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SOUTHWEST KINGS
GROUNDWATER SUSTAINABILITY AGENCY

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Portal Submission: http://sgma.water.ca.gov/portal#gsp

Dear Mr. Altare:

The Southwest Kings Groundwater Sustainability Agency ("SWKGSA") has been an integral part of the development of the Groundwater Sustainability Plan for the Tulare Lake Subbasin (Basin No. 5-22-12) and on January 27, 2020, passed a resolution adopting the Tulare Lake Subbasin Groundwater Sustainability Plan ("TLSGSP"). However, in adopting the TLSGSP, a majority of the Board expressed serious concern that the TLSGSP timeline to reach sustainability, including addressing subsidence in certain areas, should be accelerated. The Board voted to adopt the TLSGSP and submit a comment letter to the California Department of Water Resources ("DWR"). An ad hoc committee of the Board could not reach agreement on the content of this letter and on a 3 to 2 vote, approved submittal of this comment letter.

A majority of our Board and landowners have serious concerns with the level of groundwater overdraft and land subsidence within the basin along with the lack of clear management actions to deal with these undesirable results. Putting off projects and management actions until 2035 to mitigate long-term overdraft is too long of a glide path; steps need to start sooner (ref. page ES-24) to bring the TLSGSP into sustainability. This letter is intended to alert DWR to the level of groundwater overdraft and associated subsidence and recommend that DWR require the TLSGSP be modified to accelerate efforts to mitigate the subsidence impacts on our local area.

Below are recent impacts of subsidence in the TLSGSP:

Angiola Water District("AWD")

Over the past decade, AWD had to undertake two significant projects due to subsidence. The first was the installation of the Tuscon Ave. lift station at a cost of $780,000 and the second was the Utica Ave. canal improvement project at a cost of $1,127,000. Both of these projects were necessary to allow water to flow to the west of AWD, which historically it did without any lifts and with plenty of capacity in the canal.

Tulare Lake Reclamation District No. 761 ("TLRD")

Due to subsidence in the northwest area of the basin, TLRD had to install a lift station in 2017 at Nevada Ave. and Highway 41 to lift water to the south in the Blakely canal at a cost over $550,000. Historically the water flowed south by gravity. Additional impacts of subsidence at the nearby Empire #2 pool have reduced the quantity of water that can be delivered in the Blakely canal from 250 cfs to a maximum of 120 cfs.

Corcoran Subsidence

The land in and around the city of Corcoran has been subsiding for many years and to protect it from potential flooding, the Cross Creek Flood Control District was established in 1983. They constructed a levee to a height of 195.5 feet in 1983; by 2016 the levee elevation had subsided to 186 feet requiring significant investment to bring it back to 190 feet. By 2017, the levee had subsided an additional two feet and work again was started to bring the elevation to 192 feet at a cost of $14 million (reference: Valuation Assessment Commissioners Report dated May 22, 2017, Kings County, CA for the Cross Creek Flood Control District).

The TLSGSP makes numerous references to the subsidence in our area (ref. page ES-15, §3.2.6, §4.2.1.3, §4.2.2.3, §4.3.1.3) and recognizes that it's a significant issue. What we do not agree with is the assessment made in §4.3.1.3(1) that the TLSGSP is managing subsidence effectively. Clearly, much more can be done to slow down this undesirable result.

Comments on the TLSGSP:

1. The lack of pumping data is a significant problem to correcting the groundwater overdraft in the TLSGSP. Information about the number of wells along with well completion reports are vital to understanding the total water extraction from our basin. The TLSGSP references this on page 5-19 "*Collecting well construction information is especially important throughout the Subbasin which is underlain, to a large extent, by the Corcoran Clay layer and other smaller aquitards.*" But, in the following section (§5.4.1.3) it allows the GSA's up to five years to gather this important information. **We recommend that DWR require the GSA's to complete this work in less than one year.**

2. With some of the most significant areas of subsidence in the State, the TLSGSP has no USGS extensometers located within its boundaries (§5.4.4). **We recommend that DWR expedite funding of at least two extensometers to be installed within one year.**

3. As discussed on page 3-33 (§3.2.6), pumping the confined aquifer below the Corcoran Clay has substantially increased over the past two decades. In reality, a large number of wells have been drilled in the Subbasin since the enactment of the Sustainable Groundwater Act in 2014 with the majority of these wells completed in the confined aquifer. The result has been an acceleration of land subsidence in parts of the Subbasin as shown in Figure 3-35a (for the period 2007-2010) and Figure 3-35b (for the period 2015-2017), where modeling for the TLSGSP indicates the largest subsidence midway along the eastern boundary of the Subbasin and moving northwesterly towards the northwestern boundary of the Subbasin. The adverse impacts of subsidence that have already been identified in the TLSGSP include the need to raise flood control levees and railroad tracks, re-grading or adding lift stations to canals, and flooding on roads and highways. Additionally, pipelines, private and public property, utility infrastructure, and groundwater wells were also

identified as facilities of potential impact (ref. §4.2.1.3 and §4.2.2.3). **However, these impacts were identified as not significant and not unreasonable in the TLSGSP (ref. §4.2.2.3). To begin to mitigate these impacts, we recommend DWR require the GSA's to halt production from confined aquifer wells drilled after 2014 that were not a replacement well.**

4. Section 4.3.1.3 sets out Minimum Thresholds ("MT") for indicators of land subsidence in the TLSGSP with the amounts shown on Tables 4-2 and 4-3. The section goes on to state; "*Continued land subsidence in the Subbasin may result in impacts to beneficial uses and users that are significant and unreasonable (§4.2). If this were to occur, the GSA's may not be able to manage and/or mitigate the effects to infrastructure and land use.*" Section 4.3.4.3 states "*The MT's for subsidence recognizes both the need to address subsidence and the needed timeframe to substantially reduce its rate.*"
   We recommend that DWR find MT's and Measurable Objectives ("MO") for subsidence as unreasonable, as they do not reflect the amount of damage being caused to critical infrastructure in the Subbasin.

   We further recommend that DWR finds the TLSGSP deficient in management actions to reduce the land subsidence. Examples of management actions that are lacking are:
   a. **In addition to the recommendation in paragraph 3 above, a moratorium be placed on drilling new non-replacement confined aquifer wells until more data is collected to determine the extent of the subsidence caused by these wells.**
   b. **Once (a) is complete, consider a requirement for proportionate reduction of confined aquifer well pumping as the Subbasin reaches the MO for the TLSGSP, subject to prescriptive rights based on historical pumping.**
   c. **GSAs to levy significant extraction fees on confined aquifer wells to be utilized to mitigate infrastructure damage due to the continued subsidence caused by these wells.**

We appreciate DWR's attention to the subsidence issues in the TLSGSP and ask that they be considered carefully during your review. If DWR's assessment agrees with our recommendations, DWR should commence to require the TLSGSP be amended by the local GSA's in the Subbasin to accelerate mitigation measures to minimize the subsidence.

Respectfully,

Mark Grewal

Mark Grewal
Vice Chair