



ECOS
ENVIRONMENTAL
COUNCIL
OF SACRAMENTO



Environmental Council of Sacramento
P.O. Box 1526, Sacramento, California 95812
Phone: 916-444-0022

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To: Groundwater Sustainability Agencies in the South American Subbasin
Sacramento County; Linda Dorn, dornl@saccounty.net
Northern Delta; Erik Ringelberg, erik@thefreshwatertrust.org
Omochumne-Hartnell Water District, Mike Wackman, info@ohwd.org
Sacramento Central Groundwtr Auth; John Woodling, jwoodling@geiconsultants.com
Sloughhouse Resource Conservation Dist; Austin Miller, austin@sloughhouseRCD.org

Subject: Comments on the South American Subbasin Groundwater Sustainability Plan Public Draft (GSPD) dated 6/18/2021

The Environmental Council of Sacramento (ECOS) is a 501c3 nonprofit, with the mission to achieve regional and community sustainability and a healthy environment for existing and future residents. Member organizations of ECOS include: *350 Sacramento, Breathe California Sacramento Region, Environmental Democrats of Sacramento, Friends of Stone Lakes National Wildlife Refuge, International Dark-Sky Association, Physicians for Social Responsibility Sacramento Chapter, Sacramento Audubon Society, Sacramento Citizens' Climate Lobby, Sacramento Electric Vehicle Association, Sacramento Housing Alliance, Sacramento Natural Foods Coop, Sacramento Valley Chapter of the California Native Plant Society, Sacramento Vegetarian Society, Save Our Sandhill Cranes, Save the American River Association and Sierra Club Sacramento Group.* Habitat 2020 is a coalition that works to protect the lands, waters, wildlife and native plants in the Sacramento region. The great Central Valley of California has been identified by the World Wildlife Fund as one of North America's most endangered eco-regions. Preserving its remaining open space and agricultural land is essential for sustaining native plants and wildlife, and ensuring a high quality of life for ourselves and future generations. Member organizations of Habitat 2020 include: *Friends of Stone Lakes National Wildlife Refuge, Friends of Swainson's Hawk (FOSH), International Dark-Sky Association, Sacramento Area Creeks Council, Sacramento Audubon Society, Sacramento Heron and Egret Rescue, Sacramento Valley Chapter of the California Native Plant Society, Save Our Sandhill Cranes, Save the American River Association and Sierra Club Sacramento Group.* Habitat 2020 also serves as ECOS' Habitat and Conservation committee.

ECOS commends the effort of the South American Subbasin Groundwater Sustainability Agencies (GSAs), the GSP Working Group, and their consultants, for involving the public and in preparing the GSPD. The GSPD provides both a technical and lay understanding of the South American Subbasin (SAS) and how groundwater moves within it. With additional information, Projects and Management Actions recommended below, the GSPD will present a clear direction for the subbasin's sustainable groundwater management.

Conceptually, the GSPD includes two conservative assumptions that deserve clarification. First, regarding the projected impacts from pending climate change, the selection of the 'central tendency' climate forecast understates the impacts of climate change on future water supply and demand, which would have a negative impact on the SAS's sustainability. The GSPD should clearly describe the climate change study,

its assumptions, and the arguments for and against using the central tendency forecast. Second, the GSPD does not include demand reduction as a Project and, therefore, does not reduce groundwater demand resulting from the associated water conservation and efficiency actions and programs that are expected to take place. These demand reducing programs should be described along with the logic for not including them in this GSP. The effect is to potentially overstate future groundwater pumping in the SAS. We urge that: 1) the GSPD include a more robust discussion of the climate change forecast, and 2) both climate assessment and demand reduction approaches be reassessed and included in a future GSP annual report to DWR or, at a minimum, in the 2025 GSP update.

The Executive Summary (ES) does not adequately include the impacts and importance of climate change on SAS sustainability even though this information is found in the body of the GSPD. The ES focuses on the need for a plan to address human water needs, but the SGMA makes it clear that environmental groundwater needs must also be addressed. The ES also focuses on past plans and actions, and while these contribute to why we are engaged in a GSPD, the ES should focus on the future. Terms and concepts should be better defined, along with their relevance to groundwater assessments and planning. For example, “groundwater conditions”, “conceptual model”, and “water budget” need definitions/relevance narratives for the lay reader. Many readers may only read the ES, so it is important that the ES communicate effectively. Our specific comments on the GSPD’s technical work, conclusions, and findings are discussed in the following section reviews.

Section 2 encompasses a compendium of information about the SAS. While we understand that the existing monitoring well system depends on existing wells and monitoring programs of the GSAs and other organizations, we urge those deficiencies noted in the system be corrected and that plans be developed, and resources set aside to further the coverage of both the shallow and deep portions of the primary aquifer. In addition, time and experience may necessitate additional monitoring associated with ISW and GDE protection. Finally, the existing monitoring system needs to be assessed to determine if it is sufficient to monitor future groundwater banking operations. If additional wells and monitoring are needed, their installation, operation and maintenance costs should be incorporated within the water banking program and borne by its participants.

Section 2 also discusses water purveyor supply and demand numbers. The GSPD provides information from published 2015 Urban Water Management Plans (UWMP). The water purveyors subsequently published their 2020 UWMPs. These plans include updated information including actual supply and demand numbers for 2020, as well as forecasts for future water demand based on current local land use plans. The base numbers for 2020 are actual water supply and demand for that year and will not change so these 2020 UWMP numbers should be included in the final GSP. Understanding future groundwater demand is a critical component in the subbasin’s water budget and in assuring management actions will have the desired effects in achieving SAS sustainability. Additionally, including 2020 supply and demand numbers as benchmarks improves the accuracy of assessments conducted to determine the effectiveness of purveyor demand reduction programs. Also, the next five-year GSP update should be based on 2025 UWMP demand numbers and programs. Therefore, the GSAs should engage in GSP planning and coordination for the next five-year update to ensure the latest water purveyor numbers are provided in advance of the draft and included in the final 2025 GSP update.

Section 3 effectively communicates the analysis done to comply with the requirements of SGMA and we concur with the proposed Sustainability Goal. However, we are concerned about the use of 2015 storage

and water levels as the triggers in the Sustainable Management Criteria. The document implies that we can drop below 2015 levels for three consecutive years before any action is taken. However, under this approach, the GSPD does not comply with the SGMA provisions that direct conditions not to worsen below the 2015 base year. A more prudent approach would be to set the trigger levels higher so that action can be taken when water and storage levels initially reach the 2015 mark. The result of analysis presented in the GSPD makes it possible to adjust the Minimum Thresholds to levels that would require action when the actual 2015 values are reached.

We are concerned about how GDEs are impacted by the Sustainable Management Criteria. We acknowledge that the GSPD presents a comprehensive assessment of both interconnected surface water (ISW) and Groundwater Dependent Ecosystems (GDE) based on current science. However, new information was presented recently (Lewis and Burgy 1964 study) to the GSP Working Group suggesting the root depth analysis used for GDEs should use a depth of 80 feet, not the 30 feet used in the GSPD. In addition, The Nature Conservancy (TNC) is about to publish a study indicating root depths for certain oak species are 25 meters. Also, a recent TNC study identifies the inability of oak woodlands to reproduce when ground water levels are too low. Therefore, a determination of appropriate root depths to maintain GDEs should be included as a priority Management Action in the final GSP.

We are concerned about the measures being taken to protect GDEs. While we understand the rationale behind the three-year trigger for ISW, we believe another approach is necessary for the protection of GDEs. If groundwater levels fall below the root zone for three years before any action is taken, then the need for action has passed because the plants located in the area of concern will already be dead. We urge further work in this area and that the final document include more protective measures for GDEs; or if further study is needed, this be identified as a high priority Management Action.

Finally, with respect to communicating, we recommend that that monitoring data be presented to the public in a form that allows local property owners to track information from sampling events that are of immediate interest to them. We suggest that the GSAs incorporate telemetry into the well monitoring program so that results can be recorded on a real-time basis. This will allow for more frequent sampling if the need arises.

Section 4 provides complete discussions of the Projects contemplated as part of the GSP. However, we believe that water purveyor and Agriculture demand reduction should be added. The GSPD discusses a 10% demand reduction programs for water purveyors and Agriculture. While time may not be sufficient to redo the analysis to incorporate these programs, they should be described in the GSPD and included in the next GSP five-year update as Group 1 and 2 projects.

The Group 2 project list should be expanded to include a priority list of water purveyor projects that best contribute to the sustainable management of the basin. Water purveyors have a significant list of system connectivity, conjunctive use, and recharge projects. We recognize that the GSAs have no direct authority over any of these projects, but it is important to send a signal to the water purveyors and the public at large regarding which projects fit best with the management of the SAS and what completion priority each project has with respect to attaining subbasin sustainability.

Finally, we note the important insights made possible by research and monitoring that guides Project development so that both recharge and ecological value are increased. An example is the investment made

by OHWD and SAFCA to work with research teams to fully understand the site characteristics and to identify all the opportunities for both principal aquifer recharge and flood protection, and ecological uplift. This information will enhance funding opportunities and support effective and responsible groundwater banking. We encourage SAS GSAs efforts to support individual GSA projects like this, and suggest including a thorough description of the many benefits of the project in the DGSP.

This Section also contains Management Action. We endorse the concept of a Shallow/ Vulnerable Well Protection Program and the Well Permit Coordination actions. The GSPD should specify responsibilities and timeframes for these Actions' development, funding, and implementation. Additionally, we recognize that the Shallow/Vulnerable Well Protection Program is still in the formative stage and offer these suggestions: The Program should focus on shallow wells (domestic and agricultural) that become dry resulting from MT exceedance, and should not apply to localized dry well conditions. We support efforts to engage the local agricultural and residential landowners in the development of the program. We suggest that the GSPD's initial focus include voluntary, private well owner data gathering and coordination. We recommend that the GSPD include enough information about the effort to support any subsequent funding opportunities from outside sources. The tie between shallow wells and conjunctive use/recharge should also be assessed as part of program development and implementation. Additionally, with enhanced private well owner monitoring, these well owners will have information they can use to carry out their own water conservation efforts.

The GSPD's Management Actions section should be expanded to include specific lists of work, studies, and monitoring system improvements, including the responsible GSA(s). The same level of detail should be included in Management Action write-ups for the additional monitoring system improvements (including those we have recommended) noted as needed to be performed within the GSPD. The GSAs may find it difficult to plan and budget for these Actions unless they are called out in the final GSP that is approved by the GSAs.

We believe the GSPD's Management Actions section should be expanded to include the following additional Management Actions:

- 1) A Management Action should commission a climate impacts assessment that results in revised climate impact inputs for the five-year GSP update. This new climate impacts assessment should build upon the American River Basin Study used as the basis for the current GSPD analysis. The yet-to-be-published American River Basin Study is expected to include over 60 climate forecasts and the version that the GSPD uses is based on climate information and forecasts do not reflect the region's recent climate experience and the latest climate forecasts. Fortunately, the local agencies who helped fund the study have briefed the Water Forum and others on its findings and have indicated that the American River Basin Study does have climate data that is more reflective of current conditions and these newer forecasts. The study's project managers have advised that the study's forecasting models can be run with that information. Given the repeated references in the GSPD to the importance of the impacts of climate change on basin management, a new assessment should be conducted so that it is available in time for a future annual update to DWR or, by the latest, the next plan update in five years. To that end, the GSAs should reach out now to the other subbasin GSAs, RWA and the Water Forum to develop an agreement to perform that work so that it can be included in the region's three GSP updates. The same inputs should be used in the next round of UWMPs and by the RWA and Water Forum in their planning efforts. ECOS and RWA are members of the Water Forum and participate in the Water

Forum 2 renegotiation process, which is committed to actions that lead to the Region's water supplies being able to best adapt to climate change. This includes how groundwater is a significant, sustainable resource for providing for our water needs - both for people and the environment. We believe that the Water Forum 2 process, and successor efforts, should help in the development of studies linking our water supply with future climate assessments.

- 2) A Management Action should direct the GSAs to develop a policy and procedure for reviewing, formally commenting on, and approving (when appropriate) groundwater transfers, water banking activities including the accounting framework, and conjunctive use operations. The document should include GSA ongoing monitoring and management responsibilities in each area, and how costs for these activities are recovered. The policy and procedure should lay out how water banking and recharge programs will be implemented in the SAS including governance, water accounting, banking and recharge operations, and SAS banking premiums of water left in the SAS, over and above deposits, to adjust for natural storage loss, environmental premiums, and basin supply enhancement. Some Projects (Harvest Water Project and OHWD) are investments that enhance the subbasin's storage and provide multiple benefits for the subbasin. These efforts contribute to subbasin sustainability and the ability to utilize the subbasin for transfers, conjunctive use, and water banking. The policy and procedure should address how these types of Projects are able to participate in transfers, conjunctive use, and water banking operations, and/or other transactions that add value to their basin contributions.

Section 5 needs to be strengthened with the additional Projects and Actions we recommend. If the GSP does not include the full list of Projects and Actions that need to be accomplished, then those left off the Plan's published list will likely not be addressed.

We thank you for the opportunity to provide comments. If you have any questions regarding this letter, please feel free to contact us.

Sincerely,



Ralph Propper
President, ECOS



Robert Burness
Co-Chair, Habitat 2020

cc: Jessica Law, Executive Director, Water Forum
Jim Peifer, Executive Director, Regional Water Authority