Siskiyou County Groundwater Sustainability Agency
Butte Valley Advisory Committee Meeting
MEETING SUMMARY

Meeting date/time: October 29, 2020 I 3:00 – 6:00 pm
Location: Zoom Online Platform
Key contacts:
-Matt Parker, County Natural Resources Specialist I mparker@co.siskiyou.ca.us I 530.842.8019
-Katie Duncan, Stantec Consulting - Facilitator I katie.duncan@stantec.com I 916-418-8245
-Laura Foglia PhD, U.C. Davis Technical Team Lead I lfoglia@ucdavis.edu I 530.219.5692

MEETING RECAP

- **Approval of Past Meeting Summary.** The committee approved its September meeting summary for posting on the Siskiyou County SGMA website.
- **Public Comment.** No initial public comments.
- **District Staff and Other Updates.** Matt Parker provided a recap of the public workshop held on October 15th and provided updates overall GSP development and schedule and future ad hoc meetings. Pat Vellines of DWR provided information on an anticipated TSS well to be installed at the airport.
- **Review of Draft GSP Chapters.** The technical team did a high-level review of comments received on Chapter 2 and presented and secured feedback on water quality SMCs included in draft chapter 3 of the GSP. Matt Parker reminded committee members of the process for submitting comments and asked for any additional feedback within one week of the meeting.
- **Presentation and Discussion of SMCs in Butte Valley.** Dr. Thomas Harter and Bill Rice presented on potential groundwater and surface water SMCs in Butte Valley.

SUMMARY OF ACTION ITEMS

Action Item	*Responsible Party*	*Status/Deadline*
Provide comments regarding GSP Chapter 3 and the water quality SMCs	Committee members	November 4th
Update Chapter 3 and water quality SMCs based on comments provided.	Technical Team	November 18th

Next Meeting: November 19, 2020. Due to current circumstances surrounding covid-19 the meeting may again be held online with Zoom technology.

View Siskiyou County's groundwater website for posted meeting materials.

MEETING SUMMARY

Agenda Review and Approval of Past Meeting Summary
The facilitator welcomed all participants and thanked attendees for their patience with ongoing

use of Zoom as alternative meeting platform during the pandemic. She secured consent from committee members to post the September meeting summary on the county's SGMA webpage. No committee members put forward questions or expressed concerns about the agenda at the outset of the meeting.

Public Comment Period

At the outset, members of the public may comment on items not on the consent agenda. The public is asked to wait until the appropriate item to comment on issues directly related the current meeting agenda. No comments were provided.

District Staff and Other Updates

Matt Parker provided a range of updates.

- A SGMA public meeting was held for Butte Valley on Thursday, October 15th. The Butte Valley workshop did not have great attendance. Overall, the workshops across the three, Siskiyou County basins were successful in engaging the public and sharing important information regarding the SGMA process. There will be another round of public workshops in early 2021.
- Key GSP milestones and schedule were reviewed. In the coming months it will be important for the Advisory Committee to come to consensus on a range of important GSP elements.
- A TSS well will be installed by DWR on the county airport property. Well will most likely be installed in late spring. Pat Vellines shared additional information on the well.
    - The well is paid for by DWR and the Technical Support Services (TSS) program. The well costs a few thousand dollars.
    - This well will become part of the monitoring network and will help fill data gaps
    - The well installation includes a continuous data logger
    - Shared information on how well will be installed and operated

Review and Discussion of Draft GSP Chapter 2 – Plan Area and Basin Setting

Dr. Laura Foglia, SGMA technical team lead, reviewed a range of comments received of GSP Chapter 2, both general comments as well as requests for additional information or detail. No additional comments or questions were provided. The technical team has enough information to develop an updated version of Chapter 2 which will go to board.

Dr. Foglia reviewed and solicited feedback on water quality Sustainable Management Criteria (SMC) included in GSP Chapter 3. Strawman proposals, originally presented in January and March, addressing degraded ground water quality were reviewed including definitions of undesirable results and SMCs.

It was noted that the GSA serves as the steward of groundwater sustainability, but for groundwater quality monitoring is emphasized over management actions. There is limited data and SMCs are based on available data only. In general, groundwater quality in the basin is good,

with only a few areas where thresholds are exceeded.

Dr. Foglia went on to list constituent of concern and identify those that would be included in the GSP based on available data. Although all constituents of concern will be described in Chapter 2, SMCs will be set for specific constituents for which there is available data – nitrate and arsenic near Dorris. Dr. Foglia reviewed the wells that could be added to the monitoring network to monitor groundwater quality.

Dr. Foglia briefly reviewed maximum threshold and measurable objective concepts and presented proposed thermometers for water quality SMCs.

The Advisory Committee provided feedback on the proposed water quality SMCs:
Comment: The first slide suggests that pesticide is a contributor to arsenic, I've never seen that on labels. I thought you suggested not having an SMC for arsenic?
Response: Still open whether to include it or not. Back in the 50s Dorris had a wood treatment facility. Long gone but there are elevated levels of arsenic in the soil based on wood treatment, including Dorris public supply wells, which had to be dug deeper. Need to monitor for health effects; makes sure it doesn't impact drinking water. Monitor and make sure things are safe.

Comment: Are the maximum thresholds based on title 22 drinking water standards. If so, do we want our hands tied for making mitigation on other matters beyond drinking water (e.g. elevated nitrates for Ag would be ok). Do we need different thresholds for different uses?
Response: Yes, thresholds are based on Title 22 drinking water standards. I think we may be able to have different thresholds for different wells. Maybe we can consider deeper wells to define different thresholds.
Comment: Important to have criteria linked to what water is being used for. Citing high nitrate waters in Salinas Valley that are used to water Ag crops. So Ag may need a different criteria than drinking water.
Response: Two issues to consider. To degree maximum threshold is tied to MCL, that is because of existing regulations that apply to anywhere where there is drinking water as a beneficial use. We can set monitoring network up to primarily focus on where there are domestic wells and public water supply wells.

Comment: What about for specific conductivity? What are others around the state doing?
Response: Citing work from other areas. Maximum threshold set on number of wells exceeding the MCL. There is limited data in Butte Valley so we need to address that and build the monitoring network.

Public comment period:
Comment: Is the city monitoring arsenic now? Where did the data come from on arsenic and how recent is it? What bearing does domestic well qualification have?

Response: First sign was 1968 following an earthquake. This is when they found arsenic. Had to drill deeper wells to get down to where there wasn't arsenic. They've monitored since. This is just recommending that Dorris keep doing the monitoring they have been. GSA can remind this is needed. MCL is more strict with domestic drinking water. Not suggesting monitoring for arsenic occur around the valley. It's centered around Dorris.

ACTION: Committee members can have until COB Nov. 3 to provide comments on chapter 3.

Presentation and Discussion of SMCs in Butte Valley

Dr. Thomas Harter and Bill Rice presented on potential groundwater SMCs in Butte Valley. Dr. Harter provided background on definitions and concepts of sustainability goals, undesirable results, sustainable management criteria, and minimum thresholds.

Dr. Harter reviewed groundwater dynamics in Butte Valley to provide context for how the committee should think about SMC definition. Through collecting data and building a model the technical team has learned that over the past 40 years, groundwater levels have decreased by 30 feet. Much of the recharge in Butte Valley originates in the South and West, pumping occurs in Butte Valley, and what is not extracted flows to the North and East.

If the system is not in overdraft, why are water levels going down? Water level in Butte Valley controlled by gradients of lower Klamath Wildlife Refuge. Affected by how much water flows through gradient that separates Butte Valley with lower Klamath Wildlife Refuge.

Possible causes of changing groundwater levels:

- Less recharge, smaller gradient, water levels go down
- If more pumping, including last 30 years, and same recharge but increased pumping, gradient goes down and water level in Butte Valley goes down.
- Same recharge, less pumping, more water outflow from Butte Valley to drain
- Lower water table in the "drain" region – water levels are lowering elsewhere too (but this is a potentially long-term effect)

***It is important to note that because the model is still under development and due to limited data, there is still a lot of uncertainty with the numbers being presented at this time.

Advisory Committee members provided initial feedback on material presented:
Comment: How is 280,000 AF recharge determined and why is it questionable?
Response: This volume comes from the USGS study. They used a watershed model called PRMS. We've used David's Engineering data for ET.
Comment: Doesn't seem wise to ask the GSA to make decisions on something this uncertain.
Response: This is the conundrum that a lot of GSAs are facing, especially with respect to climate change. Butte Valley is unique in that most water comes into the valley in the ground, not as

surface water. Hoping over next six months the model can shed light on causes of groundwater elevation change and accuracy of 280,000AF number.

Comment: In looking at deep wells in Tule Lake again. If we can validate what we suspect it's a real conundrum. We have to come up with mitigation measures and they're drilling wells and stealing our water.
Response: GSAs need to communicate with each other. Matt reached out to Tule Lake representative today and suggested we get our technical team on a call with the Tule Lake GSP consultants. Start sharing information and what each party knows about groundwater conditions. We'll have to continue to monitor and track and communicate with our neighbors.

Comment: What's the BOR project area?
Response: This is the area where water is being pumped to augment river flows.

Comment: In bathtub model you show a certain amount of water that can't go to Tule Lake?
Response: These conceptual figures show a change in slope in the flow gradient due to sediment types. It is not a stagnant pool.

The technical team moved on to reviewing the definition of a sustainability goal and went to the group to brainstorm ideas for specific sustainability goals for Butte Valley.

Comment: Much of what we're talking about today is over my head. My main concern is with the habitat issues and ecosystems, particularly the Butte Valley Wildlife Area. Explanation of the water flow through the basin is as well produced and presented as anything I've seen. You've done a good job in making it clear.

Comment: (Referencing provided slides summarizing input from previous meetings) Curious about who suggested "ecosystems can recover/mend?" I think we need to redo this, it puts it at the lowest point of all these goals.

The technical team moved on to reviewing the definition of undesirable results and opened-up to brainstorming for how to specifically define undesirable results in Butte Valley.

Comment: If the habitat goes dry, we cannot grow cereal, grain crops. We lose the ability to pump water for crops or refuge.

Comment: We should take into consideration the groundwater levels in lower basin and how it effects our levels. We thought we had a bath tub at first.

Comment: I think what's outlined for undesirable results (wells going dry affecting agriculture and property values) sums it up.

The technical team moved on to developing minimum thresholds and presented the "thermometer" showing how these thresholds are defined. The technical team went on to suggest that well outages should be considered in setting a minimum threshold. Existing well data and well locations were presented.

Comment: Should we also include, related to undesirable results, something that relates to recharge. Seems you're going to put in 1 or 2 wells to measure recharge. Should we have something that says if a certain level of uplands recharge doesn't occur, that's an undesirable result. Recharge needs monitoring, consistent data, and some kind of UR.
Response: Management of recharge could kick in as a management action.

Comment: To have a functional measurement / minimum threshold, you almost have to measure each well individually. So need to have a percent of depletion, rather than a static groundwater level like, say, 75 ft.

Comment: It will be different for public wells than Agricultural wells. A public well that goes dry will grab a lot more attention. We need to get all data before we start pointing fingers at a place like Tule Lake. We all have to work together ultimately.

Comment: How is monitoring recharge going to help us?
Comment: If say recharge dropped by 10% over five years maybe we should adjust our minimum static groundwater elevation threshold in a comparable way. Maybe cloud seeding could be done to help. Maybe a percentage of individual wells. Percentage of saving wells without going dry.
Response: We can try to get measurements on the ground to get specific wells. Again, we want to make sure and have a good representation of wells (domestic, Ag and public supply).

Comment: Older wells more likely to go dry. I don't agree that well outages is a good calculation. You've gotta look at the water table or something.

Comment: Not sure how you would measure as many wells as what is being talked about.
Response: This relates to establishing a representative monitoring network. A suggestion might be to look at each well and then determine something more specific than just a few wells in a network and consider what constitutes the risk of a well outage.

The technical team provided some concluding comments: once we quantify minimum thresholds, then we'll look at measurable objectives. Next discussion needs to be about how to quantify minimum thresholds. And we'll have to look at management actions if water levels fall. This will be a likely impact of climate change.

Matt Parker thanked everyone for their input and acknowledged the magnitude of information shared. The next meeting is November 19th.

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Advisory Committee Members
Steve Albaugh, Private pumper
Don Crawford, Private pumper
Patrick Graham, CDFW Butte Valley Wildlife Refuge
Greg Herman, Private pumper
Steve Lutz, Butte Valley Irrigation District
Richard Nelson (Chair), Private pumper
Jeffrey Volberg, Environmental
Howard Wynant, Tribal

Absent Committee Members
Carol Mckay, City of Dorris, Municipal/City
Don Bowen (Vice Chair), Residential

District Staff
Matt Parker, County of Siskiyou Natural Resources Specialist

CDFW Staff
Janae Scruggs

DWR Staff
Pat Vellines

Technical Team
Dr. Laura Foglia, UC Davis/Larry Walker Associates
Bill Rice, UC Davis/Larry Walker Associates
Bradley Simms, UC Davis/Larry Walker Associates
Dr. Thomas Harter, UC Davis/Larry Walker Associates
Katrina Arrendando, Larry Walker Associates

Facilitator
Rich Wilson, Seatone Consulting
Katie Duncan, Stantec

Members of the public
John Bennett