

Corning Subbasin Advisory Board

January 6, 2021, 1:30 – 3:30 pm

Meeting #9 Meeting Summary

Pursuant to Governor Newsom’s Executive Orders N-29-20, this meeting was conducted by teleconference/webinar.

Webinar: <https://global.gotomeeting.com/join/608617589>

Telephone: +1 (571) 317-3122

Meeting Access Code: 608-617-589

1. Welcome and Introductions

At 1:30 p.m., Rafael Silberblatt, facilitator for the Corning Subbasin Advisory Board (CSAB), called the meeting to order.

Roll call

Ryan Teubert and Lisa Hunter took the roll call for the CSAB Members.

Tehama County Flood Control and Water Conservation District (TCFCWCD)

✓ David Lester (1:37)

✓ Bob Williams

Alternate:

✓ Ian Turnbull

Corning Sub-basin GSA

✓ Lisa Hunter

Alternate:

✓ John Amaro

Agenda Review, Review of Groundrules

Rafael Silberblatt welcomed meeting participants to the ninth CSAB meeting. He reviewed the agenda and reminded attendees that CSAB meetings follow Brown Act guidelines. He invited members of the public to announce their name and affiliation into the chat box to be included in the meeting summary.

2. Public Comment for Items Not on the Agenda

- Tamara Williams, Landowner - The Corning Subbasin SGMA Factsheet indicates that domestic users might be affected by SGMA in certain circumstances. Consider developing a separate fact sheet regarding SGMA impacts on domestic water users to provide further clarification.

- Lisa Porta - We will discuss the possibility of developing a separate fact sheet with the outreach team.

3. Action Item: Approval of the Meeting Summary

- Ian Turnbull, Board member - Consider adding written comments on the GSP project sections provided prior to the meeting, to the meeting summaries for additional context.
 - Lisa Porta - The meeting summaries are meant to concisely capture discussion held at the meeting. All written comments on GSP sections will be documented , tracked, considered for revisions, and added to the GSP appendix for documentation.
 - Ian: Thank you.

Bob Williams made the motion: *The CSAB approves the CSAB December Meeting Summary*. John Amaro seconded the motion. Mr. Silberblatt opened discussion on this motion. Hearing no comments from CSAB board members, he called a vote.

Roll call vote:

Tehama County Flood Control and Water Conservation District (TCFCWCD)

- David Lester – Aye
- Bob Williams – Aye
- Ian Turnbull - Aye

Corning Sub-basin GSA

- Lisa Hunter – Aye
- John Amaro – Aye

The Board unanimously approved the motion with a 5-0 vote.

4. GSA Updates

Ryan Teubert and Lisa Hunter reported to the CSAB on the TCFCWCD and Corning Sub-basin GSA (CSGSA) activities, respectively.

Tehama County GSA (Ryan Teubert)

- Board of Supervisors meeting January 25th and GW commission meeting January 27th.
- Provided updates for the other Tehama County GSPs
 - Working on model calibration
 - Chapter 1 is available for review

Corning Sub-basin GSA (Lisa Hunter)

- Corning Sub-basin GSA approved sustainability goal and meeting schedule for 2021 in November
- An update was provided on facilitation services (DWR funded support)
- Technical Support Services well installation in Glenn County is moving forward. Had a logistical site visit today and will get started with drilling this month.

Interbasin Coordination (Lisa Porta)

- Coordinating on modeling efforts with other sub-basins
- Posted additional information to the website
(<https://www.buttecounty.net/waterresourceconservation/Sustainable-Groundwater-Management-Act/Inter-basin-Coordination>)

5. Open Discussion on GSP Sections and Feedback

Lisa Porta – Provided a brief review of Section 3: Basin Setting – Hydrogeologic Conceptual Model and Groundwater Conditions.

Rafael opened comments to the CSAB and the public. General comments and input are summarized below. Section-specific comments are attached in a table to this meeting summary.

- Ian Turnbull -Seeking clarity and more information about identifying principal aquifers in the Subbasin. Concerned that if we don't consider different criteria for shallow and deeper wells then might lead to mismanagement of two potential separate water sources. Would like to elaborate more in the HCM sections about principal aquifer determination. Would like the GSAs to acquire funding to understand the potential deeper aquifer both through more well installations and additional hydrogeologic investigations.
 - Ms. Porta – We will elaborate more in these sections of the GSP. The HCM acknowledges the different geologic formations and hydrogeologic units have some interconnectivity. Calling them separate principal aquifers per SGMA has implications for the monitoring well network if multiple principal aquifers are defined. We will consider local conditions when developing potential projects.
- David Lester - I agree that the principal aquifer issue is a concern. If we consider the aquifers as one source of water, concerned we will only set levels at one depth that won't apply to conditions at a nearby well at other depths
 - Ms. Porta - Currently the RMP network is set up with shallow wells and deeper wells. The deep wells are below the depth of domestic wells but may be in either the Tehama or Tuscan formation, or a mix of both. SMC are set based on the historical levels in each well. Since we don't know much about the Tehama and Tuscan transition, this captures conditions in both. We wouldn't be doing much differently if we defined different principal aquifers, except some of the monitoring wells would need to be deeper, and some wells could not be used if they are screened in multiple aquifers. There may be big cost implications related to future monitoring.
- Ryan Teubert read written comments on behalf of Steve Gruenwald (who was not in attendance):
 - We've got a lot to learn about the interconnectivity of water bearing formations and the effect of pumping from some of the deeper wells that are being constructed.
 - We must continue to investigate, evaluate, and promote groundwater recharge projects utilizing existing conveyance systems (Corning Canal, TC Canal, Orland Water Users/Stony Creek) to add to the water budget.

- The concept of existing and *potential* Groundwater Dependent Ecosystems as defined by TNC/DWR and designated as beneficial users is unsettling. Maintaining shallow (< 30') groundwater along intermittent creeks miles away from the Sacramento River may be nearly impossible in drought years, and if these ecosystems are to have an equal place at the table, agricultural pumpers will be negatively impacted.
- Ryan Teubert – Interested in learning more about the status of the Airborne Electromagnetic (AEM) project that DWR is conducting to help understand geologic layering.
 - Ms. Porta - DWR is working on contracting with the AEM team. Agricultural areas are prime targets because they don't have infrastructure that interferes with the survey method. Work was previously performed on the other side of the Sacramento River in Butte County that touched a sliver of the Corning Subbasin (mostly within Glenn County).
 - Ryan Teubert - From what I understand, DWR is looking at doing a high level survey of alluvial subbasins throughout the State and then more targeted surveys in areas of interest.
- Michael Ward (public) – Can you describe AEM in more detail?
 - Ms. Porta - Yes, generally a helicopter tows an electromagnetic emitter that is used to measure resistivity differences to delineate the different aquifer materials (i.e. sand, rock or clay).
 - Brandon Davison (DWR) - AEM is a general tool for understanding hydrogeology that DWR is using. There is outreach coming soon from DWR regarding AEM.
- Michael Ward (Public) - I agree with Tamara Williams' prior comment regarding the need for a factsheet for domestic water users
 - Lisa Porta - Will need to discuss with the outreach team. It's difficult to communicate with domestic users at this time which is why we're trying to use these CSAB meetings as a way to solicit public input. Would welcome help getting the word out (e.g., through meeting attendees distributing flyers to the broader community). Domestic water users are being considered as changes to the basin may impact them, but they don't have the same restrictions.
 - Ryan Teubert - provided a [link](#) to a DWR factsheet on SGMA and domestic well owners which could be used as a starting place for developing a similar fact sheet specific to the Corning Subbasin
- Tamara Williams (Public) - My understanding is that other basins have poor water quality at great depths due to degradation of aquifers from upward gradients. I am concerned that deep pumping may induce an upward vertical gradient from deep zones with connate water or other water with poor water quality. Do we know that we don't have that problem in the Subbasin or is the Subbasin at risk based on the trend for pumping to be concentrated in certain areas in the deeper zones?
 - Lisa Porta - We don't know of the same concerns with deeper saline water intruding into wells like in other areas of the valley (Sutter Buttes area). There is some naturally higher saline concentrations found in groundwater in the western area of the subbasin. This is based on relatively shallow base to freshwater and naturally saline geology.

- Tamara Williams - Concerned that someone could drill a much deeper well if it's not noted as a concern.
 - Lisa Porta - Seems unlikely due to expense, but could be addressed as a management action. We may include some text to that effect in the GSP, to note the potential concern from deeper pumping.
 - Erin Smith (DWR) (Chat comment and highlighted verbally) - Just to add to the previous discussion on HCM it seems pertinent to share the Department's BMPs (Best Management Practices) if anyone is interested. Also I'll point you to the top of page 11 in the HCM BMP regarding identification of data gaps:
<https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents>

6. Next Steps

Lisa Porta provided an update on GSP related efforts and an overview of upcoming CSAB meetings and topics.

- We are currently finalizing model verifications. Current, historical and projected water budgets should be available for review in a month or two.
- We will be diving deeper into sustainable management criteria over the next three months.

7. Adjourn

Rafael Silberblatt thanked Lisa Porta, CSAB members, and the public for their participation and adjourned the meeting at 3:08 pm.

Meeting Participants

CSAB Members

- Lisa Hunter, Corning Sub-basin GSA
- John Amaro, Corning Sub-basin GSA alternate
- David Lester, Tehama County Flood Control and Water Conservation District (Groundwater Commissioner)
- Bob Williams, Tehama County Flood Control and Water Conservation District (Board Member)
- Ian Turnbull, Tehama County Flood Control and Water Conservation District Alternate

Other Participants

- Brandon Davison, DWR
- Bridget Gibbons, CDFW
- Dana Pressley
- Erin Smith, DWR Northern Region

- Holly Dawley, GCID (Corning Sub-basin GSA Staff)
- Jaime Lely, Landowner
- Jim Simon, Tehama County
- Kristina Miller, City of Corning
- Mariana Rivera-Torres, CBI
- Martha Slack
- Mary Fahey, Colusa Groundwater Authority
- Michael Ward
- Nichole Bethurem, TCFCWCD
- Ryan Teubert, TCFCWCD
- Tamara Williams, Landowner
- Thad Bettner, GCID
- Todd Hamer
- Todd Turley

Consultants and Project Team

- Lisa Porta, Montgomery & Associates
- Pete Dennehy, Montgomery & Associates
- Rafael Silberblatt, Kearns & West

Section	Table	Figure	Date	Commenter/Affiliation	Comment	GSA Response (Lisa Porta)
			1/6/2021	Ian Turnbull/CSAB	Why was 200 ft selected as interface with the Tuscan?	Think this was a mistake and will be fixed.
					I am skeptical that the Subbasin can be treated as a single aquifer. I think we are going to get into a situation where we are looking at recharge projects. If the aquifers are not connected and we think they are, we may not be able to recharge the disconnected aquifers. Similarly, extractions from isolated aquifers (say below 600 ft) may not impact water levels in shallower portions of the aquifer. May be a case to allow different volumes of extraction in different aquifers. At the least, would like more discussion of the possible different aquifers. There are a lot of unknowns that possibly with some grant funding can be explored.	Principal aquifers have unique meaning for SGMA. Levels of the aquifer in Corning that are more different water levels, etc. The Tuscan could in some areas. However, we are not exactly sure and at what depths. SGMA requires the Subbasin networks in each of the designated principal wells are screened in both Tehama and Tuscan separated between the two. Wells screened qualify for SGMA monitoring wells so the total monitoring network would be greatly limited aquifers. Also, potential pumping allocations not at the aquifer level, as there is a degree of
			1/6/2021	Ian Turnbull/CSAB	1. Concerned with oversimplifying aquifer system to one principal aquifer. I understand there are practical constraints of SGMA protocol, but wether in the data gaps section or general description of the principal aquifer the potential multiple aquifers should be addressed in more detail. There is a lot of uncertainty how deep aquifer pumping effects the shallow aquifer system, including gw/sw interactions along streams. 2. Didn't feel like the section was describing the local hydrogeology in a way that seemed to capture the local setting. Tuscan Tehama-transition data gap seems like a planar feature in discussion, in reality it is more complex and variable spatially. Also, in general, think that the heterogeneity of the aquifers seems a little overlooked.	We will add a bit more context and description to address these concerns .
			1/6/2021	Tamara Williams/Landowner		
			1/6/2021	Ian Turnbull/CSAB	Rainfall was included as a dominant factor in groundwater level fluctuations. Think that the changes in cropping patterns should be acknowledged here.	This is described in other sections, but we will
					In areas with different gw elevations at depths (vertical gradients), is there flow between different depths of the aquifer? This could be a situation where we have pressurized aquifers. I think that there needs to be more information in the data gaps section dealing with analysis of vertical gradients and vertical flow.	There have been some studies in the Stony Creek layers. The Sacramento Valley does have some between aquifer units due to localized low permeability. It appears to be more interfingering of the Tehama eastern portion of the subbasin. Pump testing we could do more pump testing in other areas case everywhere. We will add information in
			1/6/2021	Ian Turnbull/CSAB	Is the losing stream diagram accurate? I don't understand how it can show losing conditions and the stream be disconnected.	Yes it is accurate. There can be losing conditions the groundwater level is below the bottom of the considered disconnected and water can percolate longer flows back and forth between groundwater disconnected, groundwater management does not surface water (unless groundwater levels rise
			1/6/2021	Ian Turnbull/CSAB		

Action	Table	Figure	Date	Commenter/Affiliation	Comment	GSA Response (Lisa Porta)
		3.2-33	1/6/2021	Ian Turnbull/CSAB	Area where GDEs was mapped near Hamilton City seems somewhat excessive.	The map shows the level of groundwater less there were to be a plant in this area that is d would be considered a potential GDE. The ar all ag land that does not contain GDE vegetat determined from intersecting the groundwat provided by DWR.
		3.2-33	1/6/2021	Ryan Teubert/TCFCWCD	Area to east of pink circle south of Corning has GDE vegetation but is not shown as a GDE, can you explain what's going on there?	This area appears to have some perched gro data to say if the lower reaches of the creek
2			1/6/2021	Tamara Williams/Landowner	The section doesn't consider the environmental effects of nitrate other than ag-effects. Nitrate can harm the ecosystem by promoting nitrogen loving plants. This area is left with so few shreads of riparian systems that think that we should lay the groundwork for discussion for protection of these few areas.	Thank you this is noted. We will revisit this se