

October 18, 2021

DRAFT MEMORANDUM

Transmitted via e-mail

To: Christopher Alakel, City of Paso Robles
From: Iris Priestaf, PhD, Gus Yates, PG, CHG, and Chad Taylor, PG, CHG
Re: Approach for Technical Support to Paso Basin Cooperative Committee (PBCC) in Providing Corrective Actions

1.0 Introduction

In January 2020, the City of Paso Robles Groundwater Sustainability Agency (GSA), Paso Basin-County of San Luis Obispo GSA, San Miguel Community Services District GSA, and Shandon-San Juan GSA (collectively, the GSAs) jointly submitted the Paso Robles Subbasin Groundwater Sustainability Plan (GSP) to the Department of Water Resources (DWR) for evaluation and assessment as required by the Sustainable Groundwater Management Act (SGMA).

In June 2021, DWR completed its initial review of the Paso Robles Basin GSP and provided a consultation letter (dated June 3, 2021) to the GSAs initiating consultation in advance of its determination of the GSP as approved, incomplete, or inadequate. This determination is required of DWR no later than January 31, 2022. The consultation letter outlined “deficiencies which may preclude the Department’s approval” and indicated that DWR has the authority to determine if the GSP is incomplete and, if it does so, then the deficiencies precluding approval will need to be addressed within a period of time not to exceed 180 days from the determination (i.e., by July 30, 2022).

Staff from the four GSAs reviewed the notification letter, began developing an approach to address the deficiencies, met remotely with DWR staff to gain input, and provided a recommended approach to the Paso Basin Cooperative Committee (PBCC), established by the GSAs to guide development of the GSP. In August 2021, Todd Groundwater was retained to provide technical support to the PBCC and Paso Basin GSAs in resolving the deficiencies and providing corrective actions so that the GSAs can secure DWR approval of the GSP. The GSAs have expressed their intent not only to avoid a determination of inadequate, but also to achieve approval as soon as possible and to move forward with GSP implementation and management actions.

The approach summarized here is directed toward correcting the specific technical deficiencies in the GSP identified by DWR in the June 3, 2021 letter and communicating the corrective actions to the PBCC and to DWR to support a determination of approval.

1.1 Background

The DWR consultation letter identified two deficiencies that may preclude DWR's approval of the GSP and provided two potential corrective actions:

- Potential Corrective Action 1. Provide justification for, and effects associated with, the sustainable management criteria for groundwater levels
- Potential Corrective Action 2. Develop Sustainable Management Criteria for the Depletions of Interconnected Surface Water based on best available information and science.

For Action 1, DWR requires that the GSAs provide detailed explanation regarding the selection of the sustainable management criteria for groundwater levels, particularly undesirable results and minimum thresholds (MTs), and the effects of those criteria on beneficial uses and users of groundwater. DWR recommendations are summarized below:

- Describe the specific undesirable results GSAs aim to avoid through implementing the GSP.
- Disclose the anticipated impact of operating the Subbasin at conditions protective against those effects on relatively shallow domestic wells and all other beneficial uses and users.
- Using best available information, analyze locations and number of wells/well infrastructure that could be impacted by Subbasin management.
- Explain how the existing minimum threshold groundwater levels are consistent with avoiding undesirable results or establish minimum thresholds at the representative monitoring wells that account for the specific undesirable results the GSAs aim to avoid.
- As needed, consider mitigation strategies for drinking water well impacts that may occur with continued overdraft.

For Action 2, DWR requires that the GSAs provide more detailed information, as required in the GSP Regulations, regarding interconnected surface waters and depletions associated with groundwater use.

- Clarify and address the currently conflicting information in the GSP.
- If the GSAs cannot provide a sufficient, evidence-based justification for the absence of interconnected surface water, develop sustainable management criteria.
- Evaluate and disclose potential effects of the GSP's sustainable management criteria on beneficial uses of the interconnected surface water and on groundwater uses and users.

With regard to the second bullet, working experience in the Paso Robles Subbasin indicates that there are areas of interconnected surface water and available information to develop sustainable management criteria. Hence, this analysis addresses the inconsistencies in the GSP, assesses the occurrence of interconnected surface water, recommends sustainable management criteria, and evaluates effects on beneficial uses/users including Groundwater Dependent Ecosystems (GDEs).

1.2 Scope of Work and Schedule

The scope of work to provide the corrective actions and to communicate to the PBCC and DWR involves the five tasks listed below and discussed in the following sections. An initial draft schedule is attached that extends into June 2022 as a matter of perspective.

1. Meetings and Coordination
2. Review Documents and Refine Approach
3. Analysis for Groundwater Level Sustainability
4. Analysis for Interconnected Surface Water Sustainability Criteria
5. Reporting

1.2.1 Meetings and Coordination

Coordination includes regular communication among GSA staff and the consultant team by means of weekly progress reporting and virtual meetings scheduled at regular intervals and linked to project milestones (e.g., administrative draft deliverables). Consultation with DWR staff is provided on a regular basis (following GSA staff meetings) to promote full understanding of the DWR initial review, to provide DWR with regular technical updates, and to support discussion and agreement. Two presentations to the PBCC respectively provide an overview of the approach and a forum for discussion of progress, initial findings, and policy considerations among the four GSAs. The coordination and consultation approach is focused on the technical work and communication with DWR through 2021, with the practical objective of a determination by DWR of “incomplete” given that timing is insufficient for full approval. The schedule extends into January 2022, when the DWR determination is due.

Development of the 2019 GSP included a robust stakeholder outreach process, which is encouraged by DWR. Further outreach to the public and stakeholders and additional meetings of the PBCC can be planned for 2022, followed by a process (guided by GSAs legal counsel) for GSP amendment and/or adoption by the GSAs. The additional outreach and appropriate legal process would be planned to occur between January and July 30, 2022.

1.2.2 Review Documents and Refine Approach

Document review involves three subtasks. The first is general review of the GSP, Annual Reports, and public comments on the GSP. The second supports the analysis for groundwater level sustainability and focuses on information regarding well locations, depths, and type of use. The third addresses the inconsistencies identified by DWR related to interconnected surface water and focuses on available information regarding stream flow-duration characteristics, anadromous fish activity, riparian vegetation, and water table depths near creeks and rivers.

A fourth subtask is refinement of the approach. The technical approach is based on review of documents, discussion with the GSAs staff, and consultation with DWR staff. It is presented in this document to support discussion of and shared understanding of the scope of work, with submittal of an administrative

draft Technical Memorandum (TM) to GSAs staff and a draft TM to DWR and PBCC. The draft Approach TM will be incorporated into the Task 5 Reporting.

1.2.3 Analysis for Groundwater Level Sustainability

This analysis will be responsive to the DWR recommendations summarized in Section 1.1. As indicated in the DWR consultation letter, the expectation is that the criteria have been established as intended but require additional explanation and documentation. This will involve modifying Section 7.2, Water Level Monitoring Network, and Section 8.4, Chronic Lowering of Groundwater Levels SMC.

DWR recognizes the possibility that the MTs are not consistent with avoidance of undesirable results and in that case, the MTs would need to be revised. This scope assumes that the criteria adequately represent GSA intent and that only minor revisions or recommendations, if any, would be needed. The scope and approach do not include refining, prioritizing, or implementing projects and management actions.

The current groundwater level sustainability criteria (undesirable results, MTs, Measurable Objectives,) will be briefly described as a starting point, followed by evaluation of specific undesirable results of chronic groundwater level decline. Specifically, the MT is set at 30 feet below 2017 water levels, which in most wells were the lowest water levels during the period of record. A water level decline of an additional 30 feet will be assessed relative to undesirable results including other sustainability indicators.

The main analysis will address the anticipated impacts on domestic wells (and other beneficial uses/users) of operating the Subbasin with the sustainability criteria as defined. This will include documentation of existing well locations and construction using available well inventory data. We assume that the principal source of these data will be the data management system (DMS) described in the GSP. The GSP indicates that the DMS contains well location, construction, and perforation information compiled from DWR, San Luis Obispo County, and Geotracker / GAMA. These existing data will be used to assess existing wells relative to the 22 representative monitoring site (RMS) Wells and compare existing well construction (including average depth) to the Groundwater Level MTs at the RMS Wells. This will disclose the impact on existing wells (including those with less-than-average depth), likely to be expressed as a percentage of wells. We will compare these results with the locations and timing of owner-reported well problems in DWR's Household Water Supply Shortage Reporting System.

No additional collection, compilation, or digitization of well location, depth, and/or construction records is anticipated in this approach or in our scope of work.

This analysis will be the basis for assessing if the criteria are reasonable to protect existing wells. It will include discussion of anticipated impacts of 30 feet of additional water level decline on storage, subsidence, water quality, and interconnected surface water.

The analysis will likely find that a certain percentage of wells will be adversely affected. This will be discussed with the GSAs to verify the magnitude of impacts that appear reasonable. If impacts are deemed not reasonable, additional management actions (e.g., water system consolidation or emergency response programs beyond SGMA) will be identified through discussion with the GSAs.

1.2.4 Analysis for Interconnected Surface Water Sustainability Criteria

The GSP lacks a thorough description of interconnected surface water and Groundwater Dependent Ecosystems (GDEs) in Section 5.5, Interconnected Surface Water, and lacks sustainability criteria in Section 8.9, Depletion of Interconnected Surface Water SMC. These sections will be replaced to provide comprehensive description, reasonable criteria consistent with SGMA, and an evaluation of the criteria with respect to other sustainability indicators, beneficial uses, and adjacent basin areas.

The GSP includes some descriptive information regarding interconnected surface water including water budget tables that include groundwater discharge to streams and Appendix C showing locations where riparian vegetation may use groundwater. This information will be incorporated into Section 5.5 and supplemented with additional information, such as:

- An evaluation of whether mapped springs and seeps in upland areas appear to be using groundwater (as opposed to seasonal rainfall) and whether groundwater in those locations is plausibly affected by groundwater pumping and levels in the valley floor areas.
- An evaluation of the types of vegetation mapped along stream channels (obligate versus facultative phreatophytes), trends in the extent and density of riparian vegetation over the past several decades and whether those trends relate to groundwater level trends. Information sources will include discussions with local riparian management groups such as the Upper Salinas-Las Tablas RCD.
- Animals that may depend on groundwater will also be evaluated, primarily steelhead trout that migrate up and down the Salinas River during periods when groundwater contributions to base flow are significant. Seasonal stream flow-duration characteristics and passage-day opportunity will be tabulated, and trends in those characteristics will be compared with trends in groundwater elevations. Information sources will include discussion with fisheries management agencies such as the National Marine Fisheries Service.

Sustainability criteria for interconnected surface water will focus on three categories of potential undesirable results: diminished supply to downstream surface water users, decreased extent or vigor of riparian vegetation due to root zone dewatering, and reduced passage opportunity for steelhead. The initial minimum threshold for downstream water users will be selected in the context of water rights and operation of the Salinas Valley Water Project. The minimum threshold for phreatophytic riparian vegetation will likely be defined as a depth to the water table that empirically correlates with the existing distribution of that type of vegetation. The initial minimum threshold for fish passage will be based on the number of adult and smolt passage days, probably classified by year type.

The initial minimum threshold concepts may be re-defined in terms of water table depths in the riparian vegetation areas because water levels are easy to measure whereas flow gains and losses are not.

GSP Regulations require a GSP to not only identify interconnected surface water systems but also to evaluate the quantity and timing impacts of groundwater depletions (after 2015) to beneficial water uses/users. Depletions could occur as a result of an additional 30-foot decline in groundwater levels,

which is the proposed minimum threshold in the GSP for the chronic lowering of groundwater levels sustainability indicator. This analysis will be based on 1) empirical historical relationships between base flow or riparian water table depth and water levels in deeper water supply wells, and 2) previously modeled relationships between pumping reductions, groundwater levels and groundwater budgets presented in the GSP.

1.2.5 Reporting

The scoped and budgeted approach involves submittal of a distinct Todd Groundwater addendum to the GSP that would revise some GSP sections/subsections with tracked changes (for example, Executive Summary) and replace other GSP sections entirely (e.g., Sections 5.5, 7.6, and 8.4). The sections will be in suitable format (Word) for incorporation into the GSP.

This is an appropriate initial step that supports timely review by the GSAs, PBCC, and DWR. Edited and replaced sections will be conveyed with a submittal memorandum to the GSAs staff and to the PBCC as administrative draft and draft documents, respectively. GSAs staff will then be able to import the edited and replaced GSP sections into the master GSP document and submit it to DWR to help support their determination.

Based on consultation with GSA staff and DWR, work beyond this scope should include public outreach, with presentation of the revised/replaced sections to the public and stakeholders in 2022. Requirements for public review (including a review period) are not known and probably are at the discretion of the GSAs. Subsequently, the revised/replaced sections will be ready for incorporation into the GSP. The scope and schedule do not include provision of responses or revisions based on future public review, or recompilation, submittal, or upload to the Portal of the full amended GSP document.