

**Siskiyou County Groundwater Sustainability Agency
Butte Valley Advisory Committee Meeting**

SUMMARY

Meeting date/time: May 27, 2021/ 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

(Meeting agenda items out of order due to a delayed quorum.)

- **Public Comment:** No comment was provided at the outset of the meeting.
- **District Staff and Other Announcements:** Pat Vellines provided DWR resource updates
- **Approval of Past Meeting Summary.** The committee approved its April meeting summary for posting on the Siskiyou County Website.
- **Technical Team Update and Discussion:** Thomas Harter presented an update on Technical Team progress on Groundwater Dependent Ecosystems (GDEs) and water budget models and indicated the preliminary nature of water budget results.
- **Butte Valley Water Budget Presentation:** Thomas Harter presented the methodology and preliminary results of the Butte Valley water budget.
- **Presentation of Draft Yearly Cost Estimate:** Matt Parker and the Technical Team presented a draft yearly cost estimate.
- **Draft Chapters 3 & 4 Comment Response Review:** The Advisory Committee provided comment on PMAs written into Chapter 4 of the Groundwater Sustainability Plan (GSP).

SUMMARY OF ACTION ITEMS

<i>Action Item</i>	<i>Responsible Party</i>	<i>Status/Deadline</i>
Provide County Board Meeting Agenda and Recording of budget discussion	Matt Parker and Facilitator	Completed
Obtain information from DWR on potential well monitoring partnership	Matt Parker	June
Convene Ad hoc meeting	Facilitator	June

Next Meeting: June 24, 2021/ 3:00 – 6:00 pm. This meeting will be held online with Zoom technology.

View [Siskiyou County’s groundwater website](#) for posted meeting materials.

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Call to Order, Agenda Review

The Facilitator thanked all for joining, reviewed the virtual meeting platform procedures, and called the meeting to order. She then reviewed the meeting agenda.

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Review Action Items

The Facilitator reviewed action items and provided updates regarding progress toward their completion.

Public Comment

No comment was provided.

District Staff Updates and Other Announcements

Pat Vellines (DWR) provided updates regarding a statewide wide webinar on June 8th for airborne electromagnetic surveys and informed that Prop 68 funding has tripled for medium and high-priority basins for implementation projects. Department of Water Resources (DWR) would send a survey to Groundwater Sustainability Agencies (GSAs) on the topic of Prop 68 funding.

Richard Nelson asked whether the County had committed to a legal team and whether there would be an opportunity to meet that team in a Zoom or other setting. Matt Parker indicated that a legal team had been obtained and they have been reviewing documents as needed, but there was no intent to bring them into the meetings unless there was a specific need.

Matt Parker clarified in response to a question from John Bennett that a legal team had been hired to review the Groundwater Sustainability Plan (GSP), make sure there was no conflict between the GSP language and other laws, and verify that the GSP meets the requirements of the Sustainable Groundwater Management Act (SGMA).

Melissa High from the City of Dorris introduced herself as the new City of Dorris/Municipal representative, replacing Carol McKay who recently retired.

Review/Approval of Past Meeting Summary

The Facilitator indicated that advisory committee member Don Bowen had joined the meeting and quorum was reached.

The Facilitator obtained consent from the Advisory Committee to post the April meeting notes to the County's SGMA Website.

Technical Team Update and Discussion

Thomas Harter noted that groundwater dependent ecosystem (GDE) updates were ongoing and indicated that the Technical Team will present preliminary water budget results. He presented the geographical and hydrological boundaries of the water budget model. He explained graphical materials, including hydrographs for specific wells, to the Committee along with specific elements of graphs, such as pumping activity.

Eric Levesque asked that a percentage of recharge from neighboring mountain range be depicted. The Technical Team indicated that they would show general percentages of flow contribution from portions of the watershed in the next iteration of the material.

Butte Valley Water Budget Presentation

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Thomas Harter presented two groundwater budgets, Watershed and GSA Basin. He explained specific terms in the graphical material. He noted an overall decline in groundwater storage. Recharge was highly variable over the studied years, but showed overall decline in Watershed recharge (1989-2018). While variable year-over-year, overall groundwater pumping increased between the 1990s and the 2010s. With less recharge and more pumping, he pointed out that groundwater outflow out of the Watershed and GSA Basin toward the Klamath River has decreased. This has affected the water level gradient east of the Watershed and GSA Basin boundaries, leading to lower water levels in the Basin. Overall groundwater storage has decreased, which was expected. The two budgets showed similar trends.

Eric Levesque asked whether the budget term equates to overdraft. Thomas Harter explained that overdraft can be defined as pumping in excess of recharge, which is the budget indicates is not the case. Rather, water level declines are the result of changes in the dynamic equilibrium of inflows and outflows. Eric Levesque asked why well change data seems dissimilar from water budget trends. Thomas Harter explained that trends are similar for both analyses; the apparent difference might be due to the differing axes ranges shown. Regarding the estimation of Watershed recharge, the Technical Team described that the data is gathered from a 2018 watershed model utilizing United States Geological Survey (USGS) software; the assumptions from this model are transferred to the water budget model. David's Engineering ran a water budget analysis for the soil-landscape portion of the Watershed and GSA Basin, considering precipitation, evapotranspiration etc. to define groundwater pumping demand and GSA Basin recharge; these considerations are also included in the model.

Eric Levesque indicated that many of the variables included in the model are not sufficiently understood and highly uncertain, especially within the complicated geological conditions. The Technical Team agreed with the summation. The geologic reflects that used for a larger scale, Klamath Basin-wide USGS groundwater model that does track with well data, but data beyond the wells (many in the GSA Basin, but very few in the outlying Watershed) is uncertain. Eric Levesque expressed concern for the trajectory of storage computed from the water budget, indicating it appeared on the path to disaster. Thomas Harter commented that the past 10 years have been some of the worst on record with respect to recharge and DWR's future climate estimates do not project the same exceptionally dry conditions. The Technical Team expressed that if drought conditions stabilize and pumping stabilizes, then the 'account balance' or groundwater storage in the water budget should also stabilize.

Richard Nelson asked for the Technical Team to describe the value of the decreasing 'account balance' or water budget storage term in light of the steady recharge term. Harter explained that dynamics in recharge from the USGS model and David's Engineering model, describing demand, alongside the results of the water budget model shows reproduceable trends (from a modeling perspective). The apparently precipitous fall-trend in groundwater storage actually reflects a relatively small fraction of the overall budget. Estimated recharge in the Watershed

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far exceeds average pumping demand. If recharge does not continue to decrease and pumping does not increase, then balance is achieved.

John Bennett asked the Technical Team to identify the aquitards within the watershed with respect to the volcanic geology. He obtained clarification that the model depicts a simplified geology constrained by data availability. Thomas Harter explained how the model depicts the hydrologic gradient and its impact on the basin 'floodgate' or outlet.

Don Bowen asked whether pumping has stayed stable. The Technical Team indicated that there has been a slight, but notable increase over the modeled timeline. Don Bowen obtained clarification on groundwater leaving the Basin term as it relates to the water management. The Technical Team informed that individual well data will differ from results of the overall basin water budget. Well water level changes in the basin are impacted by the overall groundwater dynamics in the Basin.

Richard Nelson asked what factors specifically trigger GSP actions. The Technical Team explained that the water budget is intended to be a tool that would guide decisions but does not trigger actions. Measured well data triggers actions. Nelson noted that the model can only be used to indicate trends or make predictions and cannot trigger actions or thresholds.

Thomas Harter indicated that DWR is requiring GSAs to consider a 50-year timeline with both a baseline climate and climate-change scenarios (including changes in precipitation and changes in evapotranspiration). Monthly change factors for these scenarios were provided by DWR for the period of 1991-2011. Thomas Harter explained the general trends of the near, far, wet, and dry specified scenarios. The key take-aways were identified as the groundwater basin not in overdraft, water levels adjust quickly to changes in water-year type, and the limiting of groundwater extraction to current levels to stabilize groundwater levels.

The Facilitator indicated that the figures presented by the Technical Team would be posted to the County's SGMA webpage.

Eric Levesque obtained clarification that the changes in precipitation and evapotranspiration (ET) presented represent Basin-wide terms. He also noted that existing studies show potential increased glacier production in this type of area and that might constitute an additional water source. The Technical Team indicated that they intend to prioritize DWR guidance but can run other simulations in the 5-year update period.

Presentation of Draft Yearly Cost Estimate

Matt Parker introduced a high-level cost analysis. He informed the Advisory Committee that a fee study conducted by a subconsultant would be presented at the next Siskiyou County Board meeting and welcomed all to attend. Laura Foglia presented the draft cost estimate in terms of required monitoring and reporting. Matt Parker commented on the cost ranges, indicating that some costs would be shared across the three Flood Control District Basins.

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The Facilitator indicated that the team would distribute the County Board Meeting Agenda and the Board Meeting recording with relevant draft cost estimate material.

Steve Albaugh asked why the GSA is not yet planning to partner with other entities that monitor groundwater in the Basin, such as DWR. Matt Parker indicated that they would follow up on this question. The Technical Team noted that DWR encouraged local ownership of data.

John Bennett asked how costs would be apportioned to each basin. Matt Parker indicated that there are multiple options for cost allocation. John Bennett clarified that a per-acre foot cost allocation would put much of the onus on the agricultural users. Matt Parker agreed that the per-acre foot method would do as John suggests. The overall goal is for all users to share in the cost. The Facilitator noted that although per-acre foot cost allocation strategies are typical, cost allocation strategy appropriateness may depend on the specific needs of an individual basin. The acre-foot/parcel allocation model might not be appropriate for Butte Valley.

Don Bowen asked whether there are efficiency incentives built into the budget. Matt Parker indicated that the project costs are not written into the budget, but there has been a request made of the consultant to review inclusion of incentives and credit.

Draft Chapters 3 & 4 Comment Response Review

The Facilitator reminded the meeting participants of the GSP development process. After reviewing the comment response process, which involves a comment-response matrix, she indicated how the draft chapters will be provided for formal review. The Facilitator indicated that 69 comments had been received and reviewed. To make sure comfortability with the GSP is achieved, she identified topics for discussion designed to cover comments identified as 'comment level A' or comments that require Advisory Committee review and input.

The Facilitator introduced discussion of Project and Management Actions, based on Advisory Committee feedback.

John Bennett asked for clarification on the Kegg Meadow Project and Management Action (PMA) and how creation of a wetland would positively impact groundwater supply. Thomas Harter indicated that the Technical Team understands there is need to add specificity to the listed PMAs. He noted that the definition for conservation easements needs to be narrowed to explain that these easements would decrease water usage on a voluntary basis. The Technical Team asked for input on a natural, managed land designation for Butte Valley. John Bennett indicated that dryland habitat such as cereal rye, which does not require much water, would provide habitat for burrowing animals. The Technical Team asked for clarification on whether dryland habitat is a positive outcome. They indicated they would follow up on this question.

Don Bowen noted that a large natural habitat already exists in the Valley (The Grasslands). He asked whether the intent was to replicate this. The Technical Team indicated that their intent was to define multi-benefit land use changes that make sense for Butte Valley. Don Bowen indicated concern that creation of habitat would limit use of that specific land in perpetuity.

Thomas Harter commented on a request to consider whether flood flows might act as recharge. Bill indicated that the PMA (Watermaster Butte Creek Flow Management) was included in Tier 1 is due to lack of information on the topic.

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John Bennett indicated that he appreciated the explanation and that a feasibility study would answer the question.

Richard Nelson asked why the relevant flow was limited to 25 cubic feet per second. Bill Rice indicated that upstream appropriations reduce the flow accessible at the specified location, but additional study is required. Bill obtained clarification that the State Water Board specifies appropriations.

The Facilitator emphasized that there seems to be a need to clarify language with respect to discussed PMAs.

In discussion regarding the PMA, Avoiding Significant Increases of Total Net Groundwater Use from the Basis, the Technical Team provided context on the manner in which the evapotranspiration (ET) was estimated. They explained that the estimation comes from the David's Engineering model and a demand analysis therein. They further clarified the source of land use information, which were DWR surveys and satellite data paired with other gap-filling measures.

John Bennett commented that his provided question was in reference to variation of future conditions; agricultural livelihoods depending on 20% variability in evapotranspiration is problematic from a management standpoint. He asked whether the current approach was suitable since the data range is so large. The Technical Team indicated that they would utilize additional data to refine the model and reduce the uncertainty. They noted they understood the request that consistent methods and long-term averages should be utilized instead of terms describing model uncertainty.

The Technical Team provided clarification on the verbiage 'voluntary water market instruments.' They indicated a need to further specify the details of this type of PMA in the broader context of a water market. Richard Nelson asked about the appropriateness of whether the broader context should be included in the document. The Technical Team indicated that they could outline on an exemplary basis the steps that would be required to complete this action, although this type of outlining might not be necessary until such a time that it may be needed.

Eric Levesque noted the complicated nature of the topic and that the GSP potentially should not get into that level of detail. Richard Nelson indicated that the topic of following of land upon a farmer's retirement and the broader context of water markets should be put to the legal team. Matt Parker indicated that this general question had been put to the legal team and the general indication was that the action was appropriate in the context of SGMA.

Greg Herman indicated that surface water versus groundwater nature of the PMA must be defined as it relates to the possibility of groundwater being converted to surface water. Matt Parker indicated that the question might be more a legal nature. The Technical Team indicated that this should be considered further.

John Bennett provided context of an existing ordinance that prohibits the movement of water from one parcel to the next. He also indicated that the same conditions need to apply to the water markets as they apply to conservation easements.

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Don Crawford commented that rented water is a current practice and indicated that this should be clarified in the GSP. The water is typically conveyed via pipeline. The Facilitator obtained clarification that this usually occurs due to crop rotation needs.

Don Crawford also indicated that Butte Creek should flow in its original condition into Meiss Lake. Bill Rice indicated that current diversions are for flood control purposes. The Facilitator indicated that additional detail could be written into the PMAs.

The Facilitator noted need for an ad hoc meeting to convene. Richard Nelson indicated that it would be helpful to obtain a copy of the Advisory Committee comments for the meeting.

Meeting Adjourns

The Facilitator thanked all for participating and adjourned the meeting.

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MEETING ATTENDEES

Advisory Committee Members

Don Bowen, Residential (Joined the meeting at 3:22 PM)
Melissa High, City of Dorris
Greg Herman, Private Pumper
Patrick Graham, CDFW Butte Valley Wildlife Refuge
Steve Albaugh, Private Pumper
Richard Nelson, Private Pumper
Don Crawford, Private Pumper

Absent Committee Members

Steve Lutz, Butte Valley Irrigation District
Howard Wynant, Tribal Representative
Jeffrey Volberg, Environmental/Conservation

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
Bill Rice, UC Davis
Katrina Arredondo, Larry Walker Associates

Agency Staff

Janae Scruggs, California Department of Fish and Wildlife
Pat Vellines, Department of Water Resources

Facilitator

Katie Duncan, Stantec
Elizabeth Simon, Stantec

Members of the public

Eric Levesque
John Bennett