

Sonoma Valley Groundwater Sustainability Agency

Advisory Committee Meeting

Meeting Summary

Date/time: Tuesday, October 13, 2020; 3:00 p.m. – 5:30 p.m.

Location: Zoom

Contact: Ann DuBay, Sonoma Valley Groundwater Sustainability Agency (GSA), Administrator

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Next meeting: November 10, 2020, 3:00 p.m. – 5:30 p.m.

MEETING SUMMARY

Welcome, Introductions and Agenda Review

Tim Parker, Advisory Committee Facilitator, welcomed the group at 3:00p.m. then Fred Allebach, Sonoma Valley GSA Advisory Committee Chairman, called the meeting to order and asked Ann DuBay to conduct roll call.

General Public Comments

None.

Agenda Review and 2020 Meeting Schedule Planning and Review

Tim Parker reviewed the day's agenda and 2020 meeting calendar and mentioned there might be a need for more than eight Advisory Committee meetings next year – this will be discussed/confirmed at the November meeting. It was noted that Management Projects/Actions was being postponed to the next meeting (November) and that Marcus would send out information in advance of that meeting.

Review Action Items and Approval of Previous Meeting Summary

One action item we still need to respond to at our next meeting is Greg Carr's questions about the status of Permit Sonoma to modify the well application form and procedures, and if the current well monitoring program in the valley based on the existing groundwater plan, is being carried out.

Greg Carr – Regarding the previous meeting summary, the second page of the Water Budget topic, Andy Rich's response should read 'Water Service' providers, not 'Water Surface' providers. Steve Wolf made a motion to approve the previous meeting summary with the one requested change, seconded by Greg Carr. The September summary was approved by the Advisory Committee.

No public comments.

Projected Water Budget and Water Scenario Modeling – Projected Water Demand Focus

Objective: Overview of projected water budget requirements, follow-up and next steps for Climate Future scenario, discussion of approaches and assumptions for simulating future water demands, including information and recommendations from practitioner work groups (as available).

Marcus Trotta said the day's focus is on assumptions that we need to develop for the future projected water budget and model scenarios so we can test our projects and actions. Most of the focus is on future water demand projections. Pete Parkinson, Technical Consultant to the GSAs, will give an update on the methodology we have developed for rural residential water demand in the future. Trotta will cover the agricultural water demand discussed in the practitioner workgroup.

Andy Rich, Technical staff, provided up-to-date information on climate projections under consideration and results comparing two of the model simulations for the future model budget. Rich said that future climate is uncertain. SGMA requires the incorporation of climate change as a potential projected future climate scenario for purposes of "stressing the system" and identifying uncertainties in future conditions when including projects and management actions and identifying Sustainable Management Criteria. We are hoping to include only one potential climate change Representative Concentration Pathway (RCP) scenario in order to limit model runs and avoid confusion in the analysis. RCP 4.5 is considered more optimistic and RCP 8.5 is considered more pessimistic in terms of mitigating future greenhouse gas emissions, in other words, RCP 4.5 has less GHG emissions than RCP 8.5. There isn't a substantial difference in the long term but there are differences in the short-term with regards to stream losses, recharge, etc. The emissions scenario will be reviewed every five years at the regular plan updates. The initial polling results at our September meeting:

- RCP 4.5 favored by **4** members (more optimistic in terms of mitigating future greenhouse gas emissions)
- RCP 8.5: favored by **3** members (more extreme/pessimistic model scenario)
- Either model OK: **3** members
- Both models: favored by **1** member

Questions/Comments

Greg Carr – The groundwater storage change slide doesn't show the amount of change, it shows the groundwater storage volume.

Andy Rich – It shows the cumulative storage change from initial value, it is a common way to show it.

Carr – It isn't the amount of change. I would think you would drop the word "change".

Ken Johnson – The blue line is the annual storage change and the green line is the cumulative storage change. The green line is keeping track of everything that happened before and the blue line is year by year.

Rich – We could have chosen to display the total storage in the groundwater basin, but it is common to just show the cumulative storage change. They are synonymous with each other.

Caitlin Cornwall – Is the timing of the onset of the droughts that these show random? Is it meaningful that 4.5 appears just around the corner?

Rich – They are random, the timing characterizes frequency of different types of events.

Cornwall – So we should take away the frequency of these extreme events and not the exact timing of them?

Rich – Yes.

Cornwall – What is the logic of the less extreme RCP showing more of a decline in surface water? I don't understand why 4.5 has such a gain. Could the peak occur anywhere?

Rich – It isn't talking about the amount of water in streams but the net flow of the groundwater system to the streams. There is a non-transient change in the climate system, the greenhouse gas concentration changes over time.

Lisa Porta (chat) – In this simulation scenario, it appears that for RCP 4.5 climate change effects are projected to occur earlier - so the timing is part of this scenario.

Matt Stornetta – In your last slide, the 4.5 example, summary at the bottom. Is sustainability meaning our sustainable management criteria?

Rich – Yes, they are synonymous. To be sustainable by 2042, you would have to show how you have no undesirable results by that time.

Stornetta – Is there a confidence factor associated with the modeling?

Rich – These forecasts aren't predicting the future; they are looking at statistical variability that characterizes the conditions. There is no confidence about a particular year being wet or dry.

Jane Whitsett – Is there any kind of probability associated with these forecasts?

Rich – We covered this a little in our first presentation. It is more of a policy question at this point.

Stornetta (chat) – Thanks Jane, that's what I was looking for.

Fred Allebach – I find this very interesting. The difference between RCP 4.5 and 8.5 is if you pay the piper earlier or later in terms of management actions. When you look at it, 4.5 looks worse upfront and needs more projects and actions which would limit groundwater use. If our adaptive management is prescribed by 5-year milestones, what happens if we choose 8.5 but we get a bad 4.5 early bad scenario, do we have to wait five years to do projects and management actions?

Rich – The SMCs drive when you need to do projects and management actions. We could be totally wrong with the future climate but however we establish our SMCs will determine how the GSA needs to enact projects and management actions.

Allebach – If the Board would choose 4.5, the GSA would have to start gearing up for projects and management actions right away. With 8.5, we wouldn't have to act right away. 6.5 would cut the difference between the two.

Cornwall (chat) – I agree with Fred's implied question: Why is the "more pessimistic" RCP showing worse short-term conditions in the documents contained in your meeting packet that was sent out last week?

Carr – I am mindful of what Fred says. I think we should choose RCP 8.5. If we chose 4.5 and need to do projects and actions off the bat, it is a difficult starting point. I suggest starting with 8.5 and reevaluating after 5 years.

Norman Gilroy – We are not operating in a vacuum, has the County adopted either of these RCPs in their policy work as it relates to climate change and the future of land use in the county?

Rich – Not that I am aware, I will get back to you on that.

Cornwall – Sonoma County's hazard mitigation plan uses, or will use in its next iteration, projected climate conditions.

Gilroy – I am very uncomfortable with having to choose a scenario based on the outcome we would like. I don't think it is a good way to ask the question. Which scenario is the most likely and which one if evaluated for groundwater, would provide us with the best direction towards policy as it relates to groundwater? Comparative studies would tell us more. I still stay with both rather than one or the other.

Ken Johnson (chat) – I think we need to understand what these models mean for us. They are random processes based on the greenhouse gas concentrations, they are not predictive, as Andy Rich said earlier.

Johnson – It seems to me the comparison of the results of 4.5 and 8.5 are not predictive models, they are meant to characterize conditions over time. It may not be appropriate to think that one model is telling us one model is drier than another model. I am surprised that the difference isn't that great between the two. It seems the model is showing net increase in groundwater discharge to streams, yet groundwater storage is decreasing in both. Is that because the discharging to the streams?

Rich – I am sorry I do not have a concrete answer for the dynamics you describe.

Johnson – It seems if you are getting an increase in stream discharge that you should have more groundwater and see a decrease in storage.

Rich – In the beginning during the drought, lower groundwater levels are causing the increase net stream leakage so that makes sense. In the future when it gets drier, we see lower groundwater levels in 8.5 driving those stream discharges to groundwater so it seems consistent.

Johnson – I don't see groundwater levels in your graphs.

Rich – There aren't any. I am giving an explanation as to why we are seeing the variations in net stream leakage.

Johnson – I don't see that the models are telling us over the long range that there is a huge difference. I think we need to be ready with our SMCs regardless.

Whitsett (chat) – Will we be using the model to develop projects? Seems we should rely more on actual current data.

Allebach (chat) – Yes, planned projects and management actions will be contingent on which RCP the Board chooses.

Trotta (chat) – The model will help us test which types and what mixture of projects the GSP should consider/prioritize/plan for to achieve and maintain sustainability. The model has been developed and calibrated using actual historical and current data. The timing/implementation and tracking of projects and actions will be determined based on measured data for the SMCs.

Lisa Porta (chat) – The groundwater model with projected future climate change assumptions (with either RCP chosen) will be used to assess what types of projects and actions are necessary to meet the SMC. But this will be discussed further at a future meeting.

Craig Lichty – Our policies don't have to be linked to anything here. If we go with RCP 8.5, we could elect to start projects and management actions. We are not linking it to spend.

POLL

For climate future, I recommend scenario:

RCP 4.5 = **4** members

RCP 8.5 = **3** members

Either = **5** members

Both = **0** members

Pete Parkinson, Technical Consultant, former Director of what is now *Permit Sonoma* gave a presentation on rural residential water demand projections. Parkinson is providing consulting services on this topic to all three GSAs. He said staff has put together a work group on developing a range of rural residential population projections for the planning horizon of the GSP. The rural residential water demand projections (does not include municipalities or public water companies) covering a 50-year GSP planning period. The objective is to develop a high/low range of projections for the planning horizon of the GSP. As no one is doing projections beyond 2040 we are using the Sonoma County Traffic Model which combines TAZ (traffic analysis zones) and projections from PlanBayArea 2040, to develop two scenarios – General Plan Buildout and PlanBayArea2040. For PlanBayArea, we project growth in rural residential areas will be very low – about 0.5% annually. The

growth under General Plan buildout is forecast to be even lower. Next steps include extrapolating 2040 projections to 2072 and accounting for increased Accessory Dwelling Unit development. We are looking at a scenario that is 25% higher than the General Plan or PlanBayArea, which will account for an increase in Accessory Dwelling Units. The land use group now has data for vacant parcels, which will be incorporated into the projections. We are also modeling growth projections in the watershed area outside of the basin as they are important areas in terms of recharge to the basin. Sonoma Developmental Center is not factored into the projections, assuming either the existing surface water system or VOMWD will supply redevelopment on the site.

Questions/Comments

Cornwall - When you say growth, is that growth in the number of homes or in water demand?

Parkinson – Housing units.

Johnson – In considering dynamics between rural residential and existing local agencies, did your forecasts balance those two demands? Were they basically offset or is the calculation too detailed?

Parkinson – I would say it is too speculative. The county has very hard urban surface boundaries around unincorporated areas. Extending a service area is a big deal in terms of land use change in this county. I think it is prudent not to speculate it would occur.

Johnson – I am seeing more large pieces of land for sale and being split in the process and that made me think about where these folks are going to end up in the process.

Carr – I am concerned what may be falling through the cracks are wineries and commercial properties in unincorporated areas on wells. Are they accounted for in this?

Parkinson – They are not in the work I am doing.

Trotta – Wineries are projected in the agricultural irrigation. Commercial isn't calculated out in the unincorporated areas. Given all the uncertainties in terms of locations and numbers of commercial uses such as wineries, we weren't planning to include them in the initial 50-year projections.

Carr – I think you need to do that.

Parkinson – I would imagine the initial pumping of the wineries is included in the models, correct?

Trotta – Correct.

Parkinson - When you look at water demand at wineries, the lion's share of water demand is coming from the irrigation in the vineyards, not the winery.

Carr – It isn't only wineries. TAZs have tremendous potential for development / commercial growth.

Lichty – The Wine Institute collects data on this, and they have been able to show there has been a reduction in use of water in processing wine over the last 20 years. I bet if we contacted them, we could collect some useful information.

Hill – Is a winery considered commercial or agricultural?

Trotta – Agricultural is strictly related to irrigation; commercial is water used at a winery.

Allebach – I agree with Greg Carr. Development near Baylands area had a substantial amount of water use that could impact saltwater intrusion. Pete Parkinson, you mention in your staff report, there could be a higher intensification of use and you would maybe add 25%. One concern I have where I live is there are some people planting mature olive trees from the Central Valley. There may be some correlation between the wealth of the population coming into the valley and their changing water demand.

Parkinson – I have been talking to Marcus Trotta and Andy Rich about how we can account for that in the model. I think the key is making sure we are using groundwater demand factors for this growth that reflect actual water demand.

Fred – Also, the SMCs can keep an eye on that by seeing how green it is around properties. You can look at it to estimate water use.

Gilroy – A study was conducted some time ago, looking at potential for number of wineries in the Sonoma Valley but also the potential of possible subdivision under present day ordinances which means there could be more parcels available for wineries. You said you would be doing the same for residential parcels in looking at potential for subdivision. If yes, I applaud the idea, if not, I suggest it.

Johnson – Actually I think the project and management actions will not be based on the climate model.

Marcus Trotta provided an overview of Ag water demands. There is a practitioners' work group that has been formed to develop a range of agricultural water use projections for the planning horizon of the GSP. Land use planning and agricultural water subject matter experts will help identify 1) potential expansion or contraction areas for irrigated crops; and 2) project changes in crop type. The group has met twice and will meet again this week. The general work group member input was an expected reduction of farmed acreage for all crop types with exception of vineyards and cannabis/hemp. We have developed a survey form projecting 20 years, that was sent to Farm Bureau, Community Alliance of Family Farmers, and Sonoma Winegrape Commission. We received 39 responses and will report results back to you after their next meeting.

Questions/Comments

Whitsett/Cornwall (chat) – What is the blue line in the legend?

Trotta – Orchards.

Stornetta (chat) – Are the acres assumed to be in the Sonoma Valley?

Trotta – Yes, estimated with the watershed area of Sonoma Valley.

Whitsett (chat) – The vineyard acreages on the regression plots for vineyards are much higher than the 13,000 on slide 34. I see now the regression plots are for all of Sonoma County and slide 34 is only Sonoma Valley.

DuBay (chat) - I believe the regression analysis was for the whole county.

Trotta (chat) – Correct.

Carr – How well do the survey results match up to the regression analysis? When you did the survey, were folks asked to consider climate change in their projections. It might be a good opportunity to marry up their feedback with RCP 4.5 and RCP 8.5; a big drought could change the way they think about a possible outcome. You said the model wouldn't address hemp and cannabis. A suggestion – you could assume a bigger vineyard acreage.

Trotta – Your first question – comparison to regression analysis – we found that by crop type, they generally match up with vineyards, truck and berry crops projected to increase. The actual percentages varied; some were consistent. With respect to climate change, we didn't specifically ask in the survey questions, but it was raised in work group discussion; we didn't present the RCP data to them. Good point/comment.

Cornwall – I feel like it is important to have a placeholder for cannabis and hemp just so they don't fall off people's radar. Also, regarding the profitability of vineyards, a lot of the conversations you might have

had so far with the work group might not have fully accounted for fires and the prospect of more fires in the future – that might decrease future projections.

Stornetta – I echo what Caitlin Cornwall said, cannabis/hemp should be included. I ask that the acres be revisited, it seems the acreage numbers are high for the size of the basin – especially irrigated pastures.

Water Quality Degradation Sustainable Management Criteria

Objective: Review water quality SMC proposals and draft GSP section narrative, and discuss additional considerations and next steps

Lisa Porta gave feedback received since the last AC meeting and recapped key points on Water Quality SMC, and the development of Sustainable Management Criteria. Porta presented the revised proposed Significant and Unreasonable Statement:

“Significant and unreasonable water quality conditions occur if 1) Sonoma Valley GSP projects or management activities directly cause an increase in the concentration of constituents of concern in groundwater or 2) Water quality is affected due to undesirable results occurring for other SMCs that lead to adverse impacts on beneficial users or uses of groundwater.

Adverse impacts include diminished supply due to water quality impacts, such as non-compliance with drinking water standards or undue costs for mitigating negative impacts such as wellhead treatment or well replacement”.

Questions/Comments

Carr (chat) - Where is saltwater in this discussion?

Trotta (chat) – It is being addressed through the seawater intrusion indicator.

Johnson/Allebach (chat) – How prevalent/where is Boron?

Trotta (chat) – We had to drop Boron, at least initially, as when we further analyzed the data collected from public water supply wells (which are the main types of wells that are currently monitored), we found that boron is not routinely analyzed.

Carr – I suggest we drop the last paragraph, it seems extraneous.

Porta – The last paragraph was added to help characterize what an adverse impact is.

Carr – It doesn’t seem to add anything to the Significant and Unreasonable statement.

Vicki Hill (chat) – Why drop the last paragraph?

Cornwall – I see several different way bad results are described. Can we consolidate? Otherwise the reader is left to try to figure out how they relate to each other.

Porta – Good point, we can work on it.

Cornwall – The #1 and #2 are different causation pathways that could lead to bad outcomes that lead to Significant and Unreasonable results.

Porta – We will consolidate and follow up with everyone to ensure it works and simplify the last paragraph.

Johnson – There are localized areas that have non-compliant drinking water standards. Is that putting the GSA in line for being responsible or how are we thinking about those kinds of impacts and managing those?

Porta – We are not going to put the GSA at risk for things that are already occurring. It will be part of the Minimum Threshold and Undesirable Results definition.

Carr (chat) – Who is “the Agency” in the first bullet? (slide 44)

Porta – The GSA.

Cornwall – I suggest a small edit – Change “move” to “change” (Minimum Thresholds paragraph, p. 45)
First one says “GSP monitoring area”, the other two say “GSP monitoring program”.

Carr – If we have a Minimum Threshold that says we won’t have any more wells showing an exceedance, what happens if a well that currently shows exceedances has an increased water quality problem that goes above and beyond the exceedance that occurred before, does it matter?

Porta – If it is something the GSA’s actions are causing; it would be looked at.

Carr – That would not trigger a violation of a Minimum Threshold, the way it is drafted?

Porta – I see, you are saying if the value of the concentration is a lot worse. It is just on the exceedance number. It will catch up to the Minimum Threshold eventually.

Carr – How do changes in water quality standards affect this as we go forward? Is it factored in?

Porta – If there is a change in standards, we would have to update the Minimum Thresholds.

Carr – I guess it could be a problem if we started a project management action that met standards and standards change.

Porta – Yes, that will be on a one-by-one basis if it happens.

Johnson – One issue for me – The language I am seeing that raises a red flag is attributed to the GSP. It seems like we are talking about changes that are a result of our groundwater management activities. Considering right now we aren’t doing anything, and things are changing. The other thing is the basin is the basin. The language is almost limiting our effectiveness or ability. Could we do something to expunge it. Also, I am not seeing anything in the threshold definition dealing with geographic distribution. It seems we have an arsenic cluster here or there; has it been factored in?

Porta – SGMA is managing groundwater quantity and de-facto what isn’t harming groundwater quality because that is already managed by other agencies or programs. Part of the challenge is to not go against or affect other programs, so we can’t necessarily do that. It goes back to our seven considerations for water quality – the Advisory Committee decided to go with a “do no harm approach”. Technically, we could decide to go above and beyond cleaning. From SGMA perspective, we will be good stewards and manage the water quantity in the basin.

Johnson – I agree there are agencies managed with the task to control quality. I don’t want to give up our role if we see something that isn’t being addressed.

Porta – This is a great point, discussed at length with the Santa Rosa Plain basin, there is going to be coordination. We talked to regional folks, there will be coordination amongst groups.

Johnson – And how about geography?

Porta – That is taken care of by the number of wells. It is also something that will be considered. You probably won’t put a recharge pond in the middle of an arsenic cluster.

Johnson – I am worried about the extent of our basin and the local nature of the hotspot. I want to have a capability to manage our hot spot.

Porta – The problem with arsenic is that it’s naturally occurring. It can be acknowledged better in the GSP in the projects and management actions, but I don’t think there is an active management for this specific item.

Trotta – In Santa Rosa Plain, we have identified different areas where water quality fits into the GSP and the implementation program, we are developing a description of coordination with other regulating agencies.

Cornwall – I can imagine a lot of argument if there is a new exceedance. Who decides whether a new exceedance is caused by the GSP?

Porta – That is something we will have to fight through, it will be challenging.

Cornwall – I like the idea of not accepting degradation of water quality but can you say if there is really an exceedance or should we give the data two years before it is real?

Porta – Most wells get measured more than once a year. They already go through all their protocols and lots of Q&A. State Board does rigorous quality control on the data.

Cornwall – That leads me to want zero additional exceedances and go for Option #1.

Johnson (chat) – Zero good with me.

Allebach – I have the same question, particularly for arsenic which is a health hazard – if tests are good, I am more comfortable with zero. Public supply wells, I believe there are 25 of them, I am particularly concerned about arsenic because I live on a property that has a well with arsenic and my well isn't on the map. I think I read somewhere in a staff report that future monitoring isn't part of the SMC. I will send in my comments.

Allebach (chat) - The arsenic red dots missed the area on north 8th East; arsenic should be monitored all along the east side fault.

Trotta (chat) – Because our currently available monitoring network is public water supply wells, there will be data gaps in areas where there aren't any public water supply wells. Should other monitoring programs be developed through other regulatory programs or by the GSA in the future other areas could be covered by this SMC. Additionally, the GSA would also be tracking other water quality data (even if not specifically part of the SMC monitoring program) in the GSP implementation.

Carr (chat) - County well permitting uses these standards for well water quality review.

Johnson (chat) – If a well is monitored annually only how meaningful is an average? Do we have the option of mandating sampling of nearby private wells if a public well has a significant exceedance?

Stornetta – I am curious, the Constituents of Concern – how mobile are they?

Porta – It depends on the chemistry. Nitrate is less mobile, arsenic is more. Salt isn't very reactive.

Trotta – We have time series graphs for most of the wells and can make them available for review. We see occasional swings.

Johnson (chat) – Groundwater movement is quite slow.

POLL

1. *I recommend that the number of additional supply wells that exceed the MCLs be:*

Zero additional exceedance = **4** (50%)

1 additional = **2** (25%)

2 additional = **2** (25%)

2. *For Undesirable Results, I prefer:*

Option 1 = 4

Option 2 = 3

Option 3 = 1

Updates

Objective: Provide relevant updates that inform the Advisory Committee and for AC to ask questions if needed.

Ann DuBay said the Board was supposed to meet when the Glass fire moved into Sonoma County so the meeting was cancelled; the Board will meet next on October 26 with a packed agenda.

Andrea said we are identifying a Board member as liaison from each basin as we develop the survey for the rural outreach program. The Petaluma Valley Board appointed Mike Sangiacomo. The survey is planned to go out in November pending political climate.

Carr – A few months ago, Rue Furch from Santa Rosa Plain, Caitlin Cornwall and I were talking about organizing outreach presentations with environmental groups, maybe consolidating the groups into one meeting. Covid 19 has affected that and progress has dropped off for that. Is there something you can do to promote work on this? Is there some way the other basin AC folks can work with us to do consolidated remote meetings?

Rodriguez – Yes, I will set up a call with you and Rue Furch to discuss and look at possible dates.

Marcus Trotta provided a quick overview of the practitioners' work groups. The maps and other information we are compiling from the groundwater dependent eco-systems are being shared with the group looking at surface water depletion indicator. We had our first meeting last week; it went well, and we are in the process of developing technical information.

Tim Parker will send a legislative update by email in interest of time.

No Public Comment.

Review Action Items and ask for any Closing Comments

Tim Parker thanked everyone for attending and for their comments.

- We will meet again on November 10.

Fred Allebach enjoyed hearing the input today. He adjourned the meeting at 5:41 p.m.

Attendees:

Advisory Committee Members (present)

Fred Allebach

Craig Lichty

Greg Carr

Jane Whitsett

Jim Bundschu

Kenneth Johnson – joined a few minutes late

Norman Gilroy

Steve Wolf
Vicki Hill
Caitlin Cornwall
Matt Stornetta
Taylor Serres

Advisory Committee Members (absent)

None

Staff/Presenters

Ann DuBay, Sonoma Valley GSA Administrator
Jay Jasperse, Plan Manager
Marcus Trotta, Sonoma Water, Technical Staff
Andy Rich, Sonoma Water, Technical Staff
Andrea Rodriguez, Outreach Staff
Lisa Porta, Technical Consultant
Simone Peters, GSA Administrative Aide (recording meeting summary)

Facilitator

Tim Parker
Pete Parkinson, Consultant

Other Attendees

Tad Bedegrew (Dept. of Water Resources)