

CGA/GGA Joint Technical Advisory Committee Meeting
Agenda Packet

CGA/GGA Joint Technical Advisory Committee Meeting

MEETING MINUTES

December 11, 2020 | 1:00 p.m.

Due to safety concerns and directives from the Governor and Federal Government related to COVID-19,
This meeting was held remotely ONLY.

1. Call to Order, Roll Call, and Introductions

The meeting was called to order at approximately 1:00 p.m.

Danaka DeBow with the Census and Collaboration Program started the meeting and went over some housekeeping and logistical items.

In Attendance:

Committee Members:

GGA: Emil Cavagnolo, Mark Lohse, Zac Dickens, David Kehn

CGA: Darrin Williams, Thad Bettner, Bill Vanderwaal, Jim Wallace, Brandon Davison (ex-officio)

Others in Attendance: Lisa Hunter (GGA Staff), Mary Fahey (CGA Staff), Danaka DeBow (Facilitator, Consensus and Collaboration Program [CCP]), Byron Clark (Davids Engineering, Inc.), Ken Loy (West Yost Associates), John Ayers (Woodard and Curran), Reza Namvar (Woodard and Curran), George Valenzuela (Woodard and Curran), Duncan MacEwan (ERA Economics), Steve Hatchett (ERA Economics), Hilary Reinhard (CGA), Leslie Nerli (GGA), Shelly Murphy (CGA), Holly Dawley (GCID), Lisa Humphreys, Grant Davids, Lester Messina, Jim Brobeck, Jaime Lely, Pete Dennehy (Montgomery and Associates), Greg Wells, Bryce McAteer, Ryan Fulton

2. Approval of Minutes (CGA TAC, GGA TAC)

a. * October 16, 2020 CGA/GGA TAC meeting (GGA TAC only)

(The meeting minutes were previously approved by the CGA TAC). For the GGA, Emil Cavagnolo made a motion to approve the minutes from the October 16, 2020 CGA/GGA TAC meeting. Mark Lohse seconded the motion, which passed per roll call vote:

Roll Call Vote

Glenn Groundwater Authority

Zac Dickens: AYE

David Kehn: Abstain

Emil Cavagnolo: AYE

Mark Lohse: AYE

b. * November 13, 2020 CGA/GGA TAC meeting

For the GGA, David Kehn made a motion to approve the minutes from the November 13, 2020 CGA/GGA TAC meeting. Zac Dickens seconded the motion, which passed unanimously.

Roll Call Vote

Glenn Groundwater Authority

Zac Dickens: AYE

David Kehn: AYE

Emil Cavagnolo: AYE

Mark Lohse: AYE

For the CGA, Thad Bettner made a motion to approve the minutes from the November 13, 2020 CGA/GGA TAC meeting. Bill Vanderwaal seconded the motion, which passed unanimously.

Roll Call Vote

Colusa Groundwater Authority

Thad Bettner: AYE

Bill Vanderwaal: AYE

Darrin Williams: AYE

Jim Wallace: AYE

3. Period of Public Comment

There was no public comment.

4. Colusa Subbasin Groundwater Sustainability Plan Development:

a. Discussion: Management Areas

Byron Clark provided a definition of Management Areas (MAs) from the SGMA regulations. Part of the regulation states that MAs may define different minimum thresholds and operate to different measurable objectives than the basin at large, but one requirement is that Undesirable Results need to be defined consistently throughout the basin. The Colusa Subbasin is on track as the Undesirable Results statements have been completed.

MAs are also described under the Monitoring Network section. There could be situations under a MA scenario where the existing monitoring network would require augmentation. An example is the northwest portion of the basin where there is a limited number of monitoring wells.

Mr. Clark said that MAs may be defined based on physical characteristics or jurisdictional boundaries. Other portions of the GSP (HCM, water budget, notice and communication) must be consistent for the entire GSP area.

Mr. Clark then presented examples of basins that are using MAs: Yolo, Chowchilla, North and Central Delta Mendota, and Kern Groundwater Authority.

In Yolo there are six MAs based on physical setting and the purpose is to give MAs flexibility in setting thresholds. Bill Vanderwaal added that the purpose is to provide more local control and that setting unique thresholds is an added benefit.

In Chowchilla there are six GSAs and four MAs that are delineated based on jurisdictional boundaries (agency boundaries) and the purpose is to set unique thresholds for land subsidence.

In the Delta Mendota, Northern and Central region there are two MAs delineated based on jurisdictional boundaries with the purpose of setting unique subsidence thresholds.

The Kern Subbasin has 16 GSAs and twenty-five MAs based on jurisdictional boundaries. Some of the areas are subdivided based on conditions. The purpose of the MAs are to set unique thresholds, establish different fee structures, participate in water markets, allocate pumping, and implement projects and management actions.

Next, Mr. Clark described four examples of basins without MAs.

In the North and South Yuba Subbasins, the approach to set thresholds to be sensitive to varying conditions throughout the basin was to use a “decision tree” approach to set groundwater level thresholds. The North Yuba has had good surface water supplies and hasn’t had to deal with drawdown, but they wanted to be sure to protect their options when setting minimum thresholds. This is a similar approach to what might work for the Colusa Subbasin.

In the Delta-Mendota Subbasin, thresholds for groundwater levels were set at 20% deeper than the recent historic low. Subsidence thresholds are more specific to the different monitoring sites and uniform thresholds were set for water quality. Thresholds for the other Sustainability Indicators use groundwater levels as a proxy.

In the Eastern San Joaquin Subbasin, groundwater level thresholds were set using historical drought low plus a 100% buffer of historical fluctuation or 10th percentile, whichever is shallower. Water quality thresholds are based on TDS<1,000 mg/L. Other applicable thresholds are based on groundwater levels as a proxy.

In the Merced Subbasin, groundwater level thresholds are based on the depth of the shallowest well in a 2-mile radius of each representative monitoring well. Water quality thresholds are based on TDS<1,000 mg/L, Subsidence thresholds are set at <0.75 ft/year. Other applicable thresholds are based on groundwater levels as a proxy.

Mr. Clark presented a Management Area “Pros and Cons” chart that was developed by Montgomery and Associates for the Corning Subbasin Advisory Board. He described other things to consider when thinking about MAs, including: creating an “us and them” dynamic, considering impacts of unique thresholds on neighboring areas, creating a new administrative burden, benefits from projects and management actions can extend beyond MA boundaries (example direct recharge site), and quantifying project benefits within a MA.

Mr. Clark then opened the floor to discussion about Management Areas.

Mr. Vanderwaal stated that his district, Reclamation District (RD) 108, strongly favors Management Areas. He thinks this structure is the best way to enable local control. RD 108 is participating in a MA in the in Yolo Subbasin. There are challenges either way, but MAs provide more local control. Mr. Clark asked if Mr. Vanderwaal views MAs as being broadly applicable for RD 108 rather than minimum thresholds. Mr. Vanderwaal replied, yes, it is easier to have local management in a geographically large basin by having MAs.

Mr. Bettner said he tends to agree with Mr. Vanderwaal. His district, Glenn-Colusa Irrigation District (GCID) is interested in exploring MAs. Future conditions throughout the basin may be different as far as conditions and financing and MAs would help manage those conditions. Future scenarios would be helpful to understand how the basin will perform.

Mr. Cavagnolo agreed. His district, Orland-Artois Water District, is split by the freeway. Mr. Clark asked if he would consider two MAs in his district and Mr. Cavagnolo said possibly he would.

Mr. Williams asked Mr. Vanderwaal and Mr. Bettner what goals they are looking to achieve through MAs that cannot be achieved with the GSA in general. At this point Mr. Williams said he is not for or against MAs and

would like to hear specifics. Mr. Bettner said GCID is interested in MAs. They have a lot of data in their district. He is also open to not having MAs but wants to keep them on the table. He said it would be helpful to look at different areas/issues of the basin and how we want to deal with them. Mr. Vanderwaal asked about conditions in his district and how do they compare with conditions in the far north east portion of the basin, and how does the area east of the Sacramento River in the CGA compare to the west side? At the very least, MAs help zero in on challenges in each of those areas.

Mr. Williams stated that he is still on the fence and needs to listen and learn more. He is not convinced now that MAs are the way we need to go. They could be a useful tool but have potential to isolate certain areas of the basin that may have challenging issues. Where/how do you draw the line between MAs? Mr. Vanderwaal said he understands the concern but being involved in the Yolo Subbasin GSA, the area by RD 108 and Dunnigan and River Garden Farms is a totally different area than the other areas in Yolo.

David Kehn commented that he is a Municipal representative in the City of Willows. MAs make sense to delineate but there is a need to discuss where the line is drawn.

Jim Wallace said that, his district, the Colusa Drain Mutual Water Company, is different from the other districts as it is spread across a long distance. He asked Mr. Vanderwaal and Mr. Bettner if they have given any thought to how we would consider MAs and how they see MAs from a geographic standpoint, or an agency standpoint. Colusa Drain has a lot of properties adjacent to RD 108 and GCID. Mr. Vanderwaal replied that there are a variety of ways to do MAs. MAs could be set up for each agency, but he has also heard past thoughts about considering areas along river that have a different hydrology than other areas. MAs could be large scale, such as GGA is one, and in Colusa County there are two – Sacramento River and the west side. They (RD 108) have not sat down and drawn lines on a map. There are a lot of options to contemplate. Mr. Wallace said he is not sure at this time if it's good or bad. Drawing lines around districts seems to go against the original concept of the JPA and SGMA. If we have MAs, he would prefer to not see them concentrated around economic interests. If an agency is going to affect a smaller entity, that entity should be included. He would rather see them follow hydrogeologic boundaries rather than political boundaries. Mr. Vanderwaal said one intent of SGMA was to enable more local control. Mr. Wallace referred to slide 21 of the presentation (other considerations), and he worries about areas competing for the resource and that as soon as we carve up the basin, we are no longer working on the same problem.

Jaime Lely commented that Mr. Cavagnolo brought up a point of differences between west and east. She has concern about breaking the basin up this way, especially in regards to per-acre costs and how that could affect the west side landowners.

John Ayres from Woodard and Curran said that one challenge if geopolitical lines are not used to define MAs, hydrogeologic lines are "squishy." Sometimes a stakeholder wants to be in one MA rather than another. The big challenge is that the regulations say that thresholds set in one MA should not affect another to meet its sustainability goal. There is no prescriptive way in the regulations of how that is done. The bottom line is that MAs have to coordinate and work together. If MAs are not used, we can still use different methodologies in different areas by using a procedural approach. Flexibility is definitely needed in a basin this large. We can accomplish this with or without MAs.

Mr. Clark asked about the next steps to support this discussion moving forward.

Mr. Williams said he would like to know from TAC members or from Mr. Clark if there are specific goals and objectives with respect to sustainability that can be achieved better with MAs than without. Mr. Clark said there is not a good answer and the consultant team is approaching this in an objective manner. He does feel the basin can be managed well without MAs, but respects the various opinions. One potential path forward is to begin discussion with the CGA and GGA boards.

Mr. Kehn commented that it is hard to say if he is for or against MAs without seeing a line that is technically defensible. He also stated that this should be a Board decision.

Mr. Wallace asked if the consultants have taken a crack at drawing MAs on a map. They have not. Mr. Wallace said he could see surface water vs. groundwater areas. Hydrogeological areas would be more difficult. Mr. Wallace asked Mr. Vanderwaal and Mr. Bettner if either has considered taking a crack at looking at MAs outside of their boundaries. Mr. Vanderwaal said no, but he would be willing to meet with a few other folks and bring back a proposal. He said that in Yolo, MAs were drawn up based on predetermined areas. We may have something like this to refer to.

Mr. Clark said that the Glenn County BMO information could be helpful. Mr. Bettner suggested to start talking about what some of the agency interests are, including needs, planning, financing, etc. It would be helpful to have the water budgets and to bring some data into these conversations. It would also be helpful to look at what future conditions in the basin look like. Mr. Clark said the model could be a useful tool.

Mr. Williams said that a bigger discussion needs to be had. We know where problem areas are. We need to know the challenges, how we want to address challenges and then decide if/how we need MAs.

Ken Loy from West Yost Associates said that the Yolo Subbasin MAs are based on hydrological conditions. He suggested the consultant team could do a quick delineation where it is thought that groundwater behavior is different. This would be based purely on technical interpretation. They could draw lines on a map and present this to the TAC as a beginning point for further conversation. These would not be suggested MAs, but inputs that the TAC could work with. TAC members were agreeable to this approach.

b. Discussion: Funding Mechanisms

Mr. Clark introduced Duncan MacEwan and Steve Hatchett from ERA Economics. Mr. MacEwan began with a high-level overview of economic considerations and explained that the scope of work is to establish baseline economic conditions in basin. He presented the 2016 cropping map and said that trends in the Colusa Subbasin are consistent with the rest of state, with more permanent crops being planted. This will be important information when establishing Sustainable Management Criteria and Projects and Management Actions.

Steve Hatchett described a range of funding options and said that the ERA team is here to help the GSA Boards understand the implications of different funding options. There are several categories of costs, including: administrative, GSP development, and GSP implementation (PMAs, monitoring, GSP updates and reporting, etc).

Grants and loans are typically used to fund capital costs. Examples are Proposition 68, USBR WaterSmart program, Bonds (large capital projects), private funding, borrowing (lines of credit, etc.).

Fees and assessments would be used for GSP-related funding, including administration, reporting and GSP updates. This category includes regulatory fees (Proposition 26, Proposition 218), extraction fees, permit fees, other fees or a mix.

Equity considerations are related to the Management Area discussion. MAs can be the basis for differentiating fees across the basin but it is not necessarily required. The GSAs do not have to have MAs to have variation in fees throughout the basin. A fee does have to show a defensible relationship between fees imposed on different geographies and the benefits received in those geographies (nexus).

Mr. Hatchett said that his team's job is to help the GSAs think about the different funding options. The next steps will include assessing cost and financing implications at upcoming stages in GSP development,

developing options for funding, considering the potential distribution of costs and benefits and preparing a summary of funding methods and allocation considerations.

There was no further discussion from TAC members.

c. Update on Hydrogeologic Investigation

Ken Loy with West Yost Associates provided an update on the Hydrogeologic Investigation task which is being funded by the California Department of Water Resources' (DWR) Proposition 68 grant. The team is looking at four types of data collection: 1) partnering with DWR on their Airborne Electromagnetic (AEM) study; 2) installation of new multi-completion monitoring wells; 3) installation of stream gages; and 4) installation of additional subsidence benchmarks. Mr. Loy has been communicating with DWR and has learned that the contracting for their AEM study has been delayed which could be a problem given the GSP timeline. The focus of the AEM work in the Colusa Subbasin would likely be on western portion and he is not sure the GSAs would get enough bang for their buck to collect data. His recommendation would be to try to delineate a couple of subsurface faults on the west side. They believe there is a fault that goes down to the Dunnigan hills. In the Colusa Subbasin, they have encountered difficulties in model calibration in the southern portion and they think is from this fault. An AEM survey could help delineate this and help us gain a better understanding of the hydrogeology in the area and help with model calibration.

Mr. Loy explained that the current thinking of the consultant team is more towards selecting a location(s) for multi-completion monitoring well(s) and that they are looking for input. One potential location is along the Sacramento River where we know we have important interbasin flow questions. One location in particular stands out, near the intersection of Highway 162 and Highway 45 east of Willows. There is a stream gage on the river in that area. Also, in ranking Groundwater Dependent Ecosystems, the highest ranks are in that area. Also, that location is pretty much dead center between the Colusa and Butte Subbasins. There may be other locations to consider but this is one to think about and provide feedback.

Mr. Wallace asked how much budget is available for this task. Mr. Loy said approximately \$314,000, and that a multi-completion well installation would cost approximately \$200,000. Lisa Hunter reminded the group about the DWR Technical Support well installation services. Mr. Loy said he will be working with Brandon Davison at DWR to discuss these things.

Mr. Davison said that DWR will be hosting a series of webinars in early 2021 to introduce the DWR AEM project. DWR's AEM project webpage is expected to be live by January 2021. He anticipates it might be a little later, perhaps late spring.

d. Discussion: Well Monitoring Pilot Program, Screening Criteria

Mr. Clark reviewed the current schedule for the Well Monitoring Pilot Program. Applications will be available in January and landowner workshop will also be held in January. Site selection and program deployment will occur in February-April. Implementation of the program will happen during the 2021-2023 growing seasons.

Mr. Clark said he would like to have a discussion about participant selection, emphasizing an objective and transparent process.

Mr. Clark reviewed potential eligibility requirements and selection criteria, including, location, water source, and existing flow meter properly installed. Other potential considerations might include the number of wells per participant and a first come/first served tie breaker.

Regarding the criteria, Mr. Wallace asked how percent of groundwater used is determined. Mr. Clark said we would request the information from the applicant, but maybe it is more problematic as it could be complicated and difficult to calculate.

Mr. Kehn indicated he likes the idea of a matrix and suggested that location is the number one criteria and should be based on proximity to an existing monitoring well. We should choose wells that are farther away from existing monitoring wells to help fill in data gaps.

5. Interbasin Coordination Update

Ms. Fahey, Ms. Hunter and Mr. Clark provided an update on the Interbasin Coordination effort that is being coordinated by Butte County. It was emphasized the group is in the early phases of gathering and sharing information and the group is not a decision-making entity.

Jim Brobeck, representing the Vina Subbasin said he is disappointed there is not a summary from the December 1 Interbasin Coordination meeting. He suggested there are substantial discrepancies related to Interbasin flows. The next meeting of this group is not until some time in spring. He hasn't seen a way for the public to be engaged in this effort. Mr. Clark suggested that Mr. Brobeck could pose these questions to the Butte staff and/or the facilitation team who are leading the effort. It is the intent to engage stakeholders in the process. Certain information is just not ready yet.

Mr. Kehn stated that the information was sent in the last meeting packet for the Vina Subbasin and that the modeling teams are working together. Mr. Clark said that DWR just released updated version of their models. These regional models may help with looking at interbasin flow and stream aquifer interactions.

6. Topics for Next Meeting

The next Joint TAC meeting will be January 8, 2021. Some potential topics will be to introduce Basin Setting draft documents, have a more detailed discussion about Projects and Management Actions and more discussion about Management Areas. Another potential topic is Sustainable Management Criteria.

Mr. Kehn said he would like to see the schedule with milestones for GSP development. Mr. Clark pointed Mr. Kehn to the schedule matrix and said if that was not sufficient, he would like some feedback on what else would be helpful.

7. Member Reports and Comments

Ms. Fahey reported on the public workshops that were held on December 9 and 10 and noted the recordings can be found on the Colusa Subbasin SGMA Facebook page.

8. Adjourn:

The meeting was adjourned at 3:30 p.m.

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 4.a. Subarea Water Budget Discussion

Date: January 8, 2021

Background

As part of GSP development, draft water budgets have been developed for the Colusa Subbasin using a refined version of DWR's C2VSim Fine Grid integrated hydrologic model. As part of model development, 38 "zones" or subareas within the model were established representing a combination of water supplier service areas, county boundaries, and other factors. For each of these subareas, localized water budgets can be summarized. Interest has been expressed in preparing water budget estimates for these subareas, which could support discussion of management areas, projects and management actions, and potentially other aspects of GSP development.

As part of this discussion, information being developed for the subareas will be discussed, including surface layer processes such as land use, evapotranspiration, surface water and groundwater use, precipitation runoff and return flows, and groundwater recharge from precipitation and applied water deep percolation and seepage from surface water bodies (canals, drains, and streams). Additionally, subarea water budgets will estimate net subsurface groundwater flows and changes in groundwater storage over time.

Draft subarea water budgets are currently being developed and are anticipated to be distributed in January. The purpose of this discussion is to provide an overview of the information to be included and to receive feedback regarding the information being developed and format of the summaries

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 4.b. Sustainable Management Criteria Discussion

Date: January 8, 2021

Background

Quantitative Sustainable Management Criteria including Minimum Thresholds (MTs), Measurable Objectives (MOs), and Interim Milestones (IMs) must be established for each applicable Sustainability Indicator. These criteria are established at individual representative sites within the GSP Monitoring Network.

This discussion will expand upon prior discussion at the October 16, 2020 and November 13, 2020 Joint TAC meeting of MTs and MOs to provide additional information on potential means of establishing MTs based on recent analysis of available data for the Colusa Subbasin. As discussed previously, there are a range of options to establish MTs and MOs for each sustainability indicator. Additionally, the use of the integrated hydrologic model to support establishment of MTs and MOs will be discussed, including consideration of potential reductions in surface water availability in the future.

Finally, potential economic analysis to support selection of MTs and MOs will be discussed, including examples from other subbasins.

The five sustainability indicators (SIs) expected to be applicable to the Colusa Subbasin are:

1. Groundwater Levels
2. Groundwater Storage
3. Groundwater Quality
4. Land Subsidence
5. Surface Water Depletions

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 4.c. Management Area Discussion

Date: January 8, 2021

Background

SGMA allows for the formation of Management Areas (MAs) within groundwater basins as part of GSP development. To date, MAs have not been formed in the Colusa Subbasin. As Sustainable Management Criteria (SMC) are evaluated, including Minimum Thresholds (MTs) to identify potential Undesirable Results, and as potential Projects and Management Actions (PMAs) are identified and evaluated, continued discussion regarding MAs is desired.

This discussion will provide a recap of how MAs are represented in SGMA and associated GSP regulations, additional examples of how MAs have been established in other basins, and examples of factors that could be considered in delineating MAs for the Colusa Subbasin, including:

- Geomorphic Boundaries
- Topography
- Geology
- Streams
- Groundwater Levels
- Land Use
- Institutional Boundaries
- Groundwater Monitoring Network
- Groundwater Use
- Net Recharge

Staff Report

To: CGA-GGA Joint TAC
Agenda Item: 5. Public Outreach Update
Date: January 8, 2021

Background

The public outreach team has been busy since the last meeting working on the following items:

- Preparing draft summaries of the December 9 and 10 SGMA-Series Public Meetings
- Updating social media pages
- Finalizing the Colusa Subbasin logo and associated style guide for future branding use
- Launching publicity for the Projects and Management Actions form
- Preparing to publicize the Well Monitoring Pilot Program Workshop scheduled for January 25

Dave Ceppos will provide a verbal update with more details.

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 6. Interbasin Coordination

Date: January 8, 2021

Background

The fourth meeting of the Interbasin Coordination group took place on December 1, 2020. This was the second meeting with the consulting teams in attendance. The group has not met since the last Joint TAC meeting.

More information and meeting summaries can be found on the Butte County website at: <https://www.buttecounty.net/waterresourceconservation/Sustainable-Groundwater-Management-Act/Inter-basin-Coordination>

Information from the 12/1/2020 meeting provided by Consensus Building Institute (CBI):

Overview: Representatives from Antelope, Bowman, Butte, Colusa, Corning, Los Molinos, Red Bluff, Sutter, Vina, Wyandotte Creek, and Yolo subbasins held the fourth inter-basin coordination meeting. Subbasin staff and their consultant teams met with the goals of (1) discussing preliminary findings from technical information-sharing template to identify information gaps, initial concerns, and determine next steps, (2) considering opportunities for regional outreach efforts related to ongoing inter-basin coordination efforts, and (3) sharing updates on their GSP development status.

Next Steps: Staff and consultants will meet again when all water budget results are available for comparison and integrated into the information-sharing template (February-March 2021) to review compiled data, identify any significant differences, and discuss potential ways to reconcile those differences, as warranted. Meanwhile, technical teams from adjacent subbasins will meet to identify appropriate ways to compare and communicate information on model assumptions, cross-boundary flows, and stream-aquifer interactions at boundaries.

Staff Report

To: CGA-GGA Joint TAC

Agenda Item: 7. Discussion on TAC Reports to CGA and GGA Boards

Date: January 8, 2021

Background

TAC communications to their respective GSA Boards are critically important to educate, inform, and receive feedback from board members. Additionally, board members need to receive enough technical information to ensure they are prepared to provide guidance and make important decisions relating to GSP development.

The purpose of this item is for TAC members and staff to brainstorm ideas and share thoughts on communications with GSA Boards. Discussion could include:

- Key technical components
- Timing
- Decision points
- Feedback loop
- Level of detail
- Format of reporting