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Santa Rosa Plain Groundwater Sustainability Agency
Community Meeting – October 13, 2021

Questions and Answers

1. **Where will the winter water to recharge wells come from? What impact will these wells have on the Laguna and private wells? If significant impact, will pumping from those wells be stopped?**
   Jasperse (chat) – Winter water recharge can come from a variety of surface water sources, the largest being the Russian River. Our studies show that every year that we have records (since 1908), there is available natural flows that could be used for recharge, it's just a matter of how much, depending on how dry the year is.

2. **What if you'd used a model that we would have "normal" precipitation or drier conditions (instead of wetter than normal for the next 20 years) – how would the conclusions in Section 3 been different? Would we have to implement projects or actions more quickly?**
   Jasperse (chat) – We use the entire forecast period as required by SGMA to develop our projects. We chose the more pessimistic model (RCP 8.5, which is based on no significant Greenhouse Gas – GHG-- reductions) even though it shows that the first 20 years as generally normal or wetter. The important point is that the entire forecast period is much more pessimistic than the RCP 4.5 (which assumes GHG reductions). We look at the precipitation variability and the severity of drought (magnitude and duration of drought). The sequence of climate conditions shown for any model forecast are not accurate, it is important to look at the complete picture. It's not just precipitation, temperature is also an important driver for affecting groundwater conditions. Higher temperature dries soils (reducing recharge), increases evapotranspiration, and increases water demand for uses like irrigation. The RCP 8.5 scenario is one of the warmest forecast scenarios.
   John Nagle (chat) – By the regulations, the Plan needs to account for future hydrology and rainfall. Since all the hydrological models show less rain and water in the system, the Groundwater Sustainability Plan (GWSP) is based on a future with less rain in the basin.

3. **Based on your "Water Year Types" chart, you forecast only two years that have less precipitation over 50 years compared to 2021. If yes, your model is way too wet.**
   Trotta (chat) – Section 3.3.6.3 of the GSP has a summary discussion on the model simulated and projected climate. Here is a paraphrase from that section: The first 20 years of the projected simulation period are relatively wet compared to the historical precipitation. The first two years of the projection are very dry but are then followed by a total of six wet, one very wet, one dry, and 10 normal years. In this period, the average precipitation is 35.6 inches per year, which is 20 percent greater than the historical average. After water year 2041 there is an 11-year period with three wet years, one dry year, and the rest normal. In the final 20 years, the conditions become drier when compared to the prior simulation period; there are no wet water year types, and 13 dry water years.

4. **What is the basis of the rainwater projections for the next 20 years and are they too optimistic?**

See responses to questions 2 and 3 above.

5. **Why is the GWSP not subject to CEQA?**
   DuBay (chat) – Collectively, the three bills that became the Sustainable Groundwater Management Act exempted Groundwater Sustainability Plans from CEQA. However, as specific projects are planned and implemented, they would be subject to CEQA.

6. **Will single family wells be subject to the fee that was mentioned earlier?**
   Rodgers – I can't say for sure, but in 2019 roughly 25% of the total extraction in Santa Rosa Plain basin was from residential groundwater users. There was a fee that was evaluated, I think it was $9.90 a year, that we came up with in 2019. We have better data now and more information. We would love to hear what folks think about the amount. What we ultimately come up with in June remains to be seen, but we are going to be looking at options that include a fee.

7. **If it's easy, can you describe what "recycled water" is?**
   Peter Martin (chat) – In the most general terms, recycled water generally refers to highly treated domestic wastewater that is beneficially reused. In this basin setting, recycled water is put to use through land application for irrigation purposes in urban and agricultural settings.

8. **I live west of Santa Rosa, off the north side of Guerneville Rd. On the Southside, between the road and SR Creek are ag operations that have been and still are using overhead irrigation during the day, no matter how hot it is. We seem to share an aquifer and would like to have this checked. I support their businesses and am not the water police but concerned that someone is ignoring respectful water usage.**
   Magill – There is a feature on the https://santarosaplaingroundwater.org website to report water waste.
   Jasperse – Cities also have places to report water waste. Cities and water districts are required to have what's called a Water Shortage Contingency Plan by regulation through the state.

9. **Will public comments submitted after the GSP is approved locally and submitted to DWR be considered as seriously as those submitted during this comment period?**
   Rodgers – Any comment received will be important. It is a living document. Even when it is approved, we will continue to improve it. After this public comment period there's a State public comment period and they take the comments very seriously, so I think there's a lot of opportunity for input.
   Trotta – There will also be five-year updates.

10. **What are the processes/mechanisms for winter water recharge from the Russian River into this basin?**
    Jasperse (chat) – The primary method of recharge of Russian River winter water to this basin is via a method called groundwater banking or aquifer storage and recovery. This approach is especially effective in managing groundwater in deeper aquifers and is accomplished by recharging water via wells. It's likely that the source of Russian River water would be potable drinking water since the infrastructure is essentially in place. Groundwater banking is widely and increasingly used in the state, US, and internationally. The state of California is supporting these types of methods for both drought resiliency and compliance with SGMA. Other types of recharge would include recharge of water in surface ponds or spreading flood water over land,

this type of surface recharge can be effective to help shallow aquifers including helping baseflows in tributaries to support ecosystems.

11. **How can you evaluate water quality if many well owners do not have their water analyzed for quality?**
    Trotta – For purposes of our GSP and what SGMA requires, the monitoring data we will use for water quality comes from public supply wells located within the basin that are required to analyze and report water quality data. That network represents in total, 122 wells within the sub basin, that are already collecting that data, so for the GSP will be compiling that information and then evaluating that data against the thresholds and objectives that are described in Section 4 of the Plan.
    DuBay (chat) – Water quality is regulated by multiple agencies at groundwater supply wells throughout the basin. This data was used to determine if there are problems and will be used to evaluate changes in groundwater quality.

12. **How many monitoring wells are there in the basin?**
    Trotta - Approximately 122.

13. **How is this report preparing for the 20-year drought predicted by this model? For instance, any homes and other buildings built generally last for 75-100 years and will be a permanent draw on the system. Agriculture and/or cannabis established over the next 20 years is another at least semi-permanent draw on the system. Once those uses are established, what projects and actions will be taken?**
    Jasperse (chat) – The GSA boards have some regulatory authorities, but they do not have land use authorities. That said, SGMA requires that the GSA provides its plan and reports, etc. to land use agencies (i.e., county and cities) for their consideration. In some areas of the state, there has been a disconnect between land use planning and water supply planning. In Sonoma County, however, we have all the cities and the county within the 3 basins represented on the boards so they and their staff are closely involved - and will continue to be. Every five years this plan will be updated so we will capture technical advances, new data, and land use policy changes over time.

14. **The Northern California drought will probably continue beyond past next year or longer. This does not bode well for our surface water reservoirs which are very low.**
    Magill – It is a concern shared by many.

15. **How can we get our well measured? Our neighbor put in a vineyard and we are worried about how much water is in the well. Would this be a service if we need to pay a fee just for having a well?**
    Rodgers – There are a variety of options. If you have a well, there are companies that can do it for you. There are ways you can do it yourself. There are also voluntary monitoring programs. We have the Representative Monitoring Point wells (RMP) in the basin looking at the whole basin, so if there is a stressed area, it will be apparent.
    Trotta – As part of our Implementation Plan, we plan to expand our RMP. We are also in process of developing a groundwater data dashboard.

16. **How will reactivating previously out of commission mega-wells, located at the heart of the Laguna de Santa Rosa, impact the aquifer in the Santa Rosa Plain?**

Jasperse – I don't know that I would call them mega wells, but they were installed in the 1977 drought and have been used since then, for every drought except this one. They were used continuously for a period of 10 years, so they operated 24/7 for 365 days a year between 1999 and 2009. There is a deployment of at least 18 monitoring wells that carefully monitor these water levels constantly, so we have a robust data set spanning over 45 years that shows the impacts of these wells and they have not significantly impacted other well owners in those years. We will continue to monitor and adjust accordingly. What we are doing differently now is recharge; it is an important factor here. It now only improves drought resiliency, but it will also move forward some projects that this GSA is going to have to implement anyway in terms of SGMA, so the GSA will benefit from those activities and we hope to get some funding from the state.

17. **Small water districts also must check water quality, could the GSA Board get access to that information?**
    Trotta – Most of the smaller water suppliers and mutual water systems and water suppliers are considered public water supply systems. They do report to the state and are included in the network I mentioned. Also, as part of the GSA, there is a group of independent water suppliers and mutual water companies that is represented on the Board. They have been active with sharing information with the Board.

18. **Are the Casino wells monitored and the pumping quantity used in the study?**
    Trotta – The wells operated for Graton Casino are included in the GSP, and the information provided by the tribe are also included.

    CORRECTION: SGMA does not apply to tribes. While the Federated Indians of Graton Rancheria participate as a voluntary member of the GSA's Advisory Committee, the Tribe, and the wells it owns are not subject to GSA projects, programs, management actions or monitoring. Estimates of groundwater usage obtained from publicly available documents (Environmental Impact Reports prepared by the Tribe) are incorporated into Subbasin-wide water budget. The monitoring wells referred to in the above response are located near the Graton Resort & Casino but are owned by other public and private entities and are not tribal wells. The Federated Indians of Graton Rancheria operates its own monitoring wells, and in the past has voluntarily provided monitoring data to Sonoma Water. The tribal monitoring network and the publicly owned monitoring network measure groundwater levels but, do not meter the quantity of groundwater pumped.

19. **Can we increase our deep percolation of precipitation and applied water using soil management practices?**
    Jasperse (chat) – Soil management practices using carbon sequestration and biochar can be very important techniques to increase efficiency of water use.

20. **Have you factored in water used for firefighting in this plan?**
    Jasperse (chat) – The water use projections for urban providers consider firefighting as part of their Urban Water Management Plan. The Groundwater Sustainability Plan uses this data in its projections.

21. **How will well monitoring play a role in sustainability?**
    Trotta (chat) – Monitoring of groundwater-levels is key to evaluating whether the Subbasin is achieving and maintaining sustainability. Of the approximately 100 wells currently monitored, about 26 have minimum thresholds and measurable objectives that are set to define the sustainable range. Annual measurements from those wells will be evaluated against these thresholds and objectives to evaluate progress on achieving/maintaining sustainability.

22. **What is the baseline year used for comparison?**
    Trotta – It essentially depends on the type of data that's being analyzed. What we used was our available historical data, and so, for groundwater levels it depends on the monitoring records available from a particular well. When we're setting minimum thresholds for groundwater levels, we looked at the available data from a particular well that we're using as a monitoring point for groundwater levels and identified the historical low. So, the baseline in that context is going to be dependent upon the length of the historical record. For the water budget we utilize two different time periods; Sigma requires us to look at both historical and current. For the water budget future projections, the baseline is considered the future projected water budget with growth and climate change included without projects and management actions.

23. **In preparing these GSA plans, did you include all projects approved in Sonoma County after their very old General Plan was adopted? (I note that this plan does rely on that GP being updated by 2028.) For example, the existing (old) Sonoma County General Plan predicts the amount of grapes being grown, but the reality is that the maximum predicted in that General Plan is lower than the approved projects by quite a bit.**
    Jasperse (chat) – We did not use the General Plan projections for actual conditions to-date. Instead, we worked closely with the County (Permit Sonoma) and the Ag Commissioner to use actual on the ground land use based on land use maps over several years of the historical record (I believe since the 1970s). This allowed us to accurately depict land use changes over that time. In terms of the 50-year forecasts, we worked with experts in land use projections for urban, rural residential and agriculture to develop 50-year forecasts. We used the best available information. As you can imagine when you forecast anything 50 years from now, assumptions need to be made which we have documented in the report. The land use and water demand projections will be updated every five years similar, to climate projections.

24. **If depletion of surface water from interconnected streams can be caused by groundwater pumping, is the flip side true in that restoration and conservation of wetlands and streams that hold/store/convey surface water be beneficial strategies to support groundwater sustainability?**
    Trotta (chat) – Yes, depending upon the type of restoration project, they could be beneficial for groundwater sustainability. There are lots of opportunities for multi-benefit projects.

25. **How did you arrive at the figure of 1,785 gallons a day as the usage figure that would trigger a rural resident to be required to have a meter? If there are no meters to begin with, isn't it impossible to know when this figure has been reached? Is it possible for SGMA to require all NEW rural residents, ag, industrial, and commercial be required to meter? Meters should be "smart" meters which send information directly to the cloud. No self-reporting.**
    Jasperse (chat) – The 1,785 gpd figure was contained in the statute so it's part of the law. Other than municipal water use (cities, water districts) which are required to report their pumping, the approach we are using to estimate the rest of the pumping by rural residential, commercial, and

industrial, and agriculture is to estimate water use based on climate and land use by using water use factors that have been developed for different types of water use. For example, grape vines use about X amount per acre per year. We know how many acres of grapes so we can estimate the water use. Further, our models can then adjust for climatic conditions to provide a more refined estimate. We also used the best available information for rural residential use based on studies. We recognize that these are assumptions and will continue to refine the data we use in our estimates in the future updates of the plan. This approach is the most common approach by GSAs across the state given that most basins do not have meter regulations.

26. **If there are no meters required for rural residents how will you know that your outreach to encourage water conservation (low flush toilets, turf removal etc.) has been successful?**
Jasperse (chat) – It's a good question. One approach is that we can estimate water savings based on number of low flow toilets, turf removed etc. This approach is used in the urban sector too. There have been several studies and models developed to estimate savings. You are correct, it won't be a direct measurement of pumping.

27. **Is there a way to suggest areas and wells to monitor? e.g., Santa Rosa Creek between Willowside and Fulton Rds. and horse ranches with wells in this area?**
Trotta (chat) – Yes, we have identified initial data gap areas in our monitoring network section, but please add a comment through the GSP website if you have other areas you'd recommend. As we roll-out a voluntary groundwater-level monitoring program, we will develop outreach materials that can be provided to well owners that are interested in participating.

28. **I'm particularly concerned with the data gap for streams and well pumping. In 2009 Paulin Creek went dry overnight, and after I made many phone calls, within a week the water was flowing again. Well pumping near the creek is the only thing it could have been. The location of that well was a secret, as was whether it was being used and how much water was being pumped, and that's a very large problem. Does the law now require that wells and whether they're being used, and how much water they're pumping must be publicly available?**
Jasperse (chat) – All wells in Sonoma County need to have a well permit obtained through the County (Permit Sonoma) so there are records. Those records are very good in recent years but incomplete in the past. In addition, if a well diverts water that impacts surface water, it should be operated under riparian or appropriative water rights. The appropriative water rights are under permit administered by the State Water Resources Control Board. Riparian water diversion is restricted only for certain flow conditions and place of use. There's more to it than this - water rights are complicated.

29. **How can one join the rural residential well voluntary monitoring program?**
Trotta (chat) – As we roll out a voluntary groundwater-level monitoring program, we will develop outreach materials that can be provided to well owners who are interested in participating. In the interim, there is the GUIDE program that provides a conduit for well owners to provide information to the GSA. If anyone hasn't looked at that, please do. You can submit information and let the GSA know you would like to participate. As we roll-out a voluntary groundwater-level monitoring program, we will develop outreach materials that can be provided to well owners that are interested in participating. In the interim you can use this link to the GUIDE program - https://santarosaplaingroundwater.org/user/.
Rodgers – GUIDE: There is a map of the basin and you can find your parcel and see what information we are assuming. You can provide updated information. On the homepage in the

center in the top header, you'll see GUIDE groundwater user information data, and that will take you to the map and the survey.

30. **Will unregistered wells be exempt?**
    Magill – All wells must be permitted through Permit Sonoma.

31. **I was told I couldn't find anything out about any private wells as a private citizen.**
    Trotta – In terms of availability and information on private wells, there is a well log that shows the condition of the well, initial yield of the well, how it was constructed, etc. Used to be private but since 2014 isn't anymore. There is a map that locates all the wells. Map can be found on DWR's website. The GSA can't require residential well owners to meter their wells so that info wouldn't be available to the public.

Comments / Links

- From Richard Savage (chat) – NOAA has reported that droughts not only reduce surface water, but groundwater takes a longer time to begin to recover. Historically, drought and reduced groundwater storage occurred almost hand-in-hand in the Central Valley. When drought conditions ended, groundwater storage would normally rebound – this is the relationship we see in records from about 1960 - 2000. But our recent study found that this relationship has changed over the last decade and a half. In the data from the past fifteen years or so, scientists found that groundwater storage continued to decline for a full year after drought has ended. So, whereas previously when drought ended, groundwater resources would begin to recover, now groundwater continues to decline through a wet period. Here is link to NOAA report https://www.climate.gov/news-features/blogs/enso/long-arm-california-drought.

- An FAQ on the Sonoma Water's Santa Rosa Plain Drought Resiliency Project (reactivation and ASR at Sonoma Waters Santa Rosa Plain wells) is provided here - https://www.sonomawater.org/DroughtResiliency

- Feb, March, April precipitation outlook map. More below average rain predicted. https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=5

- The information Jay Jasperse referenced in his presentation can be found online here: https://santarosaplaingroundwater.org/drought/

- Link to GUIDE program https://santarosaplaingroundwater.org/user/

- There is a feature on the https://santarosaplaingroundwater.org website to report water waste.

- GSP and comment form are available here: https://santarosaplaingroundwater.org/gsp/

- Link to join Board meetings: https://santarosaplaingroundwater.org/meetings/