From:	Kristine McCaffrey
To:	FCGMA
Cc:	Ian Prichard; Bondy, Bryan
Subject:	Calleguas"s Comments on LPVB GSP Update
Date:	Monday, October 7, 2024 12:42:50 PM
Attachments:	LPVB 5-yr evaluation letter 10-7-24.pdf

Please see attached comments.

Thanks.

-Kristine

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[redacted]

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October 7, 2024

Arne Anselm, Interim Executive Officer
Fox Canyon Groundwater Management Agency
800 South Victoria Avenue
Ventura, CA 93009

Via E-mail to FCGMA@ventura.org.

Dear Mr. Anselm,

Calleguas Municipal Water District (Calleguas) appreciates the opportunity to provide comments on the above-referenced document. As the imported water supplier for the Las Posas Basin and the operator of the Las Posas Aquifer Storage and Recovery (ASR) Wellfield, long-term sustainability of the Basin is important to Calleguas. The first periodic evaluation of the Las Posas Valley Basin (LPVB) Groundwater Sustainability Plan (GSP) is an important milestone on the path to that sustainability. We offer these comments in the spirt of fostering increased coordination and collaboration in the planning necessary to achieving the shared goals of the Sustainable Groundwater Management Act (SGMA) and the Judgment in the Las Posas Valley Water Rights Coalition, et al., v. Fox Canyon Groundwater Management Agency groundwater rights adjudication case (Judgment).

Comments

1. Analysis of Effects of Minimum Thresholds (MTs) on Beneficial Users in ELPMA (Section 2.2.1.2 (pp. 7-8) and Table 2-1):

   Since the first drafts of the GSP, Calleguas has consistently commented on the inadequacy of the impact analysis of the MTs in the northern portion of the East Las Posas Management Agency (ELPMA) on beneficial uses and users. The Department of Water Resources (DWR) also recognized the insufficiency of the analysis and issued a recommended corrective action in its GSP approval:

   > *"Discuss the potential effects of the minimum thresholds and measurable objectives on beneficial uses and users of groundwater, particularly in the areas where groundwater levels will be maintained below 2015 and historical low levels. Provide an evaluation of the groundwater level and storage conditions when the groundwater storage loss will be 20 percent compared to 2015 conditions in the ELPMA and the Epworth Gravels Management Area, and, based on the result of the evaluation, discuss the effects of such conditions on beneficial users and users."*

The analysis presented in Section 2.2.1.2 (pp. 7-8) and Table 2-1 of the periodic evaluation remains inadequate and does not address the DWR recommended corrective action for the following reasons:

A. Calleguas ASR Wells are Incorrectly Classified as Agricultural Wells: In reference to Table 2-1, the 2nd paragraph of Section 2.2.1.2 (p. 7) states: "The depth and groundwater production rates from the wells in this area indicate that they are agricultural wells…". In fact, 10 of the 22 wells listed in Table 2-1 are Calleguas ASR wells.

B. The Analysis is Based on Incorrect Data: The top perforation elevation of 13 of the 22 wells in Table 2-1 for which data was readily available was reviewed and it was determined that the values for 12 of the 13 wells evaluated are incorrect, including all 10 ASR wells included in the table. The errors average 48 feet and range from 10 to 364 feet. Using the correct elevations for the 12 wells with erroneous top perforation elevations would add three wells to the list of wells with a projected groundwater elevation below the top of the screen. Based on the above findings, it is possible that some wells may have also been omitted from Table 2-1 due to incorrect well screen elevation data.

C. Analysis of Effects Does not Consider Impacts on ASR Storage and Recovery Operations: Given that analysis incorrectly assumes all wells are agricultural, the analysis does not consider or evaluate potential effects on the Calleguas ASR wellfields. For the analysis to be complete and consistent with SGMA, the impact of the MTs on Calleguas ASR storage and recovery operations needs to be fully evaluated to determine whether the decreased storage and recovery capacity is significant and unreasonable.

   Considerations for ASR wells include the introduction of air into the aquifer, which causes geochemical reactions (precipitation of minerals that clog the well screen); substantial increase in microbiological growth (biological growth that clogs the wells screens); and loss of aquifer storage capacity (air trapped in the aquifer that takes up pore space and/or dissolves into the groundwater, causing operational challenges). Calleguas was already experiencing symptoms of these problems during GSP development (four of nine ASR wells had already experienced aquifer conversion from confined to unconfined conditions) Calleguas is concerned that these problems will be exacerbated and impact additional ASR wells if groundwater levels are allowed to decline to the MTs. In our May 21, 2019 comment letter on the Draft GSP, we estimated groundwater level decline to the MT would cause an estimated 45% decline in ASR pumping capacity relative to its initial operational capability (a 35% decline relative to the 2015 operational capability). To further exacerbate this problem, the aquifer is predicted to become unconfined in the vicinity of at least six additional ASR wells, for a cumulative impact on 10 out of the 19 ASR wells with aquifer conversion. This would result in undesirable effects on a critical emergency water supply for the vast majority of Ventura County's urban water users. Again, the impact of the MTs on Calleguas ASR storage and recovery operations must be fully evaluated for MT impacts on beneficial uses and users to be complete and consistent with SGMA.

D. The Analysis Does not Consider All Potential Significant and Unreasonable Effects: The analysis assumes that significant effects will not manifest until the static groundwater level drops below the top of the screen in a well and that pumping can be sustained with pump placements in the screen interval. These assumptions are contrary to the generally accepted well design principle of setting the well pump above the screen and maintaining pumping levels above the top of screen to avoid pump bowl or screen abrasion, sand production, cascading water, and accelerated fouling (Glotfelty, 2019 – Art of Water Wells). Wells with partially desaturated screens commonly experience increased fouling rates (sometimes very rapid), which causes significant loss of production, the need for premature rehabilitation efforts, and the need for premature well replacement. The analysis should consider these effects on all well types and Fox Canyon Groundwater Management Authority (FCGMA) should determine, with stakeholder input, whether they are significant and unreasonable.

E. The Analysis Does Not Consider All Wells that May Potentially Experience Significant and Unreasonable Effects: The Table 2-1 wells are limited to those wells located in the area where the Fox Canyon Aquifer (FCA) is predicted to convert from confined to unconfined ("conversion area"). As explained above, potentially significant and unreasonable effects can manifest in wells before the *static* groundwater level drops below the top of the screen, which may occur in wells located outside of the conversion area, including Calleguas ASR wells. The area of analysis should also be extended outside of the conversion area.

In the spirt of fostering increased coordination and collaboration in the planning necessary to achieving the shared goals of the SGMA and the Judgment, Calleguas recommends that a full analysis of the effects of the MTs on beneficial uses and users be completed with Las Posas Basin Watermaster Technical Advisory Committee (TAC) and Policy Advisory Committee (PAC) consultation. This approach would ensure that all potentially affected well owners clearly understand what impacts they should anticipate given the existing MTs so they can provide input as to whether those impacts are significant and unreasonable and whether MT modifications are warranted. This process would provide relevant information to inform GSP Project No. 9 (Feasibility Study to Identify Possible Supplemental Water Supply Sources for the Northern East Las Posas Management Area).

2. Model Differences:
Calleguas is concerned that the United Water Conservation District model and Calleguas model no longer agree on the nature of the West Las Posas Management Area/ELPMA boundary. We support the recommendation for further review of this issue in consultation with the TAC. We also recommend including Calleguas in the process so that potential modifications to the ELPMA model can be considered by Calleguas.

3. Monitoring Network Coordination Needed:
There are a notable number of unavailable groundwater level and quality measurements since GSP adoption. It is critical that data be collected to evaluate status relative to the sustainable management criteria and more generally understand groundwater conditions. It is noted that FCGMA does not collect data itself and, instead, relies on other entities' monitoring programs for data, including Calleguas's. Unfortunately, other than data requests, FCGMA has never reached out to Calleguas to discuss its monitoring activities and whether those activities will meet the needs of the GSP

monitoring network. This has unfortunately led to a number of incorrect assumptions in the GSP monitoring network and periodic evaluation that are inconsistent with actual monitoring activities. Specific inconsistencies are provided in comments below. It is recommended that FCGMA coordinate with the monitoring entities, including Calleguas, to address these issues and find the most cost-effective solutions to ensure data is collected for future GSP annual reports and periodic evaluations. Calleguas is ready and willing to participate in coordination efforts.

4. Revisions to Calleguas Monitoring Network (Section 6.1 and Table 6-2):
    A. The text states, “Four of the wells have been removed from the monitoring network because they were either destroyed or CMWD had recurring access issues.“ Calleguas has not had access issues. The following are clarifications concerning the wells listed in Table 6-2:
        i. Well 03N20W32H02S has been dry for numerous years. Calleguas continues to check the well for water and will reinstall a transducer if water returns. Consider retaining this well in monitoring network pending increasing groundwater levels.
        ii. Well 02N20W02D02S was destroyed by the owner.
        iii. Well 03N20W36P01S has a transducer stuck in the sounding tube. The transducer will be reinstalled the next time the well pump is removed.
        iv. Well 03N20W35J01S is continuing to be monitored with a transducer. However, the groundwater levels are considered anomalous. It is recommended that this well be removed from the monitoring network due to anomalous data.
        v. Well 02N20W01B02 (ASR #3) is noted as being added to the monitoring network in Table 6-2. This is not correct. This well was already included in the monitoring network in the GSP. Table 6-2 also says there is no water quality sampling for this well, which is not correct. Water quality samples are collected to satisfy State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) requirements and are available from Calleguas or from the SWRCB website.
    B. Consideration should be given to incorporating the three multi-level monitoring wells constructed by Calleguas in the ELPMA into the monitoring network. These monitoring well nests/clusters provide valuable aquifer specific data, including much needed data for the Grimes Canyon Aquifer (GCA) at one location. Data from these wells are already provided to FCGMA by Calleguas on a regular basis.

5. Changes to Calleguas Monitoring Network (Table 6-3):

    A. Table 6-3 indicates that several wells are “no longer monitored” for water quality. It is noted that Calleguas has never sampled these wells (except once for monitoring wells immediately following construction). FCGMA incorrectly assumed that Calleguas was sampling these wells.

    B. Well 02N19W06F01S is an agricultural well, not a monitoring well.

    C. Well 02N20W09Q08S is a monitoring well, not a municipal well.

6. Groundwater Level Temporal Data Gaps (Section 6.2.2.2):

    A. The text states, “Currently, groundwater elevation measurements are not scheduled according to these criteria because FCGMA relies on monitoring by several other agencies. To minimize the effects of this type of temporal data gap in the future, it would be necessary to coordinate the collection of groundwater elevation data, so it occurs within a two-week window during the key reporting periods of mid-March and mid-October. The recommended collection windows are October 9–22 in the fall and March 9–22 in the spring.”

        Calleguas and Ventura County Waterworks District (VCWWD) have transducers installed in all the wells in their monitoring network. The only reason data may be missing for these wells during the fall and spring two-week windows is if a transducer has failed or is pending reinstallation. FCGMA is encouraged to coordinate with Calleguas and VCWWD to facilitate an approach for collecting manual groundwater level measurements in these cases to address its fall and spring window data needs.

    B. The text states, “Additionally, as funding becomes available, pressure transducers should be added to wells in the groundwater monitoring network.” Calleguas and VCWWD already have transducers installed in all the wells in their monitoring network.

    C. The text states, “Since adoption of the GSP, 13 wells that were to be monitored for groundwater quality are no longer monitored for groundwater quality. The majority these wells, 11 of the 13 wells, are representative monitoring wells located in the ELPMA.” It is noted that Calleguas never committed to sample the wells in its monitoring network, other than ASR wells, which are sampled to comply with SWRCB DDW requirements. Calleguas is willing to help facilitate FCGMA efforts to sample these wells.

7. New Data For ELPMA (Section 4.1.1.1) and Hydrogeologic Conceptual Model (HCM) Data Gaps (Section 4.2 and Table 4-1):
    The text on page 51 states, “No new information is available that would improve or update the understanding of the hydrogeologic conceptual model of the ELPMA and Epworth Gravels Management Area.” Similarly, the text on pp. 52-53 and Table 4-1 states that no additional information has been collected to address HCM data gaps.

    It is noted that Calleguas has constructed three multi-level groundwater monitoring wells, which provides new stratigraphic data for the hydrostratigraphic model. In particular, 03N19W30E07 is a nested monitoring well that provides data to better characterize the Epworth, FCA, and GCA in northern ELPMA and 02N20W11B01-3 is a clustered monitoring well that provides data to better characterize the Upper San Pedro Formation and FCA south of the Moorpark Anticline in the ELPMA. In addition, groundwater level data collected from these wells can be used to characterize vertical gradients. These data should be incorporated into the HCM.

Closing

Thank you for the opportunity to provide these comments. Please feel to contact me for further information or questions about our comments.

Sincerely,

Kristine McCaffrey, P.E.
General Manager