

**Cosumnes Subbasin SGMA Technical Advisory Committee & Working Group
Meeting #23**

Meetings held October 17, 2018

Prepared by the Consensus Building Institute

ACTION ITEMS

Who	What
GSAs	Provide EKI/Water Forum with GSA point of contact, confidentiality language (re: data) and logos
GSAs	Provide updates on outreach approach (timing of mailings, outreach efforts, etc.) to ensure coordinated effort - ongoing
GSAs	Review updated interviewee list (for interviews to inform outreach strategy) - by Wed., 10/24
GSAs	As appropriate for each GSA, submit letters of support for SRCD's Basin Boundary Adjustment
Finance Committee	Review EKI invoice for approval
Sacramento County	Provide GSAs with tax roll data on landowners
Sacramento County	Develop "flagged" tax roll data
CBI	Prepare media notice on stakeholder survey for GSA review
CBI	Revise fact sheet, for GSA feedback
EKI	Convene November webinar on model criteria ranking

DISCUSSION – KEY THEMES

Below is a summary of key themes discussed at the meeting. This summary is not intended to be a meeting transcript. Rather, it focuses on the main points covered during the group's discussions and any action items.

COSUMNES SUBBASIN SGMA TECHNICAL ADVISORY COMMITTEE

TECHNICAL SUPPORT SERVICES GRANT UPDATE

[*View slides 2-3.*](#)

The Cosumnes Subbasin is currently in the queue to receive Technical Support Services (TSS) funds from the Department of Water Resources (DWR). Technical consultant Anona Dutton, EKI, explained that the Cosumnes Working Group could submit a TSS grant application to install one to five nested **monitoring wells** in areas of existing data gaps within the Basin. The TSS fact sheet [[*view pages 1-3*](#)] summarizes SGMA-compliant monitoring well requirements. If existing wells do not meet these stringent criteria, the subbasin must have a plan to develop SGMA compliant monitoring wells. EKI asks that groundwater sustainability agencies (GSAs) consider which wells they currently monitor or have access to and evaluate whether they need new monitoring wells. EKI requests GSA expression of interest soon, as the sooner a monitoring well is installed, the more

useful it will be for modeling and basin characterization. Omochumne-Hartnell Water District (OHWD) has expressed interest in submitting a monitoring well project for TSS funding and is currently working with its engineers to identify potential locations.

DATA COLLECTION SURVEY¹

[View slides 4-8.](#) Anona Dutton, EKI, provided an update on the basin stakeholder data request.

Following the September meeting, EKI sent GSAs the following materials for review:

- Introductory letter for basin stakeholders
- Stakeholder survey
- Data request form
- Introductory letter for basin public water suppliers (public water suppliers provide water to more than 25 individuals for more than 60 days)

EKI requested GSA input on the following:

- Confidentiality clause – customized for each GSA based on its consultation with GSA counsel
- GSA contact info – a GSA point of contact to receive completed forms and send them on to EKI

Overview of Stakeholder Survey - [view Stakeholder Survey](#)

- Requests general information from Basin landowners and stakeholders
 - Contact info and general location
 - Stakeholder characteristics (agricultural, domestic, municipal, tribal, environmental, etc.)
 - Familiarity with SGMA and groundwater management issues
 - Opinions on land and water resources management
 - Presence of wells on property and willingness to share data
 - Recommendations to GSA
- To be distributed via cosumnes.waterforum.org, GSA website, Board meetings, workshops
- Alternate distribution could include water bill inserts, local community organizations

Overview of Data Request Forms - [view Data Request Form](#)

- Requests specific quantitative data from Basin landowners / stakeholders
 - Well construction details
 - Pumping rates and cropping (as applicable)
 - Water levels and water quality sampling (as available)
- Will be available at: cosumnes.waterforum.org
- Allows understanding of the historical and current status of groundwater in the Basin
- Actual data from the Basin are required, otherwise it's just a guess!

Overview of Basin Public Water Suppliers Data Request

- Requests specific quantitative data from well operators or potable water suppliers within the Basin

¹ Note: The points in this section accurately summarize the October Working Group discussions. However, several of the tasks and deadlines below have been superseded by subsequent Working Group deliberations.

- Exact well locations
- Well construction details
- Well construction logs, geologic logs or geophysical logs
- Pumping rates and cropping (as applicable)
- Water levels and water quality sampling (as available)
- Aquifer pumping test data and analyses/reports
- Requests will be sent by GSAs

GSA Data Requests: Customized data requests will be sent to each GSA after the initial data compilation. Since each GSA is a unique entity, the data request will be focused on the GSA's specific areas, water supply, management plans, studies, land use, etc.

Discussion – Local Data Collection

- Dutton advises that the basin compile and begin working with data as soon as possible and noted that these local stakeholder data are essential for characterizing the basin as a whole. She also noted that other basins have had success in collecting local data using the stakeholder survey method. In other basins, EKI has received helpful data from domestic well users regarding wells that gone dry and when.
- Dutton emphasized that an important GSA role is to serve as the local face and point of contact for SGMA implementation. As such, GSAs will receive tax roll mailing data from Sacramento County and then each GSA will send the mailing. GSAs will receive responses and pass them directly to EKI.
- A participant commented that many mailings will be returned to sender, which in itself is useful data for the GSP; as is data on the number of people that respond.
- Clay Water District anticipates that it may have a low response rate.
- This data request will be many GSAs' first direct communication about SGMA. As such, the mailing will include a fact sheet that describes SGMA in the Cosumnes Subbasin.
- While public workshops could be a useful step toward further raising public awareness of SGMA, to wait until *after* a series of workshops before sending the stakeholder survey (i) would push back the timing of data collection and (ii) presumes that the workshop would draw significant public engagement, which is not a certainty given past experience.
- GSAs requested a coordinated approach to media communications. In response, CBI agreed to draft a media notice for GSA review and revision.

Next Steps:²

- By the end of October, each GSA will send EKI the following information: (i) designated GSA point of contact, (ii) custom confidentiality clause and (iii) GSA logo (if desired). John Lowrie will reach out to each GSA to support this deadline.
- EKI will customize the introductory letter and send finalized materials to each GSA for distribution within its jurisdiction, with the goal of sending the mailing to customers by the end of October.
- CBI will develop an updated Cosumnes Subbasin Fact Sheet and media notice.

² As noted on the previous page, the summary of "next steps" here accurately capture the October Working Group discussions. However, several of the tasks and deadlines in this section have been superseded by subsequent Working Group deliberations.

- Sacramento County will provide mailing addresses from the tax roll for each GSA. Each GSA can then choose its approach to distributing the survey.
- CBI will closely track each GSA's approach, so that GSAs can keep each other informed about what they are doing.
- EKI will provide each GSA with information on public water systems in its jurisdiction. GSAs will take the lead on sending out the public water system survey.
- GSAs will push for an October 31 deadline³ for sending out surveys.

GROUNDWATER MODELING

[View slides 16-36](#). John Fio, EKI, presented on potential groundwater modeling options for the Cosumnes Subbasin.

Objectives for Model Selection

- Support GSP development
- Support adaptive management through GSP implementation -- model will be used over the next 20 years to support and refine the GSP
- Coordinate with other regional planning efforts, current and future
 - GSP development on ESJ Subbasin
 - GSP development in other Sac County basins
 - Regional planning efforts by SAFCA and others

Model Considerations – Cosumnes GSP

1. Support water budget calculations (past, current, and future).
 - i. Proportional contribution of Cosumnes River recharge to South American and Cosumnes subbasins
 - ii. Proportional contribution of Dry Creek and Mokelumne River recharge to Cosumnes and ESJ subbasins
 - iii. Subsurface flows across subbasin boundaries
2. Project future hydrologic conditions:
 - i. Groundwater levels
 - ii. Streamflow depletions
 - iii. Land subsidence potential
3. Calculate the groundwater storage response to potential management actions, projects, and climate change
4. Assist with development of Sustainable Management Criteria
5. Prioritize data gaps and refine monitoring network over time

Practical Characteristics for Numerical Model

1. Model mesh and simulation period (appropriate spatial and temporal resolution)
2. Reliable and physically based boundaries
3. Physical processes accurately represented

³ Note: This date has been pushed back based on subsequent Working Group feedback. The GSAs are now looking to distribute the survey in early January.

4. Ease of use: modifications, refinement, and transparency of input and output dynamics
5. Cost (as-is, adaptation, new)
6. Effectiveness for its purpose: water budget calculations and sustainability planning

Available Modeling Options

If using an existing model, EKI will take the model off the shelf and input data in order to more accurately represent the basin. If the TAC elects to create a new model for the Subbasin, any platform is on the table.

The following existing models cover the whole Central Valley and are supported by DWR:

- SacIWRM
- SVSim – strength in that it was designed specifically for looking at surface water-GW interactions
- C2Vsim-FG
- CVHM
- As Fio described at the September TAC meeting, the ESJ model will *not* work for the Cosumnes Subbasin

Fio responded to each of the following questions posed by TAC members at the September 19 TAC meeting:

1. **It would be useful to have a better understanding of the role of mesh in the model.**
In a numerical model, finer mesh (smaller cells) provides finer detail and better representation, thereby reducing error.

Guidelines for selecting mesh/grid design:

- Expected shape of the water table/potentiometric surface (e.g., mounding or drawdown).
 - Variability in water transmitting and storage properties.
 - Variability in recharge, pumping, and surface-water groundwater interactions.
 - Size of the model area.
 - Minimize nodes for computer storage and model operation time.
 - Compromise between accuracy and practicality.
 - Represent system accurately.
 - Need to select/utilize meaningful boundaries.
2. **How do the outputs from models help understand the movement of water between basins and interface with other basins' models?**

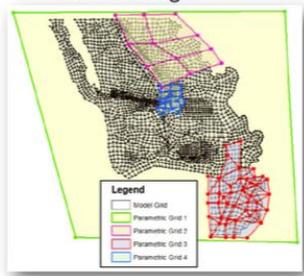
Depends on the area represented by the model. The models that represent large areas like the C2VSIM (central valley) represent groundwater movements between basins directly. Another option is to utilize one of these large existing models to

understand what is occurring around the subbasin, while integrating a finer resolution model of the subbasin or key areas of the subbasin (like the river); the large model estimate the movement of water across the smaller area model boundaries. This approach is referred to as using “nested models,” where the local (subbasin) model is nested within a larger, regional model.

3. How do you add water storage and transmitting properties?

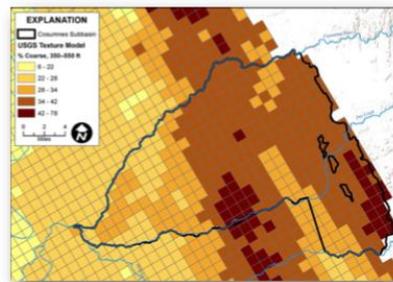
IWMF

- Element nodes
- Parametric grid



MODFLOW

- Cell by cell



4. Is there an unsaturated zone layer?

C2VSim-FG and SVSim: Yes

SacIRWM (once updated): uncertain

CVHM=NO

5. How do these models fit with the Cosumnes’ deadlines?

The Cosumnes Subbasin has one year to build a new model, update an existing model, or characterize the reliability of an as-is model.

- By January 2019, the TAC needs to determine its modeling approach.
- USGS is currently updating CVHM. The update should be complete by the end of 2019.
- If the subbasin opts to build its own model, it must complete the model by April 2020.

6. What is the cost difference between these? What is the opportunity cost (i.e. how would remaining funds be allocated)?

Estimated model development costs in preparation to support GSP:

- Characterize uncertainty of existing model and use as-is: \$50,000-\$100,000
- Update/refurbish existing model: \$100,000-\$200,000
- Construct new “stand alone” or “nested” model: \$250,000
- Note: Prop 1 budget for model development is \$247,000 so all modeling options under consideration fall within the budgeted amount.

Fio noted that all models are wrong, because they *represent* real world systems; yet it is important to characterize how wrong they are and how those errors impact the information we get and decisions we make as a result.

7. What difference is there among models with regard to autonomy and their independent use?

In the matrix below, a designation of 3 indicates the greatest autonomy and a designation of 1 indicates the least autonomy because multiple entities are involved. SacIWRM is least autonomous; SVSim, CV2Sim-FG and CVHM models afford moderate autonomy, and building a new, independent model offers full autonomy.

Supporting Agency	DWR			USGS	Work Group
Source Code (Engine)	IWFM			MODFLOW	IWFM/MODFLOW
Application	SVSim	SacIWRM (updated)	CV2Sim-FG	CVHM	Cosumnes Basin
Average Element Area in Cosumnes Basin (acre)	205**	106	393	640	?
Layers	9	3	4	10	?
Autonomy (1-3)*	2	1	2	2	3



* 1 = Multiple Entities; 2 = State/Federal only; 3 = Local only
 ** Entire model area

Regardless of platform, every model will require an ongoing process of updating and validating, throughout the SGMA implementation process and beyond.

Timeline for model selection and implementation:

- Complete evaluation of models by February 2019
 - Detailed review of CVHM (current version)
 - Detailed review of CV2Sim-FG (when released)
 - Others if/when available
- Prepare the model to support GSP development beginning in April 2019
- Employ model to develop GSP beginning in April 2020

Criteria for Model Selection

Before it can provide a recommendation, EKI will need GSA guidance on model-selection criteria and criteria weighting factors. Participants and EKI suggested the following preliminary criteria:

1. Meets SGMA modeling objectives:
 - Support GSP development
 - Water budget calculations (past, current, and future).
 - Project future hydrologic conditions (groundwater levels, groundwater storage changes, streamflow depletion, and land subsidence potential) in response to proposed management actions, potential projects, and climate change.

- Assist with development of Sustainable Management Criteria.
 - Prioritize data gaps for monitoring network improvements.
- Support adaptive management through GSP implementation
- Coordinate with other basin GSP's and regional planning efforts
 - GSP development in ESJ Subbasin
 - GSP development in South American Subbasin
 - Regional planning efforts by SAFCA and others
- 2. Adaptable/Flexible ("living model")
 - Applicable to future projects
 - Straightforward process to incorporate new data
 - Easily updated and modified to accommodate land use changes, delineation of management areas, creation of recharge sites, new pumping and monitoring wells, and so forth
- 3. Autonomy
 - For Cosumnes Subbasin
 - For region
 - For the selection of future actions
- 4. Reliability
 - Precision of model output
 - Representative of Hydrogeologic Conceptual Model
 - Hydrostratigraphy
 - Water inflows and outflows
- 5. Cost
 - To refurbish/develop for GSP
 - Long-term maintenance and upkeep
- 6. Meets Cosumnes Basin GSP schedule requirements

Next Steps:

- TAC needs to identify criteria and weighting factors so that EKI can provide an appropriate analysis and recommendation; to this end, in November TAC members will participate in a criteria-weighting exercise.
- EKI will use the results of this exercise to determine its recommended modeling platform recommendation, which EKI will share at the December TAC meeting.
- In January, the TAC will need to decide which model to use.

PUBLIC COMMENT

- Suggestion to consider how various models would impact participation in regional projects (i.e. recharge).
- SAFCA is working to modify reservoirs and generate more opportunities to capture excess runoff for recharge and potential banking in the American Basin. As such,

SAFCA is interested in giving weight to regional coordination as a model criterion. SAFCA will contribute resources toward well-coordinated modeling between basins in an effort to support any banking and recharge opportunities that might emerge.

COSUMNES SUBBASIN SGMA WORKING GROUP

GENERAL UPDATES

Status of EKI Contract and Cost-Share Agreement

EKI signed its contract with Sacramento County. In November, EKI will send Sacramento County its first invoice. The Working Group' Finance Subcommittee will review all invoices through the following process: The subcommittee is to have one week to review an invoice. If no comments are received, the invoice will be considered approval; any issues or comments raised will be brought to the Working Group. The November invoice will include a copy of the signed cost-share agreement among all GSAs. Additionally, Sacramento County hopes to have its contract with DWR in place by end of 2018.

Near-Term Coordination: Eastern San Joaquin and South American

Eastern San Joaquin (ESJ) Subbasin: ESJ Groundwater Authority met on October 11. Each GSA was requested to provide a preliminary list of potential projects and/or management actions to include in the GSP. Requested project details include: Project Name, Submitting GSA, Other Participating Agencies, Basic Project Description, Project Size (i.e. volume of added supply or demand reduction), Project Costs (capital, O&M), Planning Horizon (timeline). As of October 10, GSAs submitted 22 potential projects:

- Direct/In-Lieu Recharge (5)
- Surface Water Supply Augmentation (6)
- Recycling/Transfers (5)
- Conservation (4)
- Stormwater (2)

The ESJ TAC identified and ranked assessment criteria for which to evaluate potential projects for inclusion into the GSP, in the following order:

1. "Implementability" (i.e., feasibility & time constraints)
2. Unit Cost (i.e., cost per unit supply augmentation or demand reduction)
3. Environmental Benefits/Impacts
4. Location (i.e., relative to known and/or anticipated impacts)
5. DAC Presence & Benefits
6. Water Quality Benefits/Impacts

A list of potential projects will be further evaluated and narrowed down based on evaluation criteria at next month's meeting. The final project list (to be incorporated into the GSP) should, at a minimum, cover the long-term groundwater deficit calculated from the projected water budget (~30,000 AFY).

South American Subbasin: Parties continue to participate in ongoing trilateral meetings. SCGA awaits approval or denial of its alternative submittal and is budgeting to work on a GSP if needed.

GSA Updates

Sacramento County is to provide an update to community planning advisory committees (CPACs). Linda Dorn or another Working Group representative is to speak at the November meeting of the Cosumnes CPAC, which covers SRCD and Galt ID's service areas.

Action: SRCD will attend the meeting, which will be a good forum to introduce the upcoming survey and data request.

SRCD submitted a jurisdictional basin boundary line adjustment request to DWR. The 30-day comment period will remain open until October 31. SRCD asks that other GSAs support the boundary line adjustment, which would enable SRCD's entire jurisdiction to fall within the Cosumnes Subbasin.

Comment: SCGA opposes the basin boundary line adjustment, as it believes the adjustment would adversely affect the existing stakeholder-driven groundwater management program in the South American Subbasin.

Stakeholder Engagement and Outreach Strategy

View slides. Julia Golomb, CBI, presented on the recommended approach to updating the Cosumnes Subbasin Communication and Engagement Plan, as described in Phase 1 of the Proposition 1 Work Plan, Task 1.9: "Refine Stakeholder Communication & Engagement Plan."

GSP Regulations (Section 354.10) require a communication section to include the following:

1. An explanation of the Agency's (GSAs) decision-making process.
2. Identification of opportunities for public engagement and a discussion of how public input and response will be used.
3. A description of how the Agency (GSA) encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.
4. The method the Agency (GSA) shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

To meet the letter and spirit of SGMA, GSAs need:

- To know who to reach out to
- A strategy to reach potentially affected water users/uses
- A way to track outreach activities
- A way to track how feedback informs GSP

Cosumnes Subbasin Outreach Activities To-Date Include:

- Developing and maintaining an active basin-wide website: cosumnes.waterforum.org
- March 15 and October 2017 workshops and newsletters
- Public input at Working Group, TAC and GSA meetings
- Regular email blasts sent to interested parties list of 180+ subscribers, covering a range of uses/users

Current Gaps:

- Deepen the list of interested parties
- Need a comprehensive and integrated Communication and Engagement strategy, for the subbasin and for each GSA
- Need a basinwide Communication Plan (per DWR)
- Need a strategy to track outreach activities

Pathways to Fill These Gaps:

- EKI basinwide survey - ready to launch
- Seek advice from thoughtful leaders (formal and informal) on how to ensure that water user groups are aware and engaged - draft assessment questions and potential interviewee list were updated based on advice at the September Working Group meeting
- Devise template to track outreach at the GSA and basinwide level – a draft outreach activity tracker is ready to discuss based on GSA advice
- Develop a template for GSAs to customize their own communication and engagement strategy

Discussion

- A participant suggests adding a question such as “How well did this outreach activity work?” to the outreach tracker, in order to inform future efforts.
- Across outreach activities, it would be useful to provide a uniform survey to participants that captures (i) Who are you? and (ii) Was this engagement helpful?
- Stakeholder communication and engagement will be an adaptive process.
- It is important to have a clear message and distinguish between regulation and taxation/assessment; even de minimus users may be taxed.

Next Steps: CBI will update the list of outreach assessment interviewees, conduct assessment interviews, and update the Cosumnes Subbasin Communication and Engagement plan in advance of the December Working Group meeting.

NEXT MEETING

The Working Group and TAC will next meet in person from 9-12 p.m. **on Wednesday, December 19** in the Community Room at the Galt Police Department. The Working Group will follow the TAC; specific meeting times to be determined. EKI will host a webinar for the Working Group and TAC in November (date to be determined).

MEETING PARTICIPANTS

Darrel Evenson, Amador County Groundwater Management Authority
Gary Thomas, Amador County Groundwater Management Authority
Gene Mancebo, Amador County Groundwater Management Authority
Mark Clarkson, City of Galt
Herb Garms, Sloughhouse Resource Conservation District
Jay Schneider, Sloughhouse Resource Conservation District
Amanda Watson, Sloughhouse Resource Conservation District
Rick Wohle, Clay Water District
Sue Wohle, Clay Water District
John Mulrooney, Galt Irrigation District
Leo VanWarmerdam, Galt Irrigation District
Mark Stretars, Omochumne-Hartnell Water District
Mike Wackman, Omochumne-Hartnell Water District
Kerry Schmitz, Sacramento County
Linda Dorn, Sacramento County
Rodney Fricke, Sacramento County

Tom Gohring, Water Forum
 John Lowrie, Water Forum
 Anona Dutton, EKI
 John Fio, EKI
 Bennett Brooks, CBI
 Julia Golomb, CBI

GLOSSARY

Below is a list of commonly used terms:

CBI	Consensus Building Institute - The organization that facilitates SGMA implementation in the Cosumnes Subbasin
DWR	California Department of Water Resources
EKI	The firm that currently serves as independent technical consultant for the Cosumnes Subbasin
Galt ID	Galt Irrigation District (link) - One of the seven GSAs in the Cosumnes Subbasin
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
OHWD	Omochumne-Hartnell Water District (link) - One of the seven GSAs in the Cosumnes Subbasin
RFP	Request for Proposal
RFQ	Request for Qualification
Prop. 1	Proposition 1
SGMA	California Sustainable Groundwater Management Act (link)
SRCD	Sloughhouse Resource Conservation District - One of the seven GSAs in the Cosumnes Subbasin
SSCWA	Southeast Sacramento County Agricultural Water Authority (link)
TAC	Cosumnes Subbasin Technical Advisory Committee – An advisory body, with representatives from each of the seven GSAs, that develops recommendations for approval by the Working Group.

WF	Sacramento Water Forum (link)
Zone 13	

For questions regarding this meeting summary, please contact Tom Gohring at the Water Forum or Julia Golomb at the Consensus Building Institute.

Visit cosumnes.waterforum.org for the latest meeting information and materials.