

**Siskiyou County Groundwater Sustainability Agency
Shasta Valley Advisory Committee Meeting
MEETING SUMMARY**

Meeting date/time: October 28, 2020 | 3:00 – 6:00 pm

Location: Zoom Online Platform

Key contacts:

-Matt Parker, County Natural Resources Specialist | mparker@co.siskiyou.ca.us | 530.842.8019

-Katie Duncan, Stantec Consulting - Facilitator | katie.duncan@stantec.com | 916-418-8245

-Laura Foglia PhD, U.C. Davis Technical Team Lead | lfoglia@ucdavis.edu | 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 14th and provided updates overall GSP development and schedule and future ad hoc meetings.
- **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 Shasta Valley.** Dr. Laura Foglia and Cab Esposito presented potential groundwater and surface water SMCs in Shasta Valley. Laura provided background on definitions and concepts of sustainability goals, undesirable results, sustainable management criteria, and minimum thresholds. Brad Gooch provided an update on geophysical work. Laura introduced criteria for monitoring network.

SUMMARY OF ACTION ITEMS

<i>Action Item</i>	<i>Responsible Party</i>	<i>Status/Deadline</i>
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
Share hydrograph slides so Advisory Committee can further review and provide feedback.	Technical Team	ASAP
Continue to gather data and information on well construction, pumps location, etc.	Technical Team	ASAP

Next Meeting: November 18, 2020. Due to current circumstances surrounding covid-19 the meeting may again be held online with Zoom technology.

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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 Shasta Valley on Wednesday, October 14th. The Shasta Valley workshop had about 40 people in 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.
- Electronic equipment was installed last week in the Gazelle TSS well installed by DWR. This will be an ongoing monitoring site.
- The Shasta Surface Water ad hoc group will meet prior to the November Advisory Committee meeting.

Review and Discussion of Draft GSP Chapters 2 and 3

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.

Comment: Chapter 2 is dense. How will people from committee see modifications made to the chapter? Will you be providing a response column?

Response: We're combining all comments, making changes. We're not planning on using track changes. If there is a section you are concerned with, you will be able to see new version. We are also compiling a table with all the comments received. A response column is not required at

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this stage, but we will provide responses for the public comment period. This is more of an effort to work out details in an informal process with the committee.

Comment: Concept of beneficial uses is one a lot of people don't understand or appreciate. Might be a good idea to list all beneficial uses in the chapter so reader can appreciate the magnitude of beneficial uses.

Response: Can use list included in C&E Plan, which was drawn from SGMA.

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 nitrate, specific conductivity, and benzene. However, benzene may not require a minimum threshold as it is associated with remediation sites for which the GSA does not have authority to manage. In addition, naturally occurring constituents should be removed as there isn't a lot that can be done to manage those. 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. Undesirable result is quantified as – if a maximum threshold is exceeded in over 5% of monitoring wells.

Open to Advisory Committee members for discussion and feedback:

Question: Can you explain why we are not including a bacteria threshold (e.g. e coli)? Do we not have something from the state re: minimum levels of bacteria? Are we also not looking at pesticides and herbicides?

Response: We can include these in Chapter 2 and keep monitoring. But the amount of information we have for these constituents is not enough to set an SMC. Can also consider what we want to monitor in the future. For all public water supply systems, there is a total coliform rule. This would be sampled for. GSA doesn't really have regulatory authority over public supply systems.

Chris Watt (NCRWQCB) providing some clarification. If you exceed water quality SMCs, are you out of compliance? Not a clear answer yet. Significant and unreasonable statements provide a

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kind of box around what GSAs can do. If unreasonable conditions occur because of a GSA project, or failure to enforce other SMCs, this [needs to be considered].

Question: When talking about maybe 20 wells in network, and undesirable result occurs at 5%, that's one well. If a threshold is exceeded, what authority and funding mechanisms exist to fix the issue?

Response: Funding availability is something we will come back to when we discuss plan implementation. Regarding the percentage that indicates the undesirable result this can be adjusted. Something like "at least 3 wells" may be more appropriate.

Chris Watt (NCRWQCB)– I appreciate discussion about representative nature of the monitoring network. I would ask that you also consider the vertical definition in terms of depth and geological units. Make sure there is some thinking around this included in Chapter 2, related to water quality network. Also look in GAMMA database to get a sense of impacts from surface discharges. Should consider vertical and geological units.

Technical team noted that it may be valuable to include a study that indicates which wells are vulnerable to contamination.

Public comments

No other comments offered at this time.

Prior to seeking conditional approval for Chapter 3, the technical team will make a few adjustments based on comments received. Chapter will go to board in December or January. Will return with updates during November meeting.

ACTION: Technical team will update Chapter 3 and water quality SMCs based on comments provided.

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

Presentation and Discussion of SMCs in Shasta Valley

Dr. Laura Foglia and Cab Esposito presented potential groundwater and surface water SMCs in Shasta Valley. Laura provided background on definitions and concepts of sustainability goals, undesirable results, sustainable management criteria, and minimum thresholds. Brad Gooch provided an update on geophysical work. Laura introduced criteria for monitoring network.

Developing SMCs for the basin is an iterative process. The technical team looks at lowering groundwater levels, surface water depletion, and reduction of storage all together. Minimum thresholds and measurable objectives will be defined. The minimum threshold is the absolute line or point that should not be exceeded. Measurable objective is the ideal range that we want to operate within. There are many potential paths to meet sustainability, although Shasta Valley is unique and the data is complex.

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Establishing a monitoring network is important. Through monitoring we collect data that provides evidence of progress towards goals. The monitoring network may be different for each sustainability indicator. Representative monitoring points were shown.

For now, minimum thresholds will be defined using current data. As data gaps are addressed and new data is collected, thresholds can be adjusted. The current model may require more data and refinement to set metrics for each criterion. It is important to note, that the thresholds set are affected by many variables and a combination of metrics may need to be used.

Shasta Valley is a dynamic system. Possible metrics that can be used to define SMCs include, but are not limited to:

- River gaging
- GW elevations
- Spring discharge
- Combination of various metrics

Discussion opened to Advisory Committee members for feedback:

Comment: When we use the term groundwater levels, should we be thinking of levels at all of the wells? What do we mean by this?

Response: We don't need to set criteria at every well. We can establish representative areas considering where we have enough data (e.g. 15 years of data). We don't need to include all 36 CASGEM wells, we might be able to work with 10 wells. We may want to have wells that look at different aquifer units and/or types of geology. The key thing is that wells included in the network need to have all the well construction information (e.g. where screened, in which aquifer)

Comment: If we are looking at a 50-year life span - keep in mind wells disappear over time. Consider how much costs for the 36 wells and then feed into a database. Some of these won't be around forever. Consider wells that have good data. Keep all this in mind.

Response: For the next meeting we can show which wells we have construction information for out of the 36 CASGEM wells.

ACTION: Technical team to compile well data for Advisory Committee to review.

Public comment

No comments at this time.

Cab now presenting.

The technical team showed a map of well locations and noting the limits of CASGEM data. Groundwater elevation can be a proxy measurement for many of the sustainability indicators. But in Shasta, there are additional constraints and more metrics will need to be considered.

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River gauge locations and data were provided. The Advisory Committee provided initial reactions and feedback to hydrographs shown.

Comment: Looking at the graphs, I'm not sure what is depicted, and I don't have confidence that it's showing groundwater levels going down given that we don't have "bath tub" geology here. Do all the monitored wells have pumps in them or are they empty wells. Depending on the time of year you take elevation measurements in holes, if there are pumps in wells you need to check groundwater elevation before pumps are turned on and after pumps are turned off. Note when groundwater elevations come back. Just taking two snapshots twice a year will not give you a true picture to build a model.

Response: Cab – We need to go back and see how these CASGEM wells have been managed and used in the past. It is the only data we do have going back 30 years. We are trying to work with what we have and doing a lot of work trying to improve data we have moving forward. CASGEM wells try to monitor before and after irrigation season. The technical team has tried to be very transparent regarding data gaps.

Comment (Shasta RCD): DWR does try to assess and record the conditions during the time of CASGEM measurements. For example, whether or not the pump is on or off, or if you can hear 'cascading' or trickling down the side which can be indicative of a recently pumped well refilling.

Comment: Any plan will be a work in progress. Need to be cautious about putting something down on paper that doesn't represent what's truly happening because of lack of data. People are hesitant to let people on their property. Going back 25 years of what ESA has done to Siskiyou County. If we don't have accurate and consistent data, we'll have a product that will be used to make a decision that will impact people.

Comment: I agree, this is a work in progress. If we incorporate too much of the river in this we're not doing anything for groundwater, we're managing the river. The model has to work for the next generation. I'm concerned about river gage data. But I understand your quandary with wells and data gaps. I understand we need to get more wells in the network. Make sure we are applying valuable and pertinent information to the model. Let's remember this is a groundwater sustainability committee. First five years may just be a data collection process. Your early assessment suggests this valley is sustainable. Understand we can't be afraid of the truth. We need to make model represent what's actually happening. But data gaps are a problem. The GSP must adapt as we go.

Response: We need to keep in mind it's a groundwater sustainability plan but one of the URs is the connection between surface water and groundwater. We need to make these components work together. We cannot make a strong conclusion yet.

Comment: We need to think about using river gage info appropriately. Once snowmelt is gone, water in river is basically groundwater that has come to the surface. To deal with interconnected groundwater and protect the resource for both ag and the environment, we

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have to think about river gages and that information. River in summer is groundwater that has come to the surface, we have to measure this and incorporate this data.

Comment (NCRWQCB): I would suggest that if the objective is to measure the impact of groundwater management on surface water depletion, then gaging data on high-volume springs (Big Springs, Little Springs, springs around Table Rock) would be very complementary to groundwater gaging data.

Comment: Good points. Different from Scott (FS water right has to be met), we don't have something like this in Shasta but we may soon (re: flows needed to protected for beneficial use). If we had this number from the water board and could work from there that would help. We need to use river gages but we also have to protect GDEs. E.g. Can't just look at flow gage at bottom of the Shasta. The system is variable and need to make sure GDEs are also protected.
Response: Yes, waiting for a number from the water board, but it will take time, so we need to start thinking about what's important. Would like to get ideas from people about what to protect. Can be a number or a combination of numbers. And consider all the different beneficial uses and users. But we need to start throwing some numbers out there.

Technical team presented specific undesirable results and how they could be tied to sustainability indicators:

- Loss of domestic well pumping capacity
- Loss of fish habitat
- Reduction in agricultural practices

Comment: Looks good. Loss of fish habitat a good indicator for environmental things. But we need to also think about what sustains GDEs, not just fish. Maybe something else needs to be considered beyond fish -wetlands or riparian habitat.

Comment: Loss of fish habitat could be challenging to quantify. CDFW counts fish numbers every year. This could be looked at as an indicator. Also look at how GDES are being enhanced or degraded. For loss of pumping capacity, how are we going to be looking at this? What if domestic wells can't be used based on time of year or water quality issues?

Technical team showed how domestic wells. pumping capacity, and well depth could be considered.

Comment: I don't know why we're including domestic wells. Why isn't it enough to monitor what we have in network. Problems are usually more operators than wells. I thought CASGEM wells would give us an indication of the system. I'm with the technical team in getting more data.

Response: Domestic well users are listed as a beneficial user of groundwater. They do need to be considered under SGMA framework.

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(Note: This commenter provided a follow-up after the meeting. After some reflection and consideration of what was presented domestic wells should be protected to the same degree all wells are protected. The plan should protect groundwater in the basin as a whole and not individual wells.)

Comment: Is there a time component included when considering wells going dry? Would this depend on what kind of year it is?

Response: There can be different thresholds for different water year types.

Comment: Trying to process all information. Sustainable groundwater levels, if needed to be tied to surface water, we could have sustainable groundwater but not necessarily sustainable spring flows. If critical, some high flow springs like Big Springs need to be monitored. Farms above can pump considerably and have available water, but you can see it affects Big Springs. You can see it. We need to gather additional data so we understand interaction between demand of water on high flow springs and impact on surface and groundwater that goes to the river.

Comment: Hydrographs look good. But we need to know the bottom of the water bearing zone. E.g. just all shallow wells? If so, maybe we need to deepen. This can be a mitigation measure.

Response: With some many volcanic fractured systems, it's always challenging. We will discuss mitigation measures and management actions in upcoming meetings. We'll discuss what actions can be taken to increase operating range and how to not hit URs.

This will be an ongoing conversation. We will go deeper in November. This conversation is essential in developing a plan that everyone can agree to. We've talked a lot about limited data sets, are there any ideas to fill the data gaps? We can go with what we have but also use this discussion to consider what we are missing. We need to show DWR we have a good plan to fill gaps over time.

Comment: Have we picked up any new data from Big Springs area, particularly given the questions that have come up around water quality? There's a fire station out there, a school. Is there a utility that could cooperate with us. And consider the church out there.

Response: Not really. Folks in area still hesitant to provide data. Some have stepped forward. It's a work in progress. We can continue to follow-up.

Facilitator and Matt Parker provided final comments for the meeting. The next Advisory Committee meeting is November 18th. The Surface Water ad hoc group will meet before the next meeting.

ACTION: Technical team will share hydrograph slides so Advisory Committee can further review and provide feedback.

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ACTION: Technical team will continue to gather data and information on well construction, pumps location, etc.

MEETING ATTENDEES

Advisory Committee Members

Tristan Allen, Montague Water Conservation District
Lisa Faris, Big Springs Irrigation District
Susan Fricke (Vice-Chair), Karuk Tribe
Blair Hart, Private Pumper
Justin Holmes, Edson Foulke Ditch Company
Steve Mains, Grenada Irrigation District
Justin Sandahl, Shasta River Water Users Association
Pete Scala, Private Pumper
John Tannaci (Chair), Residential
Gregg Werner, Environmental/Conservation

Absent Committee Member

Robert Moser, Municipal/City

District Staff

Matt Parker, County of Siskiyou Natural Resources Specialist

Technical Team

Dr. Laura Foglia, UC Davis/Larry Walker Associates
Dr. Thomas Harter, UC Davis
Cab Esposito, UC Davis/Larry Walker Associates
Brad Gooch, UC Davis/Larry Walker Associates
Betsy Elzufon, UC Davis/Larry Walker Associates

Facilitation Team

Rich Wilson, Seatone Consulting
Katie Duncan, Stantec

Agency Staff

Eli Scott, Norther Coast Regional Water Quality Control Board
Janae Scruggs, California Department of Fish and Wildlife
Chris Watt, North Coast Regional Water Quality Control Board
Pat Vellines, Department of Water Resources

Public

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Jessica Boyt
Ethan Brown
Brandy Caparoso
Leah Easley
Ayn Perry
Katrina Arredondo
John Clements