

# CGA/GGA Joint Technical Advisory Committee Meeting

## **MEETING AGENDA**

June 11, 2021 | 1:00 p.m.

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

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Please see Meeting Hints and Tips at the end of the agenda.

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\* Indicates an Action Item

### **1. Call to Order, Roll Call, and Introductions**

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

- a. \* May 13, 2021 CGA/GGA Joint TAC Meeting
- b. \* May 19, 2021 CGA/GGA Joint TAC Meeting

### **3. Period of Public Comment**

*At this time, members of the public may address the Technical Advisory Committee (TAC) Members regarding items that are not on the agenda but are of relevance. The TACs may not act on items not on the agenda.*

### **4. Colusa Subbasin Groundwater Sustainability Plan Development**

- a. Sustainable Management Criteria
  - i. \* Degraded Water Quality—Action
  - ii. \* Depletions of Interconnected Surface Water—Action
- b. Groundwater Dependent Ecosystems—Status Report and Discussion
- c. Projects and Management Actions—Status Report and Discussion

### **5. Well Monitoring Pilot Program—Update and Discussion**

**6. Topics for Next Meeting (July 9, 2021)**

**7. Member Reports and Comments**

**8. Adjourn**

A complete agenda packet, including back-up information, is available for inspection during normal business hours at 100 Sunrise Blvd., Suite A, Colusa, CA 95932 or 225 N. Tehama St., Willows, CA 95988. The full agenda packet can also be found on the CGA and GGA websites:

<https://colusagroundwater.org/>

<https://www.countyofglenn.net/dept/planning-community-development-services/water-resources/glenn-groundwater-authority/gga>

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### **Remote Meeting Hints and Tips**

#### **PLEASE NOTE: For increased meeting security protections,**

- All attendees will be placed into a Zoom Waiting Room at the start of the meeting. The meeting facilitator and/or technical staff will admit participants as they appear in the waiting room. To the extent possible and to minimize uncertainty of who participants in the Waiting Room are, participants are encouraged to enter their name when they enter Zoom so the meeting facilitation staff and GSA coordinators can confirm meeting participants.
- Also, as with all recent Joint TAC meetings, for memorialization purposes, this meeting will be recorded and participants will be required to agree to that in order to participate. Participants will be prompted at the start of the meeting to agree to this.

To make the upcoming meeting effective, please read all the following.

1. The process will feel “clunky”. There will be inevitable pauses, stalls, re-sets, particularly when participants want to comment, we have to vote or take a straw poll. This may be frustrating and that’s completely understandable. Please be patient as we work together in this “new normal” approach.
2. To minimize challenges, we will open the online meeting 15-20 minutes in advance. Please log in during that time so we can walk you through the set up and get you familiarized with things. You may also want to go to Zoom (the virtual meeting tool) the day before and familiarize yourself with it.
3. Regarding personal settings, it will be VERY helpful for us to know in advance if you plan to log in via a computer, smart phone, or land line.
4. Regarding the “RAISE HAND” tool. You’ll find this if you click on the “Participants” icon. When that menu opens, you’ll see the names (or phone numbers) of everyone in the meeting. At bottom of that menu, you’ll see a button that says “RAISE HAND”. We will use this feature to let the facilitator know if you want to make a comment, so it is VERY important that you familiarize yourself with this.
5. If you’ve joined online (rather than just through the toll free phone number), we ask that during the meeting you keep your Zoom microphone on “Mute”. If you are using an organization’s landline, please do NOT put your phone on “Hold”.

**CGA/GGA Joint Technical Advisory Committee Meeting  
Agenda Packet**

**June 11, 2021**

## CGA/GGA Joint Technical Advisory Committee Meeting

### MEETING MINUTES

May 13, 2021 | 10:30 a.m.

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

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#### 1. Call to Order, Roll Call, and Introductions

The meeting was called to order at approximately 10:30 p.m.

Dave Ceppos with the Census and Collaboration Program opened the meeting and went over some housekeeping and logistical items.

#### In Attendance:

##### Committee Members:

GGA: Emil Cavagnolo (arrived at 11:21 a.m.), Mark Lohse, Zac Dickens, Donald Bills, David Kehn

CGA: Denise Carter, Darrin Williams, Bill Vanderwaal (arrived at 11:00 a.m.), Thad Bettner, Jim Wallace, Brandon Davison (DWR, ex-officio)

**Others in Attendance:** Lisa Hunter (GGA Staff), Mary Fahey (CGA Staff), Dave Ceppos, Consensus and Collaboration Program [CCP]), Grant Davids (Davids Engineering, Inc.), Ken Loy (West Yost Associates), John Ayers (Woodard & Curran), Duncan MacEwan (ERA Economics), Jeff Davids (Davids Engineering, Inc.), George Valenzuela (Woodard & Curran), Holly Dawley (GCID), Micah Eggleton (Woodard & Curran), Bridget Gibbons (CDFW), Bruce Houdesheldt (NCWA), Jamie Lely, Lester Messina, Denise Conrado, Pete Dennehy (Montgomery & Associates), Arne Gustafson, Leslie Nerli, Clifton Lollar, Jennifer Scheer, Tamara Williams, Emily James, Hilary Reinhard, Valerie Kincaid, Craig Knight, Susan Silveira, Brad Samuelson, Ryan Soden, Erik (last name not available), Brandon Ertis (Davids Engineering, Inc.), John Brennan, Ashley Driver

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

##### a. April 23, 2021 CGA/GGA Joint TAC Meeting

**CGA:** Darrin Williams moved to approve the meeting minutes from the April 23, 2021 CGA/GGA Joint TAC meeting. Denise Carter seconded and motion passed per roll call vote:

Denise Carter – Aye

Jim Wallace - Aye

Thad Bettner - Aye

Darrin Williams – Aye

**GGA:** Zac Dickens moved to approve the meeting minutes from the April 23, 2021 CGA/GGA Joint TAC meeting. Donald Bills seconded and motion passed per roll call vote:

Donald Bills – Aye

Zac Dickens – Aye  
David Kehn - Abstain  
Mark Lohse – Aye

### 3. Period of Public Comment

There were no public comments.

### 4. Colusa Subbasin Groundwater Sustainability Plan Development:

#### List of Acronyms:

CEQA – California Environmental Quality Act  
GDE - Groundwater Dependent Ecosystems  
GSA – Groundwater Sustainability Agency  
GSP – Groundwater Sustainability Plan  
MO – Measurable Objective  
MT – Minimum Threshold  
PMAs – Projects and Management Actions  
PPT – Powerpoint Presentation  
SGMA – Sustainable Groundwater Management Act  
SMC – Sustainable Management Criteria  
TAC – Technical Advisory Committee  
UR – Undesirable Result

Grant Davids provided an update on the timeline for developing Sustainable Management Criteria (SMC). He explained that decisions not made by the TACs during this meeting could be pushed until June, but that will be final deadline for decisions prior to release of draft GSP Chapter 5 on July 16.

Mr. Davids, as a general reminder to TAC members and interested parties, described key terms and definitions related to SMC:

- Measurable Objective (MO): The specific, quantifiable goal for the maintenance or improvement of groundwater conditions. MOs are the targets for sustainable operation of the basin.
- Minimum Threshold (MT): The numeric value for each sustainability indicator used to define undesirable results at each representative monitoring site. MTs are the conditions to be avoided though proactive implementation of projects and management actions.
- Undesirable Result (UR): Significant and unreasonable impacts to groundwater conditions occurring throughout the basin for the applicable sustainability indicators. These occur when MTs are exceeded at a certain number of monitoring sites for a certain period of time. URs are potential triggers for State intervention in operation of the basin.

#### 4.a. Sustainable Management Criteria (SMC)

##### 4.a.i Groundwater Elevations

John Ayres, Woodard & Curran, described the approach to set MT for Chronic Lowering of Groundwater Levels. Thiessen polygons have been developed to evaluate monitoring wells and domestic wells (1 monitoring well and count of domestic wells in each polygon). For TAC review today is the following recommendation:

1. MT = Lower of:
  - a. 20% or 50% of range below historical low (requires TAC decision)
  - b. 20<sup>th</sup> percentile of shallowest domestic wells in the monitoring well's Thiessen polygon (20% are shallower, 80% are deeper)
2. MO = Set as the mean of last 5 years available measurements, typically 2016 - 2020; not a five-year rolling average, rather a fixed value that can be changed with supporting technical or economic justification.
3. UR occurs when 25% (12 of 48) of representative monitoring wells fall below minimum threshold for 24 consecutive months.

Next, Ken Loy, West Yost Associates, displayed example hydrographs from the representative monitoring network, by typical well groups:

- a. Wells reflecting recent dry conditions
- b. Wells reflecting recent dry conditions and variability in surface water availability (and therefore groundwater pumping)
- c. Wells close to Sacramento River

### Discussion

Mr. Bills asked whether the Kanawha Water District wells are deeper, partially confined, or confined, and what the impact on well yield and water level response there might be.

Mr. Vanderwaal commented on Slide 11 and pointed out that the MO for this particular well seems low. He highlighted that there is only 20-30 feet of operational flexibility (defined as the difference between the MO and MT elevations). He suggested that the MO should be higher because the aquifer is already being operated at too low of a level considering subsidence concerns near the area near the well, and if we use the current MO the probability of needing to implement PMAs is reduced.

Tamara Williams, a member of the public, asked how the 20<sup>th</sup> percentile of domestic wells was calculated. In each Thiessen polygon, 20% are shallower, 80% are deeper. *Comment by Jeff Davids: The language on Slides 7 and 19 say "The 20th percentile of SHALLOWEST domestic wells..." I think it is more correct to say the shallowest 20th percentile of ALL domestic well depths.*

Ms. Carter asked about determination of MT between historical lows and shallowest domestic wells.

Mr. Bills asked about the distribution of domestic well depths and how 20<sup>th</sup> percentile was chosen. Mr. Ayres clarified the reason that 20<sup>th</sup> percentile was selected was because there was some alignment between the 20<sup>th</sup> percentile and the 20% below historical range for some wells.

Mr. Williams commented that he prefers to have some flexibility on this first GSP, and that there are significant differences between wells near the Sacramento River and elsewhere in subbasin.

Tamara Williams expressed concern about stranding (de-watering) more than 20% of the domestic wells: *"I am very concerned about using an MT that allows MORE than 20% of the domestic wells in a polygon to go dry. This is very important in the northwestern part of the subbasin."*

Mr. Williams asked what flexibility the GSAs/TAC have to adjust MOs, MTs, and URs during first 5 years of GSP implementation. Mr. Ayres explained that GSAs/TACs are able to revise these thresholds at any time, but any adjustments need to be supported by a technical or economical justification. He also mentioned that review of thresholds during 5-year update is required.

Ms. Carter asked if SMCs can be set uniquely for each well or for specific areas within the subbasin (i.e. river geomorphic region, foothills region, etc.). Mr. Ayres responded that, yes, SMCs can be set uniquely for each well with possibly different criteria.

Mr. Wallace suggested that the practical impact on domestic wells are very different if the 20<sup>th</sup> percentile is above or below the 20% or 50% of range thresholds. In the cases that the 20<sup>th</sup> percentile is above the 20%/50% range, do we know how many wells are potentially impacted by the selection of 20% and 50%, respectively?

Ms. Kincaid asked whether monitoring frequency for measuring in representative monitoring wells would be monthly or seasonal, noting that monthly monitoring will make it less likely that levels will be below MTs for 24 consecutive months compared to just two seasonal measurements each year.

Tamara Williams encouraged the TAC to set MTs so that relatively few domestic wells are stranded. Mr. Ayres said that after a GSA reports minimum thresholds in Annual Reports that are not being met, the State may step in to take action. Ms. Kincaid clarified that the State must provide notice of a probationary hearing prior to taking action, which would happen based on three conditions (ex. not performing required reporting).

Ms. Driver commented that she needed to leave to join another meeting and urged the TACs to consider setting the MT at 35% of historical range below the historical low, midway between the 20% and 50% being considered. Her rationale was that setting MTs should balance the dual and opposing risks of triggering State intervention and limiting adverse effects on domestic wells. Local actions would not be sufficient to drill deeper wells because the funds are not locally available and water deprivation is a major social issue. The state would likely step in prior to a certain number of people being deprived of water. There is also the consideration of the depletion of the aquifer as a whole. She suggested that the (Mid West's) Ogallala basin be regarded as an example.

Mr. Davids commented that the MTs being discussed are probably moot for near-river monitoring wells because the MTs applicable to Depletions of the Interconnected Surface Water sustainability indicator will likely be more constraining (shallower).

#### **4.a.ii Depletions of Interconnected Surface Water (Indicator #6)**

This segment began with a preview of the Technical Team's Draft Recommendation, and then review of hydrographs for selected near-river representative monitoring wells (not in slide order sequence).

Mr. Loy explained that the selection criteria for interconnected surface water monitoring wells included:

- a) Wells between 2,000 feet and 5 miles from interconnected streams



b) Well depths less than 200 feet deep (to top of shallowest screened interval).

The Technical Team identified 11 qualifying wells, with one well having two well completions. Mr. Loy explained that their initial opinion had been that near-stream monitoring wells were inadequate for setting quantitative thresholds for the 2022 GSP, but after more careful consideration some adequate wells had been identified. The Team's current recommendation is to set quantitative thresholds for the 11 qualifying wells, and explain in the GSP that the monitoring well network will be reviewed and expanded, and initial MOs and MTs evaluated and potentially revised, following submittal of the 2022 GSP.

Hydrographs for example wells were presented and discussed, with both Groundwater Level MTs and Interconnected Surface Water MTs displayed side by side for each well. For all wells, the Interconnected Surface Water MT is more restrictive (shallower) than the Groundwater Level MT.

Mr. Loy noted that there is a long reach along the Sacramento River in the eastern central portion of the Colusa Subbasin without suitable wells for monitoring Depletions of Interconnected Surface Water. This would be noted as a data gap in the 2022 GSP.

Mr. Loy displayed the Technical Team's recommendation for SMC for Interconnected Surface Water:

- Three alternative MTs were presented:
  1. Observed Fall 2015 groundwater levels (i.e. measurement closest to October 2015)
  2. 20% of historical range in GW levels below observed Fall 2015 groundwater level
  3. 10 feet below the observed Fall 2015 groundwater levels
- MO = Set as the mean of last 5 years available measurements (generally 2016 - 2020); not a five-year rolling average.

Mr. Davids explained that the rationale advocated by the Environmental Defense Fund (EDF) and others is that setting MOs at levels that existed around 2015 (when SGMA became effective) would result in negligible change to patterns of stream accretion/depletion that existed at that time.

- UR = 25% (2 to 3 of 11) of representative monitoring wells fall below MT for 24 consecutive months (same rationale for lowering of groundwater levels)

## Discussion

Mr. Vanderwaal asked about identification of observed Fall 2015 groundwater levels. Mr. Ayres responded that the observed measurement closest to October 15, 2015 was used as the Fall 2015 level.

Mr. Bills commented on the potential for confusion among stakeholders and the public between percentages, percentiles, and feet below ground surface and between MOs and MTs. He suggested considering options to clarify presentation of materials. He also asked about differences between MOs and MTs and expressed concern about negative impacts that may occur with water levels below MOs but above MTs. Mr. Ayres and Ms. Kincaid explained that the best course of action is for the GSAs to stay engaged and actively manage to maintain MOs and avoid reaching MTs.

This discussion was not completed due to time constraints and desire to have TAC decision on Agenda Item **4.a.i: Groundwater Levels (Indicator #1)**.

The discussion went back to **Agenda Item 4.a.i: Groundwater Elevations**

Mr. Davids presented an updated Slide #19 and encouraged that a decision is needed on the MT at 20% or 50% of range below historic low and how many feet below the historic low.

Mr. Dickens asked if domestic well depths are total depth or top of perforation. Mr. Dickens also commented that he felt 50% of historical range is preferable to 20%. Mr. Ayres clarified that the total well depth is what was used and not the top of perforation.

Mr. Dickens suggested that a third criteria for MT could be added for wells that don't have a large historical range based on a fixed depth below the historical low levels (e.g., 10 ft or 15 ft below the historical low) instead of a percent of range. This would be considered with the other two criteria, with the lowest of the three being set as the MT. The Consultant Team generally agreed that the suggestion has merit and could be evaluated. Mr. Wallace suggested the consultants review this consideration and potentially withdraw his suggestion due to different conditions in different portions of the subbasin. Tamara Williams inquired about which polygons Mr. Dickens' proposed MT would affect. After testing the suggestion for a few wells, Mr. Dickens retracted his suggestion after discussion.

Mr. Vanderwaal commented that he is comfortable with setting MTs based on 50% of historical range, provided that Colusa MTs and MOs for wells near the Yolo Subbasin boundary be set in consideration of and compatibly with MOs and MTs in neighboring Yolo Subbasin monitoring wells, so that subsurface inter-basin flows are not large in either direction. Ms. Fahey commented that an inter-basin coordination meeting with Yolo Subbasin stakeholders is planned for early June. Mr. Vanderwaal asked for a caveat that there be coordination with neighboring subbasins. Mr. Davids commented that MOs should be coordinated because the MO level is where the basin will be operated, but since MTs will hopefully be avoided, the two subbasins can manage their groundwater resources above that level in a coordinated manner. Mr. Davids asked whether they could set different thresholds at different wells.

Ms. Kincaid commented that the regulations allow for MOs and MTs to be set individually for monitoring wells, noting that in one of the 2020 GSPs she reviewed, MT elevations were simply listed for each representative monitoring well. The consistent methodology is designed to be clearly documented and defensible.

Noting that the MO calculation in a representative monitoring well in the northern portion of GCID omitted levels observed during temporary pumping in 2015, Mr. Dickens asked if other hydrographs were handled similarly, and suggested that all water levels during the 5-year period for MO calculation be included. Mr. Davids explained that the team would need to validate it, but he believed the GCID well was the only one for which the levels during pumping were excluded.

Ms. Carter stated that she is comfortable with the 50% of range and the current suggested SMC for groundwater levels.

Tamara Williams commented that it is important that the public understands that the proposed MT alone can't be relied upon to protect the Subbasin sustainability. The GSA will need to be actively protecting the shallow domestic well owners.

Darrin Williams commented that during the 2014-15 drought, groundwater levels in relatively deep irrigation wells were drawn down substantially, but many shallow domestic wells were not affected because they draw from shallower aquifers that were not strongly affected by deeper pumping. He favors setting MTs to provide ample operational flexibility recognizing that groundwater management can be made "on the fly" during implementation to ensure no negative impacts such as subsidence or dewatering of domestic wells occur. He recommended setting the MT (at the lower of the 20% percentile domestic well depth and) 50% of historical range below the historical low initially, allowing for adjustment to shallower MT over time, if warranted. Ms. Nerli expressed agreement with Mr. Williams, noting that she lives and farms on the west side north of Willows and lived through the droughts of 2014 –2015, during which her domestic well had no issues even as levels in nearby monitoring wells declined.

Mr. Kehn commented that 50% of Range is also his preference.

**Action:**

It was decided by the Joint TAC to approve for recommendation to the GSA Boards the MOs and MTs as modified during discussion as follows:

- 1) Minimum Thresholds will be set equal to the lower of the following two calculated water levels:
  - a. 50 percent of the historical range in observed water levels below the observed low water level, AND,
  - b. The 20<sup>th</sup> percentile depth of domestic wells in the Thiessen polygon represented by each monitoring well. This means that 20 percent of the domestic wells are shallower and 80 percent deeper than the 20<sup>th</sup> percentile depth.
- 2) Measurable Objectives will be calculated as the average of the most recent five (5) years of available groundwater levels. The calculated water level is fixed and is not a running average that changes over time.
- 3) An Undesirable Result will be detected when water levels in 25 percent or more (at least 12) of the 48 representative monitoring wells fall below their respective Minimum Thresholds continuously for 24 months. The 12 wells must be the same subset of wells, not any combination of 12 wells.
- 4) To ensure operational compatibility with adjoining subbasins, the Minimum Thresholds and Measurable Objectives for monitoring wells near subbasin boundaries will be reviewed and adjusted, as needed, in consultation with representatives of adjoining subbasin Groundwater Sustainability Agencies.

**Motion:**

**CGA:** Darrin Williams moved to approve the recommendation as amended on Slide 19. Bill Vanderwaal seconded and motion passed per roll call vote:

- Denise Carter – Aye
- Darrin Williams – Aye
- Bill Vanderwaal – Aye

**GGA:** Zac Dickens moved to approve the recommendation as amended on Slide 19. Mark Lohse seconded and motion passed per roll call vote:

Donald Bills – Aye

Emil Cavagnolo – Aye

Zac Dickens – Aye

Mark Lohse – Aye

#### **4.b Projects and Management Actions (PMAs)**

This agenda item was not discussed during this TAC meeting due to time constraints.

#### **5. Topics and TAC Decisions for Next Meeting (June 11, 2021)**

It was decided to hold a special meeting prior to the June 11 meeting to complete the items on this agenda that were not addressed.

#### **6. Member Reports and Comments**

Denise Carter mentioned that the Rural County Representatives of California (RCRC) is supporting Assembly Bill 754, a bill to extend the January 31, 2022 GSP deadline by up to 180 days, and suggested that the TAC or GSA boards may want to consider writing a support letter for the bill.

#### **7. Adjourn**

The meeting was adjourned at approximately 2:00 p.m.

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#### **Action items:**

1. Technical team to add in pumping groundwater values from 2015 into calculation of MOs and MTs for one representative monitoring well, confirm that they are already included in the other 47 representative monitoring wells.
2. TAC and GSAs to consider writing letter of support for AB 754 on GSP time extension.
3. Schedule continuation of this meeting ASAP to complete agenda for today's meeting.

## CGA/GGA Joint Technical Advisory Committee Meeting

### MEETING MINUTES

May 19, 2021 | 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.**

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#### 1. Call to Order, Roll Call, and Introductions

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

Dave Ceppos with the Census and Collaboration Program opened the meeting and went over some housekeeping and logistical items.

#### In Attendance:

##### Committee Members:

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

CGA: Denise Carter (arrived 1:24), Darrin Williams, Bill Vanderwaal, Thad Bettner, Jim Wallace (arrived 1:31), Brandon Davison (DWR, ex-officio)

**Others in Attendance:** Mary Fahey (CGA Staff), Dave Ceppos, Consensus and Collaboration Program [CCP]), Grant Davids (Davids Engineering, Inc.), Ken Loy (West Yost Associates), Jeff Davids (Davids Engineering, Inc.), George Valenzuela (Woodard & Curran), Brandon Ertis (Davids Engineering, Inc.), Micah Eggleton (Woodard and Curran), Sajit Singh (CGA), Valerie Kincaid (GGA Counsel), Holly Dawley (GCID), Jamie Lely, Lester Messina, Susan Silveira, George Pendell, Jim Brobeck, Julia Violich, Tom (last name unknown), G. Wells, Jenny (last name unknown)

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

##### a. May 13, 2021 CGA/GGA Joint TAC Meeting

Meeting minutes were not available.

#### 3. Period of Public Comment

Jim Brobeck commented about local water transfers and groundwater pumping programs. He pointed out that emergency drought proclamations allow pumping without the necessary environmental permitting processes (CEQA and NEPA).

#### 4. Colusa Subbasin Groundwater Sustainability Plan Development:

##### List of Acronyms:

CEQA – California Environmental Quality Act  
GDE - Groundwater Dependent Ecosystems  
GSA – Groundwater Sustainability Agency  
GSP – Groundwater Sustainability Plan  
MO – Measurable Objective  
MT – Minimum Threshold  
PMAs – Projects and Management Actions  
PPT – Powerpoint Presentation  
SGMA – Sustainable Groundwater Management Act  
SMC – Sustainable Management Criteria  
TAC – Technical Advisory Committee  
UR – Undesirable Result

##### 4.a Sustainable Management Criteria (SMC)

Before beginning the SMC discussion, Grant Davids announced that John Ayres was leaving Woodard & Curran for a new position at the California Department of Water Resources (DWR) where he will be reviewing GSPs. Mr. Davids expressed well wishes and his thanks for the work that Mr. Ayres has done on the Colusa Subbasin GSP project.

##### 4.a.i Depletions of Interconnected Surface Water (Indicator #6)

Ken Loy presented the suggested SMC for Interconnected Surface Water:

1. Measurable objective
  - a. Average of most recent 5-years of data. This is not a rolling average.
2. Minimum threshold options
  - a. The observed Fall 2015 groundwater level (on the date closest to October 15), OR
  - b. 20% of the historical range in groundwater levels below the observed Fall 2015 groundwater level (depth to water), OR
  - c. 10 feet below the observed Fall 2015 groundwater level (depth to water), OR
  - d. Some combination of 1-3.
3. Undesirable results
  - a. 25% (3 of 10 representative monitoring wells) fall below the minimum threshold for 24 consecutive months (same rationale as for lowering of groundwater levels)

Mr. Loy then described the monitoring network for interconnected surface water. The Technical Team has chosen wells that are located between 2000 feet and 5 miles from the applicable streams and are less than 200 feet deep. From their analysis, the Technical Team has identified 10 qualifying wells.

##### Discussion

Ms. Kincaid asked about how using groundwater levels as a proxy for depletion of interconnected surface water will be protective of other beneficial uses and users of water.

Mr. Williams asked about the actual period for the MO calculation. The methodology was to use the most recent 5 years of data, but this changes from well to well. Mr. Williams then asked why there isn't more recent data for some wells.

Mr. Bills asked how the current data gaps in the monitoring network will be filled, potentially with new wells. Mr. Bills also made the point that a continuous record of water levels would be extremely helpful.

Ms. Carter mentioned that hopefully additional monitoring wells would be installed closer to the streams of interest.

Ms. Kincaid mentioned that most GSAs are planning on amending GSPs on the 5-year time step that DWR is expecting. Mr. Loy asked if a GSP could be potentially updated or amended with small revisions with addenda. Ms. Kincaid said that DWR was open to minor modifications but that this would still require GSA board approval. Mr. Davids asked if Ms. Kincaid thought it would be better to say (1) the Surface Water Depletion data gaps are so large that there is no way to set quantitative MOs, MTs, and URs, or (2) take a first cut at using the data that are available to develop a first draft of MOs, MTs, and URs. Ms. Kincaid strongly recommended that the second approach be used and that the first approach is bordering on a direct violation of SGMA.

Mr. Bettner asked what should be done if MTs are exceeded. Ms. Kincaid mentioned that there are three conditions that would trigger state backstopping. If MTs are exceeded it might be good to include in your plan that specific PMAs will be implemented if MTs are exceeded.

Mr. Brobeck mentioned that the use of groundwater models was recommended by DWR as the best available tool for characterizing interbasin groundwater flow and depletion of interconnected surface waters.

Ms. Kincaid asked about which streams are interconnected with the subbasin. Mr. Davids responded that the primary stream of interest is the Sacramento River, but that Stony Creek may also be interconnected in some reaches, as well as the Colusa Basin Drain, and perhaps other ephemeral streams on the west side.

Mr. Williams mentioned that purely taking the Environmental Defense Fund's (EDF) approach of setting MTs at 2015 levels seems like it is not putting enough emphasis on local management and local stakeholder opinion. Therefore, Mr. Williams is in support of MTs using Option 3 (10 ft below 2015 levels).

Mr. Kehn suggested that MT Option 3 (10 ft below 2015 levels) is desirable.

Mr. Bills asked if the MT options were mutually exclusive or if there might be a potential hybrid approach.

Ms. Kincaid mentioned that perhaps the UR should be set by stream or stream reach instead of for the subbasin as a whole.

Mr. Cavagnolo asked if Stony Creek is an "interconnected stream." Three of the monitoring wells are along Stony Creek, so these three could trigger the potential 25% threshold for UR. It was questioned whether these wells should be monitoring wells for Interconnected Surface Water. Mr. Bills wrote in the chat box,

*Stony Creek is what I would call managed perennial (Stony Gorge and Black Butte dams).* He said that historical record could be evaluated to determine whether Stony Creek is perennial, intermittent, or ephemeral. Historically, he remembers year-round flow in wet years.

Mr. Vanderwaal suggested quickly resolving the UR during the next meeting.

Mr. Kehn commented that the perspectives of environmental groups should be considered in these decisions. He recommended a balancing act of tighter MTs and looser URs, or vice versa, should be taken, instead of loose MTs and URs.

Mr. Wallace suggested making decision on UR today, and pushing adjustments or additional work to 5-Year Update. Mr. Williams agreed with Mr. Wallace, pending a decision on the 3 wells along Stony Creek.

Mr. Loy shared an online map from The Nature Conservancy that shows lower Stony Creek being connected as a losing stream, or being unsure of connection. He suggested leaving the three monitoring wells along Stony Creek in the network as recommended, but having the Technical Team re-evaluate this issue. If a strong case can be made to remove the wells, this could be pursued in the future.

<https://icons.codefornature.org/>

<https://tnc.app.box.com/s/slmawgsuiw9xhjrt0q3eawnorn85ebyl>

Mr. Kehn suggested an action of recommending MO, alternative MT #3, and UR as shown on Slide 12 to the GSA Boards:

**Action: Recommend to the GSA Boards the SMC on Slide 12 for Interconnected Surface Water, with MT Option #3:**

- Measurable Objective = Calculated as the average of the most recent 5 years of available measurements; not a five-year rolling average
  - All data included (no deletions of low water levels due to temporary pumping)
- Minimum Thresholds:
  - 10 feet below the observed Fall 2015 groundwater level (depth to water)
- Undesirable Result:
  - 25% (3 of 10 representative monitoring wells) fall below the minimum threshold for 24 consecutive months (same rationale as for lowering of groundwater levels)
- Data gaps and necessary improvements to the network will be documented in the GSP.

**CGA:** Mr. Better moved to approve the recommendation on Slide 12 for Interconnected Surface Water, with alternative MT #3 to the GSA Boards. Ms. Carter Seconded and motion passed.

Denise Carter - Aye

Bill Vanderwaal – No (due to unknowns related to Stony Creek)

Thad Bettner – Aye

Jim Wallace – Aye

Darrin Williams – Aye



**GGA:** Mr. Cavagnolo moved to approve the recommendation on Slide 12 for Interconnected Surface Water, with alternative MT #3 to the GSA Boards. Mr. Bills seconded and the motion passed.

David Kehn- Aye

Emil Cavagnolo - Aye

Mark Lohse - Aye

Zac Dickens - Aye

Don Bills - Aye

#### **4.b Projects and Management Actions**

Mr. Davids presented information about the PMA submittal schedule and process:

Schedule:

- June 18 submittal cutoff for July 16 draft Chapter 6
- August 2 submittal cutoff for August 31 draft GSP
- PMAs submitted after cutoff dates will be added if:
  - Pass technical screening
  - Sponsors are encouraged to provide as much detail as possible, but they will still have less detail in GSP

Mr. Davids pointed out that, importantly, there will be ongoing opportunities to add PMAs during GSP implementation.

Mr. Davids went on to describe certain projects that the team is planning to include in the GSP, including modeling of groundwater recharge projects. The focus is on two areas in the basin, in the northern part of the basin around Orland, in the Orland-Artois Water District area, and in the southern portion of the basin around Arbuckle, in the Colusa County Water District area.

#### **Discussion**

Mr. Cavagnolo said that OAWD received an application for ~12,000 acres for annexation recently. He is encouraged by preliminary modeling results that Mr. Davids has presented. Mr. Davids said that incentives for these projects will be a critical piece to encourage growers to participate, and continually participate into the future.

#### **5. Topics and TAC Decisions for Next Meeting (June 11, 2021)**

- a. SMCs – Degraded Water Quality to be revisited
- b. PMAs
  - i. Current project list
  - ii. Sample detailed project description
  - iii. Sample simple project description

#### **6. Member Reports and Comments**

Mr. Williams commented that water levels in his local monitoring well (in Arbuckle) were 80 feet (depth from ground surface to water) on 3/1, 126 feet on 5/1, and 156 feet on 5/17. This is the fastest drop in groundwater levels that he has ever seen.

Mr. Bettner provided an update on the Sacramento River Settlement Contractors activities and actions to manage their limited water supplies this year. Internal discussion of a groundwater program has occurred in his district (GCID). He said if the groundwater program doesn't go forward, fields that have already been planted will have to be fallowed.

**7. Adjourn**

The meeting was adjourned at 4:06 p.m.

DRAFT