SMC for Depletion of Interconnected Surface Water

Friday, December 11, 2020

Meeting Notes

Contact: Sam Magill, Practitioner Work Group Facilitator

Agenda Review and Work Group Introductions

Jay Jasperse welcomed the group and expressed his appreciation for the participants taking time out of their busy schedules to join the meeting.

Sam Magill, Work Group Facilitator walked through the agenda and meeting protocol then suggested a round of introductions.

Summary of ISW SMC Work Group Input to Date

Sam Magill provided a summary of initial work group input from the October 7 meeting.

Review and Discuss Draft Significant and Unreasonable Conditions Statement

A statement of **Significant & Unreasonable** is a qualitative statement describing groundwater conditions unacceptable to beneficial uses and users of water in the basin. These describe what conditions are to be avoided and serve as an initial framework around which the quantitative SMC are developed. Marcus Trotta provided example statements from other Groundwater Sustainability Plans and initial Advisory Committee input.

Questions/Comments

Jessie Maxfield (chat) – I am curious what "biological flows" are from the Salinas example.

> Lisa Porta – The point for that agency is that they need to manage the flows on the river so the biological flows wouldn't be impacted.
> Maxfield – In terms of biology are you looking at fish?
> Porta – Yes, related to their specific biological opinion on fish on the river.

Sam Magill said that all input from the group, Advisory Committees, and ongoing staff work were put together to develop the current proposed Strawman Significant and Unreasonable statement:

"Significant and unreasonable depletion of surface water from interconnected streams, occurs when groundwater pumping within the Basin/Subbasin depletes stream flows below historical levels and adversely impacts the viability of GDEs or to other beneficial surface water users."

Marcus Trotta said he was hoping for feedback from the group on the statement.

Rick Rogers (chat) – The inclusion of "below historical levels" should be removed.
It seems like including that wording leaves the door open for a pre SGMA baseline approach which has nothing to do with trying to prevent impacts or Undesirable Results, especially ones that impact beneficial uses of surface water. Putting the two together doesn't work for me.

Maxfeld (chat) – I second Rick's comment. It could read instead ".....depletes stream flows to levels that adversely impacts the viability of GDEs or other beneficial surface water users."

Trotta – We added the language to have something to work to as we develop our technical methodology for what could be considered significant and unreasonable. We haven't received information from the basins on levels or flow requirements that would help us define adverse impacts on the viability of the GDEs or surface water users. I understand the comments.

Sam Boland – If you remove the "below historical levels" the statement still works as a good strawman proposal because you still need to figure out how to define what adversely impacts these things and how they can be quantified in a measurable way. The challenge is equally difficult with or without the "historical levels".

Maurice Hall – If you remove "below historical levels", it seems like you are saying that pumping significant and unreasonable depletion of stream water from interconnected streams occurs when groundwater pumping occurs. I think some reference to historical levels is appropriate given the way SGMA is written. The depletion of stream flows below historical levels of streamflow – It seems to be linking groundwater pumping to stream flow when many other things affect stream flow. My recommendation would be to tie it to historical groundwater depletions of stream flows.

Val Zimmer – I think of something like surface water such as wetlands that may or may not be connected to groundwater or stream flows year-round, you might have OK streamflow but if you drying out wetland that is adjacent to it, it might be a different thing even though it is near it. I wonder if the language around stream flow needs to be adjusted.

Trotta – Both those points are helpful. Maybe something like "results in more depletion of surface water than has occurred historically" rather than reference the flows.

Georgina King – The indicator is surface water, so it does cover both, wetlands and stream flow. A lot of the metrics you propose to use is stream flow as an indicator, it is hard to do with a surface water body. In general, if it is groundwater affecting stream flow that is connected directly to the stream, a wetland is often separate from the stream. If it is separate from the stream it would come under "Groundwater Level".

Zimmer – I think speaking to an expert on wetlands would be useful.

Rogers (chat) - The problem is that in these med/high basins, streamflow depletion is likely impacting beneficial uses (and ESA-listed species) currently. Managing to a historical point in time does not ensure you are avoiding these impacts but would likely lead to a situation where the current impacts are continued or worsened (most proposed pre-SGMA baselines are chosen during our recent drought).
He added verbally – In most of these basins that are undergoing SMGA right now in where stream flow depletion has an impact, that impact is occurring right now and should be addressed. Using a point in time in the past as a management point, doesn't do anything to deal with the potential impact especially if the point in time chosen is during our past drought.

Rogers – I would suggest a different way of looking at this. What are some of the beneficial uses of surface water that would be significant and unreasonable? It seems it would be much more consistent with the definition within the regulations as to how you would solve the problem.

Boland - I agree with Rick, just replacing significant and unreasonable with adverse impacts, it doesn't take you much further than the original statements. The other suggestion is it seems the viability of GDEs and beneficial uses of surface water are synonymous here. GDEs that aren't in the surface water body – I

am not sure they are in scope for this Undesirable Result like they would be addressed by water level considerations.

Trotta – I think some of the details are things we thought about. Rather than including all GDEs, it sounds like focus on GDE fish and other animals within the surface water itself rather than riparian vegetation outside.

Boland – Yes, I meant GDEs in this context is a subset of beneficial uses.

Maxfield – The Dept. supports not using historic levels or conditions but using stream flows appropriate for the different life stages rather than looking at historic levels or a certain point in time.

Rohde – I am trying to see this statement as a goal statement. This statement is more like an "I want to get fit" statement and not very helpful for guiding what Minimum Thresholds and Measurable Objectives should be. It should be a little more explicit about what would constitute that.

King – Melissa – your analogy – isn't that more the Undesirable Result? The Significant and Unreasonable is supposed to be general.

Melissa – I thought in Santa Cruz County we were more specific in the process. Maybe I am getting the two mixed up.

King – Yes, we got a lot more specific in the Undesirable Results.

Boland – Could you remind me of the distinction between Undesirable Results and Significant and Unreasonable.

King – The Significant and Unreasonable are conditions you don't want in the basin, a general guiding statement. If you didn't know anything about SGMA, you would think they are very similar. In the SGMA process, the Undesirable Results are defined as a combination of Minimum Threshold exceedances. You can have Minimum Thresholds set in your monitoring wells, and these Undesirable Results allow you to fall below the Minimum Thresholds a certain number of times without being classified as Undesirable. It is a definition of how many times you can exceed Minimum Thresholds.

Potential Methodology for Determining ISW SMC

Marcus Trotta provided an overview of the technical work staff has been doing and what we need to do to move forward with this Sustainable Management Criteria. He presented the Strawman methodology for determining Interconnected Surface Water SMC.

Stephen Maples, Sonoma Water went into detail on work completed so far and presented model results intended to help indicate surface water behavior that might be occurring in the basin. Maples explained the goal is to leverage measurements and models to characterize groundwater – surface water interactions and surface water depletion.

Marcus Trotta suggested it might make sense to set interim SMC while working to build datasets and model capabilities during GSP implementation.

1. For Remote Monitoring Points where we have less than five years of data, use autumn groundwater-level contour maps of shallow aquifer system from year with greatest simulated SWD (e.g., autumn 2015 for SRP) to pick Minimum Threshold elevations at the locations of the Remote Monitoring Points
2. For any Remote Monitoring Points with more than five years of data, use measured historical low elevations

3. For Measurable Objectives, pick a year representative of lower values of surface water depletion or set "aspirational" Measurable Objectives of maintaining groundwater levels above streambed?
4. Include a detailed plan in the GSP for how we will build our datasets and improve simulation capabilities to more fully incorporate the correlation assessment methodology we have tested.

Sam Magill then asked for feedback and reactions from the group about what Stephen presented.

Questions/Comments

Hall (chat) - What does RMP mean again?

Trotta (chat) – Representative Monitoring Point, which is where SMCs are set and monitored.

Maurice Hall – You indicated your modeling didn't overlap with the monitoring period. I am guessing that will be corrected and you extend your model into the monitoring period?

Trotta – We recently updated the model through 2018 conditions for the GSP. We will be making refinements and extending the model period during the implementation phase of the GSP so we can better capture more recent high-resolution data once we have more than one year's data to calibrate.

Rogers – How will the relationship between stream flow depletion and impact of surface water beneficial uses be fleshed out? Are there plans in the future?

Trotta – I think Stephen's analysis show that some of the metrics could be incorporated into setting the groundwater level as an SMC are potential increases of streamflow at certain times of the year or year-round. If there are certain flow requirements for certain beneficial users in certain areas that need to be considered, I think this methodology would be well suited to address that.

Rogers – So, in the interim are we going to be flushing those out in the future or will it happen in the first couple years of the GSP? When would those thresholds be developed?

Trotta – Those thresholds are where we would need longer data sets to better correlate the model results with our observations. And to help develop what the targets and thresholds are that are considered for beneficial uses in the streams. How we do that will be detailed in the GSP.

Maples – This type of analysis can tell us if you have a flow during a certain year, what would it have been without the pumping. Based on the results of biological studies, here is what an ebb and flow should be in this tributary, then we can go back and say this is what the model is telling us.

Hall – It looks like you have some nice approaches for correlating with groundwater levels to stream depletions and an amazing set of data. Tracking as best I could from what was provided, I would say in no case would you want to set your targets at or below one of the more severe droughts on record. You would want a margin of error above thresholds, because you don't want to go that low, and there is uncertainty in the model. I would also say you should consider having target levels that vary for different year times. Seems you would want to set targets at or above historic levels and do it for different times of the year. One additional point is that SGMA does allow to continue depletions at historic levels if it is the best you can do. Adding onto the basic SGMA requirement we should try to characterize how we can go above and beyond the basic requirements and have projects that raise levels above historic levels.

Boland – On the graph that shows the water level line with and without pumping - could a similar graph be made for stream flows with and without surface diversion?

Maples– I think it would be possible. I think turning of the pumping in the model is relatively easy to do.

Boland – I don't think it is necessary for the SMC but paints a picture of what is happening in the stream system.
Maples – Yes, it could give some context to pumping relative to surface water deletion.
Boland – Certain years and times of year are more important.

Zimmer – The original SRP model modelled all diversions as groundwater pumping. We have some data from the 2014-2015 drought. Data show that surface water diversions are not the major type of diversion in the summer and groundwater pumping becomes more prevalent due to supply, there isn't enough surface water to divert. That is the pattern that surface water diversions can drop off during the summer.
Andy Rich – I think the total surface water rights is about 200 acre-feet per year total face value within the subbasin. My gut feeling is the 200 acre-feet per year value is going to be a lot smaller than the total stream flow depletion caused by overall pumping in the basin and areas outside it. I don't think removing the surface water rights will cause a big change in the overall stream flow.
Maples – The model suggests it is much more than the 200-acre feet of stream flow depletion due to pumping.
Boland – If you pair it with management actions that involve coordinate surface water activities, it may make the depletion more reasonable.
Lisa Parker – One could also say that it is significant but not unreasonable. It could be significant for other reasons. If it doesn't affect beneficial users, then it isn't unreasonable.
Boland – I think you should keep in mind what management actions could be done.

Jasperse (chat) – What about wells pumping under riparian rights?
Boland. The Russian River is unique. Riparian rights aren't subject to the authority of SGMA. I believe the well pumping into the riparian rights would not be contributing to depletions as defined by SGMA.

Rohde – It would be good to understand what biological flow requirements are necessary for key ecological assets identified as being a GDE or endangered and seeing what their needs are when establishing aspirational measurable objectives. If people will have to reduce or cease pumping to achieve a measurable objective, it will have to be for a good reason.

Hall – I assume you are open to receiving feedback after this meeting about what was presented today?
Trotta – Yes, Stephen's presentations will be sent to you with specific questions.

Natalie Stork – You have all done some great work and I appreciate getting everyone together to provide feedback. Very helpful conversations. Thank you for sharing.

Rogers – I believe that whatever thresholds we come up with, they need to have a linkage to what the impact is to the beneficial use of the surface water. I am looking forward to working with everyone to figure out what this might be.

Andrew Renshaw – I would like to emphasize bullet #4 on slide 16. One thing to consider is developing a plan and schedule for filling data gaps and describing how you would move from an interim type SMC to something more permanent.

Representative Monitoring Point (RMP) Overview and Next Steps

Marcus Trotta shared the work currently being done related to identifying Representative Monitoring Points for surface water depletion and presented maps.

Questions/Comments

Maxfield (chat) – Can files of these maps be shared with us? I would like to look at them more closely and it is hard to read them here.

Trotta – Yes, we will send out the maps and hydrographs.

Review Meeting Action Items / Next steps

Marcus covered next steps in developing SMC for Depletion of Interconnected Surface Water that include:

1. *Continue developing DRAFT Significant and Unreasonable Statement*
2. *Complete GDE and ISW mapping*
3. *Further evaluate potential RMP network*
4. *Develop draft SMC at each proposed RMP based on potential methodology*
5. *Provide update on potential methodology at January AC meetings*

Marcus suggested Sam schedule an additional meeting for this group in early January.

Jay Jasperse reiterated there is lots of work ahead of us. He thanked the folks for participating and wished everyone happy holidays.

Questions/Comments

Hall (chat) – Thanks to you folks at the GSA - thanks for the opportunity to weigh in. I look forward to seeing the materials, digging in a bit more, and hopefully providing some useful input.

Attendees

Jessie Maxfield, CA Department of Fish and Wildlife
Natalie Stork, State Water Resources Control Board
Val Zimmer, State Water Resources Control Board
Sam Boland-Brien, State Water Resources Control Board
Maurice Hall, Environmental Defense Fund
Melissa Rohde, The Nature Conservancy
Rick Rogers, National Marine Fisheries Service
Andrew Renshaw, Dept. of Water Resources

Lisa Porta, Montgomery & Associates
Georgina King, Montgomery & Associates
Jay Jasperse, Sonoma Water
Marcus Trotta, Sonoma Water
Andy Rich, Sonoma Water
Mitch Buttress, Sonoma Water
Stephen Maples, Sonoma Water
Sam Magill, Work Group Facilitator
Simone Peters, Sonoma Water (recorder of meeting notes)