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

Meeting date/time: April 15th, 2020 I 3:00 p.m. – 5:30 p.m.
Location: Zoom Online Platform
Key contacts:
-Matt Parker, County Natural Resources Specialist I mparker@co.siskiyou.ca.us I 530.842.8019
-Rich Wilson, Seatone Consulting Senior Facilitator I r.wilson@csus.edu I 415.515.2317
-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 March meeting summary for posting on the Siskiyou County SGMA website.
- **Public Comment.** A few public comments interspersed the discussion, most during the course of the presentations.
- **District Staff and Other Updates.** Matt Parker noted that installation of soil moisture sensors and continuous well monitoring instruments, under the Bureau of Reclamation (BOR) grant, is briefly delayed until completion of an environmental compliance document by BOR.
- **Development of Sustainable Management Criteria (SMC) – Surface Water Depletion.** Presentations focused on understanding the physics of the interconnected Shasta Valley surface water/groundwater system, updates on the work of the surface water ad hoc, and key elements of the Shasta river TMDL.
- **SGMA Lightning Round Discussion.** Committee members and interested parties revisited the SGMA lightning round exercise, wherein questions linked to the SGMA sustainability indicator under discussion are explored at the individual level and then as group.

SUMMARY OF ACTION ITEMS

Action Item	*Responsible Party*	*Status/Deadline*
Schedule special committee meeting – Overview of the integrated Shasta Valley groundwater model	Matt Parker	Early May
Suggestion made for the SGMA technical team to estimate water use for cannabis	Technical team	During surface water discussion

Next Meeting: May 11th, 2020. Due to current circumstances surrounding covid-19 the meeting may again be held online with Zoom technology. More information is forthcoming.

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

MEETING SUMMARY

Agenda Review and Approval of Past Meeting Summary

Facilitator Rich Wilson welcomed all participants to Zoom, a new online platform, which will be used temporarily being used during the covid-19 shelter in place rule. He thanked participants for calling in and reviewed some basic features of the system which would be used during the meeting. He then secured consent from committee members to post the March meeting summary on the county's SGMA webpage. No questions or concerns about the agenda were expressed at the outset by committee members.

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. California Department of Fish and Wildlife (CDFW) staffer Janae Scruggs shared with the group that CDFW is providing comment letters regarding development of a Shasta Valley Groundwater Sustainability Plan (GSP) to the Flood Control and Water Conservation District, which serves as the Groundwater Sustainability Agency (GSA). CDFW has already provided a letter on development of the Scott Valley GSP.

District Staff and Other Updates

DWR staffer Pat Vellines noted that Proposition 68 grant awards have been finalized. DWR is working to get signed agreements by May 15th. She noted the importance of completing these agreements soon. Matt Parker followed by noting that the county's awarded Bureau of Reclamation grant cannot begin installation of soil moisture sensors and continuous well monitoring instruments until an environmental compliance document is completed by BOR, which is expected to occur by June 1st. Installations have been temporarily halted for now.

The Shasta Valley Resource Conservation District RCD will be constructing meteorological stations in the upper Shasta river watershed and installing shallow monitoring wells in the vicinity of the Shasta and Little Shasta Rivers. The meteorological stations measure and record the amount of precipitation and will help refine the water budget for the groundwater basin. The stations will be constructed near Bolam Creek on Mt. Shasta, and Goosenest. The shallow monitoring wells will help determine when the Shasta and Little Shasta Rivers are increasing or decreasing flows based on the elevation of the nearby water table, and will thereby help determine the role that water conveyance systems play in that process.

Development of Sustainable Management Criteria (SMC) – Surface Water Depletion

Dr. Laura Foglia opened with a brief technical team update noted that today's presentation and discussion would look at why the team's work developing sustainable management criteria (SMC) is relevant, needed and informed by committee input.

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Matt Parker framed the main focus of the meeting prior to presentations by the technical team as well as by Eli Scott of the North Coast Water Quality Control Board (NWRCB). He acknowledged the sensitivity and challenges surrounding the topic, and recognized that much discussion on surface water depletion has taken place over the years. A single slide helped introduce key topics and issues which the committee would discussion at this and coming meetings over the summer.

- What are the right questions we need to ask to get the answers and information we need to start shaping the surface water SMC?
- The GSP must comply with other regulatory actions, such as water rights
    - Where does legal input come into play?
- Understand and learn from submitted GSP's in other areas around the state.
- Establish monitoring network.
    - Wells, stream gages.
- Annually disconnecting reaches.
    - Understand the potential relation and impacts from groundwater extraction in specified reaches.
    - Identify opinions, based on supporting data, where groundwater extraction is impacting surface flows.
- How will the model help us.
- Let's acknowledge stream flow relates to fishery needs, but not jump too quickly into this topic.

Matt emphasized that it will be important for committee members to work to understand each other's perspectives during this extended discussion of surface water. The Shasta Valley hydrogeologic conceptual model will help the GSA and committee to explore relevant topics, better understand the system, and develop optional management scenarios.

The technical team's presentation followed, and was initially framed around a key question: What are surface water-groundwater interactions and why are they relevant? The technical team proceeded to explain the physics of the system, provided an update on the work of the surface water ad hoc committee, and were then followed by a presentation on the Shasta river Total Maximum Daily Load (TMDL) by North Coast Regional Water Quality Control Board (NCRWB) staff.

The technical team paused at various points during its presentation to facilitate open group discussion. Both committee members and the interested public put forward a range of comments and questions to which the technical team at times responded.

- Comment/question: The PPT shows streamside wells. In Shasta Valley we have underground lava tubes which facilitate subsurface streams. How does the technical team consider these subsurface streams?
    - Response: We'll have to understand if impact is occurring to spring or to the ability of water to get to the river. Regardless of whether or not a well is close to

the river, the model can help us understand and calculate potential impact. Your question also speaks to why local insights from committee members are critical.

- Comment/question: Every mile of the river will be a highly variable component of a model approaching reality. Can the model capture this complexity? What about capturing pumping rates near the river? Will it take a timeframe of years to notice the effects of pumping near the river?
    - Response : It's understood this basin is complex and unique. Current data doesn't show seasonality. Groundwater elevation appears flat, but then there are impacts to the river, so this has to be figured out. A lot of the impacts from pumping might be on local springs. Current and future data collection is critical as we still need to better understand the system.
- Question: Is it correct that water pumped from the upper part of the basin or a lava tube will not be accounted for by the model in the same way it would for an alluvial aquifer setting?
    - Response: The model accounts for well pumping in the entire watershed. Wells located in the upper part of the basin or in lavatube can definitely have a different impact on streamflow. It is important to consider both timing of pumping and geology.
- Question: Will the whole range of beneficial uses be considered?
    - Response: Yes. The range of beneficial uses and users that must be considered under SGMA are listed in the law.
- Comment: Due to the complexity of the valley, it's critical that both assumptions and potential weaknesses of the model be prominent and public during the process. Make sure the technical team does its due diligence. We recognize there will be gaps. Acquiring more data over time will help.
    - Response: Our data gaps can be described in the Groundwater Sustainability Plan (GSP). Further, it can be noted that these are the areas where the GSA wishes to collect more data, better understand the system, and inform management options.
- Comment/question: Wells exist in the Big Spring area that have never been affected by drought the way other areas in the valley have. Does the model reflect this? I'm concerned about data collection this year, as it's a drought year. Monitoring near the river is critical. It's a complex model and more data is needed.

Public comment

- Question: How are junipers, and the water they consume, being taken into consideration?
    - Response: Model scenarios can be run that look at evapotranspiration by natural vegetation.

NCRWB staffer Eli Scott followed Laura with a presentation focused on the Shasta river TMDL, water quality, and groundwater/surface water interactions. He noted that the NCRWB would

soon bring on a new groundwater specialist, who may then interact with this committee. A range of questions were put forward by committee members. Unless otherwise noted, responses below were provided by NCRWB staff (Eli Scott and Bryan McFadin)

- Question: Is the Shasta river predominantly a spring-fed system?
    - Response: Data supports this, yes. Big Springs is critical as it produces 50-80 cubic feet per second (cfs) into the system. System also receives inflows from Parks creek. Little Shasta river is also a spring fed system.
- Question: Is groundwater flow on the low end?
    - Response: It's hard to quantify flow the system gets from stream banks.
    - SGMA technical team comment: Spring water is still groundwater but it's not a regular baseflow contribution. It's important to look at the connection between surface water and groundwater, and account for streams.
    - NCRWB response: Groundwater pumping can influence production of springs. Reference made to the past decree for this area.
- Question: What can we do to increase spring flow?
    - Response: Cold spring water in streams is a critical element of the TMDL.
- Comment/question: Parks creek is a spring fed system. Upper creek is a snow melt system. There is plenty of water to go around in a typical year. But Parks creek is typically dry by June. So when you refer to cold water, are you referring to low areas?
    - Response: The critical time period is July onwards. Flows are almost entirely produced by spring at this point, so, yes.
- Questions: Are bioswales—engineered slowing of water to stop tailwater impact—effective in mitigating water temperature challenges? Do they help increase cold water input? If so, should we look into this?
    - Response: Yes, these systems can help mitigate and cool off tailwater from agricultural use. It depends on the location, the soils in the area, and not overflowing the bioswale system.
- Comment/question: In adjudicated areas, existing wells are monitored by a watermaster. Is there a possibility of changing/altering well water rights to increase cold water? Will this be needed under the SGMA process?
    - Response: Options are available without altering water rights (e.g. 1707 in-stream dedication petition, forbearance agreement).
    - Additional response: Other options exist:
        - Water treatment plant discharge
        - Water recycling
        - Improvements in efficiency and consumption reduction
        - Riparian management
        - Reusing tailwater
    - It is understand that these issues are complex so NCWRB will continue to make itself available to help the group.
- Comment: NCRWB mentioned the need for 45 cfs of cold water instream flow in its presentation. I believe the TMDL sets this as the basis of what we need. It's clear we

need to protect cold spring sources, however, it's unclear to me if this work falls under the SGMA framework.
    - Response: Yes, 45 cfs coming from cold water sources in Shasta Valley is defined as needed spring flow.
- Comment: It's important that we focus our work on critical issues, consider what's important to all users, identify key questions and issues to address, and be clear the desired conditions we want to achieve.

Public comment

- Comment: I'm concerned that the hemp/cannabis causes impacts, particularly in the Big Springs area.
    - GSA staff response: The technical team and committee will circle back later on this topic.
    - Committee member comment: I suggest the technical team estimate water use for cannabis, since this topic has come up several times.

SGMA Lightning Round Exercise

Following the presentations, the committee revisited the SGMA lightning round exercise, wherein targeted questions linked to the SGMA sustainability indicator under discussion are put forward to each committee member and interested parties in attendance. Each party is given a few minutes to quietly explore the questions at the individual level, then participate in a round robin which enables contributions by each committee member and, time permitting, other interested parties in attendance. The following questions guided this SGMA lightning round:

- In relation to surface water, what are we trying to protect? What is the ultimate objective? What is the desired condition?
- Where is groundwater pumping affecting streams, when is groundwater pumping most affecting streams and what could or can be done about it?
- What other questions or issues remain unanswered – including anything that comes to mind related to today's PPT presentations – or have not yet been fully explored when it comes to helping you understanding how groundwater pumping is connected to stream conditions, particularly as it relates to any reaches you identified in the previous question?
- If there is a fundamental management change made to groundwater extraction, due to the surface water SMC as set in the GSP, what are the concerns, thoughts or expectations you have regarding your operation, fishery/environmental interests or the watershed as a whole, or specific to your impacted reach?

Committee members and others were afforded time after the meeting to keep thinking about the questions and submit written responses later to GSA staff and the facilitator. All parties were reminded it remains a brainstorming session from a broad set of beneficial users of groundwater, thus is still informational and information-generating at this stage. A compilation

of input received will be shared at a later date. When a request was made for initial thoughts, the round robin revealed the following inputs.

- Restoring an in-stream fishery should be a desired objective. Consider alternate water sources, trading and exchanges. Bottom line is keep people whole.
- Talk of the Big Springs area is concerning as the Big Springs Irrigation District provides water to farms, ranches and the community.
- I agree with the two aforementioned comments.
- Protect all beneficial uses. Has to be balanced. When we are in short supply of water, the pain needs to be distributed. When irrigation starts upslope on the east side, we immediate impacts on the Shasta river – this is a big hurdle to overcome. We need to think outside of the box and consider all ideas.
- In response to the prior comment, right now there are no good years for fish. We can't spread the hurt to them. Environmental health is a key indicator. A desired objective for the Karuk Tribe is to have sustainable and harvestable populations of fish.
- It's important to keep the basin out of a deficit condition.
- Include and protect all public trust resources.
- Good, healthy flows to the river. Look at pumping. Be open to education and hope for voluntary forbearance. Put forward voluntary management options prior to regulations.
- Surface water flows linked to groundwater support the valley's economy (i.e. urban, ag, environment). We need good information to make good judgements. We may have to have limits on groundwater pumping, first on new wells, second, on existing wells.

Laura Foglia concluded by noting that a special committee meeting to introduce and review the model will be scheduled for early May. The technical team will provide an overview, for both committee members and other interested parties, of how the model was constructed, how it works, and data collected to date. The technical team will also provide a status update regarding its ongoing coordination with the State Water Resources Control Board.

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
Robert Moser, Municipal/City
Pete Scala, Private Pumper
John Tannaci (Chair), Residential
Gregg Werner, Environmental/Conservation

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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/Larry Walker Associates
Brad Gooch, UC Davis/Larry Walker Associates

Facilitator
Rich Wilson, Seatone Consulting

Public
Ethan Brown, Shasta Valley RCD
Brandy Caporaso, Shasta Valley RCD
Angelina Cook
Lindsay Cummings, Siskiyou Daily News
Kevin Delano – State Water Resources Control Board
Serena Doose – US Forest Service
Jeanne Fernandez
Giuliano Galdi, UC Cooperative Extension
Rajaa Hassan - State Water Resources Control Board
Bill Hirt
Danielle Linder
Bryan McFadin, North Coast Regional Water Quality Control Board
Rhonda Muse, Scott & Shasta Watermaster District
Ayn Perry, Shasta Valley RCD
Janae Scruggs, California Department of Fish & Wildlife
Eli Scott, North Coast Regional Water Quality Control Board
Jack Roggenbuck, Shasta Watershed Conservation Group
Bill Sliker
Bob Solecki, State Water Resources Control Board
Pat Vellines, California Department of Water Resources
Dan Worth, State Water Resources Control Board