

Corning Subbasin Advisory Board

September 2, 2020, 1:30 – 3:30 pm

Meeting #5 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/837316613>

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Meeting Access Code: 837-316-613

1. Welcome and Introductions

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

Roll call

Ryan Teubert (Mr. Teubert) and Lisa Hunter (Ms. Hunter) took the roll call for the CSAB Members.

Tehama County Flood Control and Water Conservation District (TCFCWCD)

- ✓ Steven Gruenwald – Joined at 1:39 pm
- ✓ David Lester – Joined at 1:36 pm
- ✓ Bob Williams

Alternate:

- ✓ Ian Turnbull

Corning Sub-basin GSA

- ✓ John Amaro - Alternate
- ✓ Lisa Hunter
- ✓ John Viegas

Agenda Review, Review of Groundrules

Ms. Leimbach welcomed meeting participants to the fifth CSAB meeting. She reviewed the agenda and reminded attendees that CSAB meetings are following Brown Act guidelines. She 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

- There was no public comment at this time.

3. Action Item: Approval of the Meeting Summary

Ian Turnbull (Mr. Turnbull) made the motion: *The CSAB approves the CSAB August Meeting Summary.* John Viegas (Mr. Viegas) seconded the motion. Ms. Leimbach opened discussion on this motion. Hearing no comments from CSAB board members, she called a vote.

Roll call vote:

Tehama County Flood Control and Water Conservation District (TCFCWCD)

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

Corning Sub-basin GSA

- John Amaro – Aye
- Lisa Hunter – Aye
- John Viegas - Aye

The Board unanimously approved the motion with a 6-0 vote.

4. Follow Up on Action Items from Previous Meeting

Lisa Porta (technical expert) reviewed action items from the previous CSAB meeting:

- Staff incorporated input from the last meeting into a new draft Sustainability Goal, which was refined and provided to the Board for a potential action item today.
- M&A has started reviewing the Allan Fulton groundwater level analysis and documentation for establishing threshold triggers.
- M&A has started reviewing salinity issues on domestic wells, primarily in Tehama, for the GSP section on Basin Setting. Many shallow domestic wells have higher salinity than rest of basin, but the trend is not worsening. The salinity is not unhealthy but may not be good for crops.
- M&A is reviewing data management for well density and depth mapping and will incorporate new information into future maps.

5. Review Draft Subbasin Sustainability Goal

Key Concepts

Ms. Porta reviewed the updated draft Sustainability Goal and Ms. Leimbach invited discussion from the Board.

Discussion (CSAB Staff, CSAB Members)

There were no questions or comments from the Board at this time. Hearing no further discussion from the Board, Ms. Leimbach opened the floor for public comment.

Public Comment

- There was no public comment at this time.

Possible Action Item: Make recommendation to GSAs on Preliminary Corning Subbasin Sustainability Goal Description

Dave Lester (Mr. Lester) made the motion: *Make recommendation to GSAs on Preliminary Corning Subbasin Sustainability Goal Description*. Steve Gruenwald (Mr. Gruenwald) seconded the motion. Ms. Leimbach opened discussion on this motion. Hearing no comments from CSAB board members, she called a vote.

Roll call vote:

Tehama County Flood Control and Water Conservation District (TCFCWCD)

- Bob Williams – Aye
- David Lester – Aye
- Steve Gruenwald – Aye

Corning Sub-basin GSA

- John Viegas – Aye
- Julia Violich – Aye
- Lisa Hunter – Aye

The Board unanimously approved the motion with a 6-0 vote.

The Preliminary Corning Subbasin Sustainability Goal Description is as follows:

The goal of the Groundwater Sustainability Plan is to ensure sufficient and affordable water of good quality be available on a sustainable basis to meet the unique needs of agricultural, residential, municipal, industrial, recreational, and environmental users within the Corning Subbasin, both now and in the future. The GSAs recognize that sustainability can only be possible with the support and coordination of local, state, and federal agencies and the utilization of both surface and groundwater resources.

6. Overview of Chronic Lowering of Groundwater Levels Sustainable Management Criteria (SMC)

Background

Ms. Porta reviewed the following key points:

- There are five applicable Sustainability Indicators, many of which can be linked to each other. For example, declining water levels may lead to depletion of interconnected surface water, decrease in groundwater storage, and land subsidence.
- Looking at Subbasin as a whole, there are unique potential sustainability concerns in each part of the Subbasin. West has potential water quality concerns, north has declining water levels, south has potential subsidence and groundwater/surface water interaction issues.
- Sustainable groundwater management may be achieved through coordination to avoid unsustainable practices in each part of the Subbasin. For example, surface water could be used in areas with chronic lowering of groundwater levels in order to decrease reliance on groundwater pumping.
- Reviewed general requirements of Sustainable Management Criteria for chronic lowering of groundwater levels.
- Groundwater levels background
 - Water levels in Corning Subbasin have annual fluctuations that are typically higher in spring and lower in fall.

- Notable long-term declining water level trend in many wells in Tehama County and western portion of the Subbasin, worsening since the last big drought.
- Generally stable water level trend in eastern Glenn County.
- Concerns about lowering of water levels causing domestic wells going dry in north and west portions of Subbasin.
- Groundwater levels decreased in many wells during 2012-2015 drought. Water levels have recovered somewhat from the drought but there are some areas that are still in decline.
- Likely reasons for water level declines in the Subbasin:
 - Cropping conversion trend from pasture to fruit and nut orchards. Orchards are groundwater irrigated and are relatively water intensive. Grazing and pasture can be surface water irrigated or dry-land farmed and are generally less water intensive
 - Less surface water availability in Subbasin as Central Valley Project water has not been as reliable since the 2012-2015 drought

Review Significant and Unreasonable Conditions

Ms. Porta reviewed the following key points:

- Recap of steps to develop a Sustainable Management Criteria – this is an iterative process.
- Considerations for significant and unreasonable statements.
- Example statements from other GSPs.

Discussion (CSAB Staff, CSAB Members, Technical Expert)

The CSAB and staff offered the following input for development of significant and unreasonable conditions for chronic lowering of groundwater:

- An iterative process for developing statements can provide direction for quantitative metrics. Another approach could begin with proposed quantitative metrics.
- The statements are still fairly broad and meant to provide direction for the measurable metrics.
- Technical team could use the Sustainability Goal as a guide to crafting draft statements for the significant and unreasonable conditions for declining groundwater levels.

Review Current Conditions and Applicability of County Triggers, Proposed Approaches for Minimum Thresholds

Ms. Porta reviewed the following key points:

- The chronic lowering of groundwater level Minimum Thresholds are water levels in specific wells that would likely cause significant and undesirable conditions to occur in the Subbasin. Consequently, these are the minimum water levels that the GSAs will need to maintain in order to manage groundwater in the Subbasin sustainably.
- The potential Water Level Monitoring Network was presented. The well network currently consists of all of the wells monitored by DWR through the CASGEM water level monitoring program. The CASGEM well network includes dedicated observation well clusters installed by DWR and domestic and irrigation wells volunteered for monitoring by the well owners. The observation well clusters include multiple wells screened at different discrete depths within the aquifer at a single location. Each well, including different wells in a cluster, may have unique

SMC. In other words, a single location can have different management goals for different depths within the aquifer.

- The Tehama County Trigger Levels adopted at ten wells in the Corning Subbasin in the 2012 Tehama County Groundwater Management Plan were established to require action if water levels approached historical minimum values.
 - Since these levels were set in 2008, water levels have dropped in some wells up to 30 feet lower than the previous fall/summer minimum water level trigger levels. Well users in certain areas within the Tehama County portion of the Subbasin are noting effects of lowering water levels, including wells going dry and lowering pumps in others.
 - Corning GSP could use something like the minimum historical levels to set the Minimum Threshold, but this action would likely result in some water users being impacted.
 - In order to return the aquifer to higher levels seen 15 years ago, substantial projects and management actions would be required.
- Glenn County Initial Basin Management Objectives (BMO)
 - Glenn County BMO water level goals were established in 2000 and revised in 2010. The BMOs included spring alert levels that could inform the water users of low water level conditions in aquifer prior to the growing season.
 - Spring water levels are not as well suited for Minimum Thresholds as these levels are not protective of wells going dry during the fall season.
 - There were some minor discrepancies between the water level data used for BMOs and the water level data provided by DWR.
- Allan Fulton's work in Glenn County
 - University of California agricultural extension analysis of water levels was being conducted in cooperation with the Glenn County Water Advisory Committee, prior to the passage of SGMA. The work was discontinued as it became apparent that forthcoming SGMA requirements would likely replace any pre-SGMA goals established by the county.
 - The analysis used water levels and well depths to analyze the impacts of establishing various water level thresholds on wells in Glenn County. The work and data helps to identify how many residential and agricultural wells are affected, which can provide helpful context for setting Minimum Threshold. This is being further reviewed by the technical team and will be incorporated into the lowering of groundwater level thresholds as appropriate.
- Summary of considerations for establishing water level minimum thresholds for the Subbasin
 - Use current minimum levels, pre-drought levels, or something lower than the historical minimum level.
 - Assess the potential impact of the SMC on groundwater users. For example Minimum Thresholds will have potential effects on groundwater-dependent ecosystems, domestic, and agricultural production wells. Can all beneficial users and uses of groundwater be protected? Or will they need projects for developing deeper wells or other mitigation?
 - Domestic and agricultural production wells are the most prevalent well types in this basin. Agricultural wells tend to be deeper than domestic wells and have more access to

groundwater than domestic wells who rely on shallower zones of the aquifer, and would be the first to go dry.

- In the Thomes Creek area there are deep agricultural wells and shallow domestic wells. Agricultural well users could have sufficient water to pump but cause the current shallow domestic wells to go dry.
- Minimum Thresholds could be different for different depths in the aquifer.

Discussion (CSAB Staff, CSAB Members, Technical Expert)

Staff and Board members discussed the following:

- How would we monitor between domestic and agricultural wells?
 - Ms. Porta: The monitoring network includes both domestic and agriculture production wells. The wells that we select for establishment of water level minimum thresholds will be dispersed throughout the Subbasin at various depths. The water level management goals will consider the needs of domestic and agricultural wells. Interpolation of water level minimum thresholds can be performed to confirm that thresholds are protective of wells and water users in all parts of the Subbasin where sufficient data are available.
- Can we select the wells that will be in the monitoring network and make decisions on each individual well that are protective of that portion of the Subbasin? For example, maybe we could determine the effects of Minimum Threshold by identifying numbers and depths of domestic wells within a certain radius of the monitoring wells.
 - Ms. Porta: Yes, we will be looking at wells located in the vicinity of each monitoring well.
- Board members were asked to share anecdotal evidence of historical challenges in different parts of the basin:
 - Ms. Porta: Were there challenging water levels in the early 2000s?
 - Mr. Turnbull: As far as domestic wells go, there were some issues in the Stony Creek Fan area. Over the last 2 to 3 years, some of the shallow domestic wells have been pulsing as water levels were drawn down to the pump depth, but not failing. Through the 1980s it was common for domestic wells to be drilled to 100 feet or shallower. Now, domestic wells are drilled to the 150- to 160-foot range. There are a number of domestic wells and a significant number of ag wells drilled around 200 feet. The end of July and August has been a particularly problematic time period as water levels are typically at their lowest level of the year.
 - Ms. Porta: Were there challenging water levels in the northern part of Tehama County?
 - Mr. Teubert: I can reach out to the Environmental Health Department to find this information. One of my concerns is that we are starting to rely on anecdotal information. How do we get local knowledge for that specific area?
- Board members discussed increasing surface water use and decreasing groundwater use.
 - Ms. Porta: If we are able to increase surface water use or implement other projects and management actions, could limit further declines in groundwater levels or possibly see groundwater level increases. For example, in some non-drought years, surface water is available but groundwater is used for various reasons, including drip irrigation for orchards is generally not compatible with surface water use. If water districts, GSAs, or counties invest in surface water irrigation infrastructure the groundwater demand

could decrease. Technical team will compile potential projects and management actions review at an upcoming CSAB meeting. Feasible projects and management actions will be incorporated into groundwater model simulations to estimate effects on future water demand, groundwater use, and groundwater levels. The model will be used to check and/or refine the Minimum Thresholds.

- Board members supported the idea of reviewing and using Allan Fulton’s work to visualize the impacts on domestic wells.
 - Ms. Porta: We can review the analysis done on domestic well depths in Glenn County, and see if we can apply this work across the Subbasin. We will likely start with the subset of wells used for Tehama County Trigger Wells, Glenn County BMO wells, and/or the dedicated monitoring well network and see how the analysis extrapolates across the Subbasin.

Public Comment

- Hilary Reinhard : I want to make sure you are considering that areas with lots of surface water rights that have not fully exercised. We might end up being at a different equilibrium between surface and groundwater if those water rights holders start to use more groundwater for production now or in the future. The minimum depth may make a lot of sense in some areas but not others.
- Mr. Teubert: What are the impacts from groundwater on agriculture? Are there other impacts?
- Thad Bettner: Pumping effects might be showing up differently in areas close and far from the Sacramento River. Groundwater pumping close to the Sacramento River still does draw water from the river that will ultimately affect the streamflow and downstream water users. Surface water users are concerned that groundwater pumping near the rivers may lessen the available surface water for use by users that rely on it downstream.
 - Ms. Porta: This is true. Depletion of interconnected groundwater and surface water will be considered when establishing the groundwater/surface water interaction SMCs.
- Todd Turley: Have seen other subbasins where minimum thresholds were set at levels below the historical minimum, in order to incorporate downward water level trends or future droughts. Are we also considering a lower water level than the minimum level for the Subbasin?
 - Ms. Porta: We will go through an iterative process to review water levels, well depths, descriptions provided by Subbasin water users, potential projects, and how these projects could help groundwater levels. Minimum Thresholds that we set in the current GSP can be changed in future years. Some areas choose to use a Minimum Threshold that is low so that they will never exceed this level. However, this low threshold could be troublesome for in-basin users.
- Mr. Turley: Imagine it would be easier to raise a Minimum Threshold than to make it lower in the future.
 - Ms. Porta: Yes, we can start with a conservative threshold and see how projects and future climate affect water levels.

Review Measurable Objectives, Effects on Beneficial Users, and Other Sustainability Indicators

Ms. Porta reviewed the following key points:

- Measurable objectives will need to be set at a level higher than the Minimum Threshold. It is a goal for a healthy Subbasin.

- Interim Milestones will be provided every five years through 2042 to assess progress towards achieving the Measurable Objectives goals. These will also be developed using the groundwater model.
- Undesirable Results are a combination of minimum thresholds
 - Over the next 20 years, you can have an undesirable result but the GSA needs to correct it to reach sustainability by 2042. Could say something like 10 or 20% of minimum annual groundwater levels at representative monitoring points may drop below the Minimum Threshold before it is considered an Undesirable Result.
 - After 2072, the expectation is that groundwater beneath the Subbasin will be managed sustainably and that there will be no exceedances of Minimum Thresholds.

Discussion (CSAB Staff, CSAB Members, Technical Expert)

CSAB Staff and Board members discussed the following:

- Mr. Amaro - What is the timeline for thresholds or objectives? We should consider 3-4 years of drought when we are making our plan and thresholds. We have droughts that last for two years, followed by a wet year that helps recover groundwater conditions.
 - Ms. Porta: Undesirable Results statements can be crafted to take into account multiple years of drought and resulting declines in groundwater levels.

Public Comment

- There was no public comment at this time.

7. Next Steps

Ms. Porta reviewed action items for the next CSAB meeting:

- Montgomery & Associates will review the Glenn County BMO Revision analysis to see if it could be incorporated into the SMC.
- Montgomery & Associates will look at domestic well depths and see how minimum threshold concepts are expected to impact a certain percentage of wells.

Potential Agenda items for the next CSAB meeting:

- Groundwater level SMC discussion #2
- Proposed approaches for selection of chronic lowering of groundwater level SMC including Minimum Thresholds, Measurable Objectives, Interim Milestones, and Undesirable Results.
- Present a preliminary list of projects and management actions for consideration by the CSAB to help manage groundwater beneath the Subbasin sustainably.

8. Adjourn

Ms. Leimbach thanked Ms. Porta, CSAB members, and the public for participating in this great discussion and adjourned the meeting at 3:17 PM.

Meeting Participants

CSAB Members

- John Amaro, Corning Sub-basin GSA
- Lisa Hunter, Corning Sub-basin GSA
- John Viegas, Corning Sub-basin GSA
- Steven Gruenwald, Tehama County Flood Control and Water Conservation District (Private Citizen)
- David Lester, Tehama County Flood Control and Water Conservation District (Groundwater Commissioner)
- Bob Williams, Tehama County Flood Control and Water Conservation District (Board Member)

Other Participants

- Nichole Bethurem, Tehama County Flood Control and Water Conservation District
- Thad Bettner, GCID
- Bernadette Boyle, LSCE
- Brandon Davison, DWR Northern Region
- Holly Dawley, GCID
- Mary Fahey, Colusa Groundwater Authority
- Matt Hansen, Tehama County Resident
- Betsy Karle,
- Jaime Lely, Landowner
- Hilary Reinhard, Provost & Pritchard
- Sharla Stockton, Glenn County
- Ryan Teubert, Tehama County Flood Control and Water Conservation District (Manager)
- Todd Turley, Landowner
- Ian Turnbull, Tehama County Flood Control and Water Conservation District (TAC Member)
- Patricia (Pat) Vellines, DWR Northern Region
- Hal Crain, Surface Water Agencies or Districts, Supervisorial District 4 Representative
- Bill Borrer, City of Tehama
- Todd Hamer, Vice Chairperson, Los Molinos Community Services District
- Martha Slack, Rio Alto Water District

Consultants and Project Team

- Julie Leimbach, Kearns & West
- Lisa Porta, Montgomery & Associates
- Peter Dennehy, Montgomery & Associates