EKI TECHNICAL PRESENTATION #37 COSUMNES SUBBASIN GSP IMPLEMENTATION

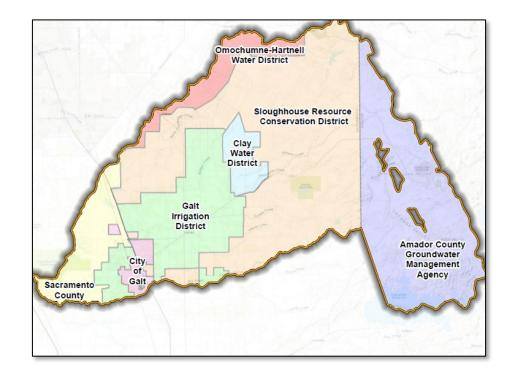
23 JANUARY 2023

COSUMNES GROUNDWATER AUTHORITY BOARD OF DIRECTORS MEETING



OUTLINE

- EKI Re-Introductions
- SGMA Planning and Implementation in the Cosumnes Subbasin (2017-2022)
- Water Year (WY) 2022 Annual Report
 - Timeline
 - Information Received
 - Monitoring Update
 - Report Outline and Preparation
 - Next steps



EKI RE-INTRODUCTION



Anona Dutton, PG, CHg Vice President

- Leader in California water issues
- Extensive experience in groundwater and surface water data and policy (e.g. SGMA), including in the Cosumnes since 2017
- Led technical communication and coordination efforts for the Cosumnes GSP
- Provides on-going strategic guidance

John Fio Principal Hydrogeologist

- ✓ Project Manger for Cosumnes work efforts
- ✓ Led development of the Cosumnes GSP
- Extensive experience in groundwater-flow, chemical transport and groundwater surfacewater interaction modeling
- Experienced in basinwide water planning and data analysis

Kristyn Lindhart Hydrogeologist

- ✓ Deputy PM for Cosumnes project
- Supported development of the Cosumnes GSP
- ✓ Grant initiative leader
- Experienced in water supply assessments and planning
- ✓ Farming background

8/2017 - 9/2018

Contracted with Water Forum as a Strategic Technical Advisor and for Grant application technical support

9/2018 - 2/2022

Contracted with Sacramento County for Groundwater Sustainability Plan (GSP) development

<u>10/2021 – 3/2022</u>

Contracted with Cosumnes Groundwater Authority (CGA) for WY 2021 Annual Report development

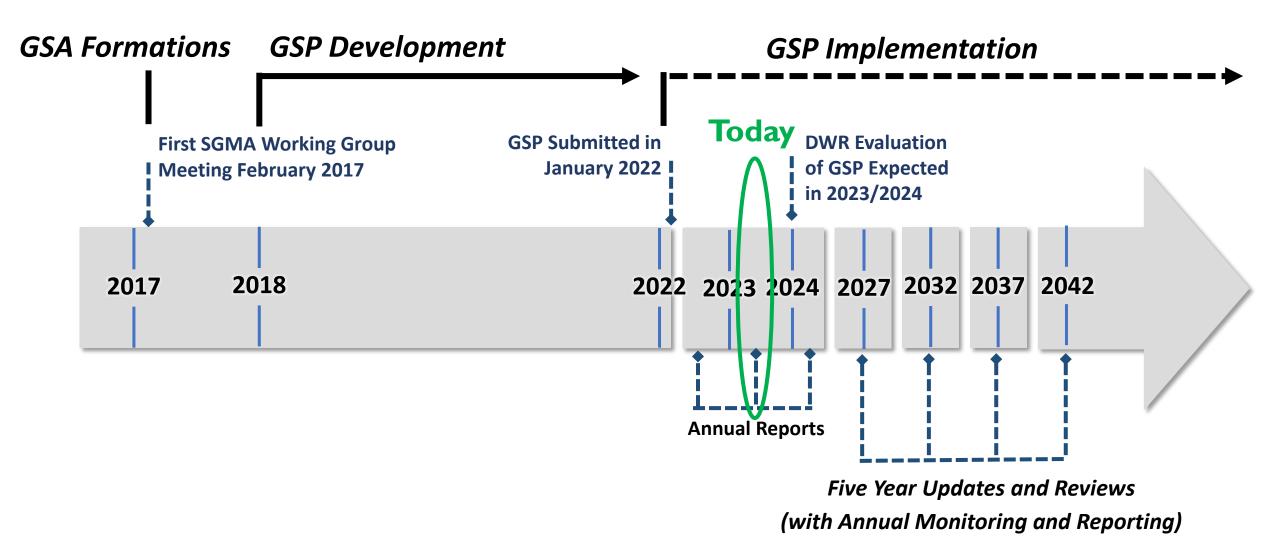
<u>9/2022 – 12/2022</u>

Contracted with CGA for Projects & Management Actions (PMAs)/Grant application support

10/2022 – Current

Contracted with CGA for GSP implementation support (includes preparing WY 2022 Annual Report)

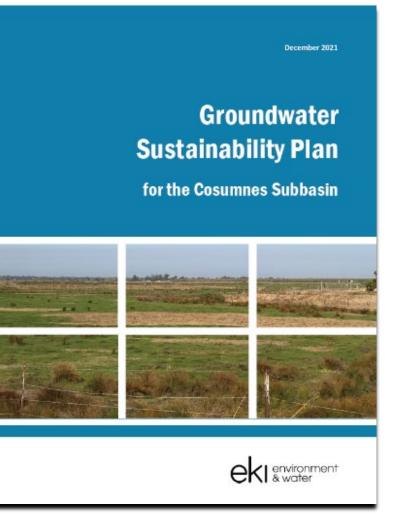
EVOLUTION OF SGMA IN THE COSUMNES SUBBASIN





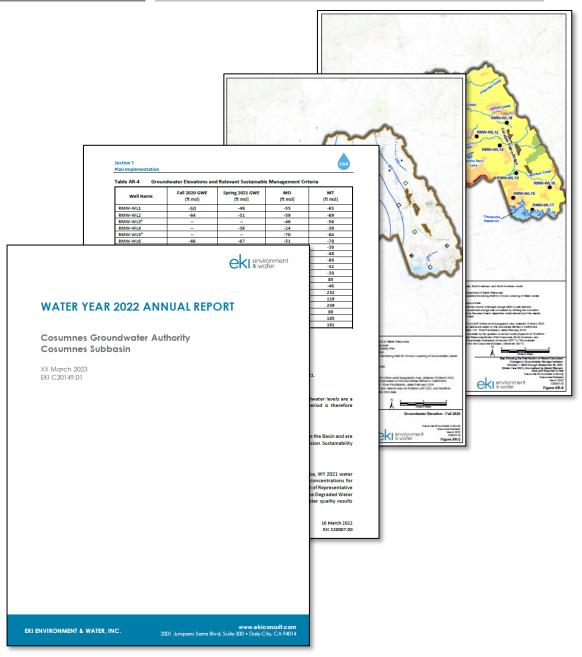
COSUMNES SUBBASIN SUCCESSES TO DATE

- Secured Prop I and Prop 68 grant funding to prepare Groundwater Sustainability Plan (GSP).
- First TSS wells installed in California.
- Developed basin-wide Data Management System (DMS).
- Extensive Stakeholder outreach: Technical Workshops (Groundwater Classroom & Geophysical Workshop); Stakeholder Surveys (received more than 210 responses); Created Surface Water Advisory Group (SWAG) and hosted 4 meetings; Hosted 8 Public Workshops; Monthly Working Group meetings open to the public, 36 technical presentations.
- Developed projects and management actions (PMA), long-term governance, outreach & engagement, and citizen advisory committees.
- Conducted Basin-wide groundwater dependent ecosystem (GDE), geophysical, and isotopic surveys.
- Designed SGMA compliant monitoring networks for groundwater levels, -storage, -water quality, land subsidence, and interconnected surface water sustainability indicators.
- Constructed Cosumnes Subbasin input data sets for integration into the regional groundwater surface-water model (CoSANA model).
- Prepared single GSP for the Basin and submitted to DWR.
- Prepared first Annual Report and submitted to DWR.
- Submitted SGM Implementation Round 2 grant application to fund 5 projects.



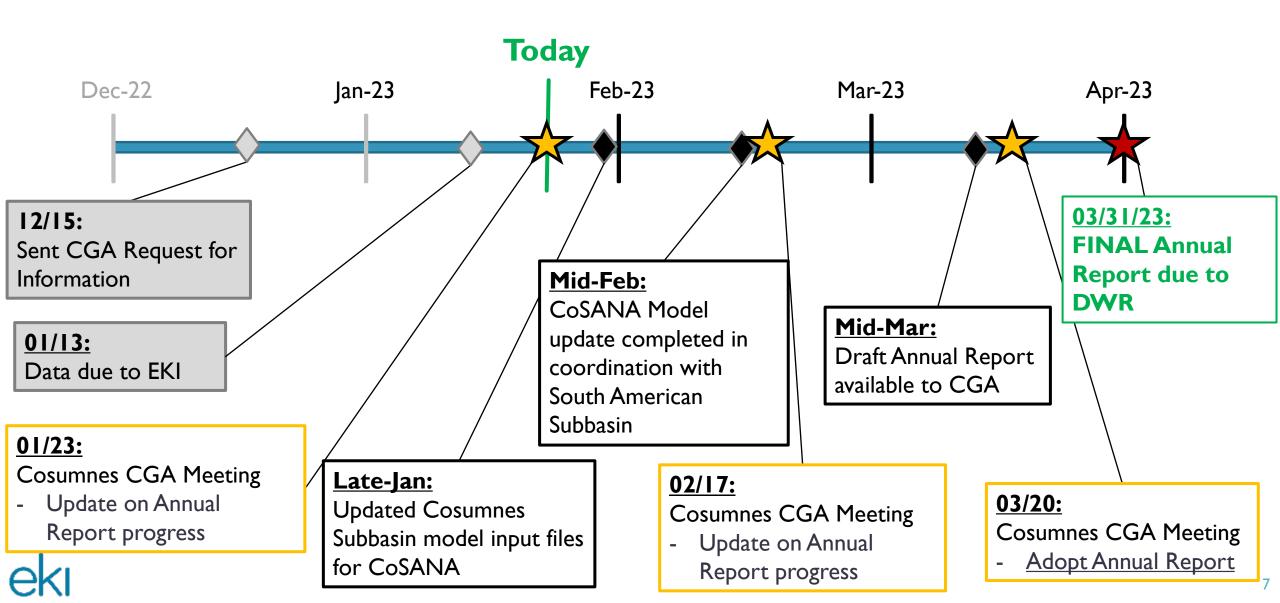
WY 2022 ANNUAL REPORT

- "Each Agency shall submit an annual report to the Department by April I of each year following the adoption of the Plan" § 356.2.
- Water Year 2022 Annual Report provides information on groundwater conditions and implementation of its GSP over the time period of I October 2021 through 30 September 2022



Draft – For discussion purposes only

ANNUAL REPORT 2022- 3 MONTH LOOK AHEAD



ANNUAL REPORT – REQUEST FOR INFORMATION

- Request for Information sent to Cosumnes Groundwater Authority (CGA) in December
- Data to support the 2022 Annual Report (I October 2021 through 30 September 2022)
 - Groundwater elevation
 - Water quality
 - Stream gauge
 - Surface water delivery
 - Stream diversions
 - Pumping data

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	REQUEST FOR INFORMATIO Cosumnes Groundwater Authorit Water Year 2022 Annual Report	ty	a water		
	Cosumes Groundwater Authority Water Year 2022 Annual Report	environment & water	nas not treated ummer ecycled rmland		
C.	EQUEST FOR INFORMATION osumnes Groundwater Authority Water Year 2022 Annual Report	to the	entially ie land n of the not yet rage in		
(WY) 2022 Annual Report. Follo January 2021, the Cosumnes Sub Annual Reports to the Californ Cosumnes Groundwater Author the Annual Report. Please provid	15 December 2022 This Request for Information (RFI) has been developed to support preparation of the Water Year (WY) 2022 Annual Report. Following adoption of the Groundwater Sustainability Agencies (GSAS) must submit Annual Reports to the California Department of Water Resources (DWR) every April ¹ . The Cosummes Groundwater Authority (CGA) is required ² to provide the following data to support the Annual Report. Please provide the following data by 13 January 2023 to ensure production of the WY 2022 Annual Report remains on schedule.				
Data Depth to groundwater and to September 2022 for th o 19 RMW-WLs o 9 RMW-ISWS	nd/or groundwater elevation measurements from October 2021 se following:	tershed			
2021 to September 2022 o 14 RMW-WQs	data ions for Arsenic, Nitrate and Total Dissolved Solids from October for the following:	llowing low for part of eyards, permit			
 Cosumnes River "Cosumnes River Mokelumne River 	ble stream gauges from October 2021 to September 2022: measured at the United States Geological Survey (USGS) at Michigan Bar" gauge	project ed from include ry wells una Del			
Creek below Lake o Camanche Reserv • Surface water delivery da o Monthly total wa	Amador" gauge	er from hen the			
¹ California Code of Regulations 23 § 35 ² California Water Code § 10728 Exi c20014.01	56.2 Page 1 of 3				

DATA RECEIVED TO DATE

Requested Data

Groundwater Elevation Data



RMW-WL*



RMW-ISW*



Supplemental Wells

Publicly available data

Water Quality Data



Publicly available data

RMW-WQ*

Stream Gauge Data



Cosumnes River



Mokelumne River below Camanche



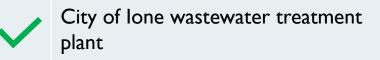
Jackson Creek*



Camanche Reservoir Stage

Requested Data

Surface Water Delivery Data



Water deliveries from Castle Oaks
 Water Reclamation Plant to the
 Castle Oaks Golf Course

 Agricultural diversions from the Folsom South Canal (FSC)

Stream Diversions



Reported stream diversions downloaded from the Electronic Water Rights Information Management System (eWRIMs)

Monthly Cosumnes River diversion by Rancho Murieta

Requested Data

Pumping Data



Public Water Systems



AWA – Camanche Village

AWA – Camanche North Shore

GSP Implementation Text



Updates on Projects and Management Actions

Note: * denotes only partial data received

Received data is being processed and QA/QC'd

MONITORING SUMMARY

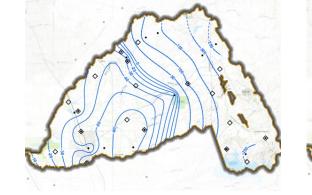
- Monitoring is a fundamental component of SGMA and measures the progress towards achieving the Basin's sustainability goal
- Measurements were not completed in all Representative Monitoring Wells (RMWs)
 - Access limitations
 - Limited communication
 - Pre-existing Monitoring programs terminated (California Groundwater Observatory)
- Recommendations for upcoming Spring sampling event:
 - Review access/monitoring agreements prior to sampling
 - Increase communication between samplers and GSAs including those conducting their own sampling
 - Conduct sampling event no later than the mid-point of the monitoring period to allow time for follow up when needed
 - Utilize monitoring checklist to ensure all wells are visited and sampled
- Consider developing a policy to support mutual accountability and complete reporting

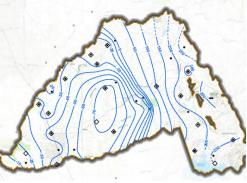
	Fall 2021	Spring 2022	Annual
RMW-WL	68% sampled (13 of 19 wells)	68% sampled (13 of 19 wells)	
RMW-ISW	55% sampled (5 of 9 wells)	44% sampled (4 of 9 wells)	
RMW-WQ			50% sampled (7 of 14 wells)

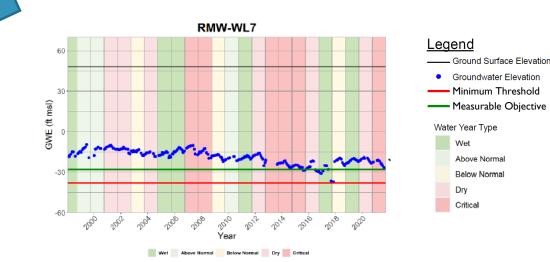
Lack of sampling consistency and completeness may become a significant compliance issue for the Basin!

ANNUAL REPORT - BREAKDOWN

Examples from Cosumnes Water Year 2021 Annual Report







Water Year 2022 Annual Report Chapters

- I. <u>General Information</u>
- <u>Groundwater Elevation Data</u>: Contour Maps & Hydrographs
- 3. <u>Groundwater Extractions</u>: Summary of metered & estimated extraction data
- 4. <u>Surface Water Supply</u>: Summary of imports and stream diversions

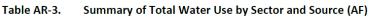
ANNUAL REPORT - BREAKDOWN

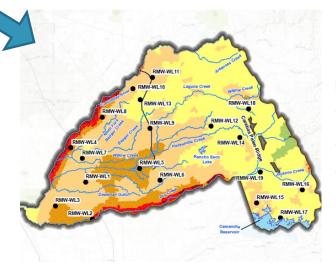
Water Year 2022 Annual Report Chapters

- 5. <u>Total Water Use</u>: Summary of total water use by water use sector and water use type
- 6. <u>Change in Groundwater Storage</u>: Change in groundwater storage map and graph depicting water year type, groundwater use, & annual and cumulative change in groundwater storage
- 7. <u>Plan Implementation</u>: Progress towards interim milestones and Summary of implementation of Projects and Management Actions

Examples from Cosumnes Water Year 2021 Annual Report

Water Year		Agricultural			Developed				
	Estimated Extractions	Imported Water	Recycled Water	Stream Diversions	Metered/ Estimated Extractions	Imported Water	Recycled Water	Stream Diversions	
	2021	133,100	100	700	22,800	16,200	1,700	600	600







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NEXT STEPS

- GSAs to provide all requested data ($\frac{1}{13}/2023 \rightarrow 1/27/2023$)
- Complete QA/QC and evaluation of data received
- Extract and summarize water budget and groundwater level information from updated model
- Draft Annual Report text, tables and figures
- Submit Draft Report to GSAs for review (3/20)
- Finalize Report and Submit to DWR (3/31)



THE END