City of LOMPOC

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Dear Western Management Area GSA:

These comments are submitted on behalf of the City of Lompoc (Lompoc) regarding the draft Santa Ynez River Valley Groundwater Basin Western Management Area Groundwater Sustainability Plan (GSP). Lompoc appreciates the efforts of the Western Management Area Groundwater Sustainability Agency (GSA) and its staff and consultants in preparing the draft GSP. That said, Lompoc believes there is still significant work to be done in order to comply with the mandates of SGMA and adopt a GSP that clearly identifies if current groundwater practices in the Western Management Area (WMA) are sustainable and, if not, specifically what needs to be done to become sustainable by 2042.

This letter will begin with some general comments about the draft GSP and then present more specific comments. Lompoc respectfully requests that the GSA representatives, staff, and consultants consider and respond to these comments. Lompoc has been an active participant in the GSA activities, including support from Lompoc's hydrologic consultants EKI Environmental & Water (EKI), and will continue its active engagement as the GSP is adopted and implemented in years to come.

A. General Comments

1. As stated above, the GSP needs a clear statement on whether current groundwater extractions from the WMA are sustainable or not. This will clarify whether GSA actions are needed to maintain sustainability, or whether the actions are needed to become sustainable. The entire GSP should be consistent with this characterization.

2. The numerical groundwater model was developed to support GSP development. It was completed prior to May 2021, yet there are multiple statements in the GSP referring to reliance on the model to refine analyses in the future. For example,

sustainable yield estimates reportedly will be refined using the "forthcoming" numerical model. Plans are described where various water budget components will be refined using groundwater model results. The SGMA regulations require reliance on a numerical model to quantify depletions from surface water, but this information is not provided in the draft GSP. The only mention of model results is in Table 2c.1-2 "Water Budget Data Sources," which indicates the model was used to estimate subsurface outflow. The analyses that benefit from the numerical model need to be included and clearly identified in the GSP.

3. The GSP provides no explanation of how the groundwater storage benefits from the Project and Management Actions (PMA) were quantified, which precludes third-party assessment of their certainty and reliability.

4. The GSP identifies increased water conservation as a potential PMA, and cites data regarding the current per capita water use of Lompoc, Mission Hills CSD, Vandenberg AFB, and Vandenberg Village CSD.[1] This water use data demonstrates that Lompoc (and its citizens) have proactively taken the steps necessary to achieve significant water conservation. The GSP should reflect this fact and acknowledge that any conservation-based efforts to address WMA groundwater conditions must be enforced in an equitable manner, recognizing the past and present efforts of those jurisdictions that are already contributing to a sustainable WMA basin through water conservation programs.

5. There may be opportunities for the GSA members to implement projects and management actions to benefit the basin. The GSP should acknowledge and encourage its members to undertake such projects/actions, and the GSA should incentivize members with a system of rules that provide groundwater credits. For example, members with recycled water might be able to use or transfer that water to be used in lieu of groundwater. Or, members may engage in groundwater recharge and recovery projects that are best incentivized with a system of credits.

6. The GSP references a contractual water supply from the State Water Project (SWP) as a potential PMA to address conditions in the basin. Lompoc's citizens have twice been presented with the option of pursuing a SWP water contract and twice rejected the funding mechanism. The GSP should recognize this reality and remove SWP supplies as a potential PMA.

7. The GSP contains questionable implementation schedules. For example, the GSP requires two years to survey a single well (see 5a.1-1 "Surveying Representative Wells") and plans to phase meter installation over "multiple years" yet complete that task by the end of 2023 (less than 2 years from the GSP submittal date).

B. Specific Comments

3b.2-1 Chronic Lowering of Groundwater Levels

[1] See Table 4a.2-2 of draft GSP.

- EKI extracted the water level data for Representative Monitoring Sites (RMS) located in the City of Lompoc from the Data Management System (DMS). The MT values were then calculated and found to be 3 feet greater than the values reported in Table 3b.3-1. This discrepancy needs to be reconciled.

- The number of wells with exposed well screens, expressed as a percentage, is utilized as a quantitative indicator for significant and unreasonable effects. However, the Minimum Threshold (MT) for the Upper and Lower aquifers was based primarily on historical water levels. A substantial amount of work is reported calculating the differences between the percentage of exposed well screens under 2020 water levels and proposed MTs, but there is no meaningful difference in the results. The MT for the Upper Aquifer was ultimately defined as 10-feet below the Spring 2020 levels, and in the Lower Aquifer the MT was defined as 20-feet below Spring 2020 levels. A more direct argument would develop the MTs from the historical water levels and then utilize the small differences in exposed well screen percentages to confirm the MTs protect against significant and unreasonable effects.

- Undesirable Results (URs) are defined by water levels below the MT in 50% of the RMS. However, the text is not clear whether this definition applies to each principal aquifer or both aquifers and all the RMS combined. The criteria should apply to each principal aquifer as follows: 50% of the RMS in the Upper Aquifer and 50% of the RMS in the Lower Aquifer.

- The Triggers appear to be arbitrarily selected and will likely be ineffective. For example, the Trigger for the Upper Aquifer RMS "*Lompoc 2*" is 5 feet below the Spring 2020 water level. During extended dry periods, the observed water level decline in Lompoc 2 was 4 to almost 6 ft/yr. Hence, during a period of declining water levels the MT (10 feet below 2020 water level) would be reached in 1 to 2 years after reaching the Trigger. Any mitigation must therefore be effective within one year of implementation. Other than requesting a water rights release, which is dependent on the Below Narrows Account, what other specific projects and management actions would be effective in this short time frame should a water rights release not occur? This fallback plan must be made clear as part of GSP implementation, and its effectiveness verified using the numerical groundwater model. Without this plan, the definition of URs and action levels for the Trigger Points must be revised to be more protective of the City's water supply. For example, the percentage of RMS exceeding the MT/Trigger Point can be reduced to something less than 50%. Alternatively, the RMS that represent conditions near and within the City can be weighted higher than the RMS west of the City, ensuring that actions to protect the City water supply are initiated promptly. The numerical groundwater model can be employed to confirm that these revised definitions and action levels provide adequate time for the groundwater system to respond to the specific projects and management actions that form the requested fallback plan.

3b.2-2 Cumulative Change in Groundwater Storage

- Section 2b.2-1 reports 15,000 AF cumulative decline in storage during 1982-2018, whereas Table 2c.2-6 reports 36,734 AF cumulative decline in storage during the same period. The two results represent different areas, yet only one value is needed for the GSP and should be reported (the one for the entire WMA). Reporting more than one value confuses the issue and will confuse DWR.

- The regulations define the MT for groundwater storage as a volume: "*The minimum threshold for reduction of groundwater storage* ***shall be a total volume of groundwater*** *that can be withdrawn from the basin without causing conditions that may lead to undesirable results.*" 23 C.C.R. § 354.28 (c)(2). The GSP seeks to employ water levels as proxy to storage volumes, however it fails to demonstrate a correlation between the water level changes at the RMS and the corresponding calculated groundwater storage changes in the WMA. Alternatively, the GSP could show that when water levels at the RMS decline to the MTs, the resulting change in groundwater storage is not significant and unreasonable (in other words, the Sustainable Management Criteria [SMCs] for Chronic Lowering of Groundwater Levels protect against significant and unreasonable changes in groundwater storage).

- Note that §356.2(b)(5)(a)[2] of the regulations require that the Annual Report include "*change in groundwater storage maps*" for each principal aquifer. In the WMA, there are two principal aquifers monitored by different RMS and managed by different SMCs.

3b.3-4 Degraded Water Quality – Minimum Thresholds

- This section needs to be rewritten. It includes conflicting statements and confuses units.

- The GSA is not required to address URs that occurred before and have not been corrected by January 1, 2015 (§ 10727.2(b)(4)). The approach toward water quality thresholds should be "to do no harm" relative to 2015 conditions. Accordingly, the MT should be set at the Water Quality Objectives determined by the CCWQCP, and the Measurable Objectives (MO) should be set at some fraction (e.g., 80%) of the MT. As a result, the sustainability goal for the GSP is to maintain groundwater quality acceptable to the prescribed beneficial uses, and URs occur when GSP implementation causes the water quality to exceed Water Quality Objectives.

- There appear to be conflicting statements regarding salt and nutrient concentrations. The text states their concentrations "currently exceed the WQOs." To support efforts to "improve groundwater quality" the MT concentrations are "established near current" concentrations. If current concentrations "exceed the WQOs," how does establishing the criteria at current concentrations "improve" water quality? Similarly, the text states that

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[2] References to section numbers are to sections from Title 23 of the California Code of Regulations – the SGMA implementing regulations.

the "average" MT concentrations are below the WQOs. It is not clear how current concentrations can be both greater than and less than WQOs.

3b.3-4-1 Nitrate Minimum Threshold

- There is confusion in concentration units for the Water Quality Objectives in Table 3b.2-2, the MT reported in Table 3b.3-2, and the MT reported in the text. Use one consistent set of units.

3b.3-6 Depletion of Interconnected Surface Water – Minimum Thresholds

- This section lacks a discussion of the relationships between recharge, pumping, and surface water depletions. Per 23 C.C.R. § 354.28(c)(6) the MT for depletions of interconnected surface water **shall be the rate or volume of surface water depletions**, and supported by (A) the location, quantity, and timing of depletions of interconnected surface water; and (B) A description of the groundwater and surface water model used to quantify surface water depletion (if a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish these requirements). This information is available from the numerical model developed for the WMA and needs to be extracted, analyzed and discussed in the GSP.

- The GSP may establish a representative MT based on groundwater elevations, as is advocated in Section 3b.3-6, but the GSP must demonstrate with adequate evidence that groundwater elevation is a reasonable proxy. This information is available from the numerical model and needs to be extracted and evaluated against measured water level conditions in the RMS for interconnected surface water.

3B.4 Measurable Objectives

- The Measurable Objective (MO) is the sustainability goal for the basin and represented by a quantitative value at each RMS. The sustainability goal is reached when the SMC is met at all the RMS. The MO values are allowed to vary between RMS and within a margin of operational flexibility, but the overall trends should be toward the MO. This is a key aspect of demonstrating the efficacy of proposed PMAs. Typically, the numerical groundwater flow model is employed to show the effects on groundwater levels, groundwater storage changes, and interconnected surface water. Furthermore, when water levels are used as proxy, the model can show effects on seawater intrusion and subsidence. If a numerical model is not used, the GSP shall identify and describe an equally effective method, tool, or analytical model to accomplish these requirements. This analysis is lacking in the GSP.
- The GSP fails to define interim milestones (IM) as required by 23 C.C.R. § 354.30(a) which states that the GSA "*shall establish measurable objectives, including interim milestones in increments of five years, to achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the*

groundwater basin over the planning and implementation horizon." IMs are not optional, and they are required for each RMS and its associated SMC.

Section 4A-1

- The GSP evaluates PMAs based on their estimated contribution to groundwater storage (the water budget). However, SGMA defines groundwater sustainability as the absence of URs. 23 C.C.R. § 354.22. Hence, the avoidance of URs as defined by MTs and the sustainability goals defined by the MOs (e.g., water levels) are central to sustainable groundwater management and critical to the success of the GSP. The GSP fails to connect the assumed/estimated additions to the water budget to water level changes relative to the MTs/MOs. This is most effectively accomplished utilizing the numerical groundwater model, and indeed is one of the key reasons for developing the tool. Instead, the GSP assumes a one-to-one (or direct) response between the estimated/assumed volume of water added (or saved) and storage increase. The assumed one-to-one response has not been established in the GSP using the model or an equally effective method, tool, or analytical model. Moreover, the assumption is questionable owing to head-dependent boundaries (e.g., the Santa Ynez River and Pacific Ocean) and the spatial distribution of recharge and pumping stresses.

Section 4A-2

- A "Tiered Fee" is not a PMA of its own. It is a means to implement a project or management action. Under Proposition 218 law, there needs to be a basis for the fee, which would typically be a budget for GSP development and implementation costs demonstrating the necessity of the fee.

Section 4a-2-1-1

- The GSP states, "The WMA GSA will coordinate with the existing agencies and programs, and develop additional voluntary, rebate-based, or mandatory conservation efforts for domestic, municipal, and agricultural beneficial uses within the WMA." Mandatory conservation efforts are essentially an allocation plan, which is proposed for Group 3. Group 1 conservation efforts should only be voluntary and rebate based.

- The GSP states, "A Water Conservation Strategic Plan, or similar document, will be developed that considers WMA GSA stakeholder concerns, integrates with existing conservation programs, and meets the health and safety water requirements for communities that rely on groundwater within the WMA." The Strategic Plan should also consider granting credit for past conservation actions, such as the extensive conservation program and actions of Lompoc and its citizens/businesses.

- The GSP states "in conjunction with County staff, the WMA GSA can explore whether industrial water demands can be met by alternative non-potable supplies (e.g., recycled water and/or brackish water)." Is this considered part of a Group 1 recycled water

project? If not, this seems out of place in Group 1, and should perhaps be part of a supplemental supply program in Group 4.

Section 4a.2-1-2

- States that conservation measures will reduce demand from baseline conditions to approximately 10% to 20% of current groundwater production. Is this with mandatory conservation? See comment above regarding moving mandatory conservation to Group 3. If mandatory conservation is moved to Group 3, this savings number may change. Also, it looks like the 10-20% reduction assumes implementation of tiered fees, but see the comment above concerning tiered fees, which are not management actions of their own, but rather a means to implement management actions.

- What is the basis for the estimated potential yield from water conservation activities?

4a.2-1-3

- The GSP states that "conservation efforts are a necessary tool to achieve the WMA's sustainability goal." The estimated average annual deficit, however, is 1,000-2,000 AFY. The potential yield from the conservation measures, metering, and fees is 2,000-4,000 AFY. Thus, it is not clear that developing and expanding conservation efforts are "necessary" to reach sustainability. The GSP should state that the actions are recommended to maintain sustainability under future projected conditions. See comments above about Lompoc's significant existing conservation efforts.

4a.2-1-8

- By relying on Water Code section 10726.4, it implies that this management action is focused on mandatory conservation, i.e., an allocation plan. See the comment above about mandatory conservation. It seems like Group 1 should be voluntary and rebate based, and allocations should remain in Group 3. Also, Water Code section 10725.4 should not be cited for a GSA's fee-imposition authority because it concerns investigations. The specific fee authority is in Water Code sections 10730 and 10730.2, though it does not appear that conservation measures will depend on fee-imposition authority.

4a.2-2-1

- Again, the GSA cannot simply establish tiered fees to try to promote conservation. Under Proposition 218 law, all fees, including tiered fees need to be justified by costs and proportional benefits associated with groundwater management actions. Tiered fees need to be designed to reflect the costs necessary to ensure adequate groundwater is available to serve the demands associated with each tier.

4a.2-2-7

- The GSP states "Prior to implementing tiered groundwater extraction fees, the WMA GSA will determine an acceptable fee structure based in part on an analysis of historical and current water production volumes." What about costs? What costs are the GSA incurring to justify the fees?

4a.2-2-8

- As noted previously, Water Code section 10725.4 concerns investigations. The specific fee authority is in Water Code sections 10730 and 10730.2.

4a.2-3-5

- The reduction in wastewater flow associated with this recycled water project would require approval by the State Water Board. See Water Code section 1211.

4a.3-1-1

- Explain the criteria that SYRWCD's uses to assess a request for a "Below Narrows Account" release.

4a.3-3-1

- The GSP states that, "These Annual Pumping Allocations could be used for the purpose of assigning pumping fees ("Augmentation Fees")." There should be some explanation as to how these Augmentation Fees are different than the Tiered Fees described above.

4a.3-3-3

- The GSP states, "the WMA GSA will work with groundwater users in the WMA to determine an equitable process for assigning allocations. The beneficial uses of groundwater will subsequently be evaluated based on water rights priorities. Accordingly, all groundwater users and uses will be equitably considered and prioritized, as required by SGMA." These sentences do not make it clear whether the GSA will attempt to follow a water right priority-based approach or some other "equitable" approach. To avoid concern or confusion, suggest stating that the allocation criteria will be developed at a future date.

Thank you for your consideration of these comments, and Lompoc looks forward to continued cooperation on developing/finalizing the GSP and moving forward through its implementation.

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