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June 21st, 2019

Re: Concerns and Recommendations to Ensure that Merced Subbasin GSP Protects Vulnerable Drinking Water Users

Dear Merced Groundwater Sub-basin Coordinating Committee members,

Our organization works alongside low income communities of color in the San Joaquin Valley and the Eastern Coachella Valley to advocate for local, regional and state government entities to address their communities' needs for the basic elements that make up a safe and healthy community, including clean, safe, reliable and affordable drinking water, affordable housing, effective and safe transportation, efficient and affordable energy, green spaces, clean air, and more. We have been engaged in the Sustainable Groundwater Management Act (SGMA) implementation process because many of the communities with whom we work are dependent on groundwater for their drinking water supplies, and often have already experienced groundwater quality and supply issues. Historically, communities we work with have not been included in decision-making about their previous water resources, and their needs have not been at the forefront of such decisions. In 2012, California recognized the Human Right to Drinking Water as a statewide goal. Now, because of SGMA's requirements for a transparent and inclusive process, groundwater management under the new law has the opportunity to include disadvantaged communities in decision-making and create groundwater management plans that understand their unique vulnerabilities and are sensitive to their drinking water needs.

We are concerned that drinking water impacts and disadvantaged community input have not been adequately analyzed and incorporated into the draft GSP, and recommend the following actions to ensure that drinking water is protected, especially for the communities whose drinking water is severely at risk from groundwater management activities, and who are the least able to pay for solutions for clean and reliable drinking water.

Development of Sustainable Management Criteria



In order to “consider the interests of”¹ disadvantaged communities in developing sustainable management criteria, GSAs must address the impacts of the six sustainability indicators, engage residents of disadvantaged communities to understand their groundwater issues and needs and get input on how to shape sustainable management criteria, and analyze the impact of preliminary minimum thresholds on drinking water users before establishing minimum thresholds.

Under SGMA, *all sustainable management criteria must be based on the GSA’s determination of what will cause a “significant and unreasonable” impact on each of the six sustainability indicators.*

² This determination of what is “significant and unreasonable” must be based on the needs of all beneficial users.³ Without first consulting beneficial users, including disadvantaged communities, to understand what groundwater impacts those individuals and communities want to avoid, the GSA cannot make a valid determination of what is “significant and unreasonable”, and thus cannot set valid sustainable management criteria.

In the Merced subbasin, GSAs and consultants had initial discussions at the first few stakeholder committee meetings about the general impacts that stakeholders on the committee wanted to avoid as they developed the GSP. On August 27th, 2018, consultants began more concrete conversations on the minimum thresholds, proposing groundwater levels minimum thresholds at the lowest historical elevation, plus a buffer, unless this would dewater no more than 25% or the shallowest nearby domestic wells. Consultants also proposed a second methodology that could protect more wells by establishing the minimum threshold at the level of the shallowest well, or the 25th percentile level, whichever was higher. For groundwater quality, consultants proposed only doing a minimum threshold for total dissolved solids and not other contaminants despite their knowledge that the subbasin has water quality issues from nitrates, DBCP, 123-TCP and other contaminants⁴, and that their groundwater management activities could impact the concentration and location of those contaminants. Our organization and Self-Help Enterprises both voiced concerns with these thresholds, both in their substance and also because they were not based on a participatory determination of what stakeholders in the subbasin consider to be “significant and unreasonable” impacts from the sustainability indicators.

Subsequently, the Merced Subbasin GSAs hosted several workshops at which they asked the public for feedback on what they considered to be significant and unreasonable impacts. Our organization and Self-Help Enterprises worked with GSA consultants to ensure that workshops were accessible to disadvantaged communities, and that the presentations would go beyond presenting updates and be geared towards soliciting meaningful feedback. After the workshops and several more conversations with the Stakeholder Committee in April and May 2019, at which Leadership Counsel and Self-Help Enterprises stressed the importance of protecting drinking water for disadvantaged communities, consultants are now proposing that groundwater levels minimum thresholds be set at the depth of the shallowest well in the 2-mile radius around each monitoring well, or if the water levels are already below that level then setting

¹ Water Code sec. 10723.2

² CCR sec. 352.28(a), 354.30(b), 354.26(a)

³ CCR sec. 352.28(b)(4)

⁴ Merced Subbasin Groundwater Sustainability Plan Current and Historical Groundwater Conditions



the minimum threshold at 2015 levels. We believe public and stakeholder feedback on “significant and unreasonable” impacts to drinking water informed the improvements to the groundwater levels minimum threshold have come from, but it is still not clear what impact the 2015 levels will have on nearby drinking water users, or how many wells will not be taken into account that are outside the 2-mile radius around monitoring wells. For groundwater quality, despite our feedback that consultants look at addressing all contaminants, the GSAs still only propose a minimum threshold for total dissolved solids. There has been no meaningful discussion with the public or stakeholders about whether this will cause “significant and unreasonable” impacts to drinking water resources for beneficial users.

*In order to effectively “consider the interests of” all beneficial users, GSA committees must analyze how preliminary sustainable management criteria will affect drinking water users before reaching proposed final sustainable management criteria.*⁵ Our experience demonstrates that once recommendations are made at the committee level, it is difficult to reassess those recommendations once they reach the governing board, so such a decision cannot overlook impacts on the most vulnerable groundwater users. Before asking committees to make recommendations to GSA staff, committees must be equipped with information about how potential minimum thresholds will impact access to drinking water for domestic well owners and communities on small community water systems. To date and to the best of our knowledge, the Merced subbasin GSAs have not conducted an analysis of how drinking water will be impacted by the groundwater quality and groundwater levels minimum thresholds proposed by consultants. Specifically, we request that the GSAs ensure that an analysis be done of the impact to domestic well users and small community water systems from the proposed minimum thresholds for groundwater quality and groundwater levels. With this drinking water impact analysis, the stakeholder committee can be equipped with the necessary information to determine whether impacts from these proposed minimum thresholds will be “significant and unreasonable.”

The GSP development process must be representative of the interests of all beneficial users named in the Act. When board members do not come from disadvantaged communities or understand the unique groundwater needs of such communities, as is the case more often than not, *it is imperative for the agency to reach out to disadvantaged community members for input* before making key decisions such as recommending or proposing draft sustainable management criteria. The Merced GSAs’ consultants have worked with Leadership Counsel and Self-Help to do outreach to disadvantaged communities for workshops, and have regular calls with our organizations to coordinate outreach to disadvantaged communities. At GSA meetings, to which community residents’ schedules prevent them from coming, Leadership Counsel and Self-Help Enterprises helps provide feedback on GSP development on behalf of community residents. We are grateful that the GSA consultants actively reach out to us for suggestions on how to do such outreach, and hope that our organizations have been able to help the GSAs and

⁵ California Department of Water Resources, Sustainable Management Criteria Best Management Practices, p. 9. The GSP must discuss how groundwater conditions at a selected minimum threshold could affect beneficial uses and users. This information should be supported by a description of the beneficial uses [of] groundwater and identification of beneficial uses, which should be developed through communication, outreach, and/or engagement with parties representing those beneficial uses and users, along with any additional information the GSA used when developing the minimum threshold.



consultants learn how to do more effective outreach to disadvantaged communities in the area. As the GSAs develop their sustainable management criteria and projects and management actions, they must *show that they are meaningfully implementing the input* that they are receiving from disadvantaged communities and disadvantaged community advocates regarding their drinking water needs.

Groundwater Quality Minimum Threshold Recommendation

Groundwater quality has been a particularly complex issue for GSAs. In determining how they will set their sustainable management criteria for groundwater quality, GSAs have considered many factors, including the state Maximum Contaminant Levels (MCLs), other agencies monitoring and regulating groundwater contaminants in the region, areas where MCLs are already exceeded, and ways that groundwater management could impact the concentration and movement of groundwater contaminants.

We understand the complexity of setting groundwater quality SMC that are accurate, attainable and measurable, and we are eager to work with the Merced subbasin GSAs to ensure that groundwater management does not increase groundwater contamination, especially where groundwater is being used as a drinking water source. Consultants for the Merced subbasin GSAs have stated they would only be monitoring for total dissolved solids. Given the need for a concrete minimum threshold that strongly protects the human right to drinking water, we recommend that the Merced subbasin GSAs instead implement the following minimum thresholds:

- Minimum thresholds for water quality should be set at the best water quality since 2015 for each constituent.
- Where the minimum threshold exceeds the public health goal for any constituent, the GSP should, at a minimum, include a policy to strive for improvements to water quality to the point of meeting the relevant public health goal(s).

The reasoning behind these minimum thresholds is that the GSA is tasked with avoiding any undesirable results, and contamination of groundwater and other drinking water sources is a “significant and unreasonable” impact to the resource that we all need to drink, cook, bathe, grow food, and more. Accordingly, minimum thresholds must ensure protection from and prevention of contamination of groundwater and other drinking water sources. DWR instructs GSAs to look to existing groundwater regulatory programs and water quality standards.⁶ Many GSAs have proposed incorporating the existing MCLs into their minimum thresholds, however reliance on an MCL is not sufficiently protective of drinking water sources, and does not prevent contamination of our critical resources. An appropriate standard in the context of groundwater protections is the state’s anti-degradation policy, which is used by the SWRCB and regional water boards, and does not allow for further contamination of groundwater based on the best quality of the water since 1968.⁷ In the SGMA context, it is key to prevent further

⁶California Department of Water Resources, Sustainable Management Criteria Best Management Practices, p. 15.

⁷ *Asociacion de Gente Unida por el Agua v. Central Valley Regional Water Quality Control Bd.* (2012) 210 Cal.App.4th 1255, 1268.



degradation of groundwater quality to protect drinking water. We are asking the GSA to specifically look at protecting the highest quality of groundwater achieved since 2015, based on the year that SGMA was passed. Another rule commonly used in environmental law is the precautionary principle, which prohibits activities that could cause harm when the amount of potential harm is unknown. We urge the GSA to use these two rules, combined with seeking to remediate groundwater to the public health goal, as laid out above, to ensure that groundwater management does not cause degradation of groundwater quality.

GSA's should monitor all primary drinking water contaminants, as well as chrome-6⁸, which is known has significant health effects but is undergoing a new process to set the MCL because of procedural flaws. It is widely known that the San Joaquin Valley experiences widespread water quality issues from nitrates⁹, DBCP¹⁰ ¹¹, 123-TCP¹² and other contaminants, and the GSA's groundwater management activities could impact the concentration and location of those contaminants. Where relevant, GSA's should also consider monitoring for PFOA and PFOS as the EPA has established a Lifetime Health Advisory for them due to their potential impacts on drinking water systems.¹³ This should especially be considered in the Merced Subbasin as they have they have identified these as emerging contaminants in their "Current and Historical Groundwater Conditions" Draft GSP Chapter. GSA's should also monitor contaminants that are proven to increase from groundwater management, such as arsenic and uranium,¹⁴ increased contamination from recharge,¹⁵ movement of contaminant plumes from groundwater pumping, and other groundwater management activities.¹⁶

Water Quality Considerations for Groundwater Management Actions

⁸ Hausladen, Debra M., et al. "Hexavalent chromium sources and distribution in California groundwater." *Environmental science & technology* 52.15 (2018): 8242-8251.

⁹ *Addressing Nitrate in California's Drinking Water: With a Focus on Tulare Lake Basin and Salinas Valley Groundwater: Report for the State Water Resources Control Board Report to the Legislature*. Center for Watershed Sciences, University of California, Davis, 2012.

¹⁰ Peoples, S. A., et al. "A study of samples of well water collected from selected areas in California to determine the presence of DBCP and certain other pesticide residues." *Bulletin of environmental contamination and toxicology* 24.1 (1980): 611-618.

¹¹ Loague, Keith, et al. "A case study simulation of DBCP groundwater contamination in Fresno County, California 2. Transport in the saturated subsurface." *Journal of Contaminant Hydrology* 29.2 (1998): 137-163.

¹² Burow, Karen R., Walter D. Floyd, and Matthew K. Landon. "Factors affecting 1, 2, 3-trichloropropane contamination in groundwater in California." *Science of The Total Environment* 672 (2019): 324-334.

¹³ "Drinking Water Health Advisories for PFOA and PFOS." EPA, Environmental Protection Agency, www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos.

¹⁴ Jurgens, Bryant C., et al. "Effects of groundwater development on uranium: Central Valley, California, USA." *Groundwater* 48.6 (2010): 913-928.; also see "Groundwater Quality in the Sustainable Groundwater Management Act (SGMA): Scientific Factsheet on Arsenic, Uranium, and Chromium," found at

https://d3n8a8pro7vhmx.cloudfront.net/communitywatercenter/pages/293/attachments/original/1559328800/Groundwater_Quality_in_SGMA_Scientific_factsheet_on_arsenic_uranium_and_chromium.pdf?1559328800

¹⁵ Ground Water Recharge Using Waters of Impaired Quality (1994) <https://www.nap.edu/read/4780/chapter/3>

¹⁶ Moran, T., & Belin, A. (2019). *A GUIDE TO WATER QUALITY REQUIREMENTS UNDER THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT*. Retrieved from <https://purl.stanford.edu/dw122nb4780>.



To establish causality between groundwater management activities and groundwater contamination, GSAs should look to (1) whether there has been a correlation in groundwater management activities and an increase in contamination that could result from groundwater management activities, (2) relevant scientific studies that show proven mechanisms by which causation can be established between groundwater management activities and groundwater contamination, and (3) data and samples collected showing a causal nexus in the case at hand.

Finally, in order to effectively protect drinking water resources, GSAs should establish Management Areas in areas that are more vulnerable to groundwater contamination, such as communities with many shallow wells and communities that cannot afford to install drinking water filters or treatment facilities.

Groundwater Levels Minimum Threshold Recommendation

GSAs must protect drinking water, and must consider the needs of disadvantaged communities and domestic well users in creating their GSPs. The California legislature has stated that the use of water for domestic purposes is the highest use of water,¹⁷ and passed the Human Right to Drinking Water in 2012.¹⁸ After the passage of SGMA, GSAs now have the responsibility to protect drinking water through groundwater management. If they choose to allow individuals to keep pumping at the expense of severe drinking water impacts, that is a groundwater management decision that violates their obligation to protect drinking water resources. GSAs must therefore have strong minimum thresholds that protect all drinking water wells from dewatering.

Minimum thresholds are the most pivotal measure for how a GSA will prevent impacts from a sustainability indicator. This is the point that a GSA must avoid, and could necessitate state intervention. There is some flexibility, however; for groundwater levels, DWR shows in its Sustainable Management Criteria Best Management Practices guide that it will allow a GSA to dip below its minimum threshold for groundwater levels in some cases, as long as its GSP will ensure that it comes back up and towards its measurable objective. Therefore, GSAs should strive to set minimum thresholds at levels that they seek to avoid.

GSAs should set minimum thresholds for groundwater levels at the level of the shallowest existing wells in use, with a buffer above the depth of the top of the screen. If GSAs choose not to do so, they must take on the responsibility for the wells that do go dry from this policy choice. If proposed minimum thresholds allow wells to go dry, a GSA must conduct a drinking water impact analysis to evaluate how many drinking water wells will go dry, set management areas for shallower minimum thresholds where there are more concentrated shallow domestic wells, and ensure that drinking water is protected by implementing preventive actions such as digging deeper wells and assisting with

¹⁷ Water Code sec. 106.

¹⁸ Water Code sec. 106.3



consolidation projects. It is important to note that prevention, not mitigation, is the only way to effectively protect drinking water resources.

Consultants for the Merced subbasin GSAs are currently proposing that the groundwater levels minimum thresholds be set at the depth of the shallowest well within a 2-mile radius of monitoring wells, or if the water levels are already above that level then setting the minimum threshold at 2015 levels. We request that the GSAs set all minimum thresholds at a level to provide a buffer above the depth of the top of the screen of the shallowest well. The buffer must be adequate to ensure that the shallowest well does not go dry due to a short or medium-term exceedance of the minimum threshold. The GSAs should only disregard wells that they can prove are not in use.

In setting groundwater levels minimum thresholds, GSAs should also set minimum thresholds high enough as to avoid groundwater contamination from overpumping. They should also set minimum thresholds that ensure that rural communities have equitable access to groundwater resources, and have enough for current needs and future growth. GSAs must also factor in the increased costs of pumping and installing new wells if groundwater levels decrease, and avoid additional costs in groundwater access for low income communities dependent on groundwater for drinking water resources. GSAs should also set minimum thresholds for groundwater levels that will prevent subsidence from occurring and disrupting infrastructure that is critical to the health and safety of vulnerable communities, such as private wells, roads, and homes.

Monitoring Network

Broadly, the GSAs must develop actionable steps to fill data gaps and monitor groundwater levels and groundwater quality. In order to protect drinking water resources, monitoring networks should be closely monitoring impacts on drinking water. In particular to water quality, GSAs should monitor for contaminant concentrations quarterly, and increase monitoring to every month if a water quality test detects higher contamination concentration than the previous water quality test. Testing should also robustly monitor plume migration especially given the high number of water users in the Merced subbasin.

As a result, the GSP should fund a water quality testing program for strategically identified domestic wells to complement data from small water systems and disadvantaged communities in order to fill existing data gaps as well as begin to identify contaminant plumes. To track these concerns the GSA should place monitoring wells near DACs and clusters of domestic wells.

We look forward to providing further recommendations on the monitoring network in the future.

Transparency and Inclusivity

As public agencies, GSAs are subject to the requirements of the Ralph M. Brown Act, which requires transparency of public agencies through notice of meetings and prior posting of agendas, posting of meeting minutes after meetings, and public access to meeting materials upon request by a member of



the public. In addition to Brown Act requirements, GSAs must also adhere to the specific public participation and inclusivity requirements for GSP development laid out in SGMA. SGMA expands the public participation requirements of GSAs to also “*encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin prior to and during the development and implementation of the groundwater sustainability plan.*” (Water Code sec. 10727.8) To assist in GSAs complying with this requirement, DWR has published guidance on public notice and engagement, highlighting good practices for effective engagement. Both the letter and spirit of SGMA communicate that GSAs must conduct GSP development in an open and inclusive way.

A best practice to ensure authentic, meaningful input as required by SGMA is to post meeting materials before the meeting, so that these materials are available to the public for feedback and engagement. The Brown Act requires these materials to be made available after the meeting upon written request of the public. Paired with SGMA’s requirements for robust community engagement, the most effective way to ensure that the public is aware of what will be talked about at meetings, and to access critical GSP development information despite not being able to attend one meeting, is to post all meeting materials online before the meeting. The Merced Subbasin GSAs send out meeting notices with an agenda, and have an easily navigable website that contains meeting agendas, presentations and minutes for each meeting. However, the GSAs would facilitate more effective public engagement at the meetings if they were to post meeting presentations ahead of time, so that attendees could view the discussion items and data before the meeting.

GSAs should also ***dedicate sufficient funding to ensure meaningful, effective, and accessible engagement of the public.*** We, along with Self-Help Enterprises, have worked with the Merced subbasin GSAs’ consultants to improve outreach to disadvantaged communities. We have helped give input on several workshops, and have helped conduct outreach for those workshops. We have also kept community residents informed about GSP developments at community meetings. Self-Help has conducted translation and interpretation at meetings to ensure that Spanish-speaking residents can meaningfully engage at GSA workshops. However, we note that the Merced subbasin GSAs’ consultants said that there was not enough funding for translation. Having food at evening meetings is also key to ensuring that residents who have worked all day can come to meetings, so the GSAs should allocate funding for food at public workshops. Given the type of outreach that is necessary in order to engage disadvantaged communities, the GSAs should also hire bilingual staff or consultants who can help conduct door-to-door outreach, attend community meetings, translate materials, and interpret at all GSA meetings. In creating annual operating budgets, GSAs should prioritize funding for these necessary outreach activities.

Projects and Management Actions

Projects and Management Actions are a crucial part of the GSP, since they demonstrate how the GSA plans on attaining the sustainability goals that they have set out. Therefore, GSAs should set specific timelines and triggers for projects.



We look forward to commenting further on recommendations for projects and management actions that will protect drinking water for the most vulnerable groundwater users.

Groundwater Markets

We have engaged in many discussions around the state about groundwater markets, and continue to warn against them. Commoditizing precious drinking water resources is dangerous and inequitable, since it lets those with more purchasing power have access to more water, and more likely than not will lead to concentrations of over-pumping by large agribusinesses, leaving nearby communities without drinking water. Furthermore, given all GSAs' severe lack of data on domestic wells and water use in their service areas, and our region's lack of understanding of how a market could impact groundwater use and subsurface groundwater flows, implementing groundwater markets now would be precipitous and reckless.

We know that Merced subbasin GSAs are considering doing a groundwater market, and consultants have communicated at meetings that they will be taking at least five years to collect the data and understand the impacts of a groundwater market for the Merced subbasin. We encourage the GSAs to take time to gather extensive data on existing groundwater resources and drinking water needs and analyze the potential impacts to drinking water before considering implementation of a groundwater market. We look forward to giving more feedback on the potential of developing a groundwater market in the Merced subbasin in the future if the subbasin decides to consider such an action.

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We look forward to speaking more in depth with consultants and the coordinating committee about our recommendations. We hope that the Merced subbasin GSAs will consider the above recommendations, and hope to collaborate with the GSAs to ensure that the GSP protects the subbasin's most vulnerable drinking water users.

We are also in communication with the Department of Water Resources about current GSP development activities in the San Joaquin Valley, and hope to successfully work with GSAs, communities and DWR to ensure that groundwater management is equitable and sufficiently protective of vital drinking water resources.

Sincerely,

Leadership Council for Justice and Accountability