

## MEETING SUMMARY

### Meeting in Brief

The Surface Water Advisory Group (SWAG) held its second meeting focused on the sustainable management criteria (SMC) for interconnected surface waters (ISW) for the Cosumnes Subbasin. The group received an update on the representative monitoring network and then discussed one potential approach for setting SMCs for ISW. The SWAG indicated the monitoring network seems to be on target to meet SGMA needs and offered suggestions for strengthening the network, including continued coordination with neighboring subbasins. Several SWAG members expressed concern that the proposed ISW SMCs (e.g., measurable objective based on 2015 conditions) would not allow sufficient flexibility to account for future challenges like climate change and drought. The group acknowledged the tradeoff challenges with setting aspirational goals that offer greater assurance for long-term sustainability and the GSAs’ limited ability to finance and implement projects and management actions to address the current historical groundwater deficit (estimated at >10,000 AFY). SWAG members encouraged the GSAs to consider several issues for determining the SMCs, such as accounting for the delayed response time between changes in groundwater levels and GDE impacts and better understanding seasonal connection/disconnections between surface waters and groundwater.

**Next Meeting:** December 4, time 9:00-12:00 (PST)

Expected topics: Sustainable Management Criteria (revisit/updates); projects and management actions (initial)

### Meeting Materials

September 25, 2020 – [Update Letter to SWAG](#) | [Agenda](#) | [Presentation Slides](#)

### Action Items

Who	What
SWAG	Send CBI / WF comments on SWAG Meeting #2 materials by October 9 <sup>th</sup> .
Pablo	Send CBI link to EDF paper on monitoring guidance (e.g., monitoring well distribution): <a href="https://www.edf.org/sites/default/files/documents/edf_california_sgma_surface_water.pdf">https://www.edf.org/sites/default/files/documents/edf_california_sgma_surface_water.pdf</a>
EDF/EKI	Potentially further discuss monitoring considerations for detecting adverse impacts to riparian corridors as they relate to ISW (time/scope/etc. permitting)
GSA members	Consider inviting RWA staff to speak with Cosumnes Subbasin GSAs on RWA’s water banking effort.
GSA/EKI	Consider using the American River Basin Climate Change Assessment to inform the basin model work on climate change.

## Meeting Summary

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### Welcome

[Refer to [Presentation Slides 3-6](#)]

The Surface Water Advisory Group (SWAG) held its second meeting focused on the groundwater monitoring network and potential approach to setting sustainable management criteria (SMC) for interconnected surface waters (ISW) for the Cosumnes Subbasin.

### Working Group Update

[Refer to [Letter to the SWAG 9/21/20](#)]

Bennett Brooks, Consensus Building Institute (CBI), referred participants to a letter sent to the SWAG that outlined the process and timing for the GSAs to receive and consider feedback from the SWAG. Due to time constraints at its September meeting, the Cosumnes Working Group (WG) was not able to discuss in depth the SWAG comments from Meeting #1 and the technical consultant EKI's proposed responses (discussion deferred to October). SWAG members are encouraged to attend the monthly WG meetings, which serve as a key opportunity to provide feedback and directly learn about the various issues the GSAs are considering as they develop their GSP.

#### Discussion

- EKI reviewed SWAG comments from Meeting #1 and developed recommendations from a technical perspective for how to incorporate the SWAG's input [[Link](#)]. Ultimately, the GSAs will decide how input will be integrated into the GSP.
- A SWAG member emphasized support for continued and close coordination between the Cosumnes Subbasin GSP development and the Sacramento Central Groundwater Authority (SCGA) GSP development process.
- A SWAG member recommended the GSP should clearly indicate where there are large data gaps and implications on level of certainty for understanding groundwater conditions (e.g., avoid unintentionally giving the impression that we know more than we do).

### Monitoring Network

[Refer to [Presentation Slides 7-14](#)]

John Fio and Anona Dutton, EKI, presented the approach and status of the monitoring network to track groundwater conditions related to the sustainability indicators and avoidance of undesirable results (e.g., significant and unreasonable decreasing groundwater levels, degraded water quality, depleted interconnected surface waters, etc.). For interconnected surface waters, the monitoring network tracks variables such as flow conditions, date/location where streams/rivers cease flow, temporal changes in discharge and regional extractions, and other factors demonstrating adverse impacts on beneficial surface water uses. The GSAs have conducted a robust and proactive effort to identify and secure access to the representative monitoring wells, confirming that the Cosumnes Subbasin has decent coverage and density of monitoring wells (and new wells can be added going forward).

#### Discussion

- Spatial distribution of monitoring wells generally seems sufficient. Consider ensuring there are monitoring wells every 4-6 miles along the Cosumnes River (also consider well spacing along Dry Creek).

- EKI noted that current locations along the Cosumnes River were selected in part because the wells are near where the new gaging stations will be constructed, and are also spaced somewhat uniformly.
- Broaden network to capture different depths (particularly want to detect impacts to shallow wells like domestic and ag-res wells).
  - EKI noted that most of the monitoring wells are supply wells, including several that are domestic wells. There are also several supplemental wells that are domestic wells. The average depth of domestic wells is about 300 feet.
- Utilize gaging stations (better understand water transfer between the river and perched groundwater).
- Hone in on areas where there are periods of disconnection and reconnection of surface water and groundwater (focused on those areas of seasonal connection in 2015).
- Consider reporting information (where available) on the perched aquifers in addition to the principal aquifer (in support of the aspirational goal of supporting these ecosystems going forward).

## Sustainable Management Criteria (SMC) for Interconnected Surface Waters (ISW)

[Refer to [Presentation Slides 15-25](#)]

### Sustainable Management Criteria Development

EKI then provided an overview for developing SMCs indicating that, overall, groundwater elevations measured in wells are the most relevant and can be used as a proxy for many sustainability indicators. Defining SMCs is a process (i.e., establish monitoring network, develop initial SMCs, evaluate whether initial SMCs are reasonable and avoid adverse impacts to beneficial users, define undesirable results and compare to SMCs, then refine and confirm SMCs). SMCs should support a systematic and repeatable process for monitoring and evaluation, utilize best available data, protect beneficial users, be flexible and support adaptive management, and consider criteria for all sustainability indicators.

### Interconnected Surface Water SMCs – One Potential Approach

The group then discussed one possible approach for defining SMCs using groundwater levels as a proxy for ISW (*NOTE: The approach does not reflect the GSAs' decision or preference as the Working Group had not discussed the approach in depth prior to the SWAG meeting*). Based on examples from other basins and previous input from the GSAs and SWAG members, different SMCs could be developed for disconnected reaches compared to interconnected reaches. For *disconnected* reaches, measurable objectives (MO) and minimum thresholds (MTs) could be set using a similar approach as setting SMCs for chronic lowering of groundwater levels. For *interconnected* reaches, the MT could be the highest seasonal-low elevation during below-average rainfall years recorded from the start of monitoring through 2015; and, the MO could be the range in seasonal-low shallow elevations over the period of record through 2015 and set above the MT (i.e., the range in seasonal-low elevations is added to the MT to determine the MO).

### Discussion

SWAG members offered the following observations and comments:

- Concerns that using the 2015 conditions for setting the MO will not allow sufficient flexibility and a buffer to account for future unprecedented challenges like climate change, drought, and wildfire.
- Consider the root zone for different vegetation in GDEs (mature trees may survive, but other vegetation may not be able to replenish itself).
  - EKI noted that this will be part of the field verification and GDE evaluations.
- Incorporate a range of different climate conditions (e.g., periods of wet years and drought years).

- EKI noted that forthcoming model runs will evaluate how the subbasin responds to projects and management actions and their performance compared to the SMCs and will include different conditions like projected climate change.
- Would be helpful to know the time of year for the seasonal low measurements.
- Historical trendlines are susceptible to “bias” depending on the period of record of data available.
  - EKI noted that SGMA helps address this issue with its adaptive management framework (e.g., 5-year updates).
- Important to remember the tradeoffs between better assuring avoidance of adverse effects to groundwater (which may call for more aspirational MOs), and the GSAs’ limited ability to finance and implement projects and management actions to address the current historical groundwater deficit (estimated at >10,000 AFY). An estimated minimum of 13,000 acre feet of water is needed for every one foot increase in groundwater elevation.
- Consider using a dual approach with both attainable MOs and aspirational MOs, which would convey that conceptually, the GSAs do have an interest in achieving more ambitious targets in the case that additional resources and funding become available. Aspirational goals may help advocate for and garner wider/more diverse support for the GSP, which can help when applying for grants (e.g., several state-funded grants are more receptive to multi-beneficial and widely supported projects).
- The number of wells going dry during the last drought is uncertain. A 2019 stakeholder survey on their wells’ conditions elicited more than 200 responses, but did not indicate stakeholders’ wells had gone dry. There was a request to ground truth the number of wells that did go dry (need to keep in mind that the wells could have gone dry for other reasons like lack of maintenance).
- Consider using the American River Basin Climate Assessment information when incorporating climate change into the water budget model runs (likely more comprehensive than DWR’s climate change scenarios).

## Additional Discussion

[Refer to [Presentation Slide 26](#)]

### Undesirable Results

The SWAG had a brief and preliminary conversation regarding undesirable results. Comments included the following:

- Ensure the areas where there are connections (including areas with periodic connections) are protected and that their conditions do not worsen, both to protect salmonids and GDEs more broadly.
- It would help to see a graphical representation that conveys the relationship between decreasing groundwater elevation and impacts (e.g., number of wells going dry). This can then be coupled with the economic costs to help consider the tradeoffs. EKI had presented something similar to the Working Group to consider different approaches for defining MOs and impacts to domestic wells. There was a request for something similar related to GDEs.
- Avoid loss of important riparian corridors (e.g., Cosumnes River Preserve) (although distinguishing whether degradation is due to groundwater withdrawal is still a challenge). Potentially EDF and EKI could further discuss (EKI’s scope/budget permitting).

### Achieving Sustainability

- Demand reduction activities. For example, engage local water agencies to include groundwater demand reduction activities as part of urban water management plans (UWMPs) - City of Galt (one of the GSAs) is the only entity in the basin that is required to develop a UWMP.
- Consider strategies for tracking new or expanded land use developments to encourage consideration of groundwater availability.

- Consider inviting members of the Regional Water Authority (RWA) to give an update on their efforts (N. and S. American subbasins are moving forward with their regional water bank). Perhaps the Cosumnes Subbasin may wish to participate in the RWA regional water bank effort as well.
- Important to coordinate with neighboring subbasins (e.g., confirm SMCs in one basin do not conflict with another subbasin's SMCs) and consider both the incoming flows into Cosumnes Subbasin and outgoing flows. Efforts in one basin (e.g., recharge) may impact a neighboring basin. The subbasins in this area have been coordinating to ensure their models are in alignment.

## Next Steps

### SWAG

[Also refer to the [Action Items list](#)]

- SWAG comments on Meeting #2 materials due to CBI / WF by October 9<sup>th</sup>.

### GSP Development

Current efforts are underway to understand the current and historical conditions of the subbasin (e.g., the GDE verification studies). That information will inform and calibrate a numerical groundwater model (CoSANA), which will be used to analyze future water budget projections (which will incorporate projected climate change conditions). Initial water budget modeling will begin later in the fall. SWAG members are encouraged to attend the monthly Working Group meetings where more frequent GSP development updates like the water budget modeling and climate change considerations will occur.

### Meeting Schedule and Info

Upcoming Meetings (subject to change)

Mtg #3: Dec 4, 2020

Mtg #4: Feb 26, 2021

Zoom Access (will be the same for all SWAG meetings):

<https://cbuilding.zoom.us/j/93059918864>

Call In: +1 669 900 6833, Meeting ID: 930 5991 8864

## Attendees

Cosumnes Subbasin GSA Working Group	
Linda Dorn	Sacramento County
Mike Wackman	Omochumne-Hartnell Water District
Jay Schneider	Sloughhouse RCD
Barbara Washburn	Sloughhouse RCD
Environmental Groups	
Jason Wiener	ECOS
Melinda Frost-Hurzel	Cosumnes Coalition
Pablo Garza	EDF
Jake Sahl	TNC
Agencies	
Bridget Gibbons	CDFW
Neighboring Subbasins	
Mike Wackman	South American
Linda Dorn	South American
Ted Rauh	South American
Other	

Amanda Watson	SAWQA, Amador RCD
Amelia Vankeuren	Elk Grove, ag -res
Bill Myers	Sheldon Community Association
<b>SWAG Support – Water Forum, Technical Consultants, &amp; Facilitation Support</b>	
Tom Gohring	Water Forum
John Lowrie	Water Forum
Kat Perkins	Water Forum
Anona Dutton	EKI Consultants
John Fio	EKI Consultants
Kristyn Linhart	EKI Consultants
Bennett Brooks	Consensus Building Institute
Stephanie Horii	Consensus Building Institute

Additional members of the public were also in attendance.