MEETING NOTES – Merced GSP

SUBJECT: Merced GSP Coordinating Committee Meeting

DATE/TIME: April 22, 2019 at 1:30 PM

LOCATION: Castle Conference Center at Castle Airport, 1900 Airdrome Entry, Atwater, CA 95301

Coordinating Committee Members In Attendance:

	Representative	GSA
☐	Stephanie Dietz	Merced Irrigation-Urban GSA
☒	Justin Vinson	Merced Irrigation-Urban GSA
☐	Daniel Chavez	Merced Irrigation-Urban GSA
☒	Ken Elwin (alternate)	Merced Irrigation-Urban GSA
☒	Bob Kelley	Merced Subbasin GSA
☒	Mike Gallo	Merced Subbasin GSA
☐	Nic Marchini	Merced Subbasin GSA
☐	George Park (alternate)	Merced Subbasin GSA
☒	Larry Harris	Turner Island Water District GSA #1
☐	Scott Skinner (alternate)	Turner Island Water District GSA #1

Meeting Notes

1. Call to order
    a. Alyson Watson (Woodard & Curran) called meeting to order. Members introduced themselves. A new member, Mike Gallo, for Merced Subbasin GSA has been added to the Coordinating Committee and replaced Rodrigo Espinoza.
2. Approval of minutes for March 25, 2019 meeting
    a. Meeting minutes from March 25th are approved with one abstention from Mike Gallo and one change. One sentence was added to include that the Water Allocation Framework Agreement was summarized as a Coordinating Committee recommendation and sent to GSA Board staff.
3. Stakeholder Committee update
    a. Update from April 22 morning meeting provided by Alyson Watson (W&C).
4. Presentation by Woodard & Curran on GSP development
    a. Climate Change Analysis
        i. Alyson Watson (W&C) described the regulations that apply for the climate change analysis and described the overall process used for Merced GSP.
        ii. The approach is consistent with the Department of Water Resources (DWR) recommended approach. A change factor from DWR is applied to the Projected Data Baseline to simulate the impact of climate change. This creates the Climate Change Baseline, which is put into the

Merced model. The output is the Climate Change Water Budget. The change (or perturbed) variables include streamflow, precipitation, and evapotranspiration (ET).

iii. Question: What are the modifications and how are they determined? Answer (W&C): We followed the DWR guidance, which provides the modifications (or change factors) and how they are determined.

iv. Alyson Watson (W&C) provided an example of precipitation using the Climate Change Analysis. The dark line is the regional average baseline. The blue line is the changed, or perturbed precipitation using factors from DWR. Generally, precipitation during a typical event is projected to be similar to the baseline conditions, but under climate change peak rain events are projected to be higher.

v. Similar DWR factors are used for ET. An example given from orchards shows a seasonal pattern of peaking in the summer months and a projected average increase in these months of 8%.

vi. Question: Is the climate change over 50 years, or over 1 year? Answer (W&C): We are applying a 2070 scenario and applying 50 years of hydrology.

vii. Question: Is this assuming the same cropping pattern? Answer (W&C): We met with GSAs to talk about changes to cropping pattern. We assumed 2040 conditions in urban build out. The projected water budget has many assumptions (e.g. assumptions on population change, etc.). We are doing the analysis to get an order of magnitude understanding of how potentially significant this can be for the basin, and see how we can adaptively manage.

viii. For surface water supplies, projections indicate that in wetter years (wetter season) there would be greater surface water, and in drier years (drier seasons) there would be less surface water.

ix. For groundwater production it is assumed there will be a change in groundwater pumping. The graph shows the difference in groundwater pumping with the climate change scenario. In general, there is an increase in groundwater demand as result of climate change conditions.

x. Summary of climate change scenario: Changed storage depletion is projected to increase from 82K AFY to 130K AFY. This analysis did not rerun the MIDH2O model to see how operations would change. The purpose of analysis was to get an order of magnitude understanding of how climate change might affect the basin.

xi. Clarification from W&C: This analysis does not include management actions and projects.

xii. Question: Is this going to be implemented in the plan? Will the budget reflect these climate changes? Or stay as it is? Answer (W&C): This is up to the group. It is not recommended to take and plan for this directly because there is so much uncertainty. However, we can revise our planning target if we find we are on this trajectory. We are going to do an update in 2025 and could update our targets then if needed.

b. Undesirable Results & Minimum Thresholds

i. Alyson Watson (W&C) explained Undesirable Results (URs) and Minimum Thresholds (MTs), provided definitions and reviewed what was discussed in previous meetings.

ii. The purpose is to try to bring the basin into balance. The GSP will need to define what is significant and unreasonable for URs. It is important to prevent these URs, because if they are violated there can be state intervention.

iii. Sustainable Management Criteria Definitions: There may be a specific groundwater condition where wells went dry and enough wells went dry that we determine this should not happen again. This could be defined as an UR. An MT can be set at a depth at which

this is not going to happen. Our Measurable Objective (MO) will be set at a shallower depth (this is a depth we are trying to reach). We want to work between these two (the MO and the MT) within the Margin of Operational Flexibility. There are no triggers for meeting the MOs. A violation occurs if URs occur. MTs are set to avoid URs. One well being in violation once is not significant and unreasonable, but a certain percentage going dry could be. Specifications can be established for dry years. The goal is to identify a way to prevent URs.

iv. Chronic Lowering of Groundwater Levels: This was discussed qualitatively for URs and needs to be quantified. Methods used for this include two levels of monitoring wells. This does not include the broader monitoring network, but is the subset used to establish MTs. CASGEM wells were used as a starting point for these monitoring wells because they follow closely to SGMA requirements. There should be monitoring wells in all three aquifers (above, below and outside Corcoran Clay). W&C looked at domestic wells and used the Merced County database. W&C looked at the depth of the shallowest domestic well and removed statistical outliers. The shallowest domestic well within a 2-mile radius buffer from each CASGEM well was compared against MTs. An example hydrograph was provided to show MTs, observed data, and a run from 2040 with 50 years of hydrology get to 2090 for Sustainable Yield.

v. Clarification: Other basins have used a method to say that if 25% of wells with MTs have surpassed MTs then this is UR. Individual wells may have different MTs.

vi. Alyson Watson (W&C) explained there is an area (identified by a red circle) on the slide with a high level of uncertainty for determining MTs. Some CASGEM wells are new, some do not have enough historical data to calibrate for the model. Alyson asks the group what are there issues in this area? Are you aware of areas where wells are not deep enough? Or have been dug deeper?

vii. W&C also looked at the distribution of domestic well depths. There are a significant number of 125 ft wells (about 70 at this depth). Are these wells still there, have they been replaced?

viii. Feedback from CC group:

1. Comment: Have not seen any domestic wells that are dry but have seen trucked water going around.
2. Comment (from public): In Meadowbrook area with California American Water Company they have a contract with a trucked water entity, which is required to stay within the company's jurisdiction.

ix. Alyson (W&C) explained there are a few options for moving forward including: identifying this area as a data gap and include in the GSP how this will be addressed, or establish this as an official Management Area.

x. Comment (MID): Interim thresholds and monitoring wells could be set up in that area.

xi. Alyson (W&C) asked group for input on how to approach URs. Should a certain percentage be used to determine what constitutes a UR?

xii. Comment (MID): SGMA allows room for flexibility in continuous drought. Establishing a percentage to determine URs is a good idea.

xiii. Comment (TIWD): In the SC meeting this morning, we discussed that we can set up mitigation plans in areas where we going to surpass meet MTs.

xiv. Comment (MID): Suggests to start with all of these ideas.

xv. Storage: Alyson (W&C) explained change in storage is about 0.3% per year. In terms of total water available, we do not anticipate significant and unreasonable URs occurring in the future. Therefore, no MTs are needed. Another approach is to take groundwater elevation (GWE) levels as a proxy and state that GWE levels are protective. A third approach is to say URs do not occur until a reduction by 10MAF is reached, and then report on this over time. W&C has suggested not to set thresholds and to provide an explanation for this. We are still waiting to hear back from DWR on this approach.

xvi. Seawater Intrusion: This indicator is not applicable for the Merced GSP, as it is not present and not likely to occur for the subbasin. Salinity is addressed as an MT under "Degraded Water Quality".

xvii. Degraded Water Quality: Thresholds should be based on our actions, where groundwater extractions effect groundwater quality. Existing cleanup sites have been previously mapped, which can ensure that new recharge sites are not put in these places and potentially cause water quality issues (e.g. extension of plumes). Where contaminants are regulated under existing programs, communication will be established with these programs. It is not necessary to take responsibility for these contaminants when they are regulated under existing mechanisms and frameworks. However, the Merced GSP will be addressing salinity.

xviii. Alyson (W&C) requested input from the group on proposed MTs for salinity. A current limit of 1000mg/L TDS is proposed for discussion. Does this sound reasonable? From a drinking water perspective as well as for agriculture?

xix. Feedback from CC group:

1. Comment (MID): There are some areas where it is already 1000mg/L. Response (W&C): In some areas where this is occurring we would not need to assign MTs if this is not posing an UR (e.g. blending, or use of salt-tolerant crops are currently employed as solutions).
2. Comment (MSGSA): They are receiving salinity intruding from the west, might be from the San Joaquin River.
3. Comment: There are sources of salinity. For example, upwelling brine. There could be trigger points where you can manage these primary sources like upwelling through saline sources and migration of water from the west. Options are to change the extraction process and take actions to prevent this.
4. Comment (public): Could look at a percentage change from ambient as one option. Or could look at difference from baseline number or use another indicator as a proxy such as acres of production affected as a proxy. Response (W&C): The only proxy allowed under SGMA is GWE.

xx. Question: What are risks are associated with a scenario where an investment fund purchases property and then violates their pumping allocation and violates an MT? Response (W&C): The GSA would be in charge of managing the extraction and enforcement through penalties (e.g. fines). MTs are not defined at every well in the basin. MTs are set on specific monitoring wells.

xxi. Land Subsidence: W&C is in communication with DWR regarding the current approach for the Merced Subbasin.

xxii. Depletion of Interconnected Surface Water: URs, MTs for this indicator are challenging. What can be measured or estimated in the modeling is streamlosses. The greatest losses actually occur in wet years because there is a lot more water in the stream channel. There

is also not a clear UR. The consulting team has tried to come up with a threshold that would keep within the historical range of depletions. We have taken out wet years, looked at historical losses, and considered the 5-year average within this range. The goal is to not exceed historical losses.

xxiii. Question: How does the Supplemental Environmental Document play into this? Answer (W&C): This is not included in the analysis. It is assumed that the SED would impact the analysis but will not be included.

c. Approach and Timing For Implementing Allocations

i. Alyson (W&C) provided review of Conceptual GSP Implementation Timeline. The CC group discussed general ideas regarding the approach and timing for implementing allocations. No agreements or formal recommendations were reached.

d. Next Steps in GSP Development

i. Alyson (W&C) reviewed the section schedule, including release dates for admin and SC & CC section drafts in preparation for GSP public draft.

ii. Alyson also reviewed the proposed GSP review and submission timeline, which includes the public review period and proposed meetings prior to GSP approval and submittal. There is a 90-day requirement that goes effect after the notice of intent to adopt. The GSP may be adopted at 90 days after the notice of intent to adopt is made. The goal with release administrative drafts to GSA staff and sections to the SC and CC is to allow additional input and time to review content prior to the complete draft.

e. Other Updates

i. Alyson (W&C) gave an update on the status of several GSP sections sent or anticipated for administrative draft release.

5. Public Outreach update

a. The next public workshop will take place May 29th at the Atwater Community Center. Notices and additional information will be posted on the Merced SGMA website.

6. Coordination with neighboring basins

a. For interbasin agreements, W&C team has been reaching out to Delta-Mendota and has been looking at Chowchilla and the Turlock agreements as models for potential agreement structure and content.

7. Public comment

a. None.

8. Next steps and adjourn

a. Focus for May will be on Minimum Thresholds and Measurable Objectives and Implementation Planning.

Next Regular Meeting
May 29, 2019 at **1:30 p.m.**
Atwater, CA – Castle Conference Center at Castle Airport (subject to change)
Information also available online at mercedsgma.org
Action may be taken on any item

Note: If you need disability-related modification or accommodation in order to participate in this meeting, please contact Merced County, Community and Economic Development staff at 209-385-7654 at least 48 hours prior to the start of the meeting.