



Turlock *Virtual* Community Workshop #1 | SUMMARY NOTES

Meeting Date: July 8, 2020

Session #1: 11:00 a.m. – 12:00 p.m.

Session #2: 5:00 p.m. – 6:00 p.m.

Workshop Overview

The fourth in a series of Turlock Subbasin Groundwater Sustainability Plan (GSP) Community Workshops was held remotely during two sessions on July 8, 2020. The two sessions, 11:00 a.m. – 12:00 p.m. and 5:00 – 6:00 p.m., featured the same presentations, as summarized below. The sessions were held on via Zoom virtual meeting platform and simultaneously livestreamed on YouTube. The workshop was supported by the Turlock Subbasin Ad-hoc Communications Committee. The focus of this workshop was to update the community and interested parties about progress related to development of the GSP, review the Turlock Subbasin Water Budget and Groundwater Model, and receive stakeholder input and concerns to inform GSP development. In addition to the summary below, supplementary details such as the slide deck, meeting agenda and meeting recording can be found on the “workshops” page of the Turlock Groundwater website, under GSP Community Workshops:

<https://turlockgroundwater.org/workshops>. Approximately 35 stakeholders attended between the two workshops. See Appendix A for list of registered participants.

- **11 a.m. Workshop:** Archived Video and Meeting Materials: <https://turlockgroundwater.org/events/turlock-subbasin-virtual-community-meeting>
- **5 p.m. Workshop:** Archived Video and Meeting Materials: <https://turlockgroundwater.org/events/turlock-subbasin-virtual-community-meeting-5-pm-session>

Summary

Meagan Wylie, facilitator from California State University, Sacramento, welcomed participants, explained the remote participation tools, and reviewed the agenda. Participants responded to a poll asking about the stakeholder groups that they belong to. Between the two meetings, participants included farmers and ranchers, municipal water customers, commercial/industrial water users, non-governmental organization, private domestic well user, academia and government agencies.

Real Talk: Common “Unanswered” Questions

[Reference slides 5-8 of the workshop’s slide deck.]

Herb Smart, a regulatory analyst with Turlock Irrigation District (TID), shared some common questions that often arise during public meetings related to development of the GSP. He emphasized that the answers to these questions, which relate to what Sustainable Groundwater Management Act (SGMA) implementation will mean for groundwater users in the Subbasin, are still being formed. Answers will be impacted by both the technical analysis and Subbasin-wide decisions that are part of GSP development. With regard to questions related to groundwater

pumping (slide 6), Mr. Smart said that at this time, groundwater pumping will be able to continue, though it is likely that agricultural pumping and/or municipal pumping will be regulated in the future to some degree to ensure that the rate of pumping is sustainable in the future.

With regard to the questions about groundwater reductions (slide 7), the two ways to balance groundwater overdraft are to reduce pumping and/or to augment supply. Once a preliminary sustainable yield analysis is done for the Subbasin, likely by August 2020, potential supply augmentation projects will begin to be considered. Even with supply augmentation projects, it is likely that demand reductions will be needed, though the amount is not yet known. The eventual costs of these projects will depend on which are ultimately implemented.

With regard to questions about funding (slide 8), *GSP development* is currently funded by the Groundwater Sustainability Agencies (GSAs) in the Subbasin, and with grants from the California Department of Water Resources (DWR) contributing close to half of the total \$3-4 million cost of GSP development. Upon Plan completion, *GSP implementation* will be funded by the GSAs (barring any new state or federal financial assistance). This means some costs will be extended to the individual users who rely on groundwater in the Subbasin.

Mr. Smart emphasized the importance of stakeholders remaining involved in the GSP development process, as that is how they can provide input on important decisions such as the levels of pumping that will be considered sustainable for the Subbasin, what supply augmentation projects and demand management actions that will be implemented, and how these will be funded.

Is there a GPS for the GSP?

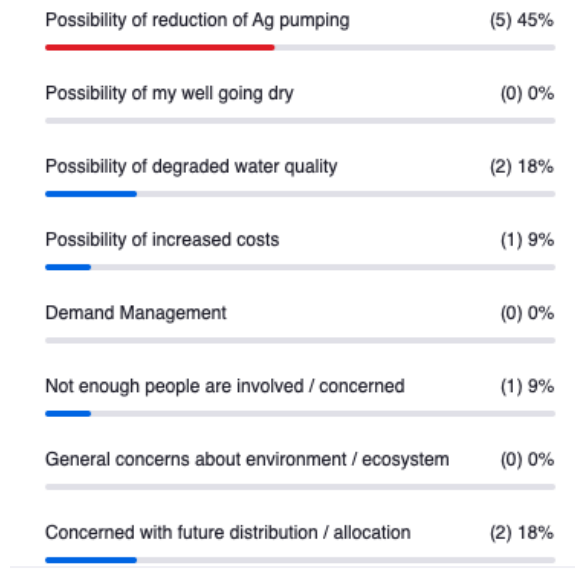
[Reference slides 10-14 of the workshop's slide deck.]

Mr. Smart reviewed the timeline of GSP development in the Turlock Subbasin. The Subbasin is currently working on defining its sustainable management criteria. Upcoming work will focus on analyzing projects and programs to support sustainability. A draft of the full GSP is expected to be released for public comment in mid-2021, ahead of the submittal deadline of January 31, 2022. As the GSP begins to be implemented in 2022 and beyond, annual reports and five-year revisions will be submitted to DWR.

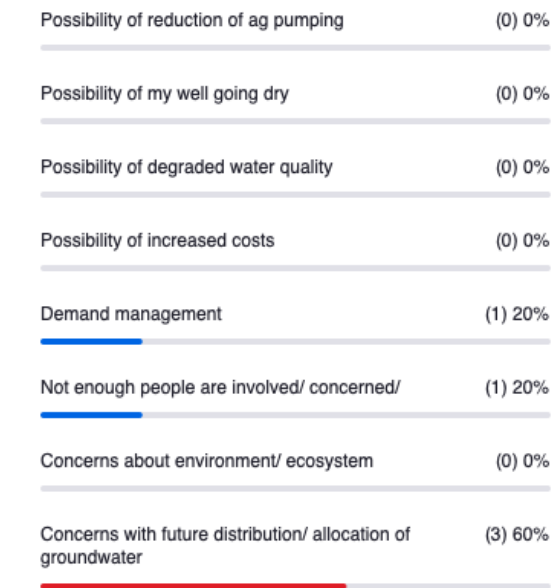
Mr. Smart reviewed the preliminary table of contents of the draft GSP, highlighting that it will follow the structure laid out by SGMA regulatory requirements. He also reviewed the six indicators that SGMA uses to define sustainability. The five indicators that are relevant to the Subbasin are beginning to be discussed, with the Technical Advisory Committee (TAC) currently working to define the undesirable results for lowering of groundwater levels and reduction of groundwater storage.

Participants responded to a poll asking about their biggest concerns related to SGMA implementation. Responses from the two sessions are shown below (note: not all workshop participants participated in the polling exercise).

11:00 am Workshop Polling Results



5:00 pm Workshop Polling Results



Participants asked the following questions:

- Since groundwater subbasins are interconnected to other subbasins adjacent to them, who ensures that all the interconnected subbasins are working equally toward the ultimate goal of sustainable ground water?
 - Kevin Kauffman, East Turlock Subbasin GSA, said that SMGA requires that the adjacent subbasins operate under coordination agreements; see below for more information about coordination agreements.
- What is the value of groundwater? Is it the same as surface water? Does conjunctive use by the Water District lower the value of drinking water?
 - Mr. Kauffman said that this question would have to be further discussed during future workshops because the economic analyst for the Subbasin's GSP was not present. He noted that drinking water is the most valuable water on the planet. Mr. Smart added that the value of groundwater, whether used for drinking or for agriculture, is dependent upon its availability. Since there has usually been ample surface water in the Turlock Subbasin, it could be said that groundwater is of less value when there is surface water available. The two are different in terms of water rights, the cost to get to the user, and storage capacity. The issue of storage capacity will be key moving forward, and the capacity for groundwater storage in the Subbasin is much more significant than surface water storage capacity. Additionally, drinking water in the Turlock Subbasin comes from groundwater.

Mr. Smart gave a quick walk-through of the TurlockGroundwater.org website, which is kept up-to-date and one of the most useful tools for stakeholders to stay informed on SGMA implementation in the Subbasin. He emphasized that the website includes agendas, slides, videos, summaries, and other supporting documents for past meetings, as well as a calendar of past and upcoming meetings. Stakeholders can use the contact feature or sign up for the

interested parties list via the website. A portal is also being developed to allow comments on the GSP to be submitted directly through the website.

Technical Tools

[Reference slides 17-39 of the workshop's slide deck.]

Mr. Kauffman gave a presentation about the technical components of the GSP, in particular the hydrogeologic conceptual model (HCM) and water budget, and how they will relate to the policy components and management scenarios that will be part of the GSP.

He first reviewed the geographical context of the Turlock Subbasin, including the surrounding subbasins and the water and irrigation districts encompassed by the Subbasin. He also reviewed the components of basin setting, which were detailed during the previous public workshop in March 2019; that workshop summary can be found at <https://turlockgroundwater.org/events/gsp-community-workshop-3>.

A water budget is an accounting of all water entering and leaving the Subbasin. These numerous input and output components can be thought of in three interconnected systems: the land surface system, the stream and canal system, and the groundwater system.

The groundwater model tracks all of the inputs and outputs for each year over a period of time, determining surpluses and deficits in the water budget and tracking trends. Some of the inputs and outputs are measured, such as urban water use which is tracked through metering. Agricultural water use is not generally metered, so instead it is estimated through a water demand calculator.

Shortage and surplus can be viewed for the full groundwater model, as well as for individual components. Mr. Kauffman shared graphs of agricultural and urban water use components, highlighting that in both cases the orange or yellow bars represent the shortage or surplus between supply and demand. The deficit for agriculture is greater than the urban deficit.

The GSP technical team has been focused for the last six months on calibrating the groundwater model to ensure that it accurately represents the dynamics in the Subbasin. The surface water dynamics have been modeled through streamflow gaging stations and the model tracks actual conditions well. The groundwater system was calibrated through measurements taken at a series of 125 calibration wells throughout the Subbasin.

With the model calibrated, the baseline water budget is now being developed. Mr. Kauffman presented a draft of the water budget for the whole basin, which represents the average annual in- and outflows between the groundwater, surface water, and land systems in the Subbasin during the period from 1991 through 2015. The overall result is that there is an average Subbasin-wide deficit of 65,000 acre-feet each year.

Mr. Kauffman noted that the figure includes the subsurface flows between Turlock and its neighboring subbasins, with the Merced Subbasin providing the most subsurface inflow at 45,000 acre-feet annually (AFA). As required by SGMA, the Turlock Subbasin has coordination agreements in place with these other subbasins to ensure that the groundwater use in one Subbasin does not have a negative impact on the others.

Mr. Kauffman presented figures showing the net recharge and groundwater budget from all uses and sources in the Subbasin as a whole from 1991 through 2015. He noted that net recharge was below zero for many years over the past decade, with a particularly large deficit during the drought years between 2012 to 2015. He also noted that these figures will be updated to include data through 2019, which includes some years where the recharge figure was positive. The figure depicting the water budget incorporates the total inflows and outflows from the Subbasin each year. The orange bar shows the impact of those in- and outflows on change in groundwater storage each year; when the orange bar is above the zero line the year had overall surplus recharging the basin and if it is below the zero line there was an overall deficit in that year. The black line shows the cumulative change in storage over time – a total of about 1.5 million acre-feet of overdraft accumulated over the last 25 years.

Mr. Kauffman noted that the level of drawdown (groundwater extraction) that is sustainable for the basin has not yet been determined. The work outlined above analyzes the past and current conditions of the Subbasin, and future GSP development work will address the sustainable yield. If the current level of use is determined to not be within the sustainable yield, supply augmentation projects and demand reduction management actions will be needed to bring the Subbasin into sustainability. Mr. Kauffman said that the TAC is beginning to discuss these topics and encouraged stakeholders to remain engaged as these issues are addressed. In the GSP updates that the Subbasin will need to submit every five years, the projects and management actions will be revisited to determine whether they are leading to sustainability and if any changes are warranted.

Participants shared the following questions and comments.

- *Comment:* Given the 65,000 AFA deficit, it seems that the Subbasin will not only need to consider the size of the projects but also their strategic location to ensure effectiveness.
- *Question:* The recent appellate court decision in *Stanford Vina Ranch Irrigation Company v. State of California* is likely to impact how surface water can be used in the Subbasin. It is likely to lead to more surface water interacting with areas close to the river but less ability to spread that water across the Subbasin.
 - Mr. Kauffman responded: Yes, due to these changes it will be important to take advantage of the water available during the shoulder seasons.
- *Question:* How does groundwater move within the Subbasin?
 - Mr. Kauffman responded: The aquifer has a low point west of Santa Fe Road in the Turlock Irrigation District. There is another low point on the east side of the Subbasin as well as one west of Denair. The amount of water that moves within the Subbasin, particularly water moving between the areas within the East Turlock Subbasin GSA and the West Turlock Subbasin GSA as well as moving east within the Turlock Irrigation District, has not yet been determined but is being investigated.
- *Question:* What is the impact of the rate of withdrawal of groundwater?
 - Mr. Kauffman responded: If there are different rates of withdrawal in different parts of the Subbasin, it may be necessary to implement projects and/or management actions specific to those areas.
- *Question:* Could the Subbasin use aquifer storage and recovery (ASR) wells to inject 65,000 AFA into the aquifer to balance the inflows and outflows?
 - Mr. Kauffman responded: ASR wells have been used successfully in other parts of the state, however due to water quality regulations, recharging the Subbasin with these wells is very expensive. Recharge through ASR wells costs around

\$1,000 per AF compared with \$50-100 per AF through other methods like recharge basins. Costs are a considering factor with all potential projects and management actions.

Moving Forward

[Reference slides 41-43 of the workshop's slide deck.]

Ms. Wylie reviewed the GSP development timeline and highlighted next steps. Next steps on the technical side include addressing comments related to calibration of the groundwater model, developing projected water budgets and conducting sustainable yield analysis, and developing the definitions of undesirable results for each of the sustainability indicators.

New upcoming engagement opportunities include a short stakeholder survey and virtual office hours for stakeholders to ask questions and engage in informal dialogue with GSA members and/or technical consultant staff. Ongoing outreach efforts are also continuing, such as additional workshops this summer and continued information sharing through social media, email list, and videos.

Participants responded to two polls, sharing feedback on topics for future workshops and on their preferred method for receiving information about SGMA implementation in the Turlock Subbasin. There was interest across the board in terms of future workshop topics, with the most responses indicating interest in projects and management actions. All respondents indicated that they like to receive information via email, with a few participants also indicating website and other preferred methods.

Stakeholders were encouraged to attend the various public meetings in the Subbasin, particularly the TAC meetings where many of the key upcoming issues will be discussed first. They were also invited to provide feedback at any time through the Turlock Subbasin website, via email, or at public workshops.

Adjourn

The official meeting times were one hour long, however participants were invited to stay after to discuss any additional questions or comments. The discussions are captured above in the sections to which they related.

APPENDIX A: Registered Participants

11:00 am Workshop Registered Participants	
Name	Affiliation
Allison Martin	City of Turlock
Aluriel Ceballos	
Ana Lucia Garcia Briones	Environmental Defense Fund
Andy Burgin	Calaveras Materials
Angela Wolfe	
Barb Seah	
Bill Penney	Turlock Irrigation District
Brandon McMillan	Turlock Irrigation District
Breanne Ramos	Merced County Farm Bureau
Brody Patterson	Merced County
Carlos Rincon	
David Odom	Denair Community Service District
Debbie Liebersbach	Turlock Irrigation District
Jovana Tilgren	Leadership Counsel for Justice and Accountability
Kari Mendenhall	
Laura Ramos	California Water Institute
Lisa McMullen	Turlock Irrigation District
Lloyd Pareira	Merced County Board of Supervisors
Marco Moreno	Latino Community Roundtable
MCFB Intern	
Miguel Alvarez	City of Modesto
Nav Athwal	TriNut Farms
Richard Bishop	
Sarah Lopes	American AgCredit
Scott Severson	
Spreck Rosekrans	Restore Hetch Hetchy
Ted Reimers	American AgCredit
Tim Jones	C21 MM
Tom Orvis	Stanislaus County Farm Bureau
Tony Marci	Gladstone Land Corporation
Vito Chiesa	Stanislaus County
Yolanda Bastian	

5:00 pm Workshop Registered Participants

Name	Affiliation
Bart Muller	Muller Berry Farms
David Odom	Denair Community Service District
Debbie Liebersbach	Turlock Irrigation District
Jerry Costa	
John Lambie	E-PUR, LLC
Josh Weimer	Turlock Irrigation District
Lacey McBride	Merced County
Leandro Maldonado	Delhi County Water District
Michael Cooke	City of Turlock
Rachelle Antinetti	
Rhett Calkins	Calkins Farming International
Robert Santos	Valley Critter Care Inc
Ward Burroughs	East Turlock Subbasin GSA

Staff Support

- Herb Smart, Turlock Irrigation District
- Kevin Kaufman, East Turlock GSA
- Meagan Wylie, California State University, Sacramento
- Julia Van Horn, California State University, Sacramento