Cosumnes Groundwater Authority
Meeting of the Board of Directors
Agenda

When: 9:00 am – 12:00 pm, Monday, March 20, 2023

Where: Galt Police Department Community Room
455 Industrial Drive
Galt, CA 95632

Zoom: Via Zoom: https://us02web.zoom.us/j/87210827748
Meeting ID: 872 1082 7748
Call in Number: 1-669-444-9171

PUBLIC COMMENT – Any member of the public may address the Board concerning any matter on the agenda before or during its consideration of the matter. Public comment is limited to three (3) minutes per person. For good cause, the Board Chair may waive these limitations.

ACCESSIBILITY - If you have a disability and require a reasonable accommodation to fully participate in this event, please contact Austin Miller (CGA Secretary) before the day of the meeting via email [info@CosumnesGroundwater.org] or telephone [916-526-5447] to discuss your accessibility needs.

Call to Order

1. Introductions *(5 minutes)*
    a. Three-month look ahead & agenda overview
    b. Determine if Quorum is Present

Consent Calendar

2. Consent Items *(5 minutes)*
    a. Agenda – March 20, 2023
    b. Minutes – February 17, 2023
    c. Financial Report – March 2023

Regular Business Action Items

3. CGA Board Planning Process *(60 minutes)*

4. Funding Study Development Process *(20 minutes)*

5. Letter of Support, Sloughhouse RCD's DOC Multibenefit Land Repurposing Program Grant Application *(10 minutes)*

Informational Items *(60 minutes)*

6. Water Year 2022 Annual Report
7. Monitoring Network Updates
8. Outreach and Engagement Team Update
9. CGA Counsel Report
10. CGA Staff Report
11. DWR North Central Regional Office Update
12. Director/Member GSA Comments
13. Upcoming Agenda Items

Public Comment on Non-Agenda Items (*Limit of 3 minutes per speaker)*

14. Public Comment: *Comment will be received for items not on the agenda, but within the jurisdiction of the agency. The Board will hear comment but may not act on issues raised on non-agenda items*.

Adjourn Meeting

Cosumnes Groundwater Authority
Board of Directors Meeting

Meeting Minutes
February 17, 2022 - 9:00am

Call to Order: 9:05 am

1) Introductions / Determine if Quorum is Present
   Directors in Attendance: Gary Thomas, Rick Whole, Jay Vandenburg, John Mulrooney, Mark Stretars, Chris Hunley, Herb Garms

Action Items

2) Consent Items
   1.1. Agenda – February 17, 2023
   1.2. Minutes – January 23, 2022
   1.3. Consideration of Findings Related to Remote Meetings Pursuant to AB 361
   1.4. Financial Report – February 2022

   Director Thomas moved to approve all consent items.
   Director Garms seconded the motion.
   The motion passed with all in favor.

3) Member Contributions
   Director Thomas moved to approve the Fiscal Year 2023-2024 Member Contributions agreement.
   Director Garms seconded the motion.
   The motion passed with all in favor.

4) Outreach and Engagement
   The Board reviewed posters for the upcoming public workshops

Information Items

5) CGA Counsel Report
   Counsel provided a verbal update on a variety of topics including Form 700, ethics training, and updated Brown Act requirements. Rebecca Smith has offered to provide an in person ethics training for the CGA and GSA Boards.

6) CGA Staff Report
   CGA Staff provided an update on other activities not covered on the agenda.

7) DWR North Central Regional Office Update
   DWR Staff provided a monthly update on DWR activities

8) Upcoming Agenda Items
   None were identified.

9) Director Comments

Directors provide verbal updates on GSA activities.

10) Public Comment

Adjourn Meeting

Chair Hunley adjourned the meeting by consensus at 11:58 pm

Cosumnes Groundwater Authority

Balance Sheet

As of March 16, 2023

	TOTAL
ASSETS	
Current Assets	
Bank Accounts	
Public Checking (4246) - 1	85,134.22
Total Bank Accounts	**$85,134.22**
Accounts Receivable	
Accounts Receivable (A/R)	285,644.15
Total Accounts Receivable	**$285,644.15**
Total Current Assets	**$370,778.37**
TOTAL ASSETS	**$370,778.37**
LIABILITIES AND EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	**$45,938.01**
Total Current Liabilities	**$45,938.01**
Total Liabilities	**$45,938.01**
Equity	**$324,840.36**
TOTAL LIABILITIES AND EQUITY	**$370,778.37**

Cosumnes Groundwater Authority

Accounts Payable

As of March 16, 2023

VENDOR	MEMO/DESCRIPTION	AMOUNT	DATE
1 - 30 days past due			
EKI Environment & Water	Professional Services - Oct 29, 2022 to Nov 25, 2022	20,241.96	12/20/2022
Total for 1 - 30 days past due		**$20,241.96**	
Current			
Austin Miller	Wilton Community Center Rental	122.50	02/22/2023
Stephen Julian	February Workshop Materials	39.74	02/22/2023
Downey Brand	Legal Services through January 31 2023	6,644.00	02/22/2023
SSCAWA	SSCAWA Staff Services - February 2023	6,380.00	03/01/2023
Sloughhouse Resource Conservation District	SRCD Staff Services - February 2023	6,400.00	03/01/2023
Austin Miller	Farmer Survey Incentives	40.00	03/15/2023
Austin Miller	Quickbooks (Jan-Feb)	85.81	03/15/2023
Downey Brand	Legal Services through February 28 2023	5,984.00	03/15/2023
Total for Current		**$25,696.05**	
TOTAL		**$45,938.01**	

Cosumnes Groundwater Authority

Budget vs. Actuals: CGA 21/22 Budget - FY22 P&L

July 2021 - June 2022

	TOTAL		
	ACTUAL	BUDGET	OVER BUDGET
Income			
4100 Member Contributions	425,729.87	444,185.00	-18,455.13
Total Income	**$425,729.87**	**$444,185.00**	**$ -18,455.13**
GROSS PROFIT	**$425,729.87**	**$444,185.00**	**$ -18,455.13**
Expenses			
5000 Staff Personnel Expenses (Contract)			
Personnel - SRCD	44,800.00	45,000.00	-200.00
Personnel - SSCAWA	44,220.00	45,000.00	-780.00
Total 5000 Staff Personnel Expenses (Contract)	**89,020.00**	**90,000.00**	**-980.00**
5010 Facilitation Support / Establish Organization		10,000.00	-10,000.00
5100 Legal Services	17,321.50	30,000.00	-12,678.50
5200 Public Outreach		20,000.00	-20,000.00
5400 Annual Report Technical Support	47,919.04	48,000.00	-80.96
5410 Data Management System		10,000.00	-10,000.00
5430 Monitoring	5,367.47	30,000.00	-24,632.53
5500 Miscellaneous. Expenses	477.10	3,000.00	-2,522.90
5600 Financial Audit and Accounting Services		15,000.00	-15,000.00
5640 Funding Exploration		35,000.00	-35,000.00
5650 Funding Study Development		100,000.00	-100,000.00
5700 Data Gaps		25,000.00	-25,000.00
5750 Projects and Management Actions		20,000.00	-20,000.00
Total Expenses	**$160,105.11**	**$436,000.00**	**$ -275,894.89**
NET OPERATING INCOME	**$265,624.76**	**$8,185.00**	**$257,439.76**
NET INCOME	**$265,624.76**	**$8,185.00**	**$257,439.76**

Cosumnes Groundwater Authority

Budget vs. Actuals: CGA 22/23 Budget - FY23 P&L

July 2022 - June 2023

	TOTAL					
	ACTUAL	BUDGET	OVER BUDGET	REMAINING	% OF BUDGET	% REMAINING
Income						
4100 Member Contributions	286,754.58	444,185.00	-157,430.42	157,430.42	64.56 %	35.44 %
Total Income	**$286,754.58**	**$444,185.00**	**$ -157,430.42**	**$157,430.42**	**64.56 %**	**35.44 %**
GROSS PROFIT	**$286,754.58**	**$444,185.00**	**$ -157,430.42**	**$157,430.42**	**64.56 %**	**35.44 %**
Expenses						
5000 Staff Personnel Expenses (Contract)						
Personnel - SRCD	51,200.00	75,000.00	-23,800.00	23,800.00	68.27 %	31.73 %
Personnel - SSCAWA	51,040.00	75,000.00	-23,960.00	23,960.00	68.05 %	31.95 %
Total 5000 Staff Personnel Expenses (Contract)	**102,240.00**	**150,000.00**	**-47,760.00**	**47,760.00**	**68.16 %**	**31.84 %**
5100 Legal Services	38,289.13	30,000.00	8,289.13	-8,289.13	127.63 %	-27.63 %
5200 Public Outreach	1,235.55	1,427.00	-191.45	191.45	86.58 %	13.42 %
5400 Annual Report Technical Support	21,773.18	48,000.00	-26,226.82	26,226.82	45.36 %	54.64 %
5410 Data Management System		10,000.00	-10,000.00	10,000.00		100.00 %
5420 Other Technical Support	13,968.41		13,968.41	-13,968.41		
5430 Monitoring	17,903.01	30,000.00	-12,096.99	12,096.99	59.68 %	40.32 %
5500 Miscellaneous. Expenses		3,000.00	-3,000.00	3,000.00		100.00 %
5600 Financial Audit and Accounting Services		15,000.00	-15,000.00	15,000.00		100.00 %
5640 Funding Exploration	17,050.95	35,000.00	-17,949.05	17,949.05	48.72 %	51.28 %
5650 Funding Study Development	15,078.75	100,000.00	-84,921.25	84,921.25	15.08 %	84.92 %
5700 Data Gaps		25,000.00	-25,000.00	25,000.00		100.00 %
5750 Projects and Management Actions		20,000.00	-20,000.00	20,000.00		100.00 %
Total Expenses	**$227,538.98**	**$467,427.00**	**$ -239,888.02**	**$239,888.02**	**48.68 %**	**51.32 %**
NET OPERATING INCOME	**$59,215.60**	**$ -23,242.00**	**$82,457.60**	**$ -82,457.60**	**-254.78 %**	**354.78 %**
NET INCOME	**$59,215.60**	**$ -23,242.00**	**$82,457.60**	**$ -82,457.60**	**-254.78 %**	**354.78 %**

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	3
Agenda Item Subject:	CGA Board Planning Process
To:	CGA Board of Directors
From:	CGA Staff

CGA Chair Chris Hunley has been working with staff, CBI, and others to map out a planning process to address a variety of questions raised by the Board and others. A few of those thoughts and concepts have been drafted in the attached slide presentation for Board discussion. Topics include:

- Annual Workplan
- Committee Charters
  - *Outreach and Engagement*
  - *Project and Management Actions*
  - *Budget Ad Hoc*
- Budgeting Process
- Personnel Support

Staff Recommendation:

- Provide feedback on the CGA planning efforts.

Agenda Item "3": CGA Board Planning Process

- FY 23/24 Annual Workplan
- Committee Charters
  - *Outreach and Engagement*
  - *Project and Management Actions*
  - *Budget Ad Hoc*
- Budgeting Process
  - *FY 23/24 Budget*
- Personnel Support
  - *Will need to update and extend contract terms*

Staff Recommendation:

- **Provide Feedback on Workplan and Committee Charters**

Agenda Item 3: Draft 2023-2024 Goals

2023-2024 GOALS	
CGA Operations	▪ Organization dev/ governance refined ▪ FY 23/24 work plan with milestones (helps identify important O&E opportunities, when GSA boards need to be briefed, etc.)
Financing	▪ Grant funding allocations ▪ Determine approach for discussing FY 24/25 Fee Schedule
Outreach & Engagement	▪ New/broader attendance at meetings
Groundwater Conditions	▪ Improving monitoring network (e.g., access agreements) ▪ Addressing data gaps (e.g., streamgages) ▪ Spring and Fall Groundwater Monitoring
Projects	▪ Projects design and implementation plan
Well Permitting	▪ Improve well permitting coordination
Other External Activities	▪ Improve regional coordination

Agenda Item 3: Draft 2023-2024 Workplan

Issues / Efforts	WINTER 2023 (Jan-Mar)	SPRING 2023 (Apr- Jun)	SUMMER 2023 (Jul- Sep)	FALL 2023 (Oct-Dec)	WINTER 2024 (Jan-Mar)
CGA Operations	▪ Update governance, procedures, and protocols ▪ Drafting/reviewing annual report (due April 1)	**Apr 1: Annual Report** ▪ FY23-24 workplan ▪ Revised governance and procedures/protocols ▪ Affirm FY 23/24 staffing agreements		▪ 2023 reflection; 2024 activities ▪ GSP reviewed by DWR (if need to make any changes)	▪ Updated FY23/24 workplan; drafting FY 24/25 workplan
Financing and Fee Schedules	▪ Affirm using existing fee schedule for FY22/23 ▪ Discuss implications on near-term cash flow (Budget Ad Hoc)	▪ FY22/23 Budget ▪ FY23/24 Budget Workshop ▪ CGA Board (and committees as needed) better understanding range of options (CGA Board various funding source workshop)	▪ Assign grant funding ▪ Adopt FY23/24 Funding Agreement ▪ Public outreach on funding updates (public workshops?)	▪ CGA Board (and committees as needed) discuss revised proposed draft fee schedule options	**Draft FY23/24 Fee Schedule** ▪
	Per CGA Board guidance, staff continuing to track funding opportunities and exploring/fostering partnerships				
Outreach & Engagement [General Public]	▪ Feb 22/Mar 4 SGMA Implementation Public Workshops ▪ 4-6 month O&E strategy planning (O&E Team/CAC)		▪ SGMA Update (webinars?)		
[Stakeholder-Specific]	▪ Farmers Survey (next round due Mar 31) ▪ O&E w/ technical experts on draft annual report?	▪ Domestic well owner O&E? ▪ Ag focus groups? ▪ Underrepresented O&E check-in ▪ Tribes O&E check-in			▪ Consider youth O&E strategies
Groundwater Conditions Monitoring, dB, modeling	▪ Updated data and analyses for annual report ▪ March Groundwater Monitoring		▪ New landowner monitoring agreements ▪ WY 24 monitoring services agreement (ex. MLJ)	▪ Groundwater monitoring	▪ Collect and analyze groundwater data for next annual report
Projects		▪ Updated draft scopes and budgets for projects	▪ Allocating grant funding specific to projects		
Well Permitting		▪ Track recent efforts (AB 1563 [which is AB2021 2.0); ACWA developing white paper expected Mar/April ▪ Consider holding well permitting ad hoc mtg			
Other External Activities?	▪ CoSANA coordination with CoSb, SASb, NASb ▪ E. San Joaquin GSA coordination (e.g. new MW installations, data monitoring		▪ E. San Joaquin GSA coordination (e.g. new MW installations, data monitoring	▪ CoSANA coordination with CoSb, SASb, NASb ▪ E. San Joaquin GSA coordination (e.g. new MW installations, data monitoring	CoSANA coordination with CoSb, SASb, NASb

Agenda Item 3: CGA Board/Committees

Work Strand	Planning • Coordination and Check-ins • Draft and review materials	Facilitation • Facilitate dialogue • Track action items and outcomes • Take notes and develop summary	Follow Up • Oversee action items and next steps • Help distribute/post materials as needed • Track and help retain momentum of work
Internal Staffing (CGA Staff; consultants as needed (CBI, EKI, Downey))	•	•	•
CGA Board (monthly)	• Lead: • Support:	• Lead: • Support:	• Lead: • Support:
Projects Committee (ranges: monthly to periodically)	• Lead: • Support:	• Lead: • Support:	• Lead: • Support:
Citizen Advisory Committee (CAC) (quarterly)	• Lead: • Support:	• Lead: • Support:	• Lead: • Support:
Outreach & Engagement Team (monthly)	• Lead: Facilitator Consultant coordinates • Support: Co-chairs and staff guide and advise	• Lead: Co-Chairs facilitate • Support: Facilitator Consultant (action items and outcomes)	• Lead: Facilitator Consultant Support: Staff
Ad Hoc: Budgets (initially as needed; then annual)	• Lead: • Support:	• Lead: • Support:	• Lead: • Support:
Ad Hoc: Well Permitting (as needed)	• Lead: • Support:	• Lead: • Support:	• Lead: • Support:
CGA Board Workshop(s): Fee Study (as needed)	• Lead: SCI	• Lead: SCI	• Lead: SCI

Agenda Item 3: CGA Board/Committees

- O&E Team Deliverables:
  - *Board discussion.*

- PMA Committee Deliverables:
  - *Board discussion.*

Agenda Item 3: Budgeting Process

- CGA operates on a July 1 – June 30 Fiscal Year
- Board will need to adopt final budget in May, allow time for GSA Boards to adopt subsequent budget packages
- Budget ad hoc to provide recommendation to the Board

Agenda Item 3: Personnel Support

- *Current* CGA Contracts
  - *Sloughhouse RCD Contract: CGA Administrator*
  - *SSCAWA Contract: Groundwater Management Services*
  - *SCI Contract: Groundwater Fee Study Development*
  - *EKI Contract: Technical Support Services*
  - *Downey Brand: CGA Legal Services*

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	4
Agenda Item Subject:	Funding Study Development Process
To:	CGA Board of Directors
From:	CGA Staff

Background:

In the last month SCI Consulting has been working to refine public water supply systems data, parcels utilizing groundwater, and evaluating which parcels are using surface water. Additional refinement is still needed but SCI will present on their progress and next steps.

If the GSAs hope to implement the updated fee this fiscal year, community meetings need to be scheduled and further budget considerations need to be made. If the GSAs plan to implement these updates next fiscal year, SCI would be happy to work with CGA on an altered timeline and this would allow for further refinement of fee structure and extended community outreach efforts.

Attachments:

- Draft SCI presentation

Staff Recommendation:

- Provide feedback on the drafting of the fee study.

Cosumnes Groundwater Authority

Fee Study Update

March 20, 2023

March Updates

Data Updates

- Administrative Fee – Parcel Counts
- Public Water Systems (PWS) Average Use and Revenue
- Irrigated Acreage

Looking Forward

- Surface Water
- Timeline

Administrative Fee

- The number of parcels using groundwater has been further refined based on updated to public water system connections and other factors
- We have separated out an ‘admin fee’ and ‘use fee’ for these parcels
  - Attributing one AF for residential use and 2 AF for commercial use
- We have leveled the administrative fee across all parcel types in the interest of consistency

Administrative Fee

Annual Admin Fee - All GW-Using Parcels								
Property Type		Parcels by County		Totals Both Counties	% of Parcels	Admin Revenue	Use Fee Revenue	Total Revenue
		Sacramento	Amador					
Residential	*Total:*	4,087	169	4,256	83%			
Admin Fee	$37.00					$157,472		
Residential Use Fee	$7.28						$30,984	$188,456
Commercial / Industrial	*Total:*	63	11	74	1%			
Admin Fee	$37.00					$2,738		
Commercial Use Fee	$14.56						$1,077	$3,815
Agricultural	*Total:*	695	95	790	15%			
Admin Fee	$37.00					$29,230		
Residential Use Fee	$7.28	181	26	207			$1,507	$30,737
Total, All GW Parcels:		**4,845**	**275**	**5,120**	**100%**	**$189,440**	**$33,568**	**$223,008**

Public Water Systems (PWS)

- 17 Public water systems with the Cosumnes Subbasin have reported groundwater use within the last 5 years
- PWS groundwater use is reported to the State Water Resources Control Board and distributed in Electronic Annual Reports (EAR)
- Data shown is calculated using a rolling 5-year average for this groundwater use

PWS Groundwater Extraction

Groundwater Extraction of Public Water Systems in the Cosumnes Subbasin										
As Provided by Electronic Annual Reports (SWRCB)								Average	Revenue	
Name	PWS ID	Estimated Population Served	Reported Annual GW Extarction (AF)					5-Year Rolling Average	Rate Per AF	Revenue
			2017	2018	2019	2020	2021			
Hope Foundation/Moriah Heights	CA0300062	30	23.81	27.46		47.60	27.51	31.59	$7.28	$230.00
Ione Band of Miwok Indians	CA0300078	62	4.97	5.90		5.93	7.49	6.07	$7.28	$44.20
MP Associates, Inc.	CA0300524	170	0.15	0.15	0.14	0.06	0.08	0.11	$7.28	$0.82
Camanche North Shore Inc	CA0310008	255	52.59	51.33	52.24	59.18	58.93	54.85	$7.28	$399.33
AWA - Camanche Village	CA0310021	2,384	227.25	239.89	244.06	262.31	258.69	246.44	$7.28	$1,794.08
Laguna Del Sol Inc	CA3400181	470	0.00	0.00	0.00	0.00	23.92	4.78	$7.28	$34.82
Rancho Seco NGS (SMUD)	CA3400232	27	0.56	1.00	0.35	0.39	0.23	0.51	$7.28	$3.68
Dillard Elementary School	CA3400254	350	2.08	1.74	1.67	1.30	12.83	3.92	$7.28	$28.57
Arcohe Elem School - Main Campus	CA3400271	465	0.00	0.00	0.94	0.10	0.00	0.21	$7.28	$1.51
Wilton Bible Church	CA3400273	125	0.00	0.13	0.13	0.09	0.12	0.09	$7.28	$0.67
Rancho Seco Park	CA3400302	40	4.86	4.88	7.18	7.11	8.88	6.58	$7.28	$47.91
Cosumnes River Preserve Visitor (BLM)	CA3400432	300	0.31	0.36	0.31	0.21	0.13	0.27	$7.28	$1.94
Church of Latter Day Saints, Galt	CA3400460	800				0.03	1.14	0.58	$7.28	$4.24
River City Recovery Center, Inc	CA3400464	60				0.01	0.02	0.02	$7.28	$0.12
City of Galt	CA3410011	26,536	4475.84	4500.91	4266.45	4780.04	4602.85	4,525.22	$7.28	$32,943.60
RANCHO DEL ORO MHP	CA0300053	44	7.14	8.50	8.69	7.63	6.84	7.76	$7.28	$56.50
Richard A. Mcgee Training Center	CA3410802	300	38.89	42.55	39.54	31.69	33.10	37.15	$7.28	$270.48
									Total:	**$35,862.47**

Irrigated Acres

- Irrigated acreage has been allocated to the parcel level throughout the Subbasin
- The SCI Team is still reviewing this data, but estimates provided today have been developed utilizing previous CGA corrections as well as further analysis
- An issue with the Amador County parcel layer has presented a challenge, but we are working to resolve it

Irrigated Acres

Irrigated Acres by GSA				
GSA	**Number of Parcels with Irrigated Acreage**	**Irrigated Acreage**	**Rate**	**Revenue**
Amador GA	107	4,137	$11.25	$46,540.46
City of Galt	0	0	$11.25	$0.00
Clay WD	28	2,217	$11.25	$24,946.65
Galt ID	689	17,405	$11.25	$195,806.25
Omochumne Hartnell WD	149	2,867	$11.25	$32,253.75
Sacramento County GSA	94	6,809	$11.25	$76,601.25
Sloughhouse RCD	327	15,116	$11.25	$170,055.00
Totals:	1,394	**48,551**		**$546,203**

Summary – All Fee Sources

Annual Admin Fee - All GW-Using Parcels								
Property Type		Parcels by County		Totals Both Counties	% of Parcels	Admin Revenue	Use Fee Revenue	Total Revenue
		Sacramento	Amador					
Residential	*Total:*	4,087	169	4,256	83%			
Admin Fee	$37.00					$157,472		
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Total, All GW Parcels:		**4,845**	**275**	**5,120**	**100%**	**$189,440**	**$33,568**	**$223,008**

Public Water Systems - Extraction Rate								
Revenue Type						Rate Per AF	Average AF Extracted	Revenue
Public Water Systems						$7.28	4,926	**$35,861**

Irrigated Acreage Fee							
Revenue Type	Irrigated Acres by County		Totals Both Counties	Rate Per Irrigated Acre		Revenue
	Sacramento	Amador				
Irrigated Acreage Fee	44,414	4,137	48,551	$11.25		**$546,199**

Total Revenue, All Sources:	**$805,068**

Budget Needs	
Administrative Budget:	$363,000
Projects Budget:	$442,000
Total:	**$805,000**

Surface Water

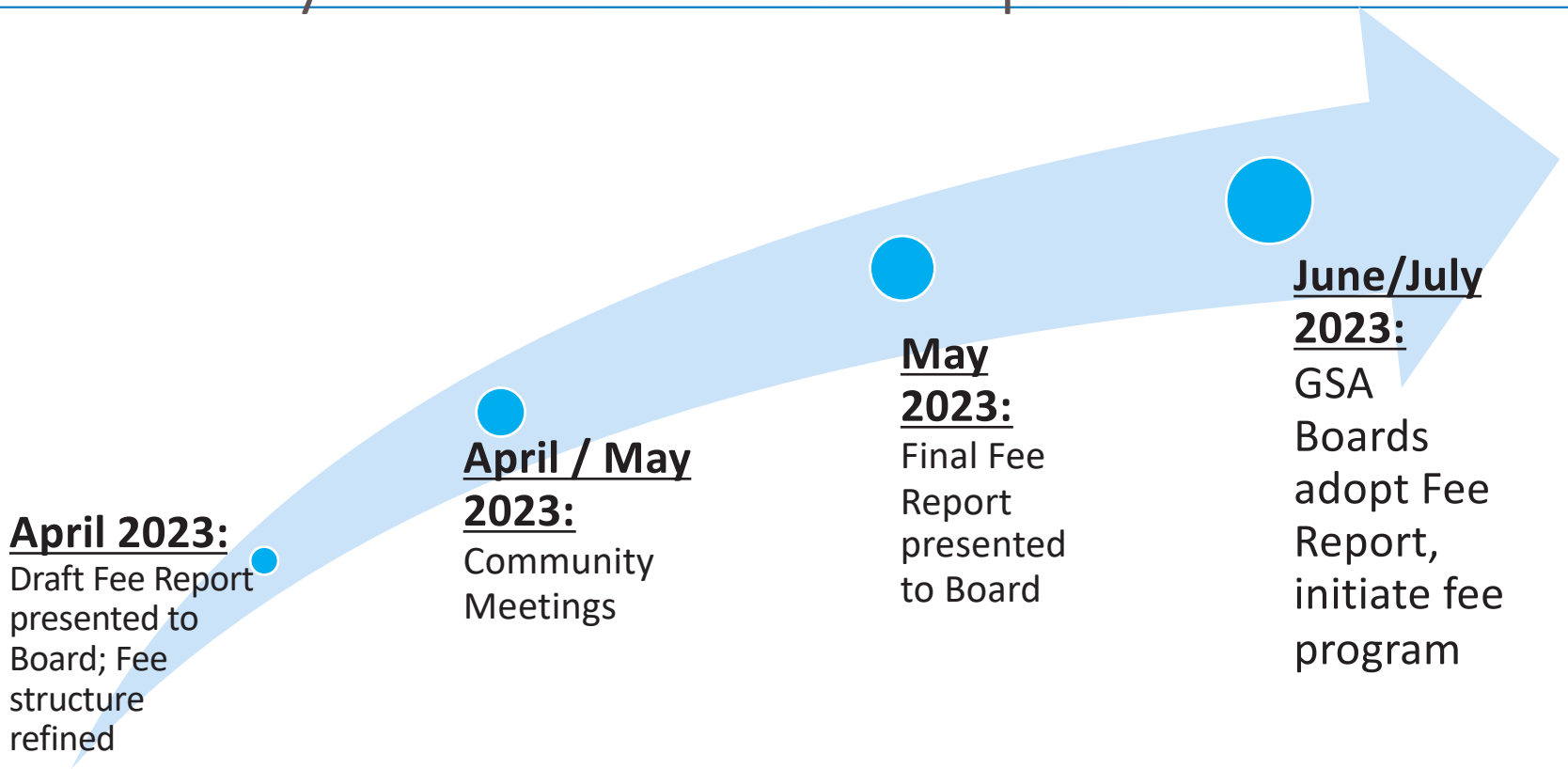
- The SCI Team is currently working with surface water data provided by EKI
- This data is currently broken down on a regional scale with diversion points
  - We are working to try to attribute it to the parcel level
- Our current approach is to try to determine what parcels, if any, likely use surface water only for irrigation
  - Parcels that likely do not use groundwater at all would then not be charged
  - Parcels that likely utilize some amount of groundwater would be charged
- This may reduce revenue, bringing up the possibility to sightly raise the irrigated acreage rate (with the idea of a $12 cap)

Timeline

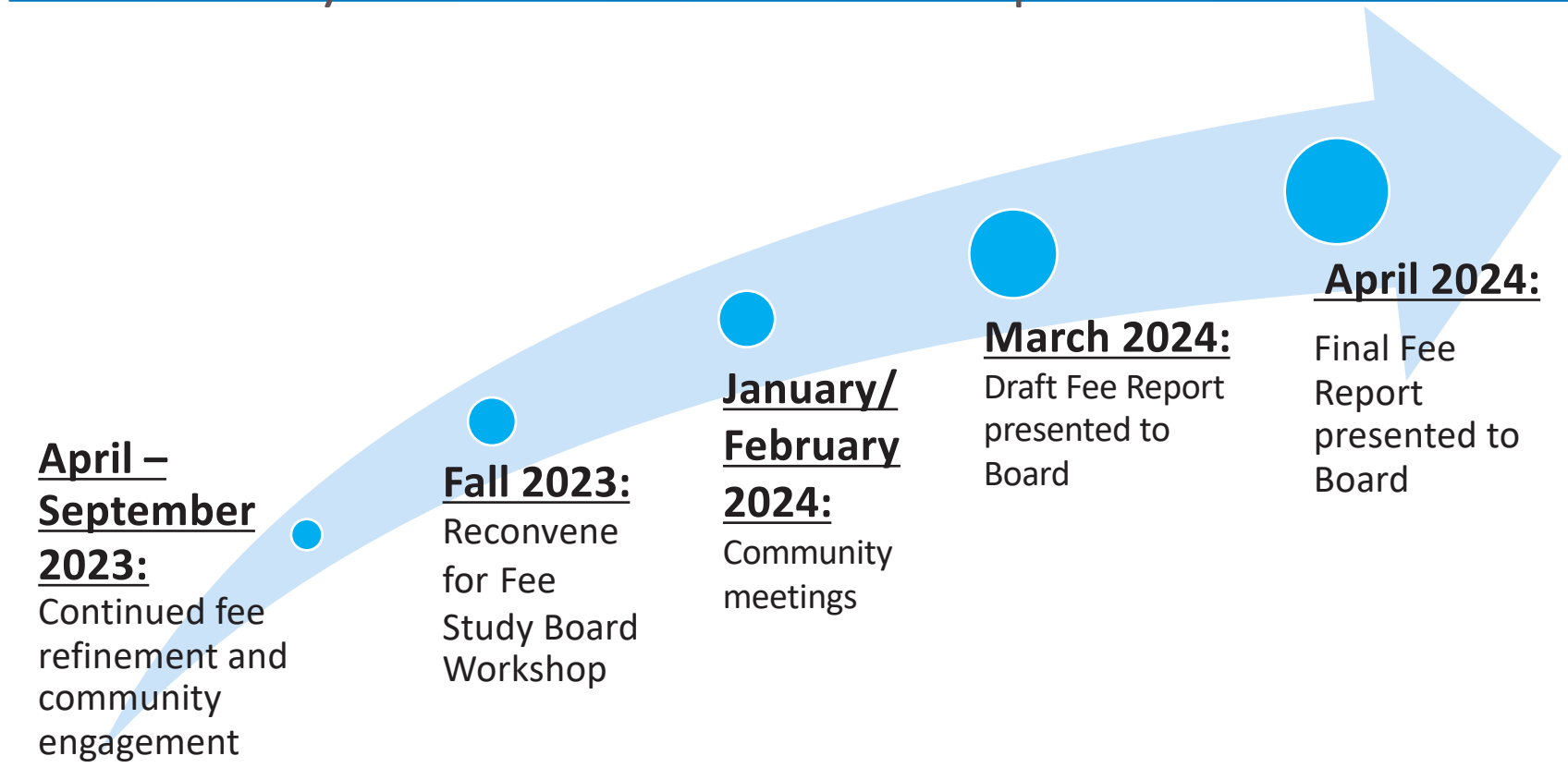
Consideration of 2023 or 2024 implementation

- 2023 implementation would require:
  - Scheduling of community meetings – likely in late April or early May
  - Further consideration of the budget – approval of budget used in Fee Report
- 2024 Implementation
  - SCI would be happy to work with the Authority on an altered timeline targeting next year for implementation
  - Consideration of revenue and grant funding are key
  - An extended timeline would allow for further refinement of fee structure and extended community outreach efforts

Fee Study Timeline – 2023 Implementation



Fee Study Timeline – 2024 Implementation



Cosumnes Groundwater Authority

Thank You!

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	5
Agenda Item Subject:	Sloughhouse RCD's DOC Multibenefit Land Repurposing Program Grant Application
To:	CGA Board of Directors
From:	CGA Staff

Background:

Sloughhouse Resource Conservation District (RCD) is preparing to apply for the California Department of Conservation (DOC) Multibenefit Land Repurposing Program grant by the end of March. If funded, the grant would support multibenefitial land repurposing efforts to reduce groundwater use within the Cosumnes and South American Subbasins. Sloughhouse RCD is partnering with a variety of local and regional partners to ensure successful implementation of nearly $9 million.

Attachments:

- Sloughhouse RCD Application Overview

Staff Recommendation:

- Approve the drafted letter of support for the Sloughhouse Resource Conservation District DOC Multibenefit Land Repurposing Program grant application.

<Official Letterhead & Logo>

<DATE>

Department of Conservation
801 K St, Sacramento, CA 95814

Re: The Sloughhouse Resource Conservation District's (SRCD's) Block Grant application, "Multibenefit Land Repurposing in Sacramento County: Building Capacity and Taking Action"

I am writing on behalf of the Cosumnes Groundwater Authority (CGA), a joint powers authority created by the seven Groundwater Sustainability Agencies (GSAs) in the Cosumnes Subbasins to implement the Cosumnes Subbasin Groundwater Sustainability Plan (GS) to express our deep support for SRCD's proposal. Their approach will allow all of us working locally on these issues to further priorities identified in our GSP while supporting multibenefit projects and practices in a way that continues to support productive agriculture, local economy, and wildlife habitat.

We agree with local GSAs and RCDs are vital to the success of multibenefit land repurposing planning and project work in our Cosumnes Subbasin and the region overall. We hope that your committee will consider the significance and importance of funding the SRCD-led proposal as a testament to the value that local, longstanding public agency-led conservation work brings to the multibenefit land repurposing arena. CGA is dedicated to working with SRCD and our partner landowners and land managers, farmers, and ranchers and to identifying multibenefit projects in a strategic, systematic way yielding maximum beneficial outcomes for aquifer recharge, wildlife habitat, and climate change resilience.

The Cosumnes Subbasins face significant groundwater sustainability challenges. We are currently developing and implementing projects to address the ~10,000 acre-foot/year decline in groundwater storage or approximately 1 foot of groundwater elevation loss per year. Degradation of groundwater conditions are beginning to impact domestic drinking wells and groundwater dependent ecosystems. Innovative approaches to ensure adequate water supply for numerous beneficial uses throughout rural Sacramento and Amador Counties will be key to the Cosumnes Subbasin GSP's success.

These interwoven issues necessitate a coordinated approach to ensure maximum benefits across local natural resource and economic needs. Some of the multibenefit project categories that we know could make a tremendous impact locally are groundwater recharge and demand management, habitat restoration, healthy soils/regenerative agriculture, and agrovoltaics.

We are excited about the potential to codify and expand our coordinated approach to ensuring local land in Sacramento County serves multibenefit purposes with current partners such as the SRCD, other Groundwater Sustainability Agencies within Sacramento County, Sacramento Valley Conservancy, Regional San, Cosumnes Coalition, Sacramento County Farm Bureau, plus other partners we develop relationships with over the course of this 4-year program. Together with community members, landowners, and agricultural producers, we will put forward and implement projects in close cooperation at the local level for maximum regional impact.

Cosumnes Groundwater Authority is committed to being an active partner in this important work during this critical time to increase the resiliency of our region. We hope that you'll strongly consider SRCD's Block Grant application with its diversity of partners and each partners' long-standing reputation of advancing these most timely issues which your program seeks to address.

Sincerely,

Chris Hunley
Board Chair
Cosumnes Groundwater Authority

Sacramento County Multibenefit Land Repurposing

Application Overview for the
CA Dept of Conservation Multibenefit Land Repurposing Program

1

Overview of DOC's Multibenefit Land Repurposing Program

Round 1
(early 2022)

- CARCD and Regional San unsuccessfully applied (only critically overdraft subbasins were awarded)
- $90 million allocated

Round 2
(Deadline: 3-29-23)

- $40 million allocated
- Max grant: $8.89 million
- No match required
- No Match (in kind encouraged)
- 25% advance payment

Updates Since Round 1:

- Regional San agreed to support CARCD application
- CARCD program manager taking a new job
- Other Subbasins no longer interested in applying

2

Subbasin Descriptions

South American (SoAm) Subbasin

- The SoAm Subbasin GSP, submitted in January 2022, concluded that the SoAm Subbasin can maintain sustainable groundwater conditions with the projects and management actions (namely recharge type projects) already in place/in development.

Cosumnes (Co) Subbasin

- The Co Subbasin GSP, also submitted in January 2022, concluded that the Cosumnes Subbasin will need intervention by GSAs and local partners to avoid undesirable results. Demand management (ex: multibenefit land repurposing) and supply augmentation (ex: recharge) will both be utilized.

3

Proposal Summary

We seek to employ agricultural lands in multibenefit solutions while keeping them *maximally productive in new, integrated ways* by exploring the following tools:

1. managed aquifer recharge (MAR)
2. habitat restoration (e.g. farm edge planting)
3. regenerative agriculture/soil health practices
4. solar installation on land to be fallowed, or within productive acreage ("agrivoltaics")
5. projects that benefit regional flood control, water supply, and water quality

None of the proposed activities are focused on permanent fallowing of productive agricultural land. *Rather, we will seek to incorporate ag land as a part of the solution to groundwater and other related crises impacting fertility and viability of ag operations in the Sacramento County area.*

4

Approach

Slightly less than **$3M** for **"capacity",** e.g. **education, outreach, and Plan development**

- Material costs and staff time in developing, launching, and maintaining multibenefit demonstration sites; travel to existing or proposed multibenefit demonstration sites; educational materials for landowners, producers and community members; staff time (existing or new staff) and partner paid time for outreach; media, events and mailers/digital ads; and org staff time in reviewing, presenting about, and iterating on their local multibenefit land repurposing projects

$6M for **"taking action",** e.g. **project development, permitting, implementation, and monitoring:**

- Staff and Consultant time for technical assistance, project scoping, implementation, and monitoring; supplemental environmental review; permitting costs; consultant costs; and contractor costs.

5

Approach

To ensure these grants funds are aligned with the Cosumnes and South American Subbasins' GSPs and GSAs' priorities, are aligned with the MLR Program guidelines, and is driven by the local property owners in the areas with irrigated agriculture, SRCD will convene a Steering Committee consisting of the following:

- rep from the Sloughhouse RCD Board
- rep from Clay Water District GSA
- rep from Galt Irrigation District GSA
- rep from Omochumne-Hartnell Water District GSA
- rep from the Groundwater User Community in the South American Subbasin
- rep from the Groundwater User Community in the Cosumnes Subbasin

The Steering Committee will develop project criteria, guidance, and evaluation processes to elevate projects to DOC for funding. SRCD will maintain a rigorous planning and budgeting process aligned with DOC MLRP Team's project review process to ensure that funds are expended per the above.

6

Approach

- Land Repurposing Plan
  - Developed for both Subbasins, goal of adopted by implementation groups (CGA Board, SoAm Exec Committee) + GSAs + partners
  - Establishes criteria for eligible projects
- Project Development and Permitting
- Project Implementation
- Support for Partners' Capacity Needs
- Outreach, Education, and Training
- Monitoring Outcomes

7

Budget Summary

	Total cost
Development of Multibenefit Agricultural Land Repurposing Plan	$750,000
Project Development and Permitting	$1,750,000
Land Repurposing Project Implementation	$2,500,000
Partner Capacity Needs	$862,000
Outreach, Education, and Training	$750,000
Monitoring	$500,000
Administrative and Indirect Costs (max 20% of grant)	$1,778,000
TOTAL	**$8,890,000**

8

Partnerships

Partners
(committed in kind/matching support):

- Sloughhouse RCD
- Southeast Sacramento County Ag Water Authority
- Omochumne-Hartnell Water District
- Amador RCD
- Sac-Amador Water Quality Alliance
- Regional San
- The Freshwater Trust
- Sacramento Valley Conservancy
- Zero Foodprint
- Sustainable Conservation

Collaborators
(committed coordination):

- Cosumnes Groundwater Authority (and Co Subbasin GSAs)
- SoAm Subbasin GSAs
- County of Sacramento County
- Cosumnes Coalition
- CA Association of RCDs
- AgInnovations

Other Project Partners:

- Florin, Lower Cosumnes, and San Joaquin RCDs
- Wilton Rancheria
- Jackson Rancheria
- Reclamation District 800

9

Other Application Components

- Community Engagement
- Disadvantage Community Benefits
- Policy and Project Expertise
- Project Maps
- Authorizing Resolution from Governing Body

10

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date: March 20, 2023

Agenda Item #: 6
Agenda Item Subject: Water Year 2022 Annual Report

To: CGA Board of Directors
From: CGA Staff

Background

Staff and EKI have worked to complete Water Year 2022 (October 1, 2021 – September 30, 2022) Annual Report as required by SGMA. The Annual Report shall be submitted to DWR before April 1st of each year. The WY 2022 report is summarized below:

Water Year	Agricultural[b]	Developed[d]	Total
	Estimated[c]	Metered[e] and Estimated[f]	
2021[g]	133,600	16,200	149,800
2022	123,500	15,800	139,300

Lowering Groundwater Levels: No Undesirable Results are reported. Undesirable Result is defined when minimum thresholds are exceeded in 25% or more of the RMW-WLs (5 out of 19) for two consecutive years. Minimum Threshholds were exceeded in 3 wells. Field notes indicate 2 of these wells were pumping at the time of these measurements. Water Level measurements should be confirmed with pumps turned off.

Degraded Water Quality: No Undesirable Results reported.

Interconnected Surface Waters: No Undesirable Results reported. Further water level measurements are needed to confirm appropriate SMCs and MTs in 2 wells.

On February 27, 2023, the Environmental Council of Sacramento (ECOS) submitted a letter to DWR regarding the Annual Report process in the North American, South American, and Cosumnes Subbasins. Further discussion of the Annual Report process will be held in upcoming Water Forum meetings.

WATER YEAR 2022 ANNUAL REPORT

Cosumnes Groundwater Authority
Cosumnes Subbasin

DRAFT 13 March 2023
EKI C20149.01

EKI ENVIRONMENT & WATER, INC.

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2001 Junipero Serra Blvd, Suite 300 • Daly City, CA 94014

Water Year 2022 Annual Report

Cosumnes Subbasin

DRAFT 13 March 2023

Prepared for:

Cosumnes Groundwater Authority
8970 Elk Grove Blvd.
Elk Grove, CA 95624

Prepared by:

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EKI C20149.01

Anona Dutton, P.G., C.Hg.
Vice President

Kristyn Lindhart
Hydrogeologist

John Fio
Principal Hydrogeologist

Water Year 2022 Annual Report
Cosumnes Subbasin

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APPENDICES

ABBREVIATIONS AND ACRONYMS

ACGMA	Amador County Groundwater Management Authority
AF	acre-feet
AFY	acre-feet per year
Ag-Res	Agricultural-Residential
ARSA	Amador Regional Sanitation Authority
AWA	Amador Water Agency
CCR	California Code of Regulations
CGA	Cosumnes Groundwater Authority
CoSANA	Cosumnes, South American, and North American model
DWR	California Department of Water Resources
eWRIMS	Electronic Water Rights Information Management System
Flood-Mar	Flood Managed Aquifer Recharge
FSC	Folsom South Canal
ft	feet
ft NAVD88	feet above the North American Vertical Datum of 1988
GID	Galt Irrigation District
GPS	Global Positioning System
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWE	Groundwater Elevation
IDC	Irrigation Demand Calculator
IMs	Interim Milestones
IWFM	Integrated Water Flow Model
JPA	Joint Powers Agreement
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
MO	Measurable Objective
MT	Minimum Threshold
N	Nitrogen
OHWD	Omochumne-Hartnell Water District
PMA	Projects and Management Actions
PWS	Public Water System
RMW-ISW	Representative Monitoring Well for the Depletions of Interconnected Surface Water
RMW-WL	Representative Monitoring Well for Chronic Lowering of Groundwater Levels
RMW-WQ	Representative Monitoring Well for Degraded Water Quality
SAFCA	Sacramento Area Flood Control Agency
SGM	Sustainable Groundwater Management

SGMA	Sustainable Groundwater Management Act
SMC	Sustainable Management Criteria
SMUD	Sacramento Municipal Utility District
SRCD	Sloughhouse Resources Conservation District
TDS	Total Dissolved Solids
TT	Trigger Threshold
µg/L	micrograms per liter
UNAVCO	University NAVSTAR Consortium
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WWTP	Wastewater Treatment Plant
WY	Water Year

EXECUTIVE SUMMARY

The San Joaquin Valley Groundwater Basin – Cosumnes Subbasin (also referred to herein as "the Basin"), California Department of Water Resources (DWR) Basin No. 5-022.16, is classified as a "medium priority" basin (DWR, 2019). To address the long-term sustainability of groundwater within the Basin, the Basin's seven Groundwater Sustainability Agencies (GSAs) developed a single Groundwater Sustainability Plan (GSP), which was adopted by the GSAs and submitted to DWR on 27 January 2022.

The Basin encompasses 210,300 acres at the northern end of the San Joaquin Valley Groundwater Basin within Sacramento and Amador Counties (see **Figure AR-1**). It is bordered on the north by the South American Subbasin (DWR Basin No. 5-021.65) and on the south by the Eastern San Joaquin Subbasin (DWR Basin No. 5-022.01). The Basin is bounded by surface water features to the north, south, and west and the eastern Basin boundary is formed by low permeability metamorphic rocks in the Sierra Nevada foothills region. The Basin has a single Principal Aquifer which is comprised of six hydraulically connected sedimentary formations that include the Younger Alluvium, Victor, Laguna, Mehrten, Valley Springs, and Ione Formations.

The Basin is cooperatively managed by seven GSAs: Amador County Groundwater Management Authority (ACGMA) GSA, City of Galt GSA, Clay Water District GSA, Galt Irrigation District (GID) GSA, Omochumne-Hartnell Water District (OHWD) GSA, Sacramento County GSA, and Sloughhouse Resource Conservation District (SRCD) GSA. In November 2021, the Cosumnes Groundwater Authority (CGA) was formed upon adoption of a Joint Powers Agreement (JPA) between the seven GSAs. The CGA enables the GSAs to collaboratively comply with the Sustainable Groundwater Management Act (SGMA), implement the GSP, seek and secure grant or other funding to support implementation, and work collaboratively with the GSAs and other entities to sustainably manage the Basin.

This Water Year (WY) 2022 Annual Report for the Basin has been prepared by the CGA in compliance with California Code of Regulations (CCR) 23 § 356.2. WY 2022 includes the period from 1 October 2021 through 30 September 2022.

Figure AR-2 and **Figure AR-3** show groundwater elevation contours for data collected in Fall 2021, and Spring 2022, respectively. Groundwater elevations generally decrease in magnitude from east to west across the Basin, with the greatest elevations measured beneath the higher topographic areas in the east. At lower topography, the western component of groundwater flow shifts towards the middle of the Basin, where extractions have created a groundwater low (i.e., a cone of depression).

Long-term hydrographs for water levels measured in the Representative Monitoring Wells for Chronic Lowering of Groundwater Levels (RMW-WLs) and the Representative Monitoring Wells for Depletions of Interconnected Surface Water (RMW-ISWs) are shown on **Figure AR-4**. Sustainable Management Criteria (SMCs), including Measurable Objectives (MOs), Minimum Thresholds (MTs), Interim Milestones (IMs), were established in the GSP for groundwater levels at the 19 RMW-WLs and the nine RMW-ISWs, as well as Trigger Thresholds (TTs). The measured data is summarized in **Table AR-4** and **Table AR-6**, and plotted on **Figure AR-4**.

During WY 2022, the total volume of extracted groundwater from the Basin was 139,300 acre-feet (AF); almost 90% was for use by "agriculture" areas, which includes domestic (agricultural-residential [Ag-Res]) uses, and 10% was used for "developed" areas including urban water uses (public water systems [PWS]) and industrial water uses (aquaculture and power planting cooling). **Table AR-1** reports WY 2022 groundwater extraction data by water use sectors (e.g., agricultural, urban, and industrial) and **Figure AR-**

5 shows the general location and volume of annual extractions represented by groundwater use within each GSA.

Though groundwater extractions comprise most of the water used in the Basin, surface water is also a source of supply in the Basin. Surface water supply volumes were reported or estimated using the Cosumnes, South American, and North American groundwater flow model (CoSANA) prepared as part of GSP development and used to support implementation. A summary of surface water supply/use by sector is presented in **Table AR-2**.

Table AR-3 summarizes the Basin's WY 2022 total water use by sector (e.g., agricultural, urban and industrial) and water source type (e.g., groundwater, recycled water, imported water, stream diversions). Total pumping in the Basin decreased from 135,400 AF in WY 2021 to 125,200 AF in WY 2022.

Changes in groundwater storage were estimated using CoSANA. **Figure AR-6** is a map showing the distribution of model-calculated changes in groundwater storage during WY 2022. Groundwater storage declined across most of the Basin, as would be expected given that WY 2022 was a critically dry year; however, storage increased along the Cosumnes River and in a portion of Amador County in the area with the least extractions. **Figure AR-7** shows water year type, annual groundwater extractions, annual change in groundwater storage, and the cumulative change in groundwater storage for WY 2015 through WY 2022.

Table AR-4 compares WY 2022 groundwater elevations to the SMCs at the RMW-WLs for the Chronic Lowering of Groundwater Levels Sustainability Indicator. **Table AR-5** compares WY 2022 water quality concentrations for Arsenic, Nitrate, and Total Dissolved Solids (TDS) to their respective SMCs at the Representative Monitoring Wells for Degraded Water Quality (RMW-WQs). **Table AR-6** compares WY 2022 groundwater elevations to SMCs at the RMW-ISWs for the Depletions of Interconnected Surface Water Sustainability Indicator. Based on evaluation of these data, Undesirable Results were not identified within the Basin.

Land subsidence is of low concern in the Basin. **Figure AR-8** shows the vertical displacement trends for WY 2022. Continuous data at the University NAVSTAR Consortium (UNAVCO) Global Positioning System (GPS) station (P275) located within the Basin in the vicinity of the groundwater depression indicates an average displacement of -0.14 ft. The TRE Altamira Interferometric Synthetic Aperture Radar (i.e. InSAR) data indicates the annual vertical displacement rate for the WY 2022 ranges from - 0.1 ft to 0.1 ft throughout the Basin.

The GSP outlined six Projects and Management Actions (PMAs) for the Basin. Initiation of a pilot study at the Laguna Del Sol Resort Project (LDSR Project) site was conducted to support PMA #2 Sacramento Area Flood Control Agency (SAFCA) Flood-MAR. During WY 2022, a dry well was constructed as part of the LDSR Project and an infiltration test initiated at the end of WY 2022. The infiltration test is planned to continue during WY2023. PMA #5 Voluntary Land Repurposing was expanded to include water conservation and plans were developed to increase coordination between landowners and to evaluate conservation methods for regional benefits. A brief description of each PMA and progress made in WY 2022 is included in **Section 7.**

1 GENERAL INFORMATION

☑ *§ 356.2 (a)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(a) General information, including an executive summary and a location map depicting the basin covered by the report.

On 16 September 2014, the California legislature enacted the Sustainable Groundwater Management Act (SGMA) - the primary purpose of which is to achieve and/or maintain sustainability within the state's high and medium priority groundwater basins. The San Joaquin Valley Groundwater Basin – Cosumnes Subbasin (also referred to herein as "the Basin"), California Department of Water Resources (DWR) Basin No. 5-022.16, is classified as a "medium priority" basin (DWR, 2019). To address the long-term sustainability of groundwater within the Basin, the Basin's seven Groundwater Sustainability Agencies (GSAs)[1] jointly developed a Groundwater Sustainability Plan (GSP), which was adopted by the GSAs between 14 December 2021 and 12 January 2022 and submitted to DWR on 27 January 2022.

This Water Year (WY) 2022 Annual Report for the Basin has been prepared in compliance with CCR 23 § 356.2. WY 2022 includes the period from 1 October 2021 through 30 September 2022. This Annual Report also contains available and appropriate historical information back to calendar year 2015, as required by CCR 23 §356.2 (b). The GSP Annual Report Elements guide (**Appendix A**) lists the Annual Report requirements and where in this report they are specifically addressed.

The Basin encompasses 210,300 acres at the northern end of the San Joaquin Valley Groundwater Basin within Sacramento and Amador Counties (see **Figure AR-1**). It is bordered on the north by the South American Subbasin (DWR Basin No. 5-021.65) and on the south by the Eastern San Joaquin Subbasin (DWR Basin No. 5-022.01). The Basin is bounded by surface water features to the north, south, and west and the eastern Basin boundary is formed by low permeability metamorphic rocks in the Sierra Nevada foothills region. The Basin has a single Principal Aquifer which is comprised of six hydraulically connected sedimentary formations that include the Younger Alluvium, Victor, Laguna, Mehrten, Valley Springs, and Ione Formations. Hydraulic conditions in the Principal Aquifer range from unconfined to semi-confined, and its total thickness ranges from 810 to 1,750 feet (ft). Water inflows include rainfall infiltration, leakage from surface water features, percolation of relatively small quantities of imported surface water that originated outside the Basin, and subsurface flows from adjacent basins. Outflows include seepage to surface water features, subsurface flows to adjacent basins, evapotranspiration, and consumption of groundwater extracted by wells.

The Basin is managed by seven GSAs: Amador County Groundwater Management Authority (ACGMA) GSA, City of Galt GSA, Clay Water District GSA, Galt Irrigation District (GID) GSA, Omochumne-Hartnell Water District (OHWD) GSA, Sacramento County GSA, and Sloughhouse Resource Conservation District (SRCD) GSA. In November 2021 the Cosumnes Groundwater Authority (CGA) was formed upon adoption of a Joint Powers Agreement (JPA) between the seven GSAs. The CGA enables the GSAs to collaboratively comply with SGMA, implement the GSP, seek and secure grant or other funding to support implementation, and work collaboratively with the GSAs and other entities to sustainably manage the Basin.

[1] The Cosumnes Subbasin GSAs include Amador County Groundwater Management Authority (ACGMA) GSA, City of Galt GSA, Clay Water District GSA, Galt Irrigation District (GID) GSA, Omochumne-Hartnell Water District (OHWD) GSA, Sacramento County GSA, and Sloughhouse Resource Conservation District (SRCD) GSA.

2 GROUNDWATER ELEVATION DATA

☑ *§ 356.2 (b) (1)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.
(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.

2.1 Groundwater Elevation Contour Maps

Fall water levels were measured between 1 October and 29 November 2021, and Spring water levels were measured between 11 March and 15 April 2022. Available Fall 2021 and Spring 2022 groundwater elevation data, including publicly available data from other sources, were contoured (**Figure AR-2** and **Figure AR-3,** respectively). Groundwater elevation contours generally decrease in magnitude from east to west across the Basin, with the greatest elevations measured beneath the higher topographic areas in the east. At lower topography, the western component of groundwater flow shifts towards the middle of the Basin where extractions have created a low in the groundwater levels (a cone of depression). The Fall 2021 and Spring 2022 groundwater contours are generally similar in magnitude and shape because measured water level changes in most wells were only a few feet. WY 2022 was a critically dry year, and the similarity between Fall and Spring water levels is likely explained by the lack of rainfall which is the primary source of groundwater recharge.

2.2 Groundwater Hydrographs

Long-term hydrographs of groundwater levels in Representative Monitoring Wells (RMWs) for Chronic Lowering of Groundwater Levels (RMW-WLs) and Depletions of Interconnected Surface Water (RMW-ISWs) are shown on **Figure AR-4**. Sustainable Management Criteria (SMCs), including Measurable Objectives (MOs), Minimum Thresholds (MTs), and Interim Milestones (IMs), established in the GSP are included in **Figure AR-4**, and the data and SMCs are reported in **Table AR-4** and **Table AR-6**, respectively**.** These data are discussed in **Section 7**.

3 GROUNDWATER EXTRACTIONS

☑ *§ 356.2 (b) (2)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.

Groundwater extractions were metered or estimated. Estimated values were provided by the Cosumnes, South American, and North American groundwater flow model (CoSANA), the Numerical Model for the Basin (Appendix M "CoSANA – An Integrated Water Resources Model of the Cosumnes, South American, and North American Groundwater Subbasins, November 2021" in "Groundwater Sustainability Plan for the Cosumnes Subbasin", December 2021). The CoSANA is a three-dimensional (3-D) groundwater flow model that uses DWR's finite-element Integrated Water Flow Model (IWFM) platform. CoSANA was prepared to support GSP development and implementation in the Basin.

Table AR-1 reports WY 2022 groundwater extraction data by water use sector (i.e., agricultural, urban and industrial) and **Figure AR-5** shows the general location and volume of annual extractions represented by groundwater use within each GSA. During WY 2022, the total volume of extracted groundwater was 139,300 acre-feet (AF), of which almost 90% was used by the Agricultural sector; the Agricultural sector includes domestic (agricultural-residential [Ag-Res]) uses. The 10% of remaining extracted groundwater was for the Developed uses which includes urban (e.g., public water systems [PWS]) and industrial (e.g., aquaculture and power plant cooling) water uses. While extractions were reported for most, but not all, municipal and PWS wells, the measurement methods were not always available. When reported extractions were not available, the extractions were estimated by repeating data from the previous year. Total pumping in the Basin decreased from 135,400 AF in WY 2021 to 125,200 AF in WY 2022.

All extractions for agriculture were estimated from reported land use (i.e., crop types), crop water demand, and climate data. In October 2021, meters were installed on three agricultural wells; however, data was not reported for WY 2021. Domestic, non-urban self-supplied water use is also included as part of the Agricultural sector extractions (Ag-Res extractions), and these extractions were calculated based on representative indoor and outdoor water use and the estimated number of residential parcels in the Basin.

Table AR-1 Summary of Groundwater Extraction Data by Sector (AF)

Water Year	Agricultural[(b)]	Developed[(d)]	Total
	Estimated[(c)]	Metered[(e)] and Estimated[(f)]	
2021[(g)]	133,600	16,200	149,800
2022	123,500	15,800	139,300

Abbreviations:
AF = acre-feet

Notes:
(a) Values are rounded to the nearest 100 AF.
(b) Agricultural includes agricultural and domestic water use.
(c) Agricultural extractions were estimated from land use and climate data using the Irrigation Demand Calculator (IDC) within the Cosumnes, South American, and North American model (CoSANA). Domestic (Ag-Res) extractions were estimated based on representative indoor and outdoor water use and the estimated number of residential parcels in the Basin.
(d) Developed extractions include urban (e.g., PWS) and industrial (aquaculture and power plant cooling) water uses.
(e) Data reported by the City of Galt GSA, ACGMA GSA, and some PWSs.
(f) Estimated extractions under the "Developed" Sector include non-reporting PWSs and aquaculture.
(g) WY 2021 data is updated to reflect the Water Year 2022 updated CoSANA model; Some values may differ than data reported in the WY 2021 Annual Report.

4 SURFACE WATER SUPPLY

☑ *§ 356.2 (b) (3)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.

Surface water supplies were reported or estimated using CoSANA. In the Basin, the surface water supply includes imported water and stream diversions (**Table AR-2**). In WY 2022, the Amador Water Agency (AWA) provided imported surface water to the City of Ione from Lake Tableaud, and the United States Bureau of Reclamation (USBR) provided imported surface water to the Sacramento Municipal Utility District (SMUD).

Imports:

- AWA delivered water from Lake Tableaud to meet urban demand in the City of Ione. From 1998 onward, these imports have been estimated from the total water treated at the wastewater treatment plant, as provided by AWA. Estimated deliveries in WY 2022 were 1,600 AF.
- Treated wastewater originating outside the Basin is delivered by the Amador Regional Sanitation Authority (ARSA) to the Castle Oaks Water Reclamation Plant, which supplies tertiary treated wastewater for irrigation to the Castle Oaks Golf Course. Estimated deliveries in WY 2022 were 600 AF based on irrigation demand.
- Surface water diversions from the Folsom South Canal (FSC) are delivered to the decommissioned Rancho Seco nuclear power facility, which is owned by SMUD, and is used for cooling the Cosumnes Power Plant and maintaining water levels in the Rancho Seco Lake (i.e., developed uses). SMUD reported 4,211 AF of diversions from the FSC during WY 2022; however, the CoSANA model underestimates these deliveries based on the water demand of agricultural land areas that surround Rancho Seco. **Table AR-2** reports the model-calculated estimated deliveries in WY 2022 as only 100 AF. The CoSANA model needs refinement to accurately represent lake evaporation and plant cooling, which will be addressed as part of the 5-year GSP update.

Stream Diversions:

- In WY 2022, 21,000 AF of water was diverted from surface drainages in the Basin (e.g., the Cosumnes River and Dry Creek). The best available data for most of the diversions are the monthly reported stream diversions uploaded to the Electronic Water Rights Information Management System (eWRIMs). The monthly diversions are reported by the permit holder, but the reports do not include the measurement method. Monthly Cosumnes River diversion by Rancho Murieta were metered and reported directly to the CGA.

Table AR-2 Summary of Surface Water Supply by Sector (AF)

Water Year	AWA Import Surface Water	ARSA Imported Treated Wastewater	SMUD	Stream Diversions	
	Developed	Developed	Developed	Agricultural	Developed
2021[(b)]	1,700	600	100	22,200	600
2022	1,600	600	100	20,400	600

Abbreviations:

AF = Acre-feet
AWA = Amador Water Agency
ARSA = Amador Regional Sanitation Authority
SMUD = Sacramento Municipal Utilities District

Notes:

(a) Values are rounded to the nearest 100 AF.
(b) WY 2021 data is updated to reflect the Water Year 2022 updated CoSANA model; Some values may differ than data reported in the WY 2021 Annual Report.
(c) Developed includes urban (e.g., PWS) water uses.

5 TOTAL WATER USE

☑ *§ 356.2 (b) (4)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

As described above, surface water and groundwater extractions comprise most of the water use in the Basin. Additionally, recycled water is used for a small amount of irrigation within the Basin (1,200 AF). Secondary treated water is imported into the Basin and treated to tertiary standards for use as irrigation water at the Castle Oaks Golf Course. Wastewater produced by the City of Galt is treated at the City of Galt Wastewater Treatment Plant (WWTP) and delivered to nearby fields for use as irrigation water. Therefore, the total water use is equal to the sum of total estimated groundwater extraction and the total surface water and recycled water supplies.

Table AR-3 summarizes the total water use by sector (e.g., agricultural, urban and industrial) and water use type (e.g., extractions, recycled water, imported water, and stream diversions). Groundwater extraction and surface water supply by sector are shown in **Table AR-1** and **Table AR-2**, respectively. Recycled non-potable water used for irrigation by the golf course is estimated based on demand, and recycled water use by agricultural fields near the City of Galt WWTP is recorded using meters that record in gallons.

Table AR-3 Summary of Total Water Use by Sector and Source (AF)

Water Year	Agricultural			Developed			
	Estimated Extractions	Recycled Water	Stream Diversions	Metered/ Estimated Extractions	Imported Water	Recycled Water	Stream Diversions
2021[(b)]	133,600	700	22,200	16,200	1,800	600	600
2022	123,500	600	20,400	15,800	1,700	600	600

Abbreviations:
AF = acre-feet

Notes:
(a) Values are rounded to the nearest 100 AF.
(b) WY 2021 data is updated to reflect the Water Year 2022 updated CoSANA model; Some values may differ slightly from the data reported in the WY 2021 Annual Report.
(c) Developed includes urban (e.g., PWS) and industrial (aquaculture and power plant cooling) water uses.

6 CHANGE IN GROUNDWATER STORAGE

☑ *§ 356.2 (b) (4)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(4) Change in groundwater in storage shall include the following:

(A) Change in groundwater in storage maps for each principal aquifer in the basin.

(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

Changes in groundwater storage were estimated using CoSANA. **Figure AR-6** is a map showing the distribution of model-calculated changes in groundwater storage between October 1, 2021, through September 30, 2022 (WY 2022). CoSANA calculates the volume of storage change within each model element, and the element-by-element change was normalized by dividing the volumetric change in storage by the area of each respective element and the results mapped in units of feet. Groundwater storage declined across most of the Basin with the greatest decline near the areas characterized by the greatest extractions (**Figure AR-5**). Groundwater storage increased along the Cosumnes River and in a portion of Amador County in the area with the least extractions and greatest opportunities for water to recharge the aquifer (**Figure AR-5**).

Figure AR-7 shows water year type, annual groundwater extractions, annual change in groundwater storage, and the cumulative change in groundwater storage for WY 2015 through WY 2022. Annual extraction rates of 135,200 acre-feet per year (AFY) or greater resulted in storage declines, whereas annual extraction rates of 121,800 AFY or less resulted in storage accretion. The estimated sustainable yield for the Basin reported in the GSP ranges from 119,000 AFY to 125,700 AFY.

7 PLAN IMPLEMENTATION

☑ *§ 356.2 (b) (4)*

Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:

(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

7.1 Semi-Annual Monitoring

The WY 2022 semi-annual monitoring occurred in Fall 2021 and Spring 2022. During the Fall 2021 event, water levels were not measured in six (6) monitoring wells (RMW-WL4, RMW-WL16, RMW-WL17, RMW-WL18, RMW-ISW2, and RMW-ISW3), and during the Spring 2022 monitoring event water levels were not measured in six (6) monitoring wells (RMW-WL3, RMW-WL16, RMW-ISW2, RMW-ISW3, RMW-ISW4 and RMW-ISW7). Complete water quality data (i.e., Arsenic, Nitrate and TDS) were not collected for seven (7) monitoring wells (RMW-WQ1, RMW-WQ3, RMW-WQ8, RMW-WQ9, RMW-WQ10, RMW-WQ11, and RMW-WQ12). Additionally, readings from the few known agricultural wells that have meters were not obtained as part of the Fall and Spring events. The missing water level and well production data is attributed primarily to the lack of well access. Some wells became inaccessible because the original access agreement was with the former Cosumnes Working Group and not the CGA. The agreements therefore need to be updated to gain access. Similarly, CGA relied on telemetry systems to retrieve data from some wells and therefore did not require physical access, but removal of the 3G network in 2022 unexpectedly caused the telemetry systems to go offline. Without access agreements in place for these wells, the wells could not be visited to collect manual measurements.

Missing data is also attributed to insufficient communication between CGA, GSA staff, and field technicians collecting the data. For example, wells were not measured if the technician could not physically access the well and a contact could not be reached to resolve the issue. The agreements therefore need to be updated to include multiple points of contact to resolve access issues when encountered in the field. Moreover, protocols need to be put in place to ensure frequent check-in calls between CGA and field technicians to monitor progress and identify potential conflicts in the field.

To mitigate access issues and develop a more robust monitoring implementation plan, CGA plans to do the following.

1) Conduct site visits to each Representative Monitoring Well to document site conditions, access procedures, and identify key issues of concern, if any.
2) Secure updated access agreements that include multiple points of contact to address unforeseen conditions that prevent well access or collecting the necessary data.
3) Develop a checklist of procedures and steps based on Section 17.2 “Protocols for Data Collection and Monitoring” to guide each monitoring event. The checklist will include a kick-off meeting between participating parties to review the checklist, moreover check-in calls will occur during monitoring to review progress and resolve issues that can potentially prevent meeting the monitoring objectives.

7.2 Progress Towards Interim Milestones for Chronic Lowering of Groundwater Levels

Fall 2021 water levels were measured in fifteen (15) wells and Spring 2022 water levels were measured in seventeen (17) wells. **Table AR-4** compares these WY 2022 groundwater elevations to SMCs (MOs and MTs) at the RMW-WLs for the Chronic Lowering of Groundwater Levels Sustainability Indicator. The GSP defines Undesirable Results when MTs are exceeded in 25% or more of the RMW-WLs (5 out of 19) for two (2) consecutive years. MT exceedances in WY 2022 are discussed below and do not indicate Undesirable Results in The Basin. There are no Interim Milestones for WY 2022.

- In WY 2022 groundwater elevations in RMW-WL5 were below the MT. However, data were not available for RMW-WL5 in WY 2021. There is uncertainty in the SMCs for RMW-WL5 because historical data are not available to assess seasonal and long-term water level trends relative to land use and climatic variations.
- In WY 2022 groundwater elevations in RMW-WL12 were more than 60 feet lower than measured in WY 2021, and field notes indicate the well was actively pumping at the time of the Spring 2022 measurement. Hence, the low elevation represents pumped (dynamic) water levels and were not compared to the SMCs.
- In WY 2021, one well (RMW-WL16) had a groundwater elevation below the MT but the water level was not measured during WY 2022. Based on the hydrograph for this well (**Figure AR-4b**), it is plausible the water level in RMW-WL16 was also below the MT in 2022, but this cannot be confirmed.
- In Fall 2021 (WY 2022) the groundwater elevation in RMW-WL19 was below the MT, however the elevation was more than 10 feet lower than the previous measurement in Spring 2021 (WY 2021), and lower than the measurement in the following Spring 2022 (WY 2022). Hence, the low elevation may represent pumped conditions, but this needs to be confirmed.

Consistent with the GSP (Section 15.8 *Action Plan Related to Minimum Threshold Exceedances*), the CGA and affected GSAs (Amador County Groundwater Management Authority [RMW-WL16 and -WL19], Galt Irrigation District [RMW-WL5], and Sloughhouse Resource Conservation District [RMW-WL12]) will investigate conditions at the noted wells to further evaluate factors that could contribute to lowered water levels and assess the need for increased or expanded monitoring.

Table AR-4 Groundwater Elevations and Relevant Sustainable Management Criteria

Well Name	Fall 2021 GWE (ft msl)	Spring 2022 GWE (ft msl)	MO (ft msl)	MT (ft msl)
RMW-WL1	-46	-47	-55	-65
RMW-WL2	-68	-57	-59	-69
RMW-WL3	-41	--	-46	-56
RMW-WL4	--	-20	-24	-39
RMW-WL5	-92	-90	-70	-84
RMW-WL6	-69	-65	-51	-78
RMW-WL7	-27	-26	-28	-38
RMW-WL8	-42	-35	-36	-48
RMW-WL9	-87	-84	-75	-89
RMW-WL10	-32	-28	-22	-32
RMW-WL11	-33	-31	-28	-38
RMW-WL12	(48)	(53)	106	85
RMW-WL13	-32	-29	-36	-46
RMW-WL14	252	254	250	232
RMW-WL15	127	127	141	119
RMW-WL16	--	---	269	259
RMW-WL17	---	209	116	89
RMW-WL18	---	198	195	185
RMW-WL19	160	172	171	161

Abbreviations:
ft msl = feet above mean sea level
GWE = groundwater elevation
MO = measurable objective
MT = minimum threshold
RMW-WL = Representative Monitoring Well for Chronic Lowering of Groundwater Levels
"--" = not collected

Notes:
(a) Measured water levels in parenthesis "()" represent pumping (dynamic) conditions well and therefore are not compared to SMCs.

7.3 Progress Towards Interim Milestones for Groundwater Storage

There are no groundwater storage IMs for WY 2022. As explained in the GSP, groundwater levels are a reasonable proxy for groundwater storage. Progress made during the reporting period is therefore represented by the discussion of water levels in **Section 7.1.**

7.4 Progress Towards Interim Milestones for Seawater Intrusion

Because significant and unreasonable effects from seawater intrusion are not present in the Basin and are not likely to occur, SMCs were not set for Seawater Intrusion. The Seawater Intrusion Sustainability Indicator is therefore not discussed herein.

7.5 Progress Towards Interim Milestones for Degraded Water Quality

Table AR-5 compares available WY 2022 water quality concentrations for arsenic, nitrate, and TDS (i.e., Constituents of Concern [COCs]) to their respective SMCs at the RMW-WQs for the Degraded Water Quality Sustainability Indicator. At the time of GSP development, current concentrations were below the MOs and setting IMs would promote water quality degradation. Therefore, TTs were established for Degraded Water Quality whereby if the concentration of a COC in a RMW-WQ reaches 50% of its Maximum Contaminant Level (MCL), the GSAs will consider whether additional action is necessary. There are no TTs specified for WY 2022.

The GSP defines the criteria for Undesirable Results when MTs for a constituent of concern are exceeded in samples from 25% or more of the RMW-WQs (for example, the MTs are exceeded in samples from 4 of the 14 RMW-WQ wells) for two (2) consecutive years. In WY 2022, except for arsenic, all available data were below the MT. The arsenic concentration in the sample from RMW-WQ2 was 11 micrograms per liter (µg/L) and exceeded the MT; no data was available for this well in WY 2021. This exceedance of the MT is not indicating Undesirable Results in the Basin.

Table AR-5 Groundwater Quality and Sustainable Management Criteria

Well Name	**Arsenic** (µg/L)		**Nitrate as N** (mg/L)		**TDS** (mg/L)	
	MO = 8	MT = 10	MO = 8	MT = 10	MO= 500	MT=1,000
RMW-WQ1	--		--		--	
RMW-WQ2	11		ND		170	
RMW-WQ3	--		--		--	
RMW-WQ4	2		2.2		150	
RMW-WQ5	4.6		0.4		140	
RMW-WQ6	1.4		1.2		190	
RMW-WQ7	2		1.6		110	
RMW-WQ8	--		--		--	
RMW-WQ9	--		--		--	
RMW-WQ10	--		--		--	
RMW-WQ11	--		ND		--	
RMW-WQ12	--		3.7		--	
RMW-WQ13	3.5		1.4		150	
RMW-WQ14	9.8		ND		150	

Abbreviations:

mg/L = milligrams per liter
MO = Measurable Objective
MT = Minimum Threshold
N = Nitrogen
ND= Not Detected
RMW-WQ = Representative Monitoring Well for Degraded Water Quality
TDS = Total Dissolved Solids
µg/L = micrograms per liter
"--"= not collected

Notes:

(a) For all RMW-WQs, SMCs were set at the same level based on state and federal standards.

7.6 Progress Towards Interim Milestones for Land Subsidence

Land subsidence is of low concern in the Basin. The following describe measured vertical displacement (subsidence) trends for WY 2022 (see **Figure AR-8**):

- Continuous vertical displacement data has been collected since July 2006 at a University NAVSTAR Consortium (UNAVCO) Global Positioning System (GPS) station (P275). The site is located in the cone of depression, and measured -0.14 ft of average vertical displacement during WY 2022.
- The TRE Altamira Interferometric Synthetic Aperture Radar (InSAR) data indicates the annual vertical displacement rate for the period 1 October 2021 through 1 October 2022 ranged from - 0.1 ft to 0.1 ft throughout the Basin.

As explained in the GSP, groundwater levels are a reasonable proxy for land subsidence, and progress made during the reporting period is therefore represented by the discussion of water levels in **Section 7.1**.

7.7 Progress Towards Interim Milestones for Depletions of Interconnected Surface Water

Fall 2021 water levels were measured in seven (7) wells and Spring 2022 water levels were measured in five (5) wells. **Table AR-6** compares these WY 2022 groundwater elevations to SMCs (MOs and MTs) at the RMW-ISWs for the Depletion of Interconnected Surface Water Sustainability Indicator. The GSP defines Undesirable Results when MTs are exceeded in one or more of the RMW-ISWs (1 out of 9) for two (2) consecutive years. In WY 2021, the water levels reported for all RMW-ISWs were above their respective MTs and therefore the MT exceedances in WY 2022, discussed below, do not indicate Undesirable Results in the Basin.

WY 2022 groundwater elevations in RMW-ISW5 were below the MT in both the Fall and Spring monitoring events. However, data were not available for RMW-ISW5 in WY 2021, and the SMCs for this well are uncertain because historical data are not available to assess seasonal and long-term trends under variable land use and climatic conditions. In Fall 2021, the groundwater elevation in RMW-ISW6 was below its MT. The hydrograph for this well is shown in **Figure AR-4c** and shows the water levels have been trending downward through two critically dry years (the only years with data).

Table AR-6 Groundwater Levels in Interconnected Surface Water Representative Monitoring Wells and Sustainable Management Criteria

Well Name	Fall 2021 GWE (ft msl)	Spring 2022 GWE (ft msl)	MO (ft msl)	MT (ft msl)
RMW-ISW1	-18	-13	-18	-23
RMW-ISW2	--	--	-3	-6
RMW-ISW3	--	--	-4	-10
RMW-ISW4	-27	--	-14	-19
RMW-ISW5	72	58	83	78
RMW-ISW6	-31	-28	-26	-31
RMW-ISW7	252	--	257	247
RMW-ISW8	176	178	179	172
RMW-ISW9	171	172	171	164

Abbreviations:
ft msl = feet above mean sea level
GWE = groundwater elevation
MO = Measurable Objective
MT = Minimum Threshold
RMW-ISW = Representative Monitoring Well for the Depletions of Interconnected Surface Water
"--" = not collected

7.8 Implementation of Projects and Management Actions (PMAs)

The GSP outlined six PMAs. PMA implementation progress described below represents activities taken place during WY 2022. The CGA will continue to pursue available funding opportunities to support PMA implementation (e.g., DWR's Sustainable Groundwater Management (SGM) Implementation Round 2 funding, California Department of Conservation's Multi-benefit Land Repurposing Program, and State Water Resources Control Board's Water Recycling Funding Program).

- PMA #1 - OHWD Agricultural Flood Managed Aquifer Recharge (Flood-MAR). In WY 2022, no diversions occurred. Progress was made to gain a 5-year diversion permit (granted in WY 2023).
- PMA #2 - Sacramento Area Flood Control Agency (SAFCA) Flood-MAR. Initiated a pilot study at the Laguna Del Sol Resort Project site (LDSR Project). During WY 2022, a dry well was installed (August 2022), and the first infiltration test began at the end of WY2022. Test results will be evaluated and reported as part of the WY 2023 Annual Report.
- PMA #3 - OHWD Cosumnes River Flow Augmentation. PMA #3 has not been initiated.
- PMA #4 – City of Galt Recycled Water Project. PMA #4 has not been initiated.
- PMA #5 – Voluntary Land Repurposing. In WY 2022, a survey was conducted to gather input from growers and evaluate parameters for the project. As a result, the project was modified to include conservation activities aimed to reduce groundwater use by agriculture. The CGA initiated an evaluation of conservation methods for their regional effectiveness and coordination activities with landowners.
- PMA #6 - Groundwater Banking and Sale. PMA #6 has not yet been initiated.

7.9 Stakeholder Outreach

During WY 2022 the CGA continued to conduct stakeholder outreach on a variety of platforms:

- Monthly CGA Board of Directors meetings open to the public provided updates of GSP implementation activities.
- The PMA Committee was formed in March 2022 to develop the Cosumnes Subbasin Priority Projects List. This list guides PMA implementation and prioritizes CGA efforts to apply for future funding opportunities.
- The Citizen Advisory Committee (CAC) was formed in March 2022 to provide input from and information-sharing among the Basin's diverse communities and interests. The CAC serves an advisory role to the CGA Board of Directors and consists of a range of applicants with interest and experience in sustainable groundwater management.
- Stakeholder/Technical Workshops, website maintenance, updates and expansion of the list of interested parties, fact sheet development and distribution, farmer surveys, and public presentations made by GSA members to their local governing bodies as part of regular Public City Council or Board meetings. Dates of the various stakeholder outreach activities during WY 2022 are included in **Appendix B**.

8 REFERENCES

DWR, 2019. *Sustainable Groundwater Management Act 2018 Basin Prioritization Process and Results*. California Department of Water Resources, April 2019.

Robertson-Bryan, Inc. and WRIME, 2011, South Basin Groundwater Management Plan, Prepared for South Area Water Council, dated October 2011.

Sacramento Valley
South American
(5-021.65)

San Joaquin Valley
Cosumnes
(5-022.16)

San Joaquin Valley
Eastern San Joaquin
(5-022.01)

Wilton
Herald
Galt
Lodi
Acampo
Woodbridge
Victor
Clements
Wallace
Burson
Jackson Valley
Lone Valley
Rancho Seco Park
Camanche Reservoir
Castle Oaks Golf Club
Twin Cities Rd
Hadselville Creek
Browns Creek
Badger Creek
North Fork Badger Creek
Griffith Creek
Skunk Creek
Dry Creek
Deer Creek
Crevis Creek
Coyote Creek
Goose Creek
Bear Creek
Paddy Creek
Middle Paddy Creek
Lockeford Springs
SACRAMENTO
AMADOR
CALAVERAS
Carlton E Forbes Fwy
E Highway 12

Legend

Groundwater Subbasin

- Cosumnes Subbasin (5-022.16)
- South American Subbasin (5-021.65)
- Eastern San Joaquin Subbasin (5-022.01)

Abbreviations

DWR = California Department of Water Resources

Notes

1. All locations are approximate.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 8 March 2023.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - Final Prioritization, dated February 2019.

N

0 3 6

(Scale in Miles)

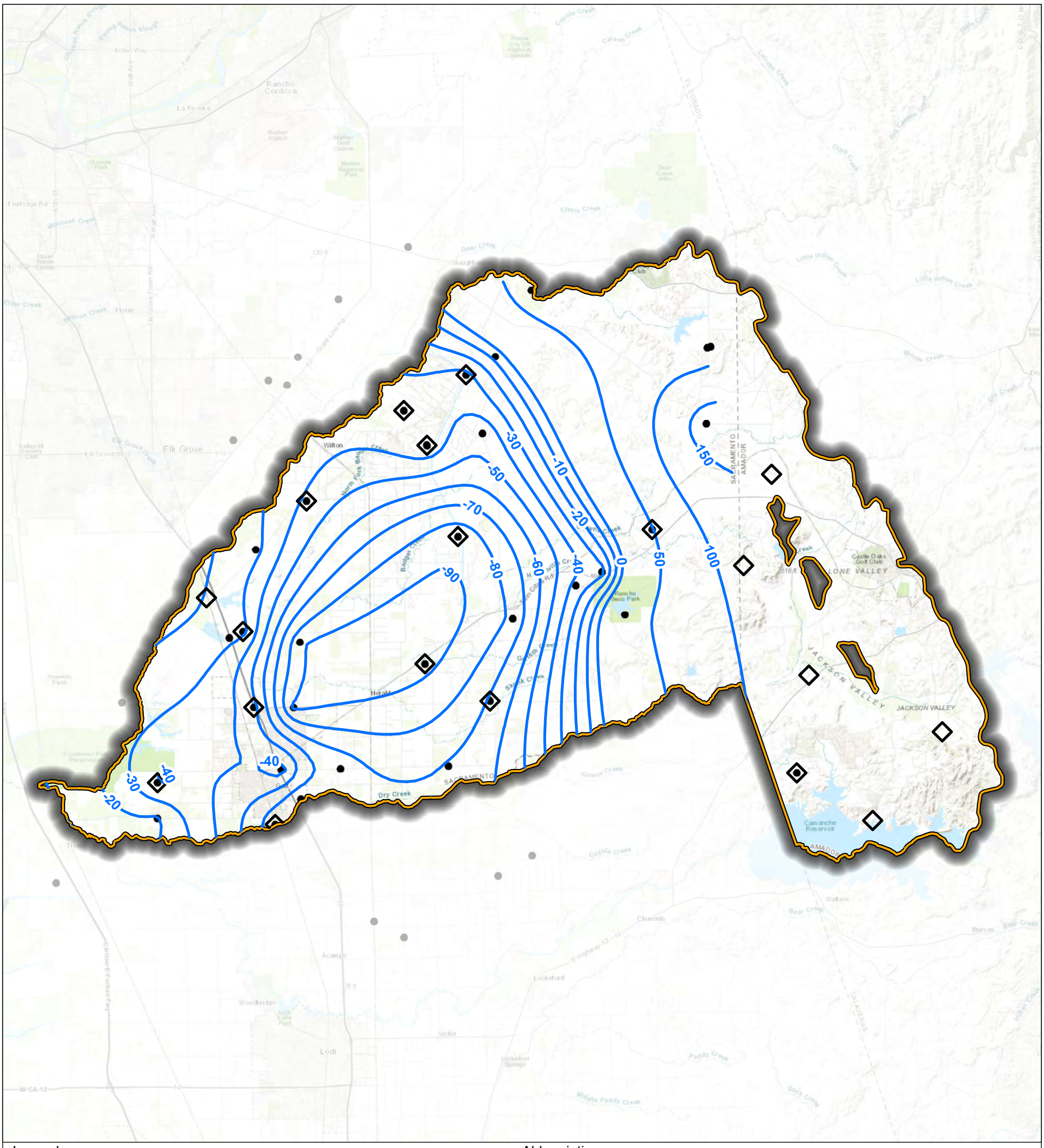
Cosumnes Groundwater Subbasin

Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-1

eki environment & water

Path: X:\C20149.01\Map\01\Figure AR-1. Cosumnes Groundwater Basin.mxd



Legend

- Well with Fall 2021 GWE
- RMW-WL
- Fall 2021 GWE (ft NAVD 88)

Groundwater Subbasin

- Cosumnes Subbasin (5-022.16)

Abbreviations

DWR = California Department of Water Resources
ft NAVD 88 = feet above the North American Vertical Datum of 1988
GWE = Groundwater Elevation
RMW-WL = Representative Monitoring Well for Chronic Lowering of Groundwater Levels

Notes

1. All locations are approximate.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 March 2023.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - Final Prioritization, dated February 2019.

N

0 3 6

(Scale in Miles)

DRAFT

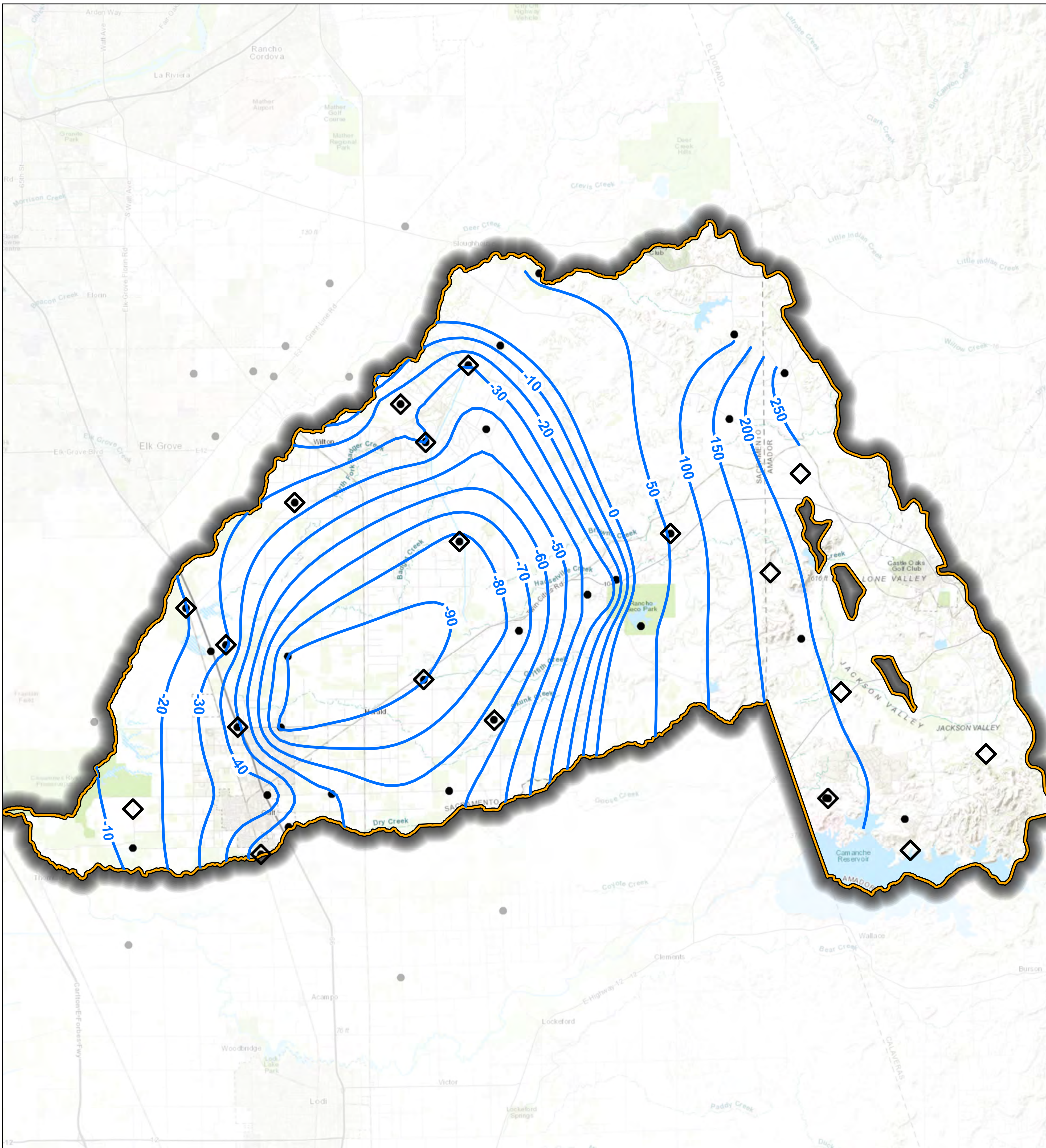
Groundwater Elevation - Fall 2021

Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-2

eki environment & water

Path: X:\C20149.01\Map\03\Figure AR-2. Groundwater Elevations - Fall 2021.mxd



Legend

● Well with Spring 2022 GWE

◇ RMW-WL

Spring 2022 GWE Contour (ft NAVD88)

Groundwater Subbasin

Cosumnes Subbasin (5-022.16)

Abbreviations

DWR = California Department of Water Resources
ft msl = ft above the North American Vertical Datum of 1988
GWE = Groundwater Elevation
RMW-WL = Representative Monitoring Well for Chronic Lowering of Groundwater Levels

Notes

1. All locations are approximate.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 March 2023.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - Final Prioritization, dated February 2019.

N

0 3 6
(Scale in Miles)

DRAFT

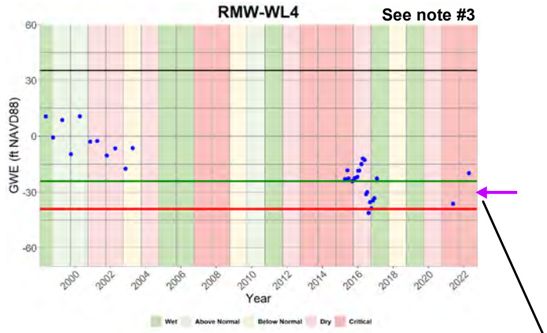
Groundwater Elevation - Spring 2022

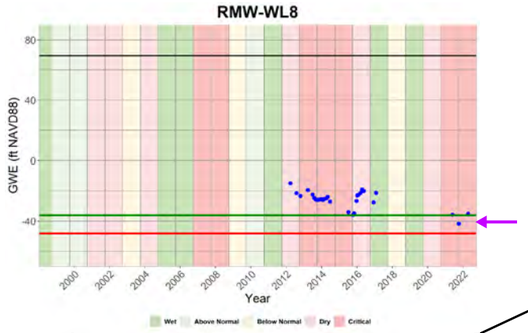
Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

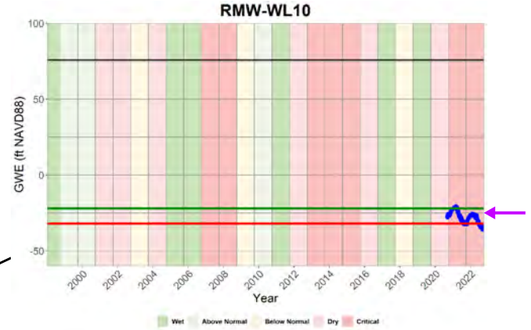
eki environment & water

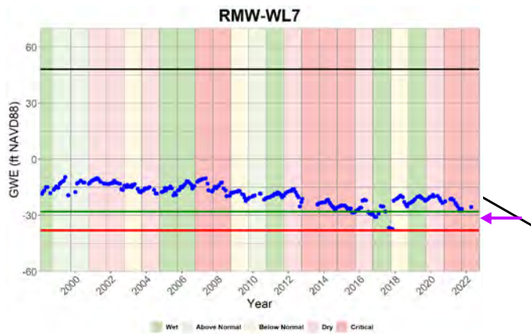
Figure AR-3

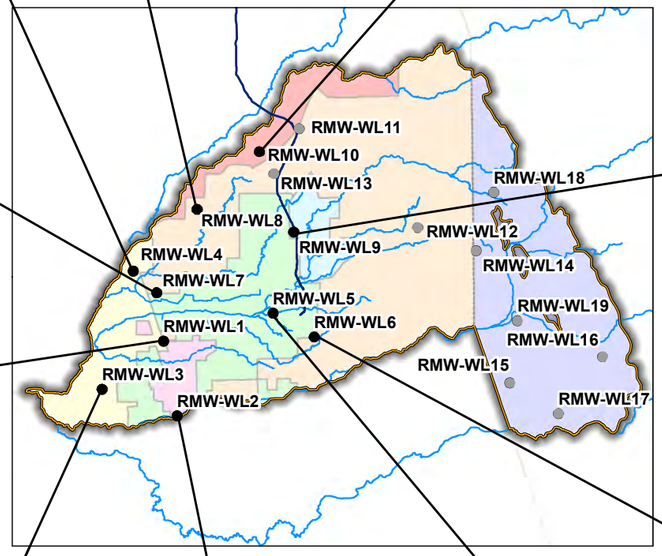
Path: X:\C20149.01\Map\03\Figure AR-3. Groundwater Elevations - Spring 2022.mxd

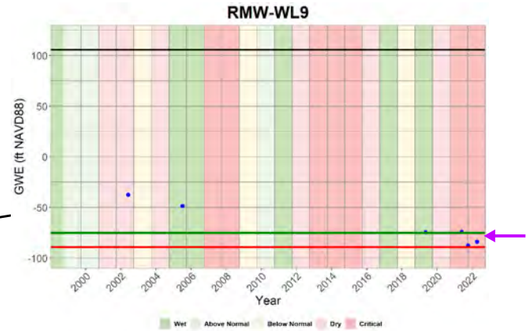


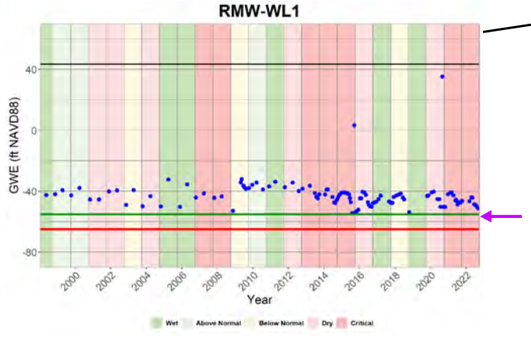


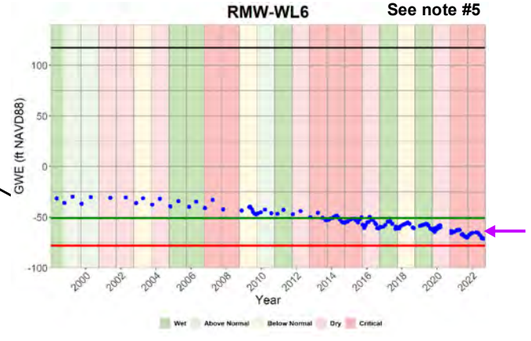


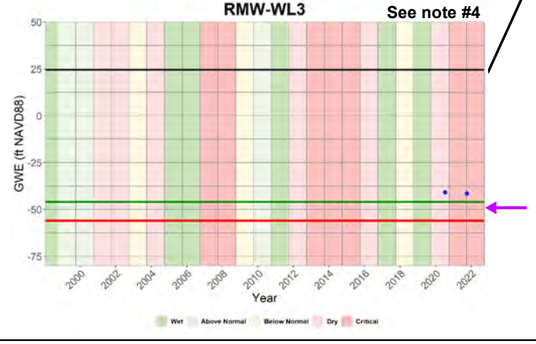


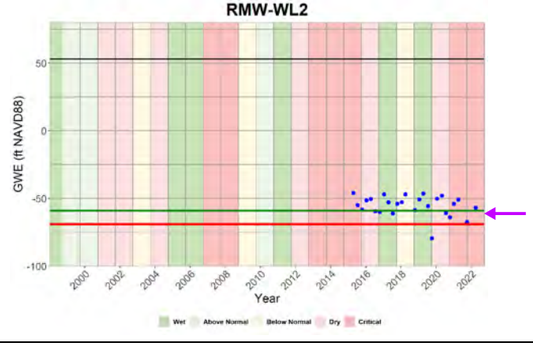


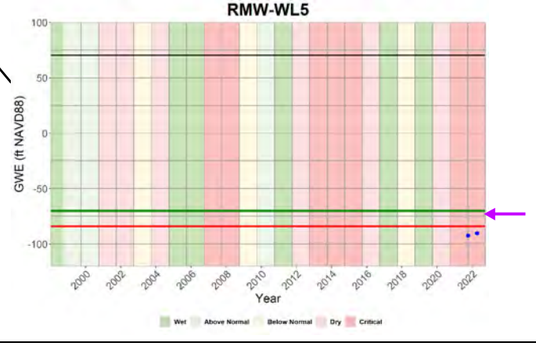












Legend

- Cosumnes Subbasin (5-022.16)

Groundwater Sustainability Agency

- Amador County Groundwater Management Authority
- City of Galt
- Clay Water District
- Galt Irrigation District
- Omochumne-Hartnell Water District
- Sacramento County
- Sloughhouse Resource Conservation District
- County Line
- Major Stream
- Folsom South Canal
- RMW-WL
- Groundwater Elevation
- Ground Surface Elevation
- MT
- MO
- 2027 Interim Milestone

Water Year Type

- Wet
- Above Normal
- Below Normal
- Dry
- Critical

Abbreviations

ft NAVD88	= feet above the Vertical Datum of 1988l
GWE	= groundwater elevation
MO	= Measurable Objective
MT	= Minimum Threshold
RMW-WL	= Represenatitve Monitoring Well for Chronic Lowering of Water Levels

Notes

1. All locations are approximate.
2. See Figure AR-4b for RMW-WL11 through RMW-WL19.
3. Fall 2021 water levels were not measured in RMW-WL4.
4. Spring 2022 water levels were not measured in RMW-WL3.
5. Since about 2015, the trend seems to have increased relative to the longer-term historical trend.

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(Scale in Miles)

Representative Monitoring Well - Hydrographs

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Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01
Figure AR-4a

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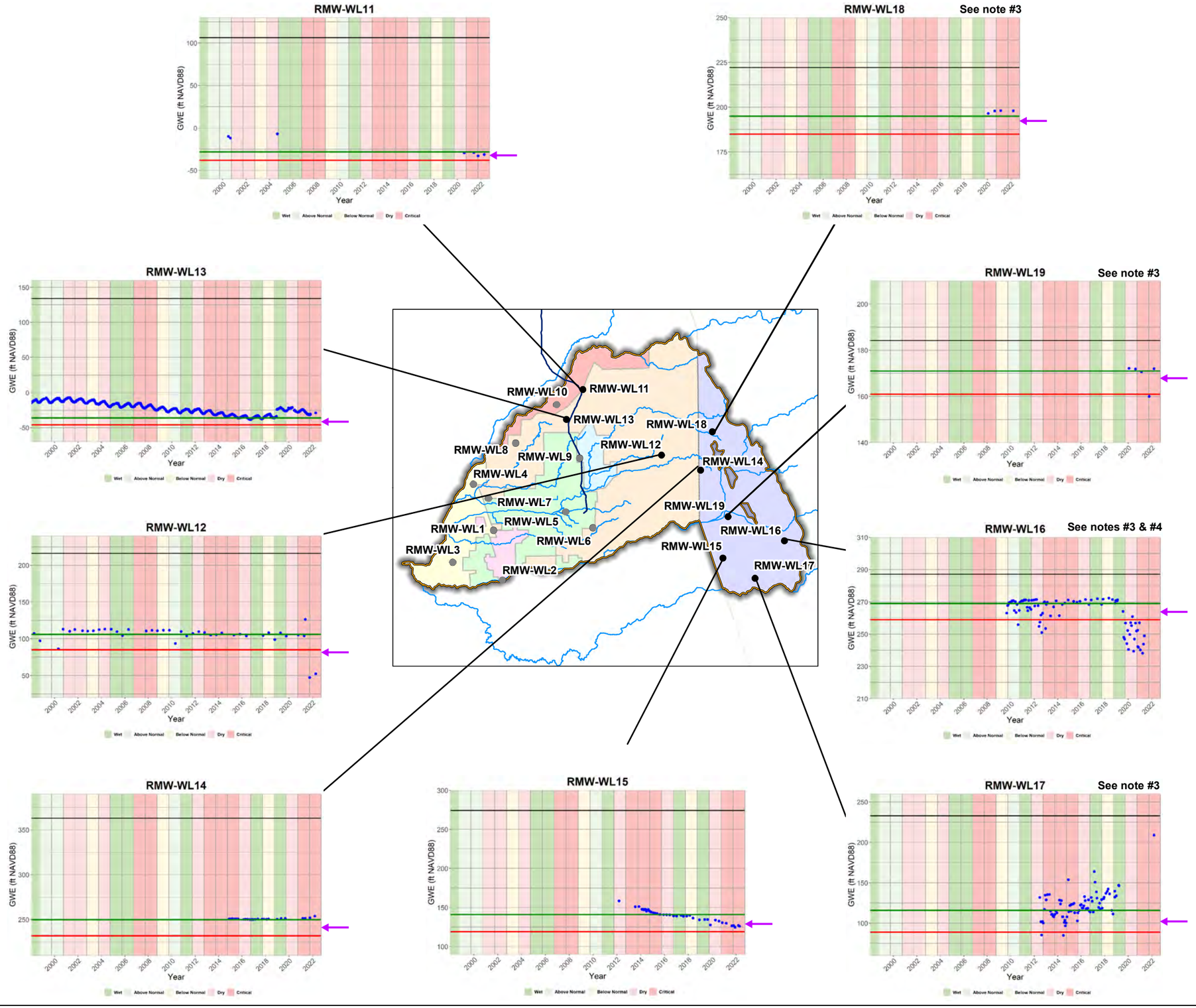

Legend

- Cosumnes Subbasin (5-022.16)

Groundwater Sustainability Agency

- Amador County Groundwater Management Authority
- City of Galt
- Clay Water District
- Galt Irrigation District
- Omochumne-Hartnell Water District
- Sacramento County
- Sloughhouse Resource Conservation District
- County Line
- Major Stream
- Folsom South Canal
- RMW-WL
- Groundwater Elevation
- Ground Surface Elevation
- MT
- MO
- 2027 Interim Milestone

Water Year Type

- Wet
- Above Normal
- Below Normal
- Dry
- Critical

Abbreviations

ft NAVD 88 = feet above the North American Vertical Datum of 1988
GWE = groundwater elevation
MO = Measurable Objective
MT = Minimum Threshold
RMW-WL = Represenatitve Monitoring Well for Chronic Lowering of Water Levels

Notes

1. All locations are approximate.
2. See Figure AR-4a for RMW-WL1 through RMW-WL10.
3. Water levels were not measured in RMW-WL14, RMW-WL16, RMW-WL17, RMW-WL18, and RMW-WL19 during Water Year 2022.
4. Change in water level trends starting in WY 2020.

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(Scale in Miles)

Representative Monitoring Well - Hydrographs

DRAFT

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Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-4b

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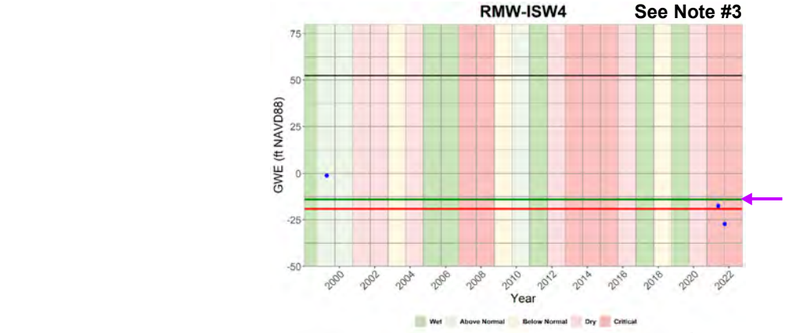

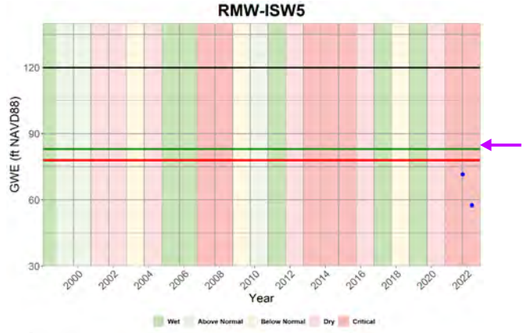

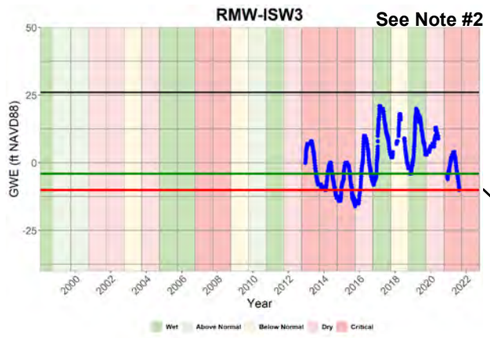

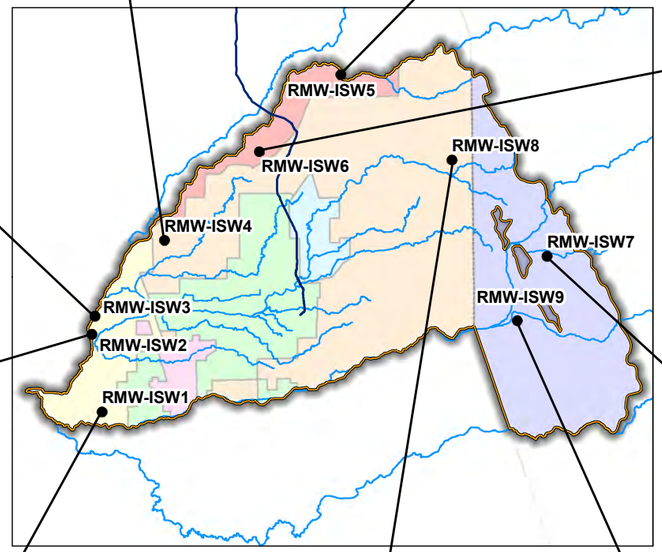

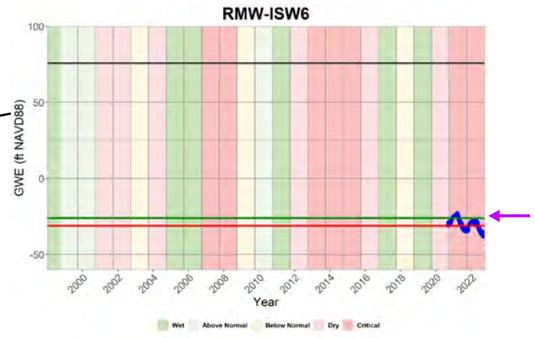

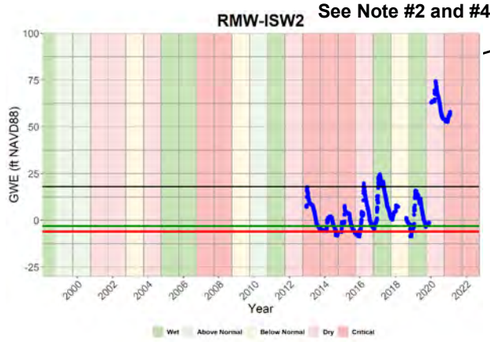

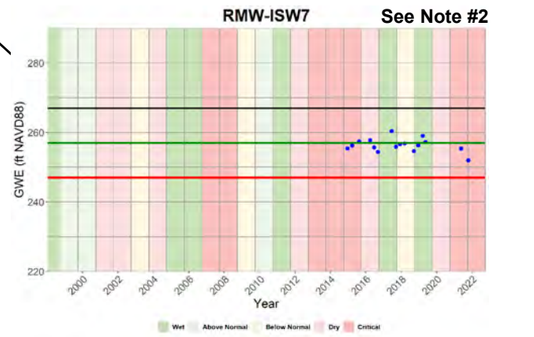

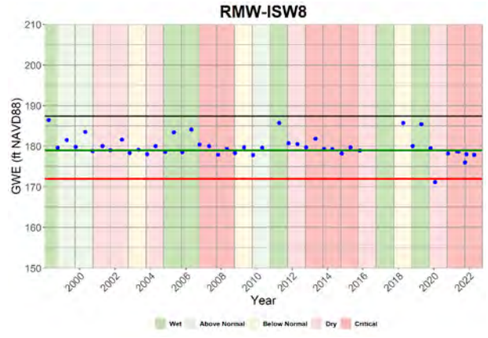

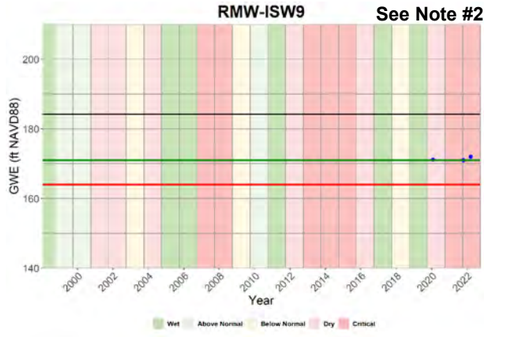

Legend

- Cosumnes Subbasin (5-022.16)

Groundwater Sustainability Agency

- Amador County Groundwater Management Authority
- City of Galt
- Clay Water District
- Galt Irrigation District
- Omochumne-Hartnell Water District
- Sacramento County
- Sloughhouse Resource Conservation District
- County Line
- Major Stream
- Folsom South Canal
- RMW- ISW
- Groundwater Elevation
- Ground Surface Elevation
- MT
- MO
- 2027 Interim Milestone (see note #5)

Water Year Type

- Wet
- Above Normal
- Below Normal
- Dry
- Critical

Abbreviations

ft NAVD88	= feet above mean sea level
GWE	= groundwater elevation
MO	= Measurable Objective
MT	= Minimum Threshold
RMW-ISW	= Represenatitve Monitoring Well for Interconnected Surface Water

Notes

1. All locations are approximate.
2. Water levels were not measured in RMW-ISW2, RMW-ISW3, RMW-ISW7 or RMW-ISW9 during Water Year 2022.
3. Water levels were not measured in RMW-ISW4 during Spring Water Year 2022.
4. Measurements recorded for RMW-ISW2 after 10 January 2020 are considered questionable as all values are increased by up to 60 feet compared to recent data.
5. Interim Milestones only set for RMW-ISWs in disconnected reaches lacking Groundwater Dependant Ecosystems.

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(Scale in Miles)

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Representative Monitoring Well - Hydrographs

Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-4c

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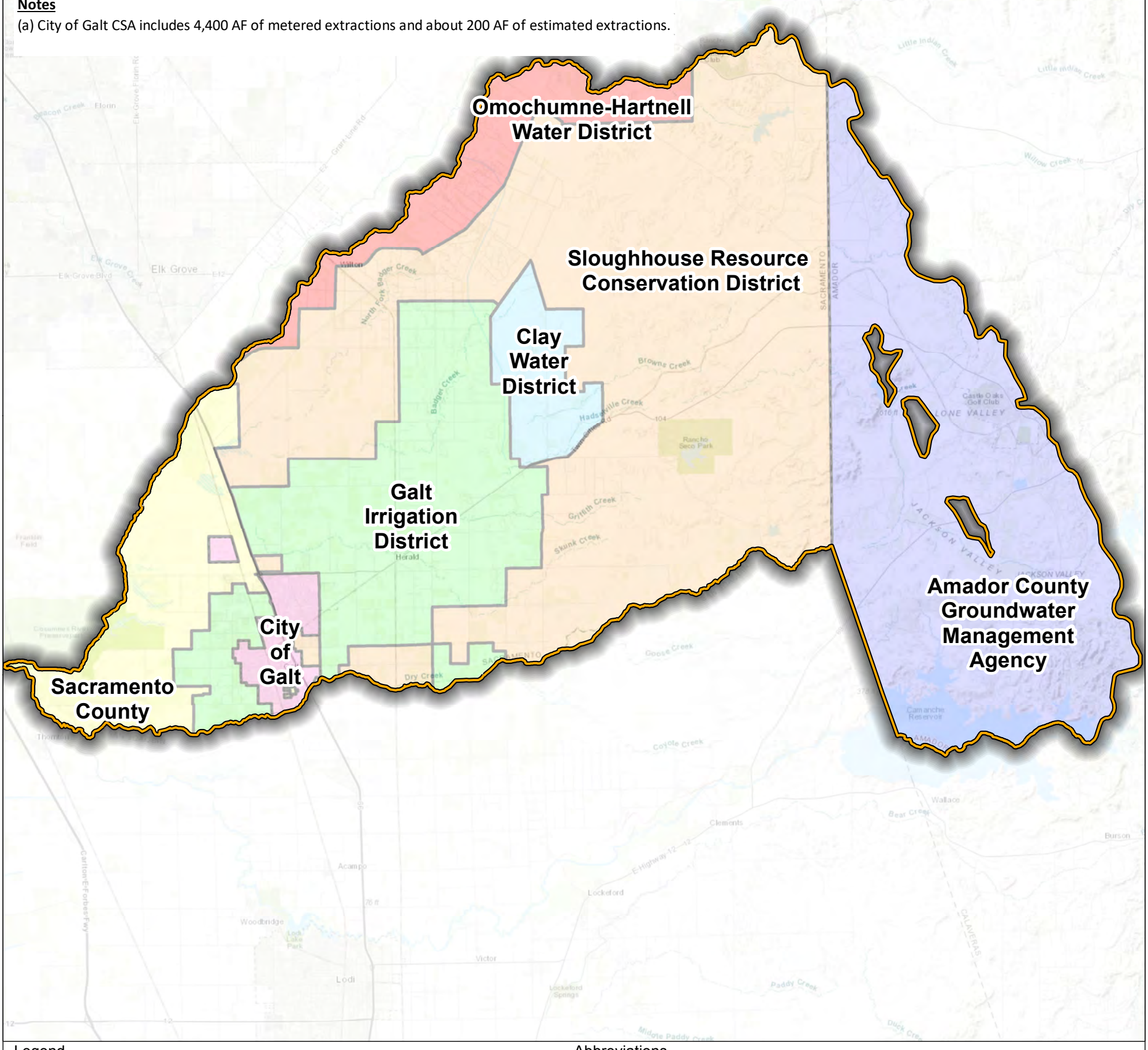
Groundwater Sustainability Agency	Total Estimated Extractions (AF)
Amador County Groundwater Management Authority	1,700
City of Galt[(a)]	4,600
Clay Water District	8,200
Galt Irrigation District	57,700
Omochumne-Hartnell Water District	6,900
Sacramento County	15,400
Sloughhouse Resource Conservation District	44,800
Total	139,300

Notes

(a) City of Galt CSA includes 4,400 AF of metered extractions and about 200 AF of estimated extractions.



Legend

Groundwater Subbasin

- Cosumnes Subbasin (5-022.16)

Groundwater Sustainability Agency

- Amador County GMA
- City of Galt
- Clay WD
- Galt ID
- Omochumne-Hartnell WD
- Sacramento County
- Sloughhouse RCD

Abbreviations

DWR = California Department of Water Resources
GMA = Groundwater Management Authority
ID = Irrigation District
RCD = Resource Conservation District
WD = Water District

Notes

1. All locations are approximate.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 March 2023.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater, Bulletin 118 - 2018.

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(Scale in Miles)

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General Locations and Volumes of Annual Extractions Water Year 2022

Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-5

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RMW-WL11
RMW-WL10
RMW-WL13
RMW-WL8
RMW-WL9
RMW-WL12
RMW-WL4
RMW-WL14
RMW-WL7
RMW-WL5
RMW-WL1
RMW-WL6
RMW-WL3
RMW-WL2
RMW-WL18
RMW-WL19
RMW-WL16
RMW-WL15
RMW-WL17
Arkansas Creek
Laguna Creek
Willow Creek
Cosumnes River
North Fork Badger Creek
Badger Creek
Hadselville Creek
Willow Creek
Rancho Seco Lake
Carabas Paleo-Ridge
Jackson Creek
Deadman Gulch
Dry Creek
Camanche Reservoir

Legend

- RMW-WL
- Major Stream
- Folsom South Canal
- Lake and Reservoir

Groundwater Subbasin

- Cosumnes Subbasin (5-022.16)

Storage Change (ft/yr)

- ≤ - 1
- - 0.999 to - 0.750
- - 0.749 to - 0.500
- - 0.499 to - 0.250
- - 0.249 to 0.000
- >0.001

Abbreviations

CoSANA = Cosumnes, South American, and North American model
ft/yr = feet per year
DWR = California Department of Water Resources
RMW-WL = Represenatitve Monitoring Well for Chronic Lowering of Water Levels

Notes

1. All locations are approximate.
2. CoSANA calculates the volume of storage change within model element, and the element-by-element change was normalized by dividing the volumetric change in storage by the area of each respective model element and the results mapped in units of feet

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 9 March 2023.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - Final Prioritization, dated February 2019.
3. Storage change calculated by the updated numerical model (Appendix M "CoSANA - An Integrated Water Resources Model of the Cosumnes, South American, and North American Groundwater Subbasins, November 2021" in "Groundwater Sustainability Plan for the Cosumnes Subbasin, December 2021").

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(Scale in Miles)

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Map Showing the Distribution of Model-Calculated Changes in Groundwater Storage between October 1, 2021 through September 30, 2022 (Water Year 2022), Normalized by Model Element Area and Reported in feet

Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-6

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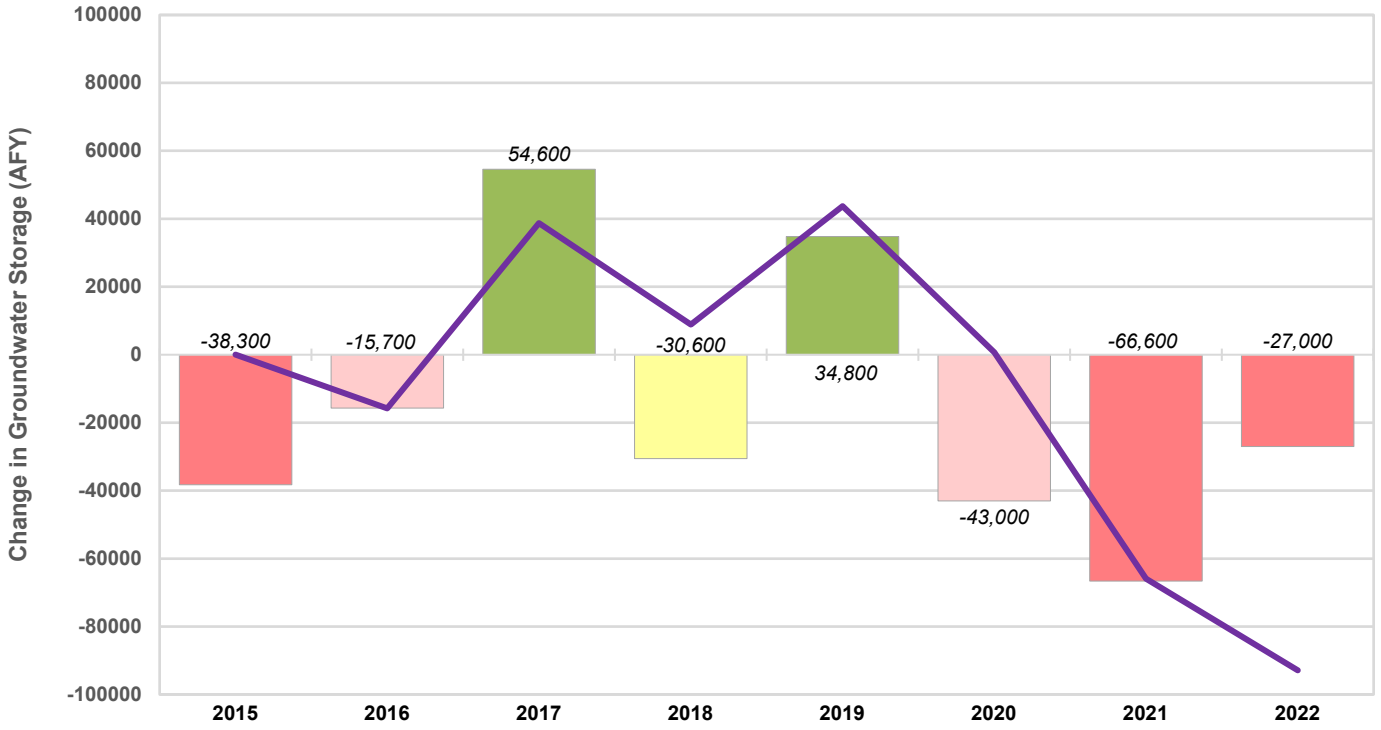

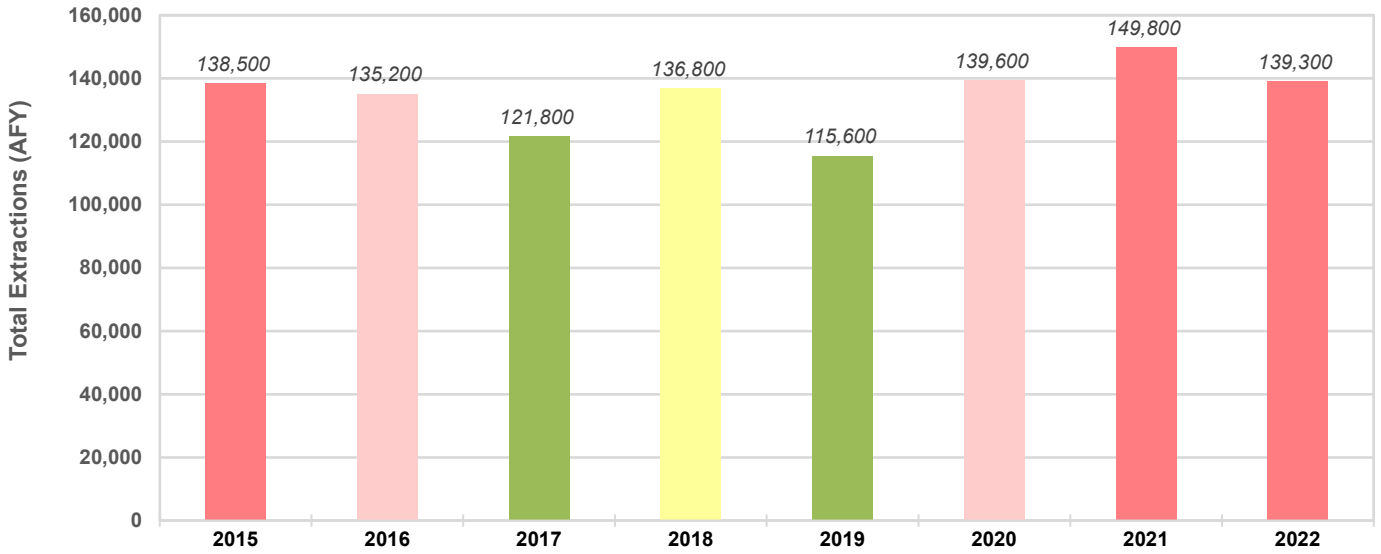

Legend

DWR Water Year Type and Annual Groundwater Storage Change (AFY)

- Wet
- Above Normal
- Below Normal
- Dry
- Critical
- Cumulative Storage Change Since 2015 (AFY)
- Estimated Extractions (AFY)

Abbreviations

AFY = acre-feet per year
DWR = California Department of Water Resources
WY = Water Year

Notes

1. Water Year is defined as the October of the previous year through September of the current year.
2. All values are rounded to the nearest 100 AF.

Sources

1. DWR Water Year type for 2015 - 2021 is from DWR's Water Year Hydrologic Classification Indices for the San Joaquin Valley (http://cdec.water.ca.gov/reportapp/javareports?name=WSIHIST).
2. WY 2022 assigned the water year type based on previous years having similar annual precipitation and evapotranspiration.

Annual Change in Groundwater Storage, Groundwater Use, and DWR Water Year Type

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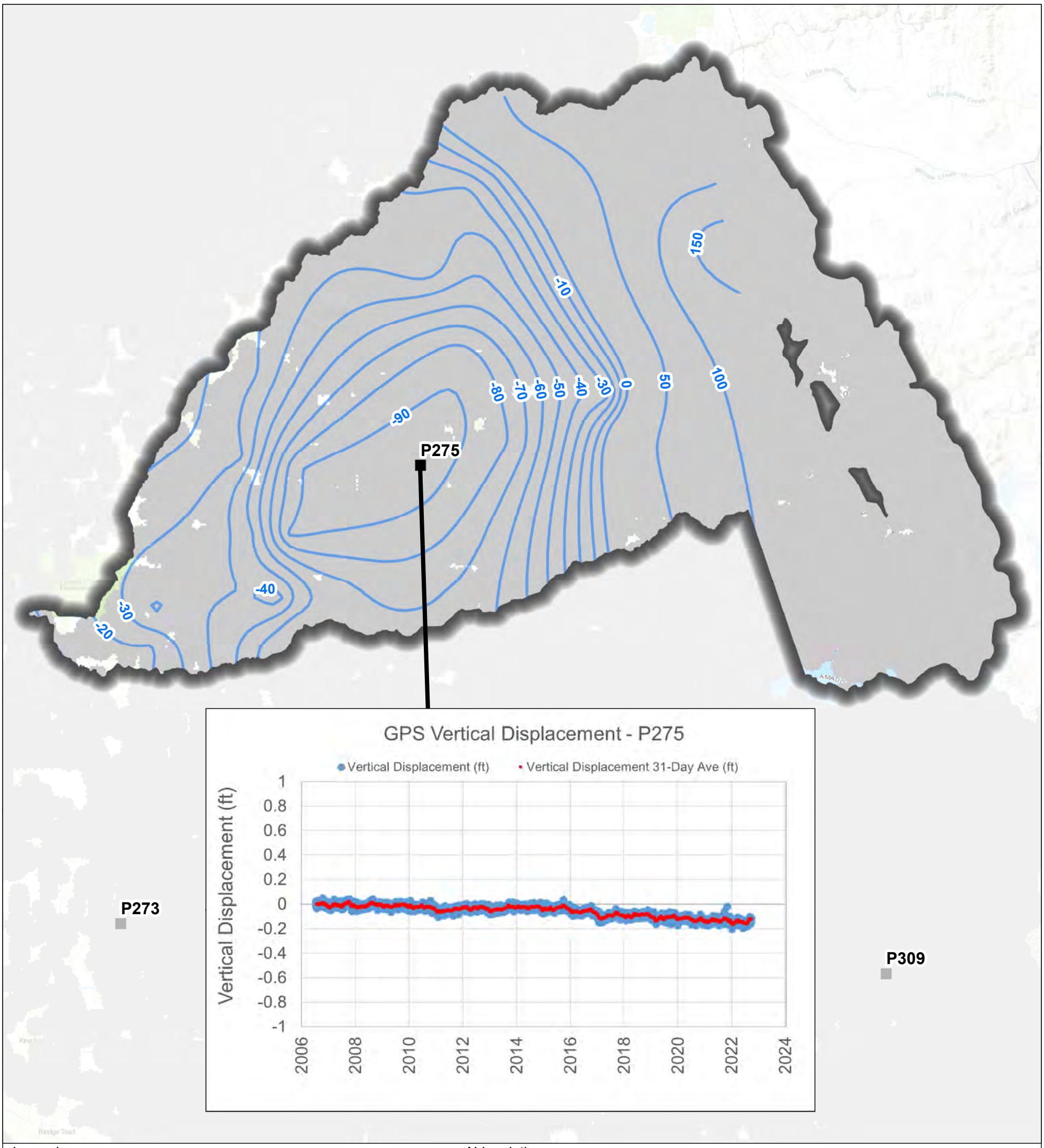
Cosumnes Groundwater Autority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-7



Legend

- Subsidence Monitoring Station
- Fall 2021 GWE (ft NAVD 88)

Groundwater Subbasin

- Cosumnes Subbasin (5-022.16)

TRE Altamira InSAR Vertical Displacement WY 2022

- < - 1 ft
- - 1.0 to - 0.8 ft
- - 0.8 to - 0.6 ft
- - 0.6 to - 0.4 ft
- - 0.4 to - 0.2 ft
- - 0.2 to - 0.1 ft
- - 0.1 to 0.1 ft
- > 0.1 ft

Abbreviations

DWR = California Department of Water Resources
ft = feet
ft NAVD 88 = feet above the North American Vertical Datum of 1988
GWE = Groundwater Elevation
SGMA = Sustainable Groundwater Management Act

Notes

1. All locations are approximate.
2. TRE Altamira InSAR data displayed shows October 2021 through October 2022.

Sources

1. Basemap is ESRI's ArcGIS Online world topographic map, obtained 3 March 2023.
2. DWR groundwater basins are based on the boundaries defined in California's Groundwater Bulletin 118 - Final Prioritization, dated February 2019.
3. GPS subsidence monitoring data and Vertical Displacement data are from the SGMA Data Viewer: https://sgma.water.ca.gov/webgis/appid=SGMADataViewer#currentconditions
4. GWE contours from Figure AR-2.

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(Scale in Miles)

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Subsidence Monitoring WY 2022

Cosumnes Groundwater Authority
Cosumnes Subbasin
March 2023
C20149.01

Figure AR-8

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Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	7
Agenda Item Subject:	Monitoring Network Updates
To:	CGA Board of Directors
From:	CGA Staff

Background

To address previous monitoring efforts, CGA staff are working with EKI to establish monitoring protocols. To begin, staff are visiting each monitoring well, establishing field coordinates, access instructions, and taking water level measurements. Binders and field sheets have been created to ensure physical and electronic tracking of data. A spring monitoring report will be prepared once all field measurements have been collected.

Field measurements this spring are being collected using an electronic sounder. Past data will be gathered from 2 RMWs with non-transmitting pressure transducers, eliminating previous data gaps in the monitoring network. Additionally, monitoring reporting procedures are being developed for the City of Galt and Amador GSAs.

Existing access agreements are being collected. Wells with insufficient access agreements or no access agreements have been cataloged and new access agreements are being prepared.

Staff and EKI will begin to prepare a more robust Request for Proposals with the information gathered during this spring monitoring event.

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	8
Agenda Item Subject:	Outreach and Engagement Team
To:	CGA Board of Directors
From:	CGA Staff

Workshops Recap:

- Saturday, March 4th, 2023, 10am-12pm, Wilton Community Center
  - ~25 attendees
- Wednesday, February 22, 2023, 5pm-7pm, Herald Fire Hall
  - ~15 attendees

Farmer Survey Update:

- The main purpose for the survey is to assess the interest of farmers/ranchers in participating in efforts to reduce water use as well as parallel efforts to increase water supply by engaging in managed aquifer recharge. We would also like to understand the types of incentives farmers would consider in exchange for their participation.
- CGA Staff plan to work with the CGA Projects Committee and the Outreach & Engagement Team to consolidate the survey findings and to develop a memo to help identify approaches/options to reduce groundwater pumping/increase recharge in the Cosumnes Subbasin that are consistent with the interests of farmers/landowners.
- The survey is completely confidential, and you are not obliged to answer all the questions. Link: https://forms.gle/CTXJLDV3VBX56UMaA

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	9
Agenda Item Subject:	CGA Counsel Report
To:	CGA Board of Directors
From:	CGA Staff

The following is a brief update on items of interest from CGA Counsel since your last regular Board meeting. Counsel will present an oral report at the Board meeting.

Legal Budget: You requested an update on budget-to-actuals for your 2022-2023 legal budget, which covers July 1, 2022 through June 30, 2023. As of February 23, 2023, your fiscal year legal spending was $16,284 of the $30,000 budget, or 54% of the total budget for the first 8 months of the fiscal year. Staff will provide an updated report in the March financials.

Brown Act & Remote Meeting Updates: Due to updates in the law, Board members who wish to participate in a meeting remotely have two options:

1. List the remote meeting location on the agenda, and make the remote meeting location available to the public.
2. Participate pursuant to AB 2449, if eligible for an excused absence. Remote participation location does not need to be noticed in advance, but this option may only be used twice annually for each Board member.

Remote meeting compliance will require close coordination with staff to meet noticing requirements. Please contact staff as soon as possible if you believe that you will not be able to participate in person at any meeting.

700 Forms: All Board members should submit Form 700s for CGA's records on or before April 1. Copies of the forms are available online, or can be provided by staff on request.

AB 1234/Public Agency Ethics: An AB 1234 training will be hosted by Cosumnes Groundwater Authority in June. If you have not yet completed your required training, please plan to attend. Staff will confirm a date at the March 2023 Board meeting.

Cosumnes Groundwater Authority
Board of Directors Meeting

Agenda Date:	March 20, 2023
Agenda Item #:	10
Agenda Item Subject:	CGA Staff Report
To:	CGA Board of Directors
From:	CGA Staff

Flood-MAR Network Workshop:

On Wednesday March 22, 2023 from 10am-1pm, the California Flood-MAR Network will be hosting a virtual workshop to discuss items such as Executive Orders N-7-22 and N-4-23, DWR technical assistance, recharge permitting/water rights, and more.
Registration: https://csus.zoom.us/meeting/register/tZwrf-6upzkqEtTrSuwUyPB4ncLQqgoYcqdU

DWR Final Determination of Subbasins:

In early March 2023, the California Department of Water Resources (DWR) announced decisions for 12 groundwater sustainability plans (GSPs) in critically overdrafted subbasins in Central California. 6 of those GSPs were recommended for approval with recommended corrective actions for the subbasins to remain in an approved status. The other 6 subbasins were determined inadequate and will be transitioning from DWR's oversight to the California State Water Board.
Mavens Notebook Article: https://mavensnotebook.com/2023/03/02/this-just-in-california-advances-groundwater-sustainability-with-release-of-decisions-for-management-plans-in-critically-overdrafted-basins/

GRAC GSA Summit:

The Groundwater Resource Association of California (GRAC) is holding their annual SGMA Implementation Summit & Workshop on June 7th and 8th in Downtown Sacramento.
Registration is now open: https://www.grac.org/events/477/

DWR Water Tank Program:

The California DWR has developed a new drought relief grant program. DWR will provide tanks and hauled water to communities that are in immediate need of water supplies. Individuals are NOT eligible applicants and will need to work with public agencies (like CGA or GSAs) to apply. Please contact CGA staff with any questions.
Program flyer: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Water-Basics/Drought/Files/Resources/Water-Tank-Program.pdf