May 5, 2023
Sent via email

State Water Resources Control Board
Joaquin Esquivel, Chair
Dorene D'Adamo, Vice Chair
Nicole Morgan, Board Member
Laurel Firestone, Board Member
Sean Maguire, Board Member

Re: Comments on the State Water Resources Control Board (SWRCB) Intervention for Inadequate Groundwater Sustainability Plans (GSPs)

Dear Chair Esquivel, Vice Chair, and members of the Board,

On behalf of the undersigned organizations, we write to provide comments and recommendations to the State Water Resources Control Board (the Board) as the Board assumes intervention in six groundwater sustainability basins across the San Joaquin Valley. Our organizations have been deeply engaged and committed to the successful implementation of the Sustainable Groundwater Management Act (SGMA) because we understand that groundwater is critical for the resilience of California's water portfolio, particularly in light of climate change. Our comments are based on review and analysis focused on how well drinking water users, disadvantaged communities (DACs), environment, stakeholder involvement, and climate change were addressed in GSPs. Collectively, these issues are true indicators of sustainability. Because California's water and economy are interconnected, the sustainable management of each basin is of interest to both local communities and the State as a whole.

Under the requirements of SGMA, Groundwater Sustainability Agencies (GSAs) must consider the interests of all beneficial uses and users of groundwater, including domestic well owners, environmental users, surface water users, state and federal government, California Native American tribes, and

disadvantaged communities.[1,2] As stakeholders, we have reviewed and analyzed all the critically overdrafted, and high and medium priority groundwater sustainability plans submitted to the state. We provided technical and policy recommendations[3] and relevant policy feedback to local GSAs and California Department of Water Resources (DWR) based on our findings. We have published our findings in several reports.

Our comments are summarized into the following categories:

A. SGMA Regulatory Requirements
B. Our GSP Review Criteria and Priorities
C. Recommendations on Probation Process

A. SGMA Regulatory Requirements

If a basin is found inadequate by DWR, the SGMA Statute requires the Board to complete the following:

> 10735.2 (a) The board, after notice and a public hearing, may designate a high- or medium-priority basin as a probationary basin[4]
>
> 10735.4. (a) If the board designates a basin as a probationary basin pursuant to paragraph (1), (2), or (4) of subdivision (a) of Section 10735.2, a local agency or groundwater sustainability agency shall have 180 days to remedy the deficiency. The board may appoint a mediator or other facilitator, after consultation with affected local agencies, to assist in resolving disputes, and identifying and implementing actions that will remedy the deficiency.[5]
>
> (b) After the 180-day period provided by subdivision (a), the board may provide additional time to remedy the deficiency if it finds that a local agency is making substantial progress toward remedying the deficiency.[6]
>
> (c) The board may develop an interim plan pursuant to Section 10735.8 for the probationary basin at the end of the period provided by subdivision (a) or any extension provided pursuant to subdivision (b), if the board, in consultation with the department, determines that a local agency has not remedied the deficiency that resulted in designating the basin as a probationary basin.[7]
>
> 10735.6. (a) If the board designates a basin as a probationary basin pursuant to paragraph (3) or (5) of subdivision (a) of Section 10735.2, the board shall identify the specific deficiencies and identify potential actions to address the deficiencies. The board may request the department to provide local agencies, within 90 days of the designation of a probationary basin, with technical recommendations to remedy the deficiencies.[8]

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[1] "The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater" [Water Code 10723.2]

[2] "When evaluating whether a Plan is likely to achieve the sustainability goal for the basin, the Department shall consider the following: [...] (4) Whether the interests of the beneficial uses and users of groundwater in the basin, and the land uses and property interests potentially affected by the use of groundwater in the basin, have been considered." [23 CCR § 355.4(b)(4)]

[3] Arthur et al.. 2022. Groundwater Sustainability Assessments- DWR Determinations Analysis. Available online: https://groundwaterexchange.org/wp-content/uploads/2022/08/NGO-DWR-Determinations-Analysis-2022.pdf

[4] Cal. Water Code § 10723.2

[5] Cal. Water Code § 10723.4 (a)

[6] Cal. Water Code § 10723.4 (b)

[7] Cal. Water Code § 10723.4 (c)

[8] Cal. Water Code § 10723.6

10735.8. (a) The board, after notice and a public hearing, may adopt an interim plan for a probationary basin.[9]

B. Our GSP Review criteria and Priorities

Our team reviewed all the plans submitted to the State. We provided detailed comments to GSAs on their GSPs. We also submitted detailed comments with recommendations to DWR on the final plans. Our review did not assess the quality of the data provided in the GSP, but analyzed whether data was provided, what data sources were cited, how information about beneficial users of groundwater were used to develop the plan, and whether or not the GSP included plans to reconcile existing data gaps. In our review of the critically overdrafted basins, we found two plans to be inadequate - Indian Wells GSP and Central Kings GSP. We found the remaining plans to be incomplete pending revisions.[10] In 2022, we reviewed the determinations[11] released by DWR, analyzing how the Department considered our review criteria and priorities. Below we summarize our priorities and main areas of concern when reviewing GSPs:

- **Drinking Water Users**
    - **Identification of DACs, domestic wells, and tribes:** The consideration of beneficial uses and users in a GSP is contingent upon adequate identification of *all* beneficial users, including DACs, domestic wells, and tribes.[1,2] In our review of the identification of DACs, domestic wells, and tribes, we looked to see if a GSP included the source of water for DACs, population of DACs in the basin, and if the GSP provided the depth of domestic wells (such as minimum well depth, average well depth, or depth range). This information is necessary to understand the distribution of shallow and vulnerable drinking water wells within the basin. In our review of the identification of DACs, domestic wells and tribes, we found that most GSPs included maps of DACs, domestic wells and tribes within their basins, however the more specific details on source of water for DAC, DAC population, and well depth was not consistently included in all 108 plans. (see Data Gaps section below).
- **Environmental Users**
    - **Identification of interconnected surface waters (ISWs):** SGMA requires that the GSP identify ISWs in the basin, including estimates of the quantity and timing of depletions. The complete analysis of ISWs requires mapping of gaining and losing reaches and assessing the temporal variability in stream depletions to account for the inherent variability within California's Mediterranean climate. Since this relies upon seasonal and multiple water years of data, the GSP should discuss the spatial and temporal gaps in data needed to adequately characterize the interaction between groundwater and surface water within the basin. In the absence of data, the GSP should not exclude any segments with data gaps from the ISW map and instead consider and map them explicitly as potential ISWs until data gaps are reconciled. The absence of evidence is not the evidence of absence. In our review of the identification of interconnected surface waters, we found that GSPs did not clearly map potential ISWs in areas of the basin with data gaps.

[9] Cal. Water Code § 10723.8

[10] Summary Analysis of 31 Groundwater Sustainability Plans in Critically Overdrafted Basins https://drive.google.com/drive/folders/1kwsASohOVYmrXzTaqMEwMBcsRotPDG3i?ths=true

[11] Arthur et al.. 2022. Groundwater Sustainability Assessments: A Review of the Department of Water Resources' Determinations on Groundwater Sustainability Plans in Critically Overdrafted Basins. *Groundwater Leadership Forum*. Available at https://groundwaterexchange.org/wp-content/uploads/2022/08/NGO-DWR-Determinations-Analysis-2022.pdf

- **Identification of groundwater dependent ecosystems (GDEs):** SGMA requires that GDEs be identified in the GSP.[12,13] In our review of the identification of GDEs, we found that most GSPs did not provide an inventory of flora and fauna present in the basin, nor identify threatened and endangered species residing within the basin.
- **Inclusion of ecosystems in the water budget:** Native vegetation and managed wetlands are water use sectors that are required to be included into the water budget.[14,15] Based on our review, we found native vegetation and managed wetlands were not properly identified and considered in most GSPs.

- **Stakeholder Engagement and Inclusion**
  - **Stakeholder engagement:** Stakeholder engagement is critical for the GSAs to fully understand the specific interests and water demands of all beneficial users, and to support the identification and consideration of beneficial users in the development of sustainable management criteria and selection of projects and management actions. The expectation is that robust stakeholder engagement includes active and targeted outreach to ensure that stakeholder concerns are consistently understood and stakeholder feedback is incorporated in the decision making process. Robust and inclusive engagement to DACs, drinking water users, and environmental users was lacking in most of the plans we reviewed. Some GSPs conducted partial engagement that failed to translate into incorporation of stakeholder voices into the plan.
  - **Consideration of impacts to DACs, drinking water users, and environmental users in the sustainable management criteria (SMC):** Adequate consideration of potential impacts of selected SMCs on beneficial users is contingent upon adequate identification and engagement of the appropriate stakeholders, and is essential for ensuring that GSPs integrate existing state policies on the Human Right to Water and the Public Trust Doctrine.[16] Our review criteria evaluated if GSPs described the direct and indirect impacts of SMCs on DACs, drinking water users, and GDEs when defining undesirable results and minimum thresholds for chronic lowering of groundwater levels and degraded water quality. Most plans failed to provide an analysis of direct or indirect impacts to DACs and drinking water users. This is particularly concerning given the absence of firm plans for a drinking water well mitigation programs[17] in most basins.
- **Climate Change**
  - **Incorporation of climate change in the water budget:** In our review of climate change in the projected water budget, we found that most GSPs did incorporate climate change into the projected water budget using 2070 central tendency data from DWR. However, most GSPs did not incorporate extremely wet and extremely dry climate scenarios in their plans. While extreme scenarios may have a lower likelihood of occurring and their consideration is only suggested by DWR, their consequences could be significant and

[12] "Each plan shall provide a description of current and historic groundwater conditions in the basin, including data from January 1, 2015, to current conditions, based on the best available information that includes [... (g)] Identification of GDEs within the basin, utilizing data available from the Department, as specified in Section 353.2, or the best available information." [23 CCR § 354.16(g)]

[13] Refer to Attachment B for a list of freshwater species located in the basin.

[14] "'Water use sector' refers to categories of water demand based on the general land uses to which the water is applied, including urban, industrial, agricultural, managed wetlands, managed recharge, and native vegetation." [23 CCR §351(al)]

[15] "The water budget shall quantify the following, either through direct measurements or estimates based on data: (3) Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow." [23 CCR §354.18]

[16] "The Department shall consider the state policy regarding the human right to water when implementing these regulations." [23 CCR §350.4(g)]

[17] Department of Water Resources drinking water guidance https://water.ca.gov/Programs/Groundwater-Management/Drinking-Water-Well

their inclusion can help identify important vulnerabilities in the basin's approach to groundwater management. Although California has experienced an exceptionally wet winter that has eased the drought, the rain has not substantially recharged groundwater and ultimately, drought conditions are expected to return.

- **Data Gaps**
    - **Identification and reconciliation of data gaps:** SGMA requires that impacts to beneficial uses or users of groundwater be monitored.[18] Beneficial users may remain unprotected by GSPs without adequate monitoring. When data gaps are not identified, particularly in shallow aquifers, impacts disproportionately threaten GDEs, aquatic habitats, and shallow domestic well water users. In addition to monitoring wells, biological monitoring is an important component to ensure impacts to GDEs do not occur.[11] In many cases, GSPs did not provide adequate mapping to clearly convey whether current and proposed monitoring well locations sufficiently monitored groundwater conditions for shallow drinking water wells and the environment. In our review of GSPs, we found that there is insufficient representative monitoring near DACs, domestic wells, and GDEs.
    - **Identification of potential impacts to beneficial users in the Projects and Management Actions:** Project and Management Actions are essential for ensuring that groundwater basins stay within the sustainable yield and avoid undesirable results for *all* beneficial users in the basin. Our review evaluated whether GSAs considered the benefits or impacts of project and management actions to key beneficial users. While not all projects and management actions are applicable to every basin, GSPs must include benefits and evaluate impacts to vulnerable beneficial users in all planned projects and management actions, and include a drinking water well mitigation program to protect drinking water.[17]

C. Recommendations on Probation Process

In general, we found most GSPs had deficiencies in the identification and engagement of DACs, drinking water users, and the environment during the GSP development and implementation process. Our review findings show that most GSPs failed to adequately consider DACs, drinking water users and the environment when establishing their SMCs. In addition to this, most plans do not have a drinking water well impact mitigation program in place. Finally, the representative monitoring well locations are not representative of the impacts to most vulnerable users. Below we summarize recommendations for the Board for the six inadequate basins including Delta-Mendota, Tule, Kaweah, Kern, Tulare Lake, and Chowchilla.

- **State Intervention:** The deficiency reports from DWR along with detailed comments from the public provide a detailed roadmap for the Board to understand the severity of the conditions in these basins. We ask that the Board begin the state intervention process across all six basins as soon as possible. We recommend the start of this process no later than 90 days from DWR's inadequate determination. The Board should provide notices and hold probationary hearings across all six basins. The Board should ensure that members of the public are provided opportunities to participate in public hearings.
- **Plan Deficiencies:** As outlined above in Section B, we conducted a detailed review of each plan to understand how they considered groundwater users. We ask the Board to require that all outlined deficiencies above be addressed by local GSAs in this probation period. In addition to the deficiencies provided by DWR, the Board has the authority to identify additional deficiencies within inadequate basins. Consideration of water quality in SMCs, robust stakeholder engagement, mitigating impacts to drinking water users, and protection of beneficial users in projects and management actions are still lacking across all six basins.

[18] "The monitoring network objectives shall be implemented to accomplish the following: [...] (2) Monitor impacts to the beneficial uses or users of groundwater." [23 CCR §354.34(b)(2)]

- **Probation Designation:** The statute requires that if the Board designates a basin as probationary, the GSA be given 180 days to remedy deficiencies identified. Most of the concerns and deficiencies we have outlined above can be addressed in a timely manner with state directive and local commitments.
- **Groundwater Monitoring:** After probation designation, we ask that the Board require basin-wide metering and increased representative monitoring across all six basins. In our review of GSPs, we found that there is insufficient representative monitoring near DACs, drinking water users, and GDEs. During the probation period, the Board must require local GSAs to improve their monitoring networks to collect data and information on groundwater level and groundwater quality impacts to vulnerable communities and ecosystems.

The degree to which key beneficial users are included in GSPs is a critical indicator of whether a plan is indeed on the path to sustainability. The success of SGMA depends majorly on the inclusion of *all* beneficial users in the implementation of GSPs.

We appreciate the opportunity to comment and are available to respond to any questions you might have.

Best Regards,

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