October 8, 2019

Ron Stefani, Chairperson
Members of the Board of Directors
Salinas Valley Basin Groundwater Sustainability Agency
P.O. Box 1350
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Via email peterseng@svbgsa.org, camela@svbgsa.org

Subject: Comments on Groundwater Sustainability Plan (GSP) 180/400-foot Chapter 10, Implementation, and on need for interim pumping restrictions

Dear Chair Stefani and Members of the Board of Directors:

LandWatch appreciates the opportunity to comment on the set of policy issues identified for discussion at the October 10, 2010 Board meeting regarding the 180/400-Foot Subbasin Groundwater Sustainability Plan.

Attached is a table recapitulating the table that staff circulated to identify policy issues and to suggest policy options. We have added a column that sets out LandWatch's position on the policy issues. The new column also identifies legal constraints on the interaction of Minimum Thresholds.

The most critical policy issue is a decision as to the goal to halt seawater intrusion, i.e., the Minimum Threshold. The current draft plan proposes a Minimum Threshold that would halt seawater intrusion at the 2017 line of advancement. LandWatch supports that Minimum Threshold.

As LandWatch has commented in previous letters, SGMA requires as a matter of law that the seawater intrusion Minimum Threshold be supported by and consistent with the Minimum Thresholds for other sustainability indicators, including the Minimum Thresholds for groundwater levels and annual storage depletion (i.e., pumping of native groundwater). Unfortunately, the proposed Minimum Thresholds for groundwater levels and for storage depletion do not support the Minimum Threshold for seawater intrusion because these Minimum Thresholds would not halt seawater intrusion at the 2017 line of advancement. LandWatch urges SVGBGSA to revise the Minimum Thresholds for groundwater levels and annual storage depletion so that they support attainment of the seawater intrusion Minimum threshold.

The staff report suggests that the SVGBGSA could instead revise the seawater intrusion Minimum Threshold to provide a “buffer” to allow seawater intrusion to continue moving inland. This would be an unwise policy choice because it would mean the permanent loss of more of the aquifer: there is no evidence that seawater intrusion can be reversed.

But if the SVGBGSA does adopt such a “buffer,” it will need to be specific as to just how much longer it intends to permit seawater intrusion and whose land will be sacrificed for the sake of near-term pumping because minimum Thresholds must include milestones. Thus, SVGBGSA would have to decide how much longer it going to let seawater intrusion advance (if it adopts a time-based "buffer") and/or whose land it would allow to be subjected to seawater intrusion (if it adopts a spatial "buffer"). This is a critical decision that bears on the economic health of the Valley as a whole and of the affected landowners in particular.

LandWatch urges SVGBGSA to hold the line on seawater intrusion at the 2017 line of advancement, and to revise the other Minimum Thresholds to support this goal.

Sincerely,

Michael DeLapa
Executive Director

Attachment – LandWatch positions on policy issues identified for discussion at October 10, 2019 Board meeting.

Sustainability Indicator	Staff report's identification of Policy Issues	LandWatch position
1. groundwater level elevations	**Current Minimum Thresholds set to 1 foot above 2015** • Option: Set to a year in the Representative Climatic Cycle with higher groundwater levels. ○ Advantage: Groundwater levels will be held at higher levels ○ Disadvantage: Greater threat of exceeding minimum thresholds **Current Measurable Objective set to 2003 groundwater levels** • Option: Set measurable objectives to a year after 2003 with lower groundwater levels. ○ Advantage: Objectives will be easier to achieve ○ Advantage: Potentially less costly to achieve objectives ○ Disadvantage: Less operational room between measurable objectives and minimum thresholds **Undesirable Result set to 15% of Measurements** • Option: Raise or lower that percentage ○ Higher percentage (20%, 25%) allows more flexibility,	**The Minimum Threshold for groundwater must be set at a level that will support the Minimum Threshold for seawater intrusion, i.e., at a protective elevation that will halt seawater intrusion at the 2017 line of advance consistent with the seawater intrusion Minimum Threshold.** **1.** *Each* minimum threshold must avoid each undesirable result ○ SGMA mandates that the "basin conditions at *each* minimum threshold will avoid undesirable results for *each* of the sustainability indicators." (23 CCR § 354.28(b)(2), emphasis added.) ○ The groundwater level minimum threshold must be "supported by" the "[p]otential effects on *other* sustainability indicators." (23 CCR 354.28(c)(1)(B), emphasis added.) ○ This means that each minimum threshold, especially the groundwater level minimum threshold, must be coordinated to ensure that *all* undesirable results are avoided. **2.** The proposed Minimum Threshold for seawater intrusion is to halt it at the 2017 line of advancement. **3.** So it would violate 23 CCR § 354.28(b)(2) to set the groundwater level Minimum Threshold at a level that does not actually halt seawater intrusion at the 2017 line. **4.** But Section 8.6.2 sets a minimum threshold for groundwater elevations at one foot above the 2015 groundwater levels. ○ This proposed level is equal to the 1991-1992 groundwater level, which was the lowest historical level that occurred in the 1967-1998 climatic cycle. (See Chapter 8, Figure 8-2). ○ Figures 8-2 and 8-3 show that ***the proposed minimum groundwater levels would be well below sea levels in the northern end of the Salinas Valley.*** **5.** One foot above 2015 levels will not halt seawater intrusion

	but potentially leaves more growers and well owners with unreasonably low water levels in their wells	○ In its 2013 report for MCWRA, *Protective Elevations to Control Seawater Intrusion in the Salinas Valley*, Geoscience explains that control of sea water intrusion requires achieving and maintaining "protective elevations," which are defined as "those groundwater elevations which will keep the fresh/salt water interface from migrating inland. ***In the northern portion of the Salinas Valley these elevations need to be above sea level*** and the flow of ground water toward the coast."
2. Reduction in storage (i.e., max annual pumping of native groundwater)	**Current Minimum Threshold set to hold pumping to the estimated future sustainable yield** □ Option: Set the minimum threshold to slightly above the sustainable yield to allow for some uncertainty in our calculations. o Advantage: Required pumping cutbacks are less significant o Disadvantage: We may allow pumping above what is truly sustainable, making it more difficult to meet the other sustainability indicators (such as groundwater elevations). **Current Measurable Objective set to hold pumping to the estimated future sustainable yield – same as the Minimum Threshold** □ Option: Set the measurable objective to pump less than the sustainable yield. o Advantage: Less pumping may help achieve the measurable objectives for other sustainability indicators (such as groundwater elevations).	**The Minimum Threshold for annual storage reduction (native groundwater pumping) <u>should</u> be set conservatively, and <u>must</u> be set at a level that will support Minimum Threshold for seawater intrusion, i.e., at a level that will halt seawater intrusion at the 2017 line of advancement.** 1. From a policy perspective, the storage reduction Minimum Threshold <u>should</u> be set conservatively – at most at 95,700 afy ○ The section 8.7.2 Minimum Threshold for annual reduction of groundwater storage (i.e., groundwater pumping of natural recharge amounts) is 112,000 afy, representing the "*future* long-term sustainable yield of the Subbasin under reasonable climate change assumption." ○ This is a black box number that makes optimistic and unexplained assumptions about the reduction of seawater intrusion. It is also the least conservative estimate of sustainable yield. ○ Until SVGBGSA has a validated groundwater model that reconciles historic and modeled future conditions, it should adopt the <u>most conservative estimate</u> of sustainable yield for this minimum threshold, i.e., the 95,700 afy estimated using the historic model. (See GSP Table 6-31.) 2. From a legal perspective, the storage reduction Minimum Threshold <u>must</u> be set to support the Minimum Threshold for seawater intrusion – which means that it must be reduced

		below sustainable yield in order to begin replacing the cumulative storage deficit that is responsible for groundwater elevations that permit seawater intrusion. o As set out above, the Minimum Threshold for storage reduction must support the Minimum Threshold for seawater intrusion per 23 CCR § 354.28(b)(2). o The conservative 95,700 afy estimate of sustainable yield would be sufficient at most to *maintain* protective groundwater elevations, if we already had protective elevations. o But we will not attain those protective elevations until we replace the cumulative storage deficit from prior years. o We cannot attain the proposed 2017 line of advancement Minimum Threshold for seawater intrusion if we wait 5-10 years or more for new water projects to replace the deficit and establish protective elevations because seawater intrusion cannot be reversed once the aquifer is contaminated.
3. Seawater intrusion	**Current Minimum Threshold set to the extent of 2017 intrusion in the 180 and 400-Foot Aquifers. Set to the line of Highway 1 in the Deep Aquifer** Option: Provide a buffer allowing the minimum threshold to move inland while the GSP is being implemented. o Advantage: Allows for additional seawater intrusion during GSP implementation. However the GSP is only potentially out of compliance in the year 2040, so there is no need to allow temporary intrusion as long as it is arrested by 2040.	**SVGBGSA does not have the option to allow the Minimum Threshold to move inland unless it is prepared to permit the permanent loss for groundwater-based activity (e.g., agriculture) of the land overlying newly seawater intruded portions of the aquifer– because seawater intrusion cannot be reversed.** o Allowing seawater intrusion to move inland is not an "advantage" to the users of the land overlying the new areas of seawater intrusion, because these users will lose the ability to pump groundwater in the future. It is only an advantage to those who benefit from insufficiently restricted near-term pumping. o If the SVGBGSA adopts a Minimum Threshold for seawater intrusion that permits any further advancement, it must also define a measurable objective for seawater intrusion that includes interim milestones in increments of five years, as required by 23 CCR 354.30. Thus, SVGBGSA would have to

		decide how much longer it going to let seawater intrusion advance (if it adopts a time-based "buffer") and/or whose land it would allow to be subjected to seawater intrusion (if it adopts a spatial "buffer").
4. Groundwater quality	**Current Minimum Threshold set to have no NEW exceedances of groundwater quality.** □ Option: Allow one or more exceedences o Advantage: Allows for uncertainty or natural fluctuations in groundwater quality. However, our Undesirable Result statement says that we are not managing sustainably ONLY IF the exceedance is directly caused by SVBGSA activities. Therefore, even if there is one more exceedance due to natural groundwater quality fluctuations we will not be managing unsustainably.	**No position**
5. Subsidence	**Current Minimum Threshold is no subsidence**. □ Option: Allow a *de-minimis* subsidence rate. o Advantage: Allows for additional pumping and some subsidence as long as it does not harm infrastructure. o Disadvantage: It may be very difficult to establish a quantitative *de-minimis* subsidence rate that DWR will approve.	**No position**
6. Depletion of interconnected waterway	Fundamental Question is, "What is Significant and Unreasonable". We have made the case that the stream depletion due to pumping is not significant and unreasonable because the reservoirs are operated to meet all the environmental requirements, riparian rights, and recreational needs.	**The Minimum Threshold for interconnected waterways should be based on compliance with the federal ESA streamflow standards that are to be developed for reservoir operations.** o NMFS retracted the biological opinion for reservoir operations and is now developing a new set of flow standards as part of a new biop or HCP.

	A fundamental, and yet unanswered question by DWR, is whether we need to address stream depletions during “non-natural” flows. That is, do we care if we deplete summer flows. Option: Reduce pumping near the river to reduce stream depletion, potentially enhancing environmental habitat. This would likely only be relevant during the winter and spring, when there are environmental flow requirements. o Advantage: Potentially improve habitat along the river. However, it is also likely that during some parts of the year MCWRA will simply hold more water in the reservoirs if there is less river leakage, resulting in no net benefit to the environmental habitat. A related concern is developing a policy towards Groundwater Dependent Ecosystems (GDE). These are areas that rely on shallow groundwater for habitat such as riparian zones, marshes, springs, etc. At the board’s discretion, we can undertake refined habitat mapping of the identified **POTENTIAL** GDEs during GSP implementation. The board could then assess which GDE’s should be protected, meaning that groundwater levels must be maintained at a shallow level near these GDE’s. This will have some impact on the ability to pump groundwater in and around these GDE’s.	o These flow standards must be met and may provide relevant Minimum Thresholds. **GDE Policy – LandWatch supports mapping and protection of these ecosystems.**