, FOURTH FLOOR
 BAKERSFIELD . CA. 93301

HTTP://WWW.YOUNGWOOLDRIDGE.COM
 EMAIL: ACCOUNTING@YOUNGWOOLDRIDGE.COM
 PHONE: (661) 327-9661
 FACSIMILE: (661) 327-1087

PRIVILEGED AND CONFIDENTIAL ATTORNEY-CLIENT COMMUNICATIONS

CONFIDENTIAL

CUYAMA BASIN WATER DISTRICT
 MATT KLINCHUCH, PC
 MANAGER- ASSESSOR-COLLECTOR
 1800 30TH STREET, SUITE 280
 BAKERSFIELD, CA 93301

November 30, 2021

Client ID 20308 SKK

Statement for period through November 30, 2021**Summary by Matter**

Matter	Description	Prior Balance	Payments & Adjustments	Current Charges	Total Due
1	ACCOUNTING AND AUDIT	\$246.50	-\$246.50	\$0.00	\$0.00
4	BOARD MEETINGS AND MATTERS (INCL. BROWN ACT)	\$3,569.50	-\$3,569.50	\$1,005.00	\$1,005.00
100	COSTS	\$151.70	-\$151.70	\$103.42	\$103.42
PRIOR STATEMENT BALANCE					\$3,967.70
TOTAL PAYMENTS AND ADJUSTMENTS					-\$3,967.70
CURRENT CHARGES					\$1,108.42
PAY THIS AMOUNT					\$1,108.42

Any Payments Received After 11/30/21 Will Appear on Your Next Statement

Visa, MasterCard and Discover accepted

A FINANCE CHARGE OF 1.5% WILL BE ADDED TO YOUR BALANCE 30 DAYS AFTER STATEMENT DATE

2001 Junipero Serra Blvd, Suite 300
Daly City, CA 94014
(650) 292-9100
ekiconsult.com

Cuyama Basin Water District
Provost & Pritchard
1800 30th Street, Suite 280
Bakersfield, CA 93301

Invoice number B70069.02-04
Date 12/08/2021
Project: B70069.02

Professional services for the period October 16, 2021 through November 26, 2021

Consulting services associated with SGMA support, including participating in the GSP implementation process, Water District meetings, GSA meetings and associated technical conference calls. Please see attached Progress Summary Report (PSR) for additional details.

Professional Fees			Hours	Rate	Billed Amount
John Fio	Principal Engineer-Scientist		1.25	275.00	343.75
David Leighton	Senior II, Engineer-Scientist		0.50	230.00	115.00
Jeffrey R. Shaw	Senior II, Engineer-Scientist		44.00	230.00	10,120.00
Hunter Johnson	Engineer-Scientist, Grade 5		16.75	129.00	2,160.75
Professional Fees subtotal			62.50		12,739.50
Reimbursables			Units	Rate	Billed Amount
Communication Fee - 4%			12,739.50	0.04	509.58
Tolls/Transportation					292.31
Reimbursables subtotal					336.15
			801.89		845.73
Invoice total					13,585.23

Please refer to the EKI Project Number on all checks and correspondence.

PROGRESS SUMMARY REPORT #4 (B70069.02)

Technical Support to the District Regarding Proposed GSP Management Actions Cuyama Basin Water District

CLIENT: **Cuyama Basin Water District**
 CLIENT PM: Matt Klinchuch, P.E.
 EKI PROJECT #: B70069.02
 EKI PROJ. MANAGER: Jeff Shaw
 EKI INVOICE NO: B70069.02-04

PROGRESS SUMMARY REPORT #: **4**

PERIOD BEGINNING: 16 Oct 2021

PERIOD ENDING: 26 Nov 2021

PREPARED BY: Jeff Shaw

WORK COMPLETED THIS PERIOD:

- a) Prep for and attend one District Board meeting in person (10/27), and one remotely (11/17);
- b) Remote attend GSA Board meeting (11/3);
- c) Prepare review outline for Cuyama model review; send to B. Van Lienden (WC); attend call w/WC, Hallmark, Matt Klinchuch (10/29);
- d) Review developments in OpenET; contact Amanda Peisch (DWR) re Airborne EM data availability (Spring 2022);
- e) Coordinate pumping test plans with WC, Hallmark (10/29);
- f) Prepare review summary of water level data issues for WC; compare WC-vetted data to errors found by EKI; transmit to WC;
- g) Review model parameters that may be improved with pumping tests, map test areas, wells, model K values; and
- h) General management & communication with District.

NOTES: (a) EKI attendance has been in-person for half of Water District meetings, but remote for GSA meetings, due to COVID-19 restrictions.

WORK PLANNED OR OR IN-PROGRESS FOR NEXT PERIOD:

- a) Provide additional technical support during DWR review of the GSP;
- b) Complete review and provide feedback on CBWRM model performance;
- c) Review and provide feedback on model recalibration;
- d) Assist the District regarding 2021 GSP implementation tasks;
- e) Assist the District with priorities for upcoming funding opportunities; and
- f) Support the District regarding task delegation from the GSA.

OTHER COMMENTS: (none)

TABLE 1
Project Invoice Summary - 2021 Authorization

Task	Description	Budget	Billed This Period (a)	Billed Prior Periods (b)	Billed to Date	Budget Remaining	Est. % Compl.	Projected Cost to Complete	Projected Variance
1	Attend District Board Meetings and Cuyama GSA Board Meetings	\$ 47,500	\$ 3,804.55	\$ 21,285	\$ 25,089	\$ 22,411	53%	\$ 22,411	\$ -
2	Technical Review of GSA Draft Annual Report and Groundwater Conditions Report	\$ 9,600	\$ -	\$ 957	\$ 957	\$ 8,643	10%	\$ 8,643	\$ -
3	Assess Proposed GSA Model Refinement	\$ 16,000	\$ -	\$ 15,941	\$ 15,941	\$ 59	100%	\$ 59	\$ -
4	Assess GSA Model Recalibration	\$ 26,900	\$ 1,433.90	\$ 8,049	\$ 9,483	\$ 17,417	35%	\$ 17,417	\$ -
5	Evaluation of Proposed Representative Monitoring Well Network Modifications	\$ 18,200	\$ 6,433.18	\$ 191	\$ 6,624	\$ 11,576	36%	\$ 11,576	\$ -
6	Review GSA Draft Guidance on Well Flow Meters	\$ 5,600	\$ -	\$ 2,535	\$ 2,535	\$ 3,065	45%	\$ 3,065	\$ -
7	Research Low-Cost Methods of Pumping Estimation for Smaller Irrigators	\$ 17,600	\$ -	\$ 15,263	\$ 15,263	\$ 2,337	87%	\$ 2,337	\$ -
8	Evaluate GSA Proposals for Geophysical Investigations	\$ 4,900	\$ -	\$ -	\$ -	\$ 4,900	0%	\$ 4,900	\$ -
9	On-call District Assistance Responding to GSA-Proposed Delegated Tasks	\$ 5,000	\$ 1,913.60	\$ 2,512	\$ 4,425	\$ 575	89%	\$ 575	\$ -
TOTALS:		\$151,300	\$13,585.23	\$ 66,731	\$ 80,317	\$ 70,983	<====>	\$ 70,983	\$ -

Notes

- (a) Amounts listed in Table 1 (other than the current billing period) are rounded to the nearest dollar. Values in parentheses are negative.
(b) Column lists prior billing for 2021 authorization (NTE \$151,300) only.

455 W. Fir Avenue
Clovis, CA 93611
(559) 449-2700
Fax (559) 449-2715

EST. 1968
**PROVOST &
PRITCHARD**
CONSULTING GROUP
An Employee Owned Company

Cuyama Basin Water District
1800 30th Street, Suite 200
Bakersfield, CA 93301

December 21, 2021
Project: No: 02620-21-001
Invoice No: 89277

Project Name: 2021 CBWD-Manager

Client Project #:

Work this period included:

MAN: Outstanding 2021 assessment coordination. Filing and depositing payments. Reimbursables (mileage, UPS).

SGMA: Prep and attend Nov. 3 GSA Board and Nov. 17 CBWD Board meetings. District management and coordination.

Professional Services from November 1, 2021 to November 30, 2021

Phase: MAN Manager

Labor

	Hours	Rate	Amount	
Senior Engineer	1.50	158.00	237.00	
Project Administrator	3.00	78.00	234.00	
Project Administrator	1.00	91.00	91.00	
Associate GIS Specialist	.80	100.00	80.00	
Totals	6.30		642.00	
Total Labor				642.00

Reimbursable Expenses

Travel & Mileage	80.50	
Postage/Shipping/Delivery	22.18	
Total Reimbursables	102.68	102.68

Total this Phase: \$744.68

Phase: SGMA SGMA

Labor

	Hours	Rate	Amount	
Senior Engineer	18.50	158.00	2,923.00	
Totals	18.50		2,923.00	
Total Labor				2,923.00

Total this Phase: \$2,923.00

Total this Invoice \$3,667.68



COVID-19 Visitor and Meeting Guidelines

(as of July 26, 2021)

The safety of our employees, clients and visitors is our highest priority. We are following guidance from the Santa Barbara County Department of Health and the CDC.

Meeting Guidelines:

1. 72 hours prior to your meeting, please email Martha Yepes (M.Yepes@sbcsocialserv.org) and Lynn Carlisle (lynn@cvfrc.org) with the following information:
 - a. Meeting time, date and anticipated length of meeting.
 - b. Meeting Coordinator's name, email and cell phone number. Throughout your meeting, the Meeting Coordinator will be responsible for enforcing the required guidelines contained in this document.
 - c. Anticipated number of attendees.
 - d. Preferred configuration of the meeting room.
2. Upon arrival at the CVFRC facility, all meeting attendees must complete and sign the COVID-19 Visitor Screening Questionnaire. Forms, clipboard, pens (with marked containers for "clean" and "used") will be provided, along with a marked folder to which completed forms should be returned and left on the CVFRC's receptionist's desk in the site provided.
3. Until further notice, all visitors over the age of 2, regardless of vaccination status are required to wear a mask that covers the nose and mouth at all times while indoors.
4. All individuals or family groups must remain at least 6 feet apart from other individuals or groups. The meeting room will be set up to accommodate this requirement, depending on the number of expected attendees.
5. At the close of your meeting, please leave all chairs and tables in place, as set up prior to your meeting.
6. Required meeting fee: \$50 per meeting. Please provide payment for each meeting within 10 days of the scheduled meeting. Checks can be made out to: CVFRC, and mailed to CVFRC, P.O. Box 5, New Cuyama, CA 93254. Alternatively, checks can be left in the Visitor Screening Questionnaire folder at the CVFRC office provided for each meeting.

I affirm that the undersigned is authorized to agree to and will enforce the above guidelines.

Signed

Date

Print Name

Phone

To be signed by CVFRC staff member

Print Name / Date

UNIQUE_ID	Assessed Amount	Payment Received	Amount Paid
CBWD 1	58.21	4/9/2021	58.21
CBWD 2	4,443.83	11/15/2021	4,443.83
CBWD 3	2,233.54	4/27/2021	2,233.54
CBWD 4	27,683.46	4/27/2021	27,683.46
CBWD 5	6.65		
CBWD 6	35.20	4/9/2021	35.20
CBWD 7	5.31	6/21/2021	5.31
CBWD 8	16.90		
CBWD 9	640.25	5/17/2021	640.25
CBWD 10	6.02		
CBWD 11	10.84		
CBWD 12	24,274.90	11/1/2020	24,274.90
CBWD 13	32,718.10	5/17/2021	32,718.10
CBWD 14	412.02		
CBWD 15	195.03	4/27/2021	195.03
CBWD 16	35.20	4/7/2021	35.20
CBWD 17	15,314.97	5/3/2021	15,314.97
CBWD 18	9.00		
CBWD 19	306.95		
CBWD 21	34.57	4/9/2021	34.57
CBWD 23	9.14		
CBWD 24	37.23		
CBWD 25	186.23	4/19/2021	186.23
CBWD 26	54.00		
CBWD 28	433.94		
CBWD 29	153.68	5/3/2021	153.68
CBWD 30	277.36	4/19/2021	277.36
CBWD 31	11.49	4/19/2021	11.49
CBWD 32	17.60	4/9/2021	17.60
CBWD 33	8.80	4/9/2021	8.80
CBWD 34	9,684.75	4/27/2021	9,684.75
CBWD 35	19.47		
CBWD 36	2.10		
CBWD 37	123.20	4/9/2021	123.20
CBWD 38	37.25		
CBWD 39	4.81	4/12/2021	4.81
CBWD 40	6.97		
CBWD 41	17.60		
CBWD 42	281.60		
CBWD 43	1.06		
CBWD 44	9.00		
CBWD 45	17.42	5/7/2021	17.42
CBWD 47	900.62		
CBWD 49	47.73		
CBWD 50	17.60	5/17/2021	17.60

 Assessment Less than \$15

2021 Assessment Payment Summary
Through (12/22/2021)

UNIQUE_ID		Assessed Amount	Payment Received	Amount Paid
CBWD	51	31.53		
CBWD	52	325.55		
CBWD	53	16.57		
CBWD	54	35.20	4/9/2021	35.20
CBWD	55	316.80	4/14/2021	316.80
CBWD	56	14.81		
CBWD	57	97.34		
CBWD	58	35.20		
CBWD	59	787.34	4/27/2021	787.34
CBWD	60	52.04	4/19/2021	52.04
CBWD	63	17.60	8/30/2021	17.60
CBWD	64	18.38		
CBWD	65	35.20	5/3/2021	35.20
CBWD	66	1,202.99	11/18/2021	1,202.99
CBWD	67	32.49		
CBWD	68	105.60	4/12/2021	105.60
CBWD	69	131.56	7/31/2021	CR
CBWD	70	2.66		
CBWD	71	4.85		
CBWD	72	3.64		
CBWD	73	3.36		
CBWD	74	1,448.98	5/3/2021	1,448.98
CBWD	75	6.23	4/19/2021	6.23
CBWD	76	602.44	8/30/2021	602.44
CBWD	77	135.37	4/23/2021	135.37
CBWD	78	2,414.38	4/23/2021	2,414.38
CBWD	79	11.74		
CBWD	80	22.64	4/19/2021	22.64
CBWD	81	359.46		
CBWD	82	11.00		
CBWD	83	17.48	4/9/2021	17.48
CBWD	84	4,027.07	4/23/2021	4,027.07
CBWD	85	52.80	9/25/2021	52.80
CBWD	86	6.73		
CBWD	87	4.40		
CBWD	88	33.54		
CBWD	90	0.89		
CBWD	91	33.53		
CBWD	92	43.91		
CBWD	93	230.60		
CBWD	94	9.00		
CBWD	95	67.69	5/3/2021	67.69
CBWD	96	149.35		
CBWD	97	6,096.66	5/24/2021	6,096.66
CBWD	98	11,393.04	4/27/2021	11,393.04

2021 Assessment Payment Summary
Through (12/22/2021)

UNIQUE_ID		Assessed Amount	Payment Received	Amount Paid
CBWD	99	2,682.79		
CBWD	100	8.93		
CBWD	101	332.47		
CBWD	102	7.78	4/9/2021	7.78
CBWD	103	127.81	4/9/2021	127.81
CBWD	104	480.57	4/14/2021	480.57
CBWD	105	2.52		
CBWD	106	12.66	4/9/2021	12.66
CBWD	107	158.40	4/9/2021	158.40
CBWD	108	52.80	4/9/2021	52.80
CBWD	109	32.64	4/12/2021	32.64
CBWD	110	8.99		
CBWD	111	2,038.47	9/20/2021	2,038.47
CBWD	112	396.91	9/20/2021	396.91
CBWD	113	123.27		
CBWD	114	8.95		
CBWD	115	6.67	4/12/2021	6.67
CBWD	116	17.60		
CBWD	117	2.41	4/27/2021	2.41
CBWD	118	10.78	4/16/2021	10.78
CBWD	119	17.60		
CBWD	120	31.91	7/28/2021	31.91
CBWD	121	64.63		
CBWD	122	4.40	10/29/2021	4.62
CBWD	123	17.41		
CBWD	124	20.37		
CBWD	125	17.87	4/23/2021	17.87
CBWD	126	335.45	11/16/2021	335.45
CBWD	127	1.00	8/30/2021	1.00
CBWD	128	328.25	4/23/2021	328.25
CBWD	129	126.22		
CBWD	130	8.80		
CBWD	131	18.00	4/9/2021	18.00
CBWD	132	35.00		
CBWD	133	70.88	4/19/2021	70.88
CBWD	134	834.63	9/20/2021	834.63
CBWD	135	17.60	4/9/2021	17.60
CBWD	136	111.35	5/24/2021	44.00
CBWD	137	12.77		
CBWD	138	599.00	5/7/2021	599.00
CBWD	139	44.00	4/23/2021	44.00
CBWD	140	10.37		
CBWD	141	1.66		
CBWD	142	196.17		
CBWD	143	137.59		

2021 Assessment Payment Summary
Through (12/22/2021)

UNIQUE_ID		Assessed Amount	Payment Received	Amount Paid
CBWD	144	69.52	4/12/2021	69.52
CBWD	145	17.60	7/5/2021	17.60
CBWD	146	89.16		
CBWD	147	4,351.75	4/19/2021	4,351.75
CBWD	148	3,888.59	5/3/2021	3,888.59
CBWD	149	87.21	4/27/2021	87.21
CBWD	150	44.96	4/19/2021	44.96
CBWD	151	35.03		
CBWD	152	2.69	4/9/2021	2.69
CBWD	153	318.80	8/30/2021	318.80
CBWD	154	17.60	4/9/2021	17.60
CBWD	155	2,024.23	8/11/2021	2,024.23
CBWD	156	5.07		
CBWD	157	24.20	4/16/2021	24.20
CBWD	158	13.29		
CBWD	159	35.20	4/19/2021	35.20
CBWD	160	17.60		
CBWD	161	1,185.71	5/7/2021	1,185.71
CBWD	162	8.44		
CBWD	163	3.96		
CBWD	164	1.18		
CBWD	165	4.40		
CBWD	166	225.46		
CBWD	167	476.82		
CBWD	168	8.81		
CBWD	169	1,599.81	4/19/2021	1,599.81
CBWD	170	8.41		
CBWD	171	493.15	4/27/2021	493.15
CBWD	172	37.65	4/23/2021	37.65

Dollars Received 166,886.84
95%
Payments Received 72
63%

**2021 Assessment Payment Summary
Through (12/22/2021)**

UNIQUE_ID		Assessed Amount	Payment Received	Amount Paid
CBWD	14	412.02		
CBWD	28	433.94		
CBWD	47	900.62		
CBWD	99	2,682.79		
CBWD	167	476.82		

4,906.19

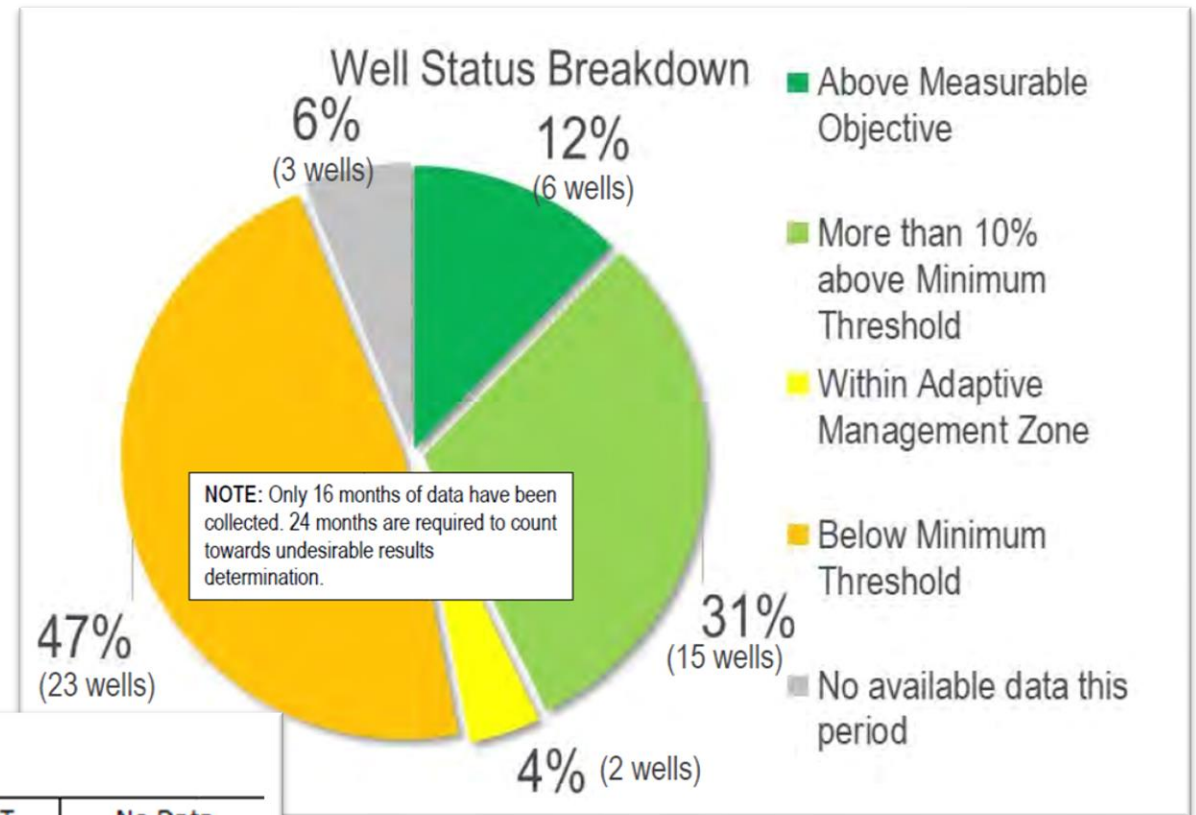
3% Total Budget

UPDATE: CUYAMA BASIN GSP IMPLEMENTATION

CUYAMA BASIN WATER DISTRICT
BOARD OF DIRECTORS
29 DECEMBER 2021

Update on Groundwater Conditions Report

- Oct 2021 groundwater monitoring data
- 48 network wells; 46 wells with data
- 23 wells (**50%**) were **below their MTs**
- 3 wells (7%) had no data
- 8 wells were below MTs at the time of GSP adoption



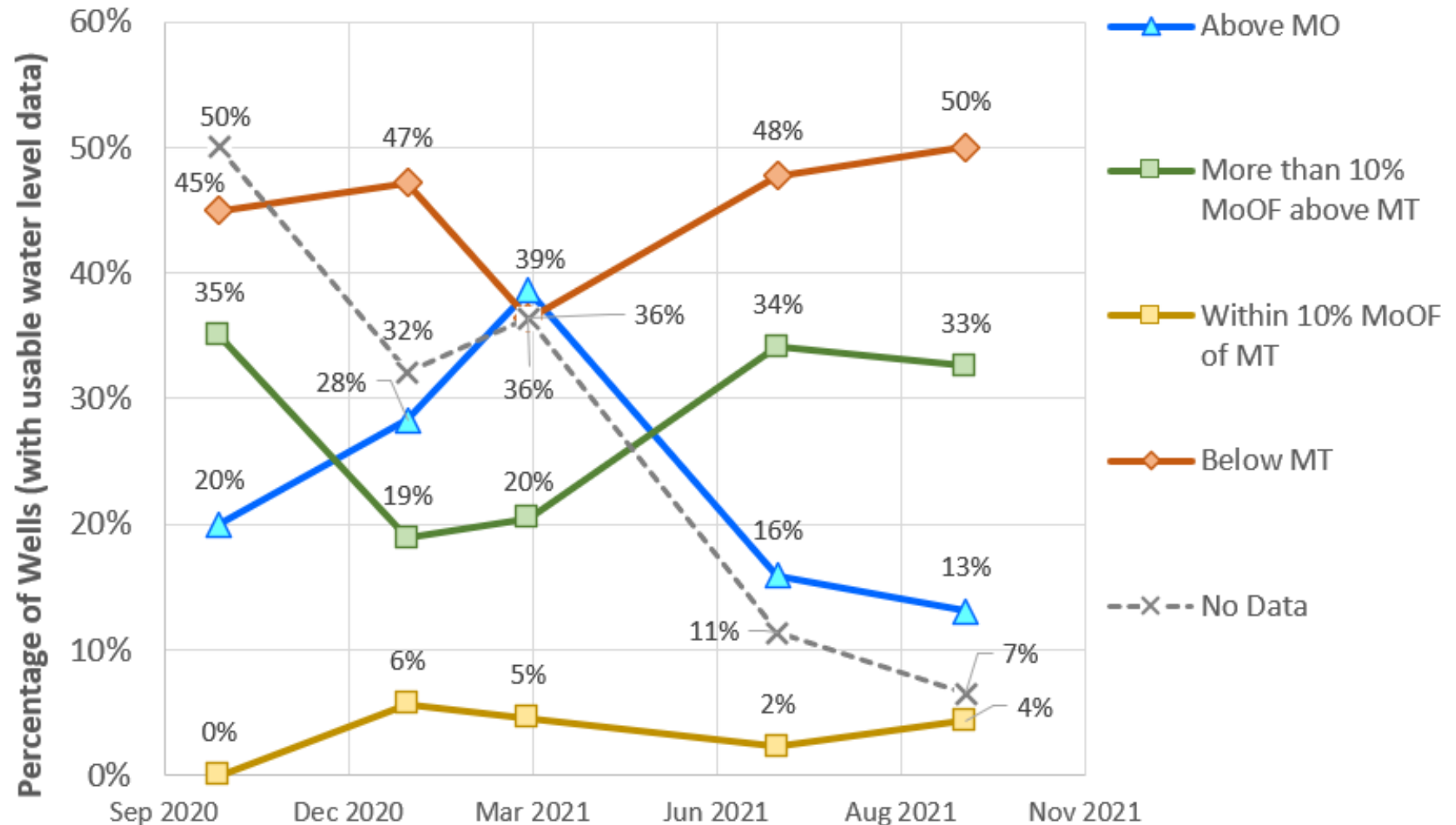
Well Status Breakdown over Time

Period	Total Wells with Data	Above MO		More than 10% MoOF above MT		Within 10% MoOF of MT		Below MT		No Data	
Oct 2020	40	8	20%	14	35%	0	0%	18	45%	20	50%
Jan 2021	53	15	28%	10	19%	3	6%	25	47%	17	32%
Mar 2021	44	17	39%	9	20%	2	5%	16	36%	16	36%
Jul 2021	44	7	16%	15	34%	1	2%	21	48%	5	11%
Oct 2021	46	6	13%	15	33%	2	4%	23	50%	3	7%

MoOF = Margin of Operational Flexibility (MoOF = MO - MT)

Update on Groundwater Conditions Report

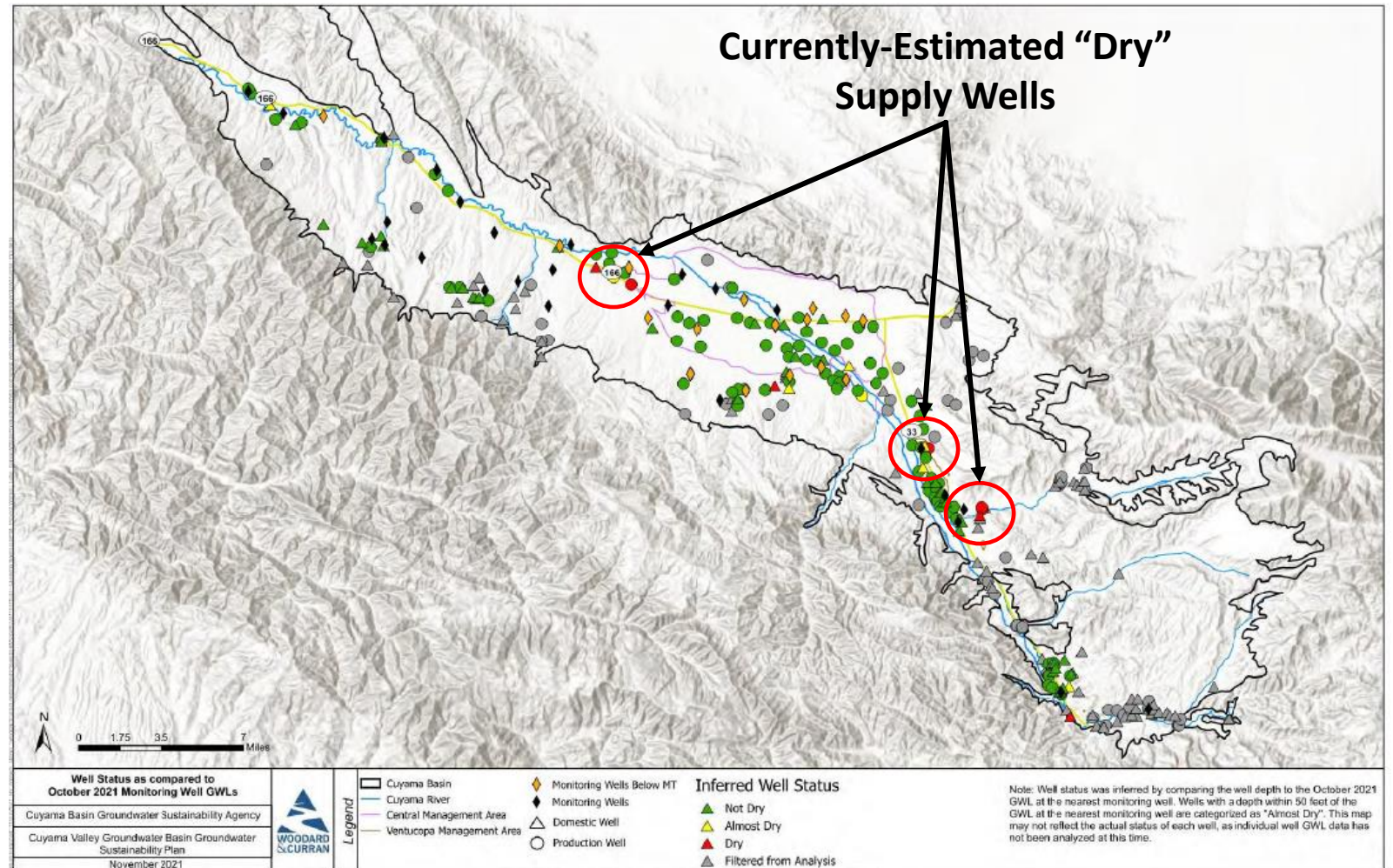
- Denominator is number of wells with data; other metrics can be used
- Seasonal effect is evident; spring will bring higher water levels
- Uncertainty is reduced from earlier summaries
- 30% of wells are likely to be below their MTs for two consecutive years
- Will trigger SGMA Undesirable Results for Basin



Update on Groundwater Conditions Report

GSA Staff performed a preliminary well impact analysis (23 Nov 2021 Tech Memo)

- Considered domestic and agricultural production wells
- Used bottom of screened interval (if available) or total depth if not
- Did not consider wells without at least total depth data
- **Compared supply wells to Oct 2021 water level in the nearest monitoring network well**
- Identified “Dry” and “Almost Dry” supply wells



Update on Groundwater Conditions Report

GSA Staff preliminary well impact analysis (23 Nov 2021 Tech Memo)

- Nine supply wells (including four domestic wells) classified as “Dry”; nine other wells classed as “Almost Dry”, with less than 50 ft remaining in their water column
- Tech Memo includes table and detailed maps of impacted wells
- **Two potential problems with this approach:**
 - 1) The method does not account for drawdown in the pumped wells
 - 2) A supply well can become unusable long before its total screened interval is dewatered, so use of a more-conservative practical metric is recommended, e.g.,
 - a) Less than 50 ft of positive suction head above the estimated pump intake, or
 - b) Loss of 50% of the total estimated water column in the well, or
 - c) Dewatering the top of screen, or other field-based criteria

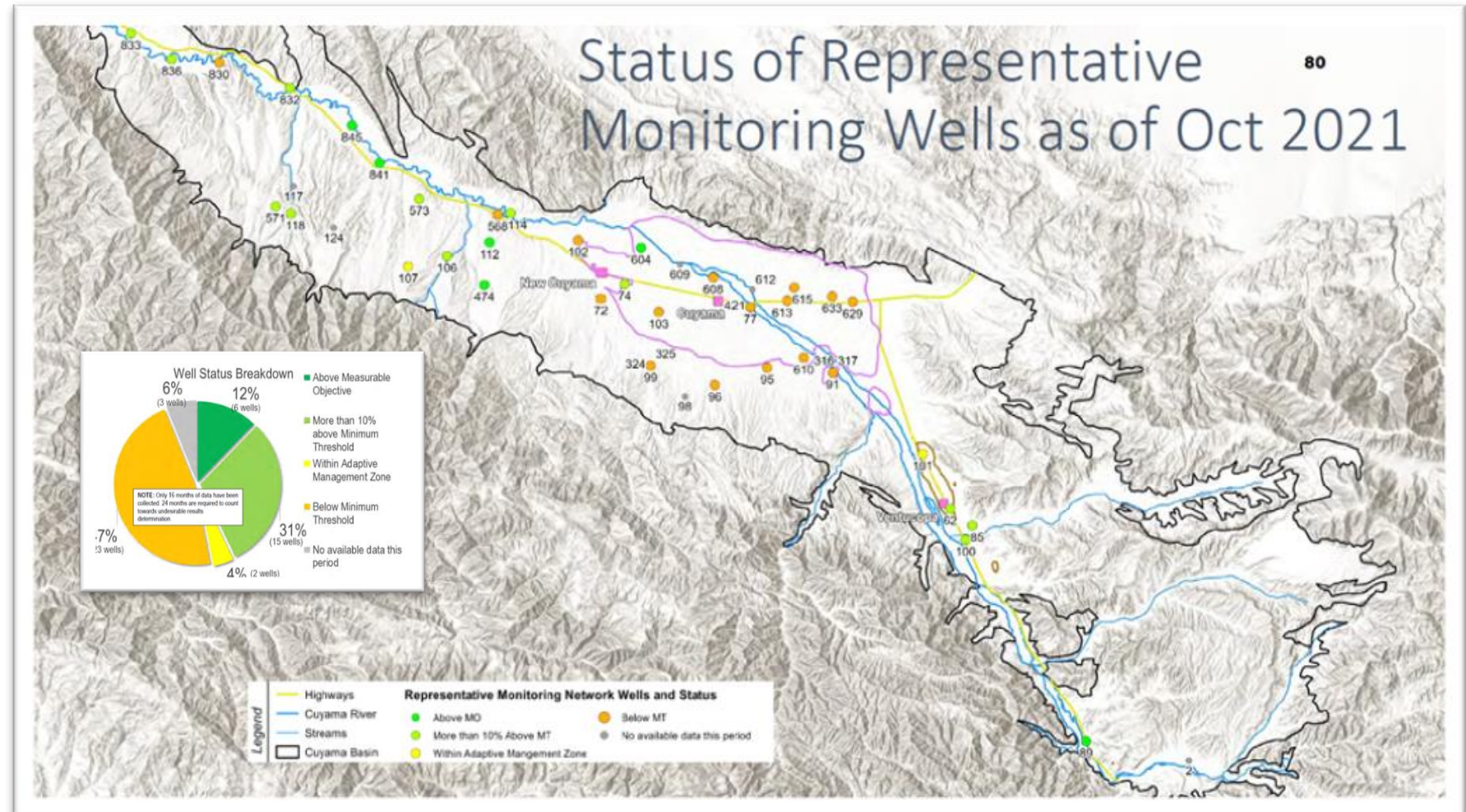
Table 1. Summary of Domestic and Production Wells Status as of October 2021

Threshold Region	Total number of wells	Domestic wells that may currently be dry	Total wells that may currently be dry	Percentage of wells that may currently be dry	Total wells that are almost dry
Northwestern	16	0	0	0%	2
Western	40	0	0	0%	0
Central	89	2	4	5%	4
Eastern	39	1	4	10%	2
Southeastern	66	1	1	2%	1
Whole Basin	250	4	9	4%	9

Update on Groundwater Conditions Report

Adaptive Management Ad-Hoc Committee met on 30 Nov 2021 and considered five potential actions:

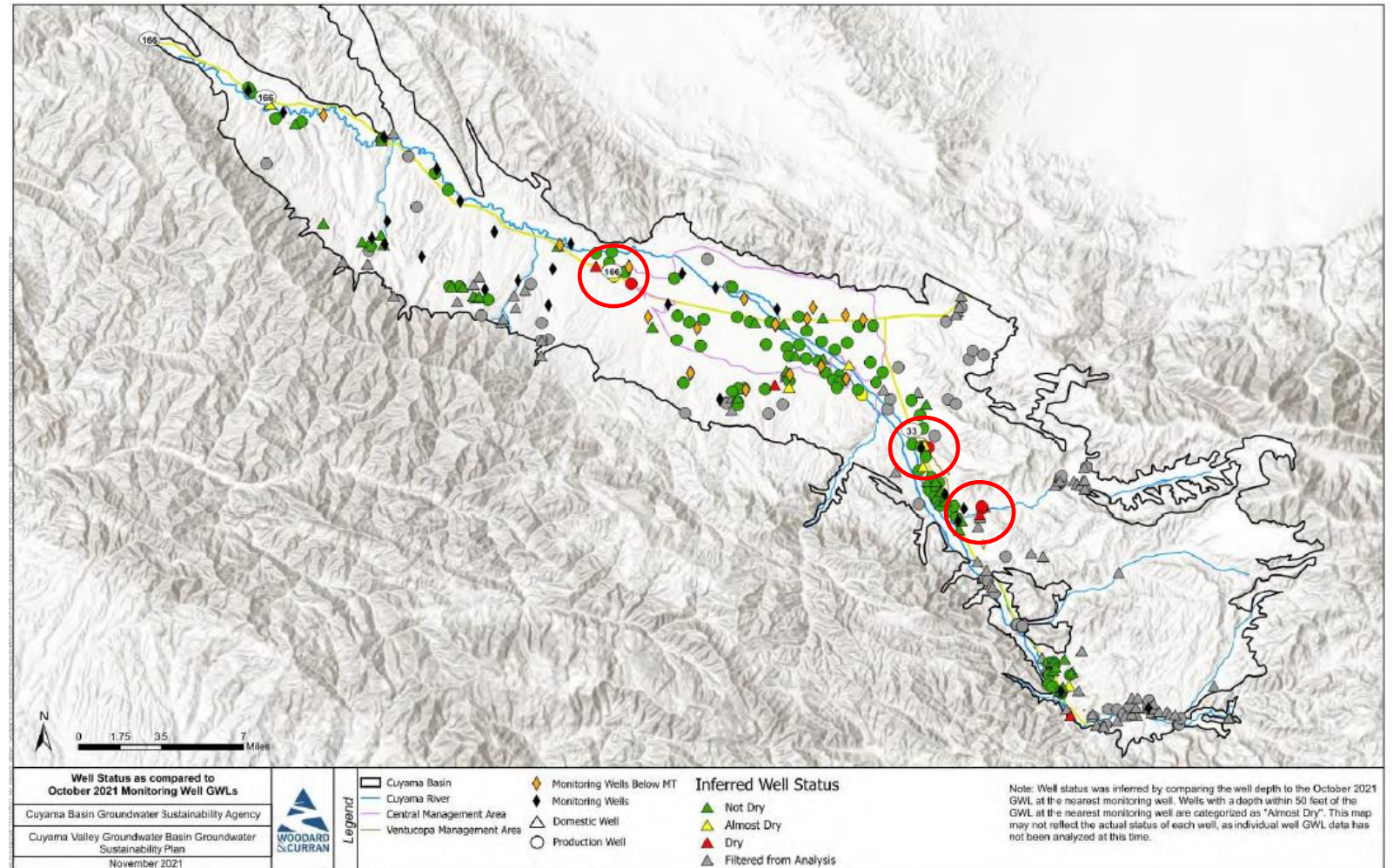
- 1) Restrict pumping in individual wells
- 2) Adjust the 30% over 2 years criteria
- 3) Adjust thresholds (may require plan amendment)
- 4) Accelerate glidepath
- 5) Perform additional data gathering and analysis



Update on Groundwater Conditions Report

Ad-Hoc Committee recommended a follow-up well impact analysis

- Telephone outreach by GSA staff to potentially-affected well owners
- Field verification of affected well status to be performed by Provost & Pritchard
- **Recommendations:**
 1. Solicitation and review of well-impact complaints *prior to outreach or fieldwork*
 2. Current evaluation is *not conservative* and may miss some significantly-impacted supply wells



SGM Grant Program Update

Final proposal solicitation package
released on 17 December 2021



- Round 1 is **\$150M** for GSAs in critically overdrafted (COD) basins
- Evenly split so **~\$7.6M available non-competitively to each COD basin**
- Funds are intended for project planning and implementation
- Each basin must complete a “**Spending Plan**” using a DWR template
- **Self-evaluation of potential projects** within the basin competitively using specific scoring criteria
- Provide a Spending Plan for a **minimum of \$10 million** for DWR to review and rank
- **Local 5% cost-share** required to receive full score, but **can include amounts already spent** before grant agreement date
- **Due at 12:00 Noon on Friday, 18 February 2022**

SGM Grant Program Update

GSA Staff developed a draft project list and budget of \$10.08M



- 26 components or tasks identified in Phase I
- Range \$15k - \$2.4M each
- GSA management included (\$450k/yr for 3 years)
- Additional wells, piezometers, and field studies
- Grant application list is an outline only, many additional details required in application
- “Self-evaluation” of application required

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Preliminary SGM COD Basin Grant Proposal Components

Component	Cost (\$k)	Notes
1 Grant Administration	\$300	Perform reporting to DWR required by Grant (assume \$100k per year)
2 Perform Monitoring and Monitoring Network Enhancements		
3 Install Piezometers for GW-SW and GDE Monitoring	\$210	Install 6 piezometers for GDE & GW/SW monitoring (assume \$35k each)
4 Install Dedicated Monitoring Wells	\$2,415	Install seven new multi-completion wells. (assume \$345k per well)
5 Data Management System maint & enhancements	\$75	\$10k per year annual maint.; \$45k in improvements (develop sustainability displays and annual report module)
6 Quarterly GW levels and annual GW quality (TDS) monitoring	\$240	Perform GSP-required monitoring (\$80k per year for 3 years)
7 Perform one-time nitrate and arsenic testing	\$25	Perform one-time testing at each water quality well
8 USGS stream gage maintenance	\$165	CBGSA fee to USGS for recently installed gauges (\$55k per year for 3 years)
9 Improve Understanding of Basin Water Use		
10 Perform updated land use survey	\$30	Develop satellite-based land use for 2021 (one time cost)
11 Perform river channel survey	\$45	Field survey of river channel cross-sections (assume 8 locations)
12 Enhance existing CIMIS station & implement new stations	\$80	Improve existing CIMIS station and install five new weather stations (\$12k per station and \$8k for coordination)
13 Project & Management Action Implementation		
14 CBWRM model update and re-calibration	\$210	Perform model update and re-calibration in advance of GSP 5-year update
15 Incorporate AEM data into model update	\$80	Incorporate data from DWR AEM survey as part of model update above
16 Pumping allocation implementation	\$200	Develop water allocation framework & set up data management process for pumping allocation action
17 Analysis of management action implementation options	\$240	Simulation of up to five water management action alternatives
18 Adaptive management support	\$150	Assume \$50k per year for coordination and technical support
19 Precipitation enhancement feasibility study	\$30	Feasibility analysis to assess this approved project in the GSP
20 Flood and Stormwater Capture - water rights analysis	\$55	Water availability and water rights analysis for stormwater capture
21 GSP Implementation, Outreach, and CBGSA Management		
22 CBGSA administration and legal support	\$1,350	Overall GSA management, coordination and legal services (\$450k per year for 3 years)
23 Administration of extraction fee	\$75	Tracking of pumping amounts and ongoing administration costs (assume \$25k per year)
24 Stakeholder & board engagement	\$345	Support for SAC/Board, public workshops, ad-hocs & tech forum (\$110k in first 2 years; \$125k in year of GSP update)
25 General outreach support	\$70	General outreach support & CBGSA website maintenance (\$20k in first 2 years; \$30k in year of GSP update)
26 Outreach - domestic well owners	\$15	Targeted outreach to domestic well owners, including public workshop
27 Program management	\$160	Oversight, coordination and tracking of GSP implementation tasks (\$50k in first 2 years; \$60k in year of GSP update)
28 Prepare annual reports	\$135	Prepare annual report required by DWR (assume \$45k per year for 3 years)
29 Modify GSP in response to DWR determination	\$100	Assume \$100k for coordination and technical support, following receipt of DWR letter in Jan 2021
30 5-year GSP update	\$800	Develop updated version of GSP for submittal to DWR in Jan 2025
31 Subtotal	\$7,600	
32 Phase 2 Tasks		
33 Flood and Stormwater Capture - detailed feasibility study	\$1,100	Flood and stormwater capture detailed feasibility study
34 Install Dedicated Monitoring Wells in lower priority areas	\$1,380	Install 4 new multi-completion wells (in addition to 7 budgeted above). (assume \$345k per well)
35 Total	\$10,080	

SGM Grant Program Update

Self-Evaluation of Application



- Explanation of how application meets criteria for each task, including:
- Why proposed project(s) were ranked over others in GSP
- Quantification of benefits; description of tasks & subtasks
- Outreach and engagement; underrepresented communities, DACs, SDACs; human right to water
- Small water system and domestic well impacts
- Regional and Project-specific maps
- Budget with 5% cost share

Section Name	Q#	Questions	Possible Points	Scoring Guidance
General	1	Was a description of the proposed Project or Component provided? Did it explain why this Project or Component was chosen over all others identified in the Plan in terms of benefits provided, communities served, measurable objectives, minimum thresholds, plan implementation timeline, and feasibility? If you feel a question component does not apply to your proposed project, please explain why it is not applicable. (Example "Measurable objective not applicable because project is planning only".) • <i>No funds will be awarded without clear justification for the proposed tasks/subtasks.</i>	4	• 4 – Fully addressed • 3 – Mostly addressed, with minor details not included or unclear • 2 – Mostly addressed, with significant details missing or unclear • 1 – Marginally addressed • 0 – Not addressed
General Implementation Only	2- Imp	Does the Project or Component provide a description of quantifiable benefits? Was an explanation of the benefits that are expected to be realized from the Project or Component provided, along with how those benefits will be evaluated and quantified? • <i>To obtain full points, 3 or more quantifiable benefits must be identified and fully supported with backup documentation.</i>	4	• 4- At least three quantifiable benefits with explanations and supporting documents. • 3 – Two quantifiable benefits with explanations and supporting documents. • 2 – Two quantifiable benefits lacking explanations and supporting documents. • 1 – One quantifiable benefit with explanations and supporting documents. • 0 – Benefits provided but are not explained or quantified.
General Planning Only	2- Plan	Does the Project Description describe a well-coordinated proposal including a GSP(s) that encompasses the entire basin or describes why a portion of the basin is not covered in the proposal? Does it describe how well the multiple GSA(s) surrounding and within the basin are working together?	4	• 4 – Fully addressed • 3 – Mostly addressed, with minor details not included or unclear • 2 – Mostly addressed, with significant details missing or unclear • 1 – Marginally addressed • 0 – Not addressed
General	3	Does the Project or Component fully describe their plan for outreach and engaging interested parties (e.g., residents, local leaders, non-profit representing Underrepresented Communities, etc.) located within Underrepresented Communities? Does the outreach and engagement include interested parties during all phases of the Project or Component (e.g., planning, design, and implementation)? Can interested parties provide input and be involved in the decision-making processes? • <i>To obtain full points, a minimum of three comment letters are required from the Underrepresented Communities.</i>	3	• 3 – Interested parties included on decision-making committees and fully engaged/involved in all aspects of the Project or Component • 2 – Interested parties engaged/involved, but not included on decision-making committees • 1 – Marginally addressed • 0 – Not addressed
General	4	Was there a regional and Project map(s) depicting the site location, current conditions, and benefitting areas? • <i>The information should be clear and easy to read. If not, the point will not be given.</i>	2	• 2 – Provided and all necessary information provided • 1 – Provided but missing some information • 0 – Not provided

SGM Grant Program Update

DRAFT

Preliminary SGM COD Basin Grant Proposal Components

Sustainable Groundwater Management (SGM) GRANT PROGRAM



Component	Cost (\$k)	Notes
1 Grant Administration	\$300	Perform reporting to DWR required by Grant (assume \$100k per year)
2 Perform Monitoring and Monitoring Network Enhancements		
3 Install Piezometers for GW-SW and GDE Monitoring	\$210	Install 6 piezometers for GDE & GW/SW monitoring (assume \$35k each)
4 Install Dedicated Monitoring Wells	\$2,415	Install seven new multi-completion wells. (assume \$345k per well)
5 Data Management System maint & enhancements	\$75	\$10k per year annual maint.; \$45k in improvements (develop sustainability displays and annual report module)
6 Quarterly GW levels and annual GW quality (TDS) monitoring	\$240	Perform GSP-required monitoring (\$80k per year for 3 years)
7 Perform one-time nitrate and arsenic testing	\$25	Perform one-time testing at each water quality well
8 USGS stream gage maintenance	\$165	CBGSA fee to USGS for recently installed gauges (\$55k per year for 3 years)
9 Improve Understanding of Basin Water Use		
10 Perform updated land use survey	\$30	Develop satellite-based land use for model
11 Perform river channel survey	\$45	Field survey of river channel cross-sections
12 Enhance existing CIMIS station & implement new stations	\$80	Improve existing CIMIS station and add new stations
13 Develop GSP		
14 Develop GSP	\$210	Perform model update and re-calibration in advance of GSP 5-year update
15 Develop GSP	\$80	Incorporate data from DWR AEM survey as part of model update above
16 Develop GSP	\$200	Develop water allocation framework & set up data management process for pumping allocation action
17 Develop GSP	\$240	Simulation of up to five water management action alternatives
18 Develop GSP	\$150	Assume \$50k per year for coordination and technical support
19 Develop GSP	\$30	Feasibility analysis to assess this approved project in the GSP
20 Flood and Stormwater Capture - water rights analysis	\$55	Water availability and water rights analysis for stormwater capture
21 GSP Implementation, Outreach, and CBGSA Management		
22 CBGSA administration and legal support	\$1,350	Overall GSA management, coordination and legal services (\$450k per year for 3 years)
23 Administration of extraction fee	\$75	Tracking of pumping amounts and ongoing administration costs (assume \$25k per year)
24 Stakeholder & board engagement	\$345	Support for SAC/Board, public workshops, ad-hocs & tech forum (\$110k in first 2 years; \$125k in year of GSP update)
25 General outreach support	\$70	General outreach support & CBGSA website maintenance (\$20k in first 2 years; \$30k in year of GSP update)
26 Outreach - domestic well owners	\$15	Targeted outreach to domestic well owners, including public workshop
27 Program management	\$160	Oversight, coordination and tracking of GSP implementation tasks (\$50k in first 2 years; \$60k in year of GSP update)
28 Prepare annual reports	\$135	Prepare annual report required by DWR (assume \$45k per year for 3 years)
29 Modify GSP in response to DWR determination	\$100	Assume \$100k for coordination and technical support, following receipt of DWR letter in Jan 2021
30 5-year GSP update	\$800	Develop updated version of GSP for submittal to DWR in Jan 2025
31 Subtotal	\$7,600	
32 Phase 2 Tasks		
33 Flood and Stormwater Capture - detailed feasibility study	\$1,100	Flood and stormwater capture detailed feasibility study
34 Install Dedicated Monitoring Wells in lower priority areas	\$1,380	Install 4 new multi-completion wells (in addition to 7 budgeted above). (assume \$345k per well)
35 Total	\$10,080	

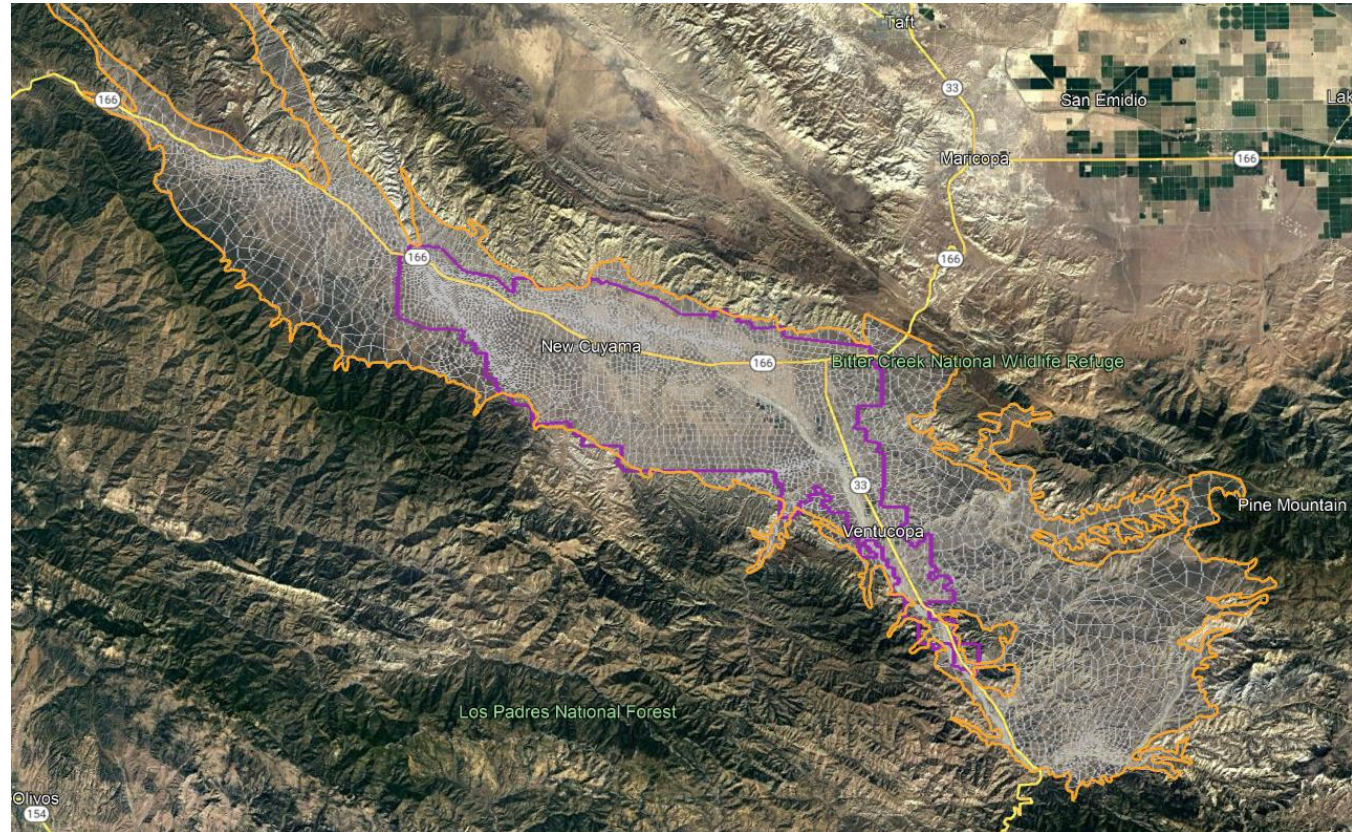
Outreach to well owners is smallest budget item; may need augmentation (reference previous slides)

Water rights analysis will be key for any enhanced recharge projects

Update on Groundwater Model

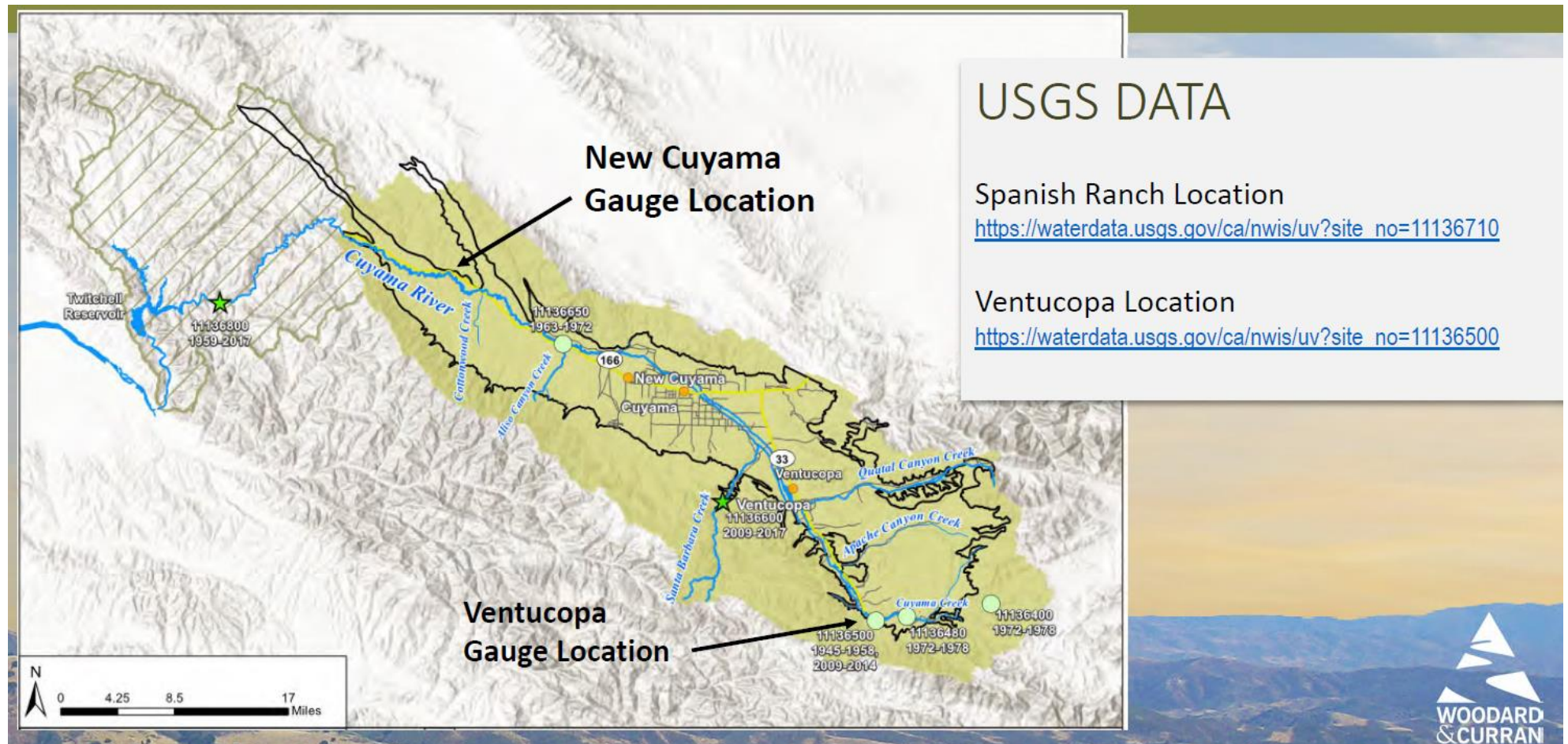
Cuyama Basin Water Resources Model (CBWRM) will be updated

- Historical period of model will be extended through September 2021; previous historical period was 1998 - 2020
- Updated data obtained for:
 - Groundwater elevations
 - Land use (updates provided by Bolthouse & Grimmway; other major landowners confirmed no changes since 2020)
 - Precipitation
 - Evapotranspiration
- Allows a check on model performance through the historical period, by comparing model results to observed values
- Model recalibration is a separate process and will come later



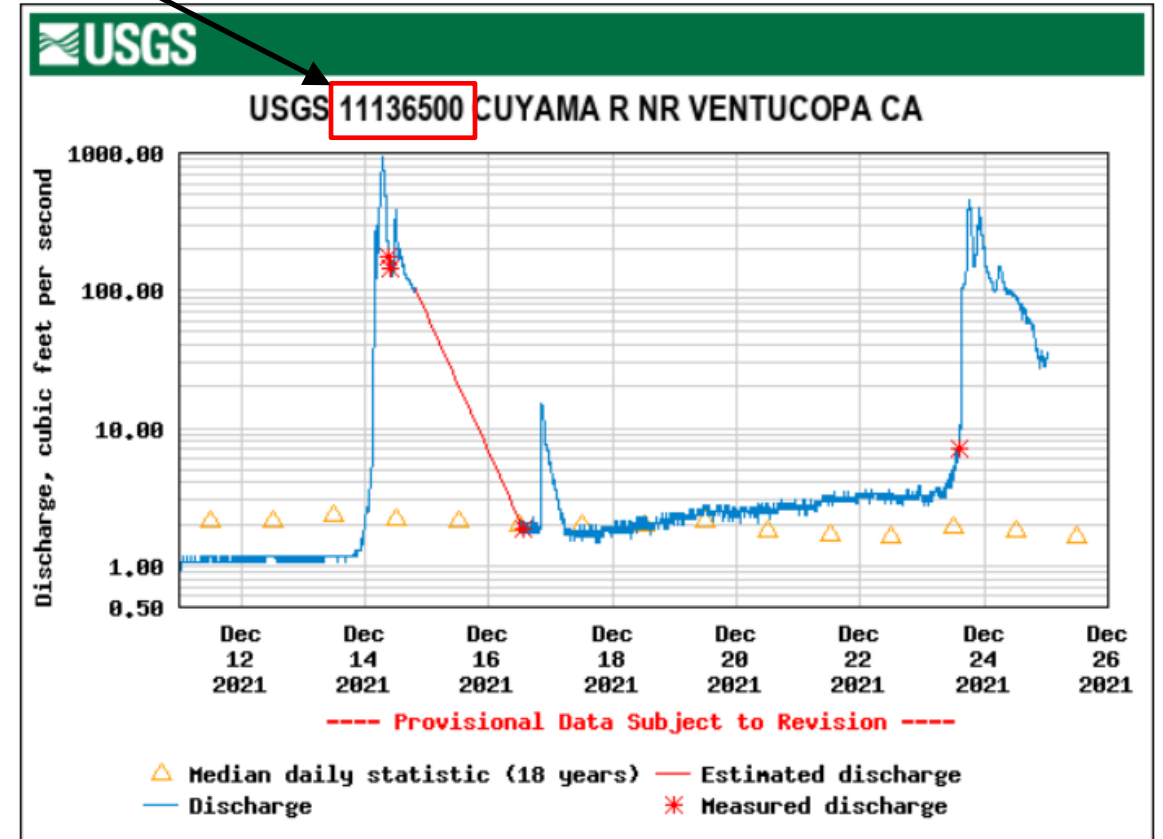
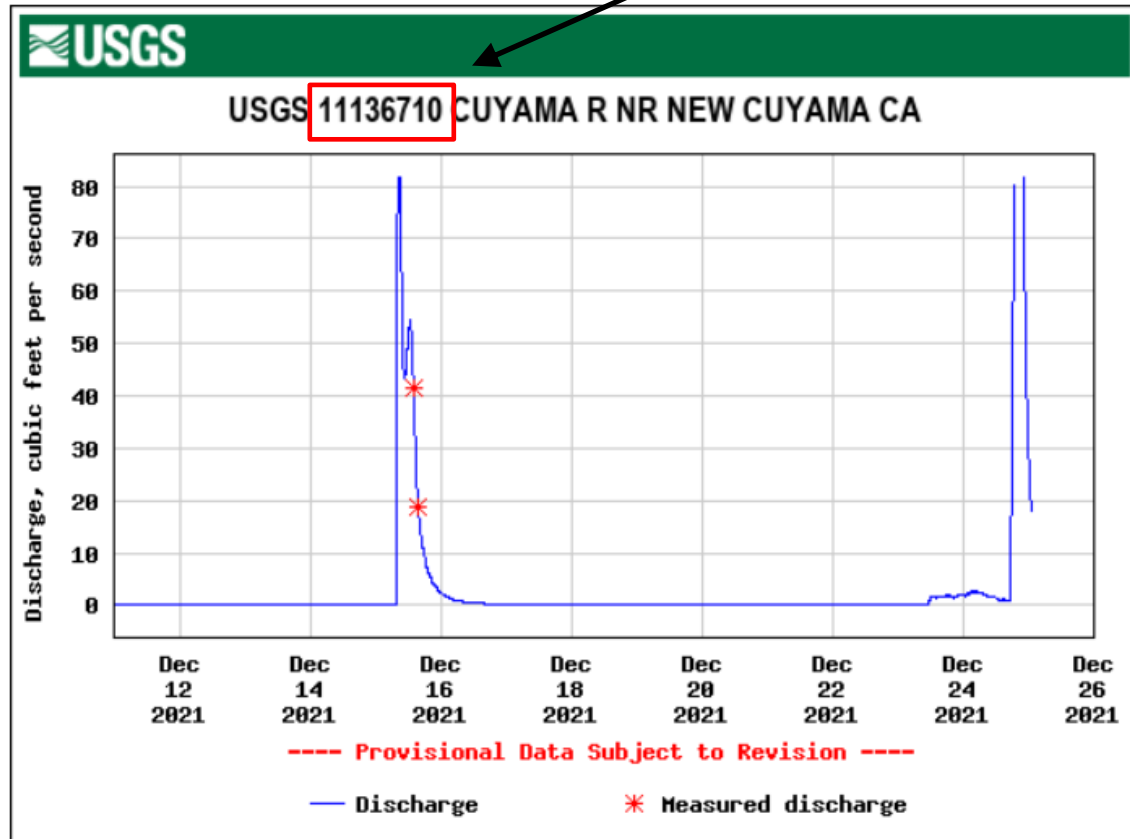
Stream Gauging Update

- Two new stream gauge locations are producing data
- Spanish Ranch (near Russell Fault)
- Ventucopa



Stream Gauging Update

- Real-time data available online (by station number) at <https://waterdata.usgs.gov>



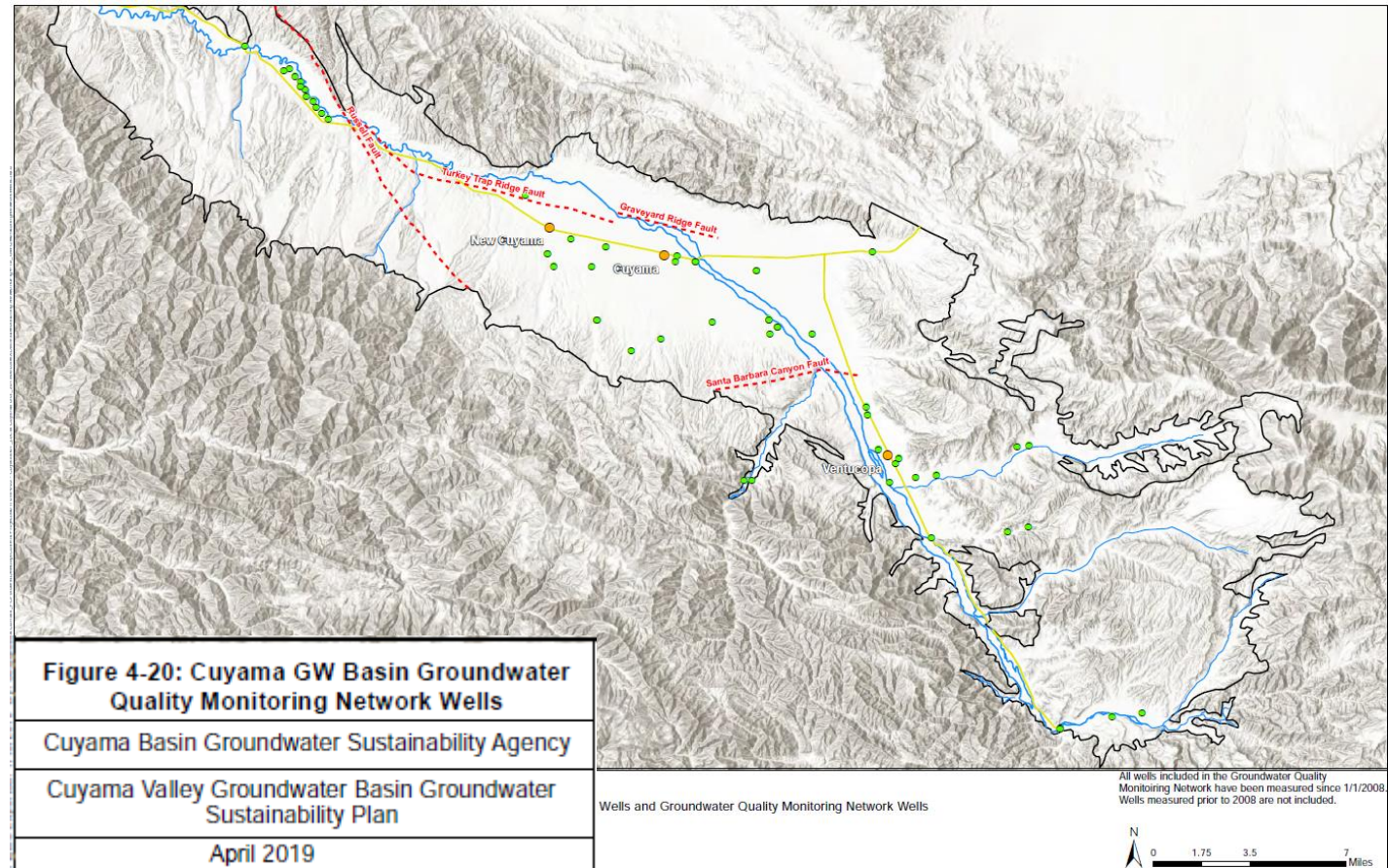
Groundwater Monitoring Update

Water level monitoring (quarterly):

- January / April / July / November
- Staff working on getting datalogging pressure transducers in new TSS wells
- Transducer data will improve understanding of groundwater fluctuations & trends

Water quality monitoring baseline event

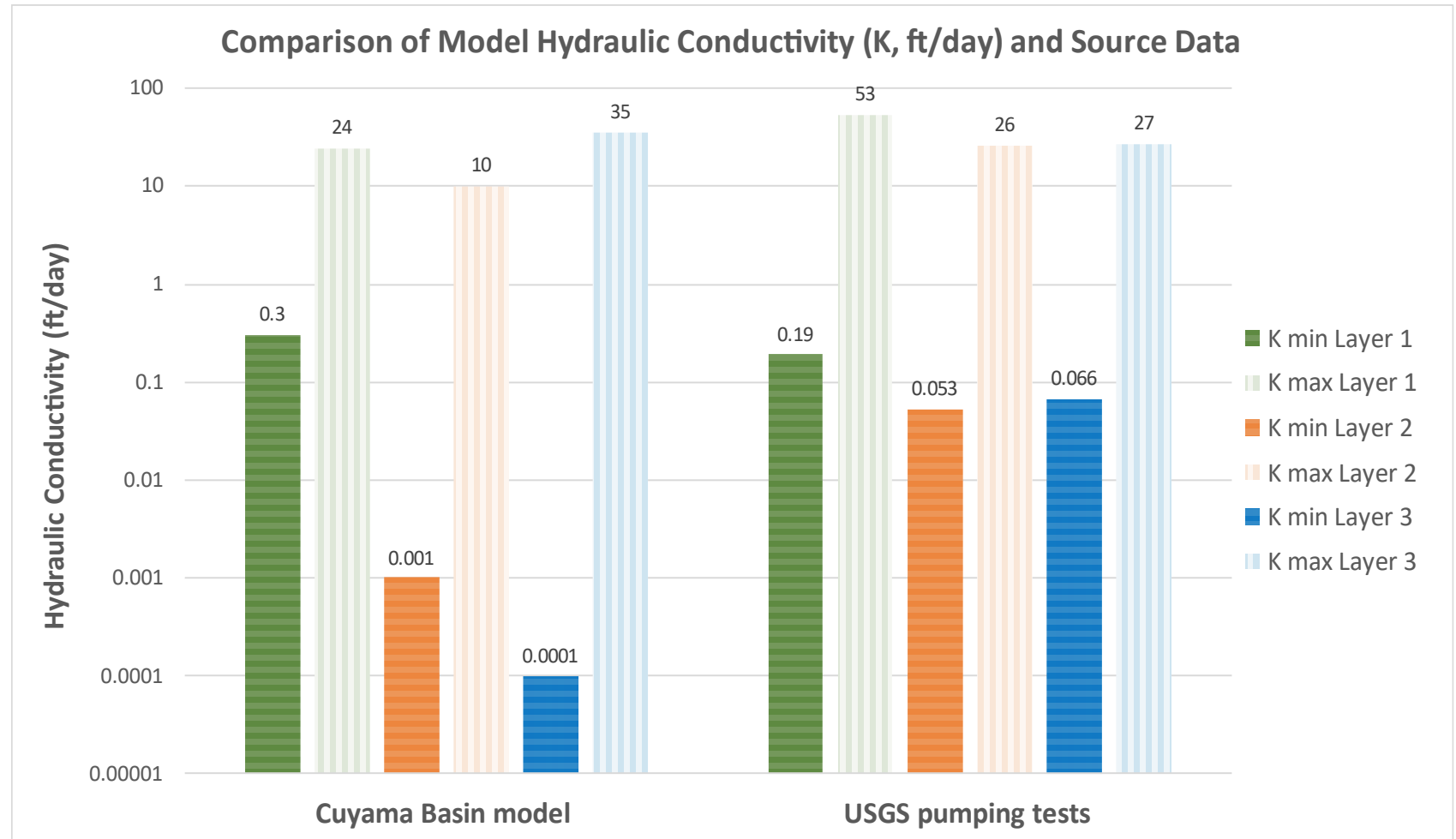
- Currently to be performed once, proposed for July 2022
- Establish a “snapshot” for later comparison as needed
- Constituents:
 - Specific Conductance (electrical conductivity or “EC”)
 - Nitrate
 - Arsenic
 - Total Dissolved Solids (TDS)



Aquifer (Pumping) Test Update

Model parameters and field data

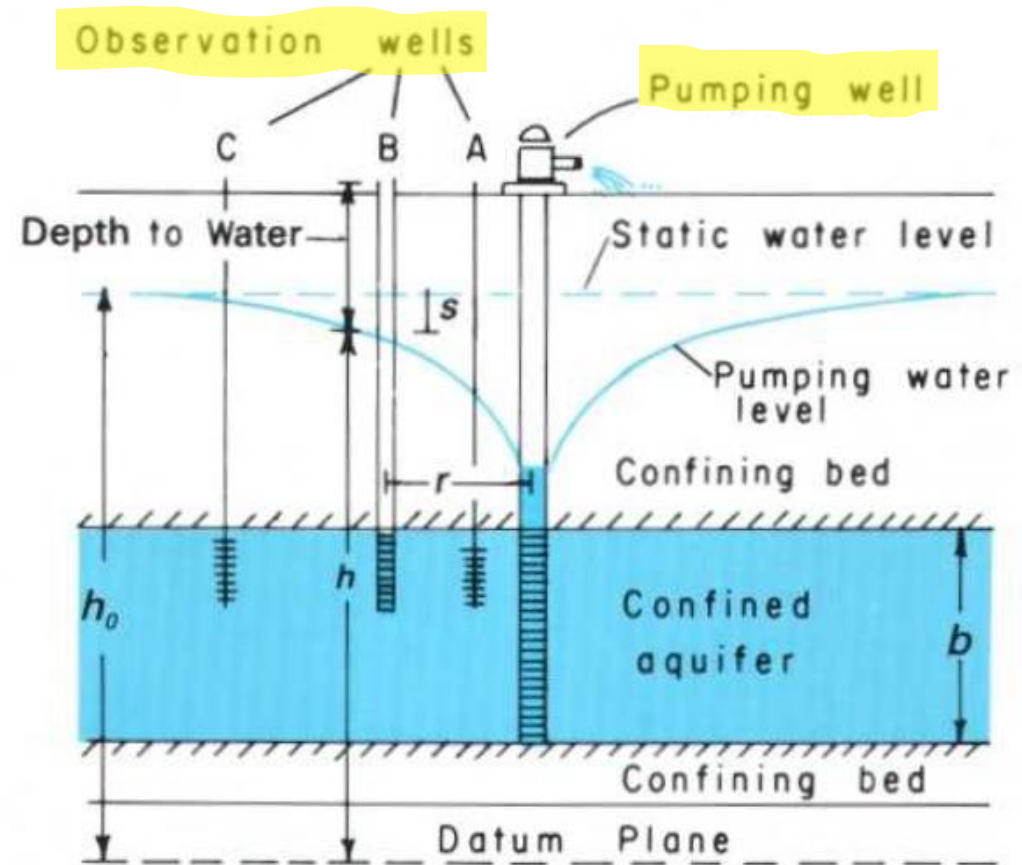
- Model's aquifer properties (*hydraulic conductivity* and *storage coefficient*) control how the model simulates groundwater movement and storage in the aquifer
- Model properties are currently estimated from existing data
- Data can include analytical results from pumping tests, slug tests, and published values based on grain-size estimates or geophysical investigations



Aquifer (Pumping) Test Update

Pumping Tests

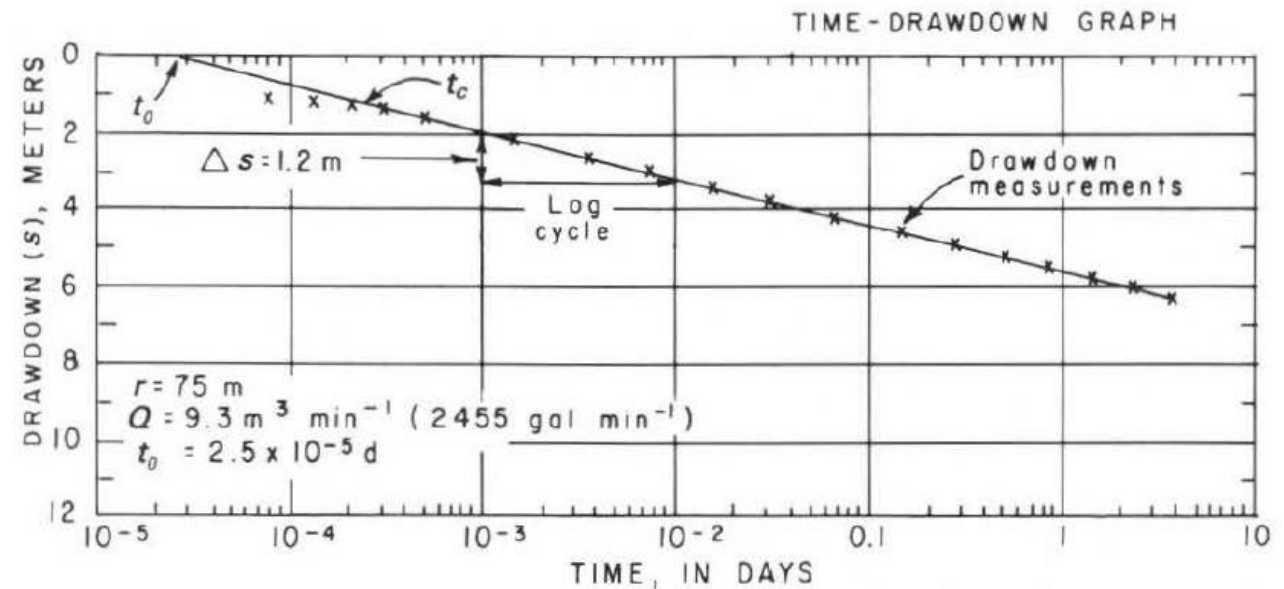
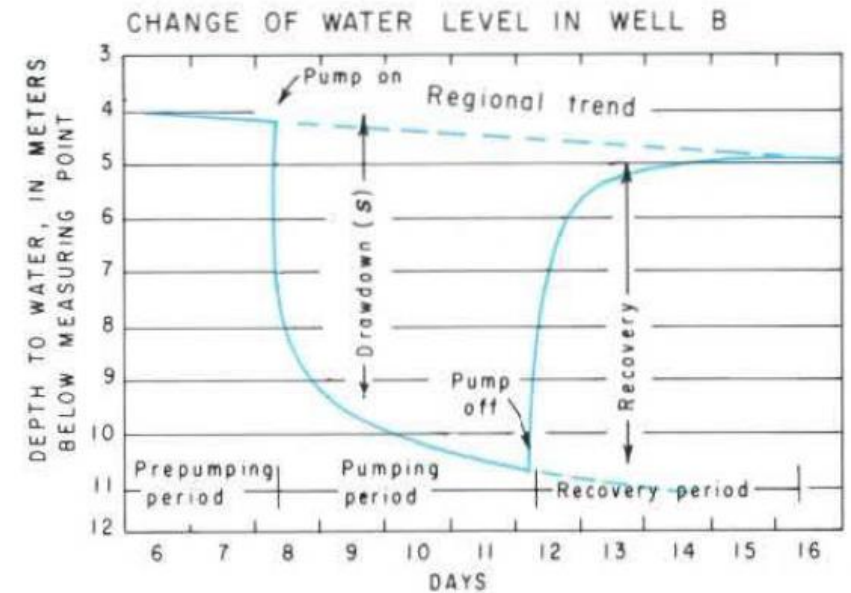
- Diagram represents a schematic arrangement of one *pumped well* and three nearby *observation wells*
- Ideally observation wells should be:
 - a) The same depth and screened intervals as the pumped well
 - b) Spaced away from the pumped well at a logarithmically-increasing distance
 - c) Located along two orthogonal lines from the pumped well (oriented 90°) from each other but parallel to the axis of the basin or other known *anisotropy*
- In reality, it's never that simple



Aquifer (Pumping) Test Update

Pumping Tests

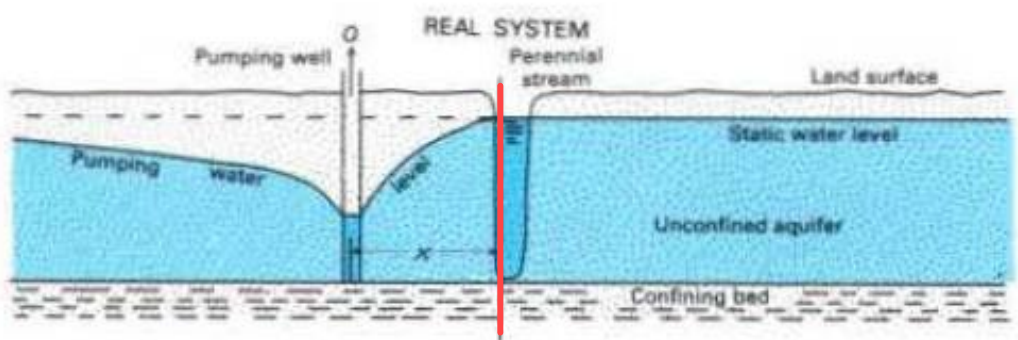
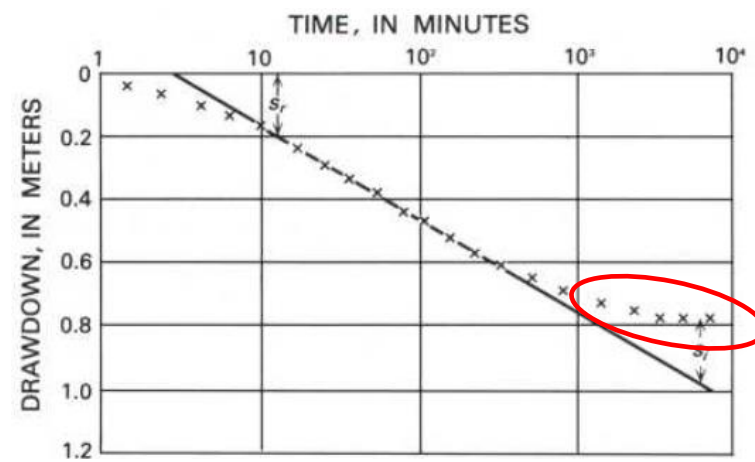
- Basic idea is to analyze how water levels in wells change (*drawdown*) when they are pumped at a fixed rate
- Pump one well at a constant rate for several days
- Measure water level changes in the *pumped well* and other nearby *observation wells*
- Fit theoretical equations to the drawdown data
- Obtain values which are used to calculate aquifer parameters
- Analysis can be very complex - different theoretical curves can be used based on different conditions and assumptions
- Rainfall and infiltration during a pumping test can obscure or even completely invalidate the data



Aquifer (Pumping) Test Update

Pumping tests can provide useful information on hydrogeologic *boundary conditions*, which affect water levels and flow

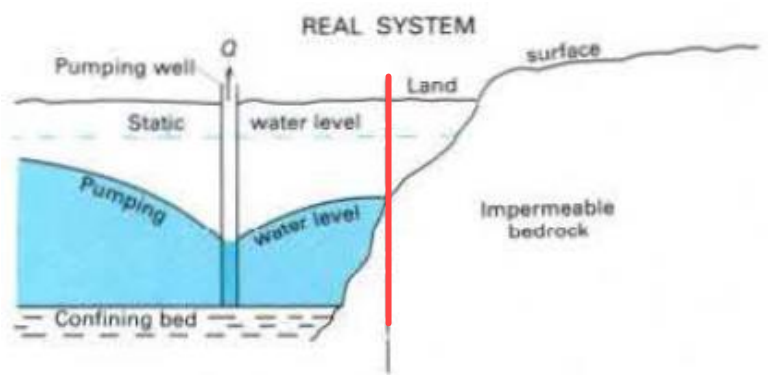
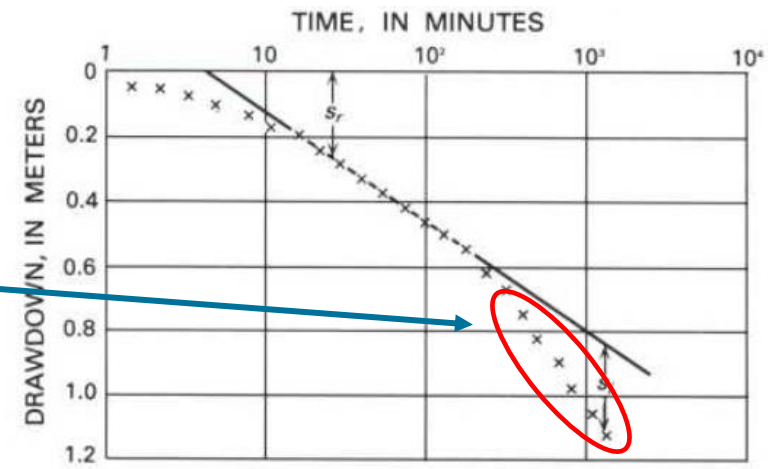
Positive (constant-head) boundary



Stream is source of water to the aquifer

Deviation from theoretical behavior can provide information on aquifer boundaries

Negative (no-flow) boundary

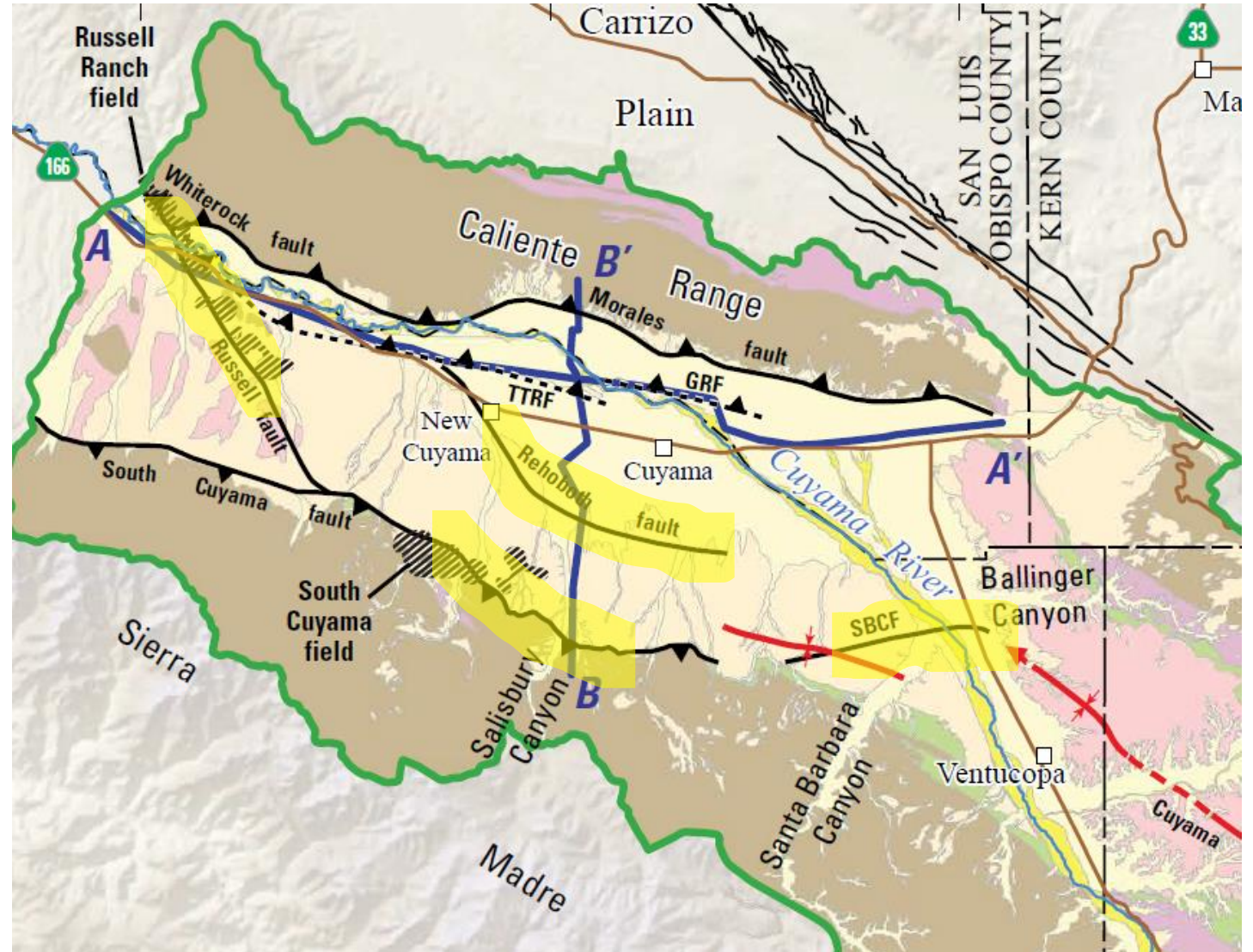


Change in geology impeding groundwater flow (can include faults)

Aquifer (Pumping) Test Update

Pumping Tests

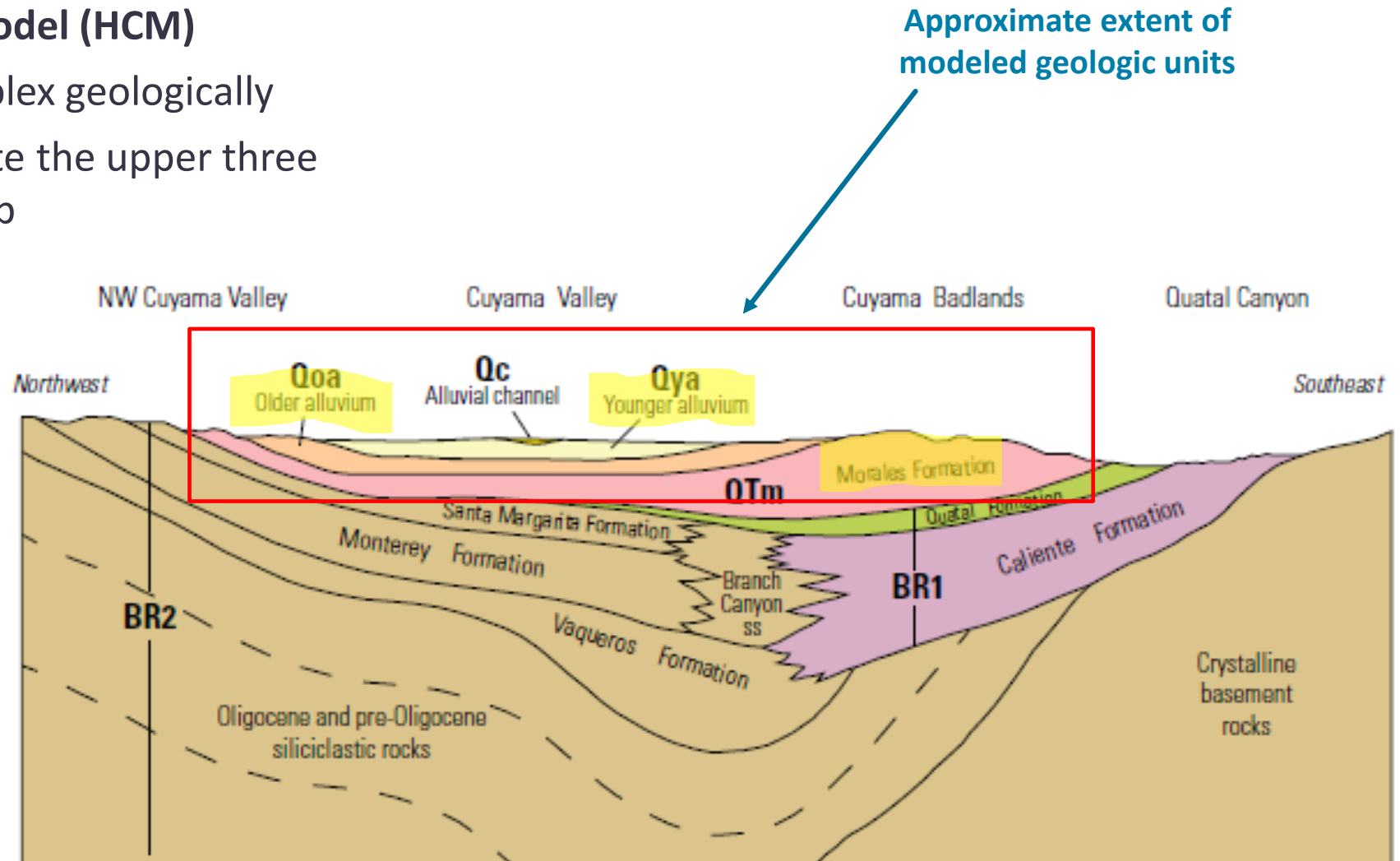
- Scheduled for next month
- Will provide field data to help clarify:
 - a) Transmissivity, hydraulic conductivity, and storage properties of the different layers within the basin aquifer
 - b) Effect of faults on movement of groundwater in the different aquifer units
- *Russell, South Cuyama, Rehoboth, and Santa Barbara Canyon Faults* may exert significant control on groundwater flow in the Basin



Aquifer (Pumping) Test Update

Hydrogeologic Conceptual Model (HCM)

- Cuyama Basin is very complex geologically
- Three model layers simulate the upper three geologic units that make up the Basin aquifer
- Layer 1:
Younger Alluvium
- Layer 2:
Older Alluvium
- Layer 3:
Morales Formation



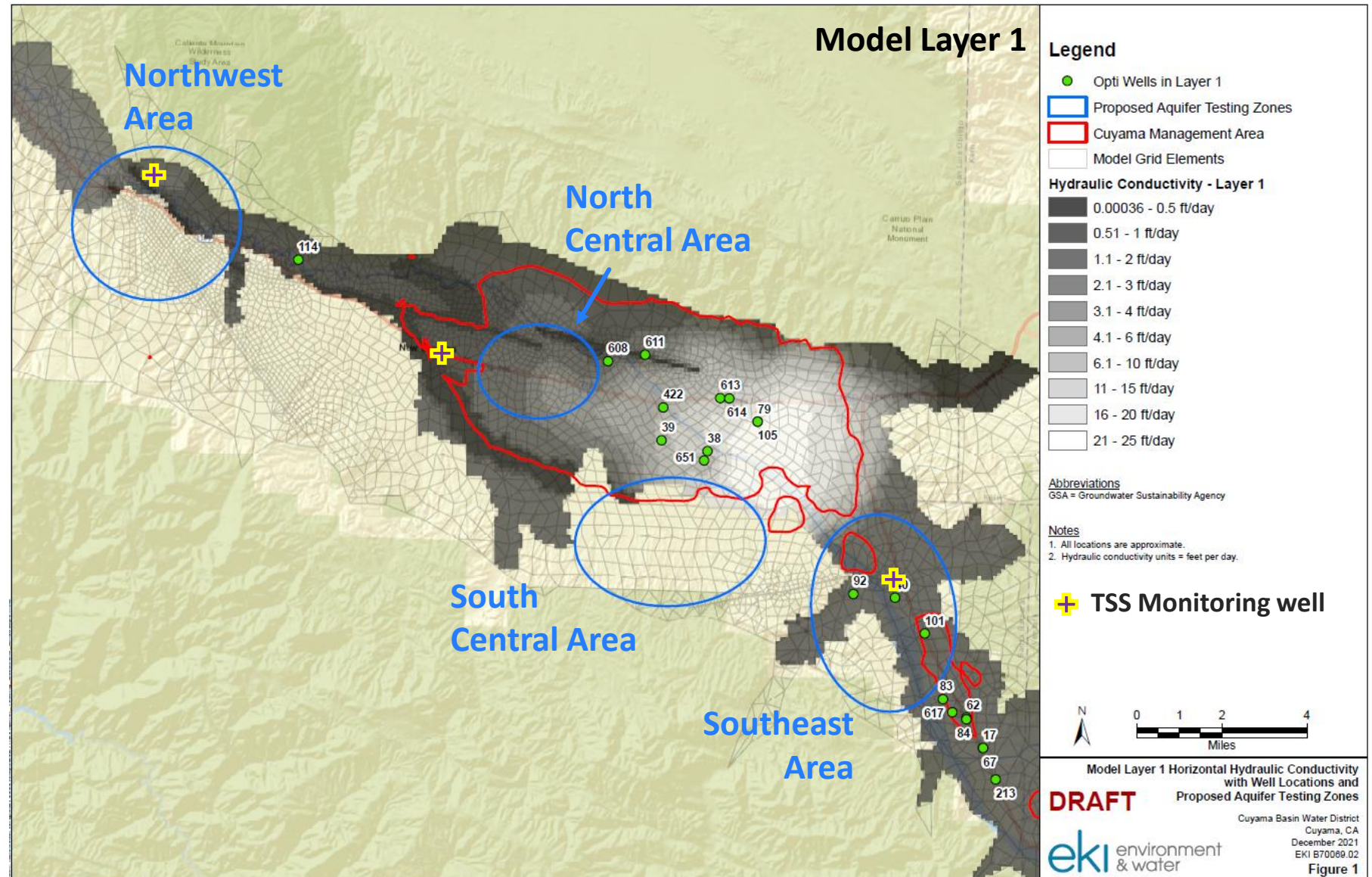
DIAGRAMMATIC, NOT TO SCALE

Adapted from Dibblee (1995)

Aquifer (Pumping) Test Update

Pumping test areas

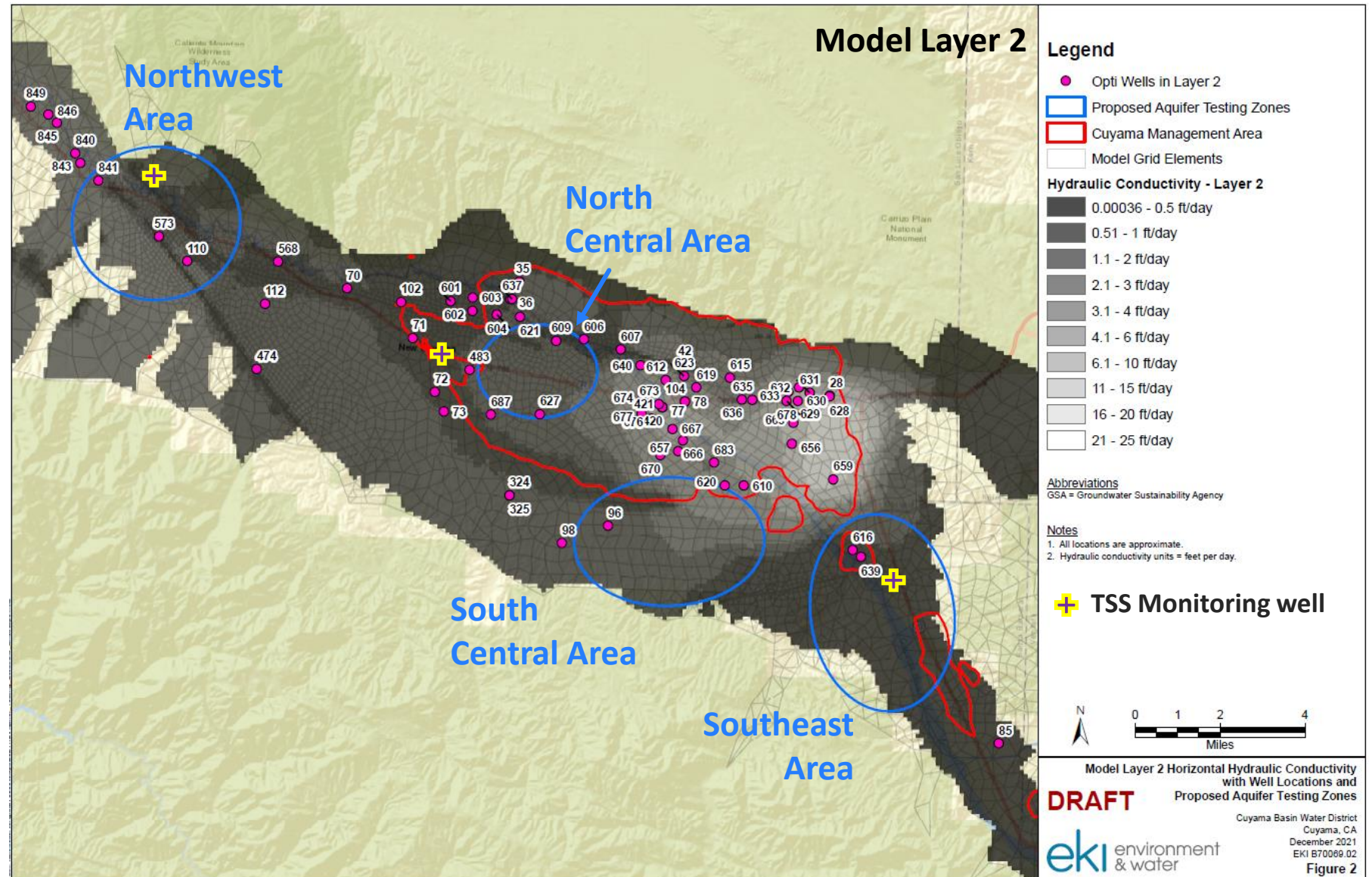
- GSA Staff identified data gap areas
- Staff is planning pumping tests in each area
- New clustered TSS monitoring wells will be used
- Other existing wells will be used as pumping and also as observation wells
- Some test areas have few or no wells



Aquifer (Pumping) Test Update

Pumping tests

- Modeled hydraulic conductivity values shown in greyscales
- Dark areas are low-K zones as modeled, mostly follow faults and probable faults
- TSS wells generally are near faults
- Pumping tests may shed light on whether faults as modeled should be changed



Aquifer (Pumping) Test Update

Pumping tests

- Modeled hydraulic conductivity values may be artificially low in Layer 3
- This may unrealistically increase drawdown in Layer 2, where most wells are screened
- Pumping test results may help resolve the most realistic K range to use in Layer 3

