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May 29, 2019

State Water Resources Control Board
Division of Water Rights
Attn: Mitchell Moody
P.O. Box 2000
Sacramento, CA 95812-2000

Re: (1) Petition to Revise Declaration of Fully Appropriated Streams (Kings River); (2) Application A032815 to Appropriate Water from the Kings River in Multiple Counties; and (3) Complaint in Support of Petition to Revise and/or Revoke or Request to Notice hearing (Kings River) MSM:A032815

Dear Mr. Moody:

The Kings River Conservation District (KRC D) is writing to express our concerns regarding Semitropic Water Storage District's (Semitropic) above mentioned applications. As a public agency, one of KRC D's key functions is providing flood control for portions of Fresno, Tulare, and Kings Counties. This service is provided to numerous unincorporated areas and more than 100 Disadvantaged Communities (DAC). KRC D also assists its constituency, and other agencies within its service area, with reaching their water use and water quality obligations under the Irrigated Lands Regulatory Program (ILRP), Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), Sustainable Groundwater Management Act (SGMA), and other related water use and water quality objectives. KRC D's website is www.krcd.org.

It is KRC D's position that Semitropic's proposed Tulare Lake Storage and Floodwater Protection Project (Project) and associated groundwater bank have not received sufficient scientific or environmental analysis and review by Semitropic, and that the potential environmental and economic impacts on KRC D's constituency and supported agencies – including the increased capital, replacement, maintenance, and operational cost burdens the Project would place upon the Kings River Watershed – have not been delineated or mitigated by the Project plan.

Furthermore, removing surface waters from the Kings River service area, and diverting water to the south that normally flows north, would exacerbate groundwater quality, land subsidence, groundwater depletion/over-draft, and interconnected surface waters issues and concerns in a SGMA management area designated as "high" priority by the Department of Water Resources (DWR). These water resource impacts will require mitigation, which would include mitigating for the volume of reduced ground water recharge as a result of the reduced flows in the Kings River North Fork and associated subsidence impacts, and mitigating for the volume of increased seepage and evaporation as a result of increased flows in the South Fork, Crescent Bypass, and Clark's Fork. Mitigating said impacts also applies to related water quality issues and concerns which Kings River Watershed constituents are working to address under the auspices of the current ILRP and developing CV-SALTS program.

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In addition to the above concerns, it is important to mention the critical matter of the Kings River's channel capacity. In a related Proposition 1 funding effort, Semitropic included a DWR response as part of their requested funding appeal package. DWR staff indicated that Semitropic provided sufficient information – using 2017 Kings River flow data and additional hydrologic data from the DWR Central Valley Hydrology Study (CVHS) – to support Semitropic's claims that sufficient channel capacity exists in the Kings River, both downstream and south of the Army Weir, and in the Clark's Fork and Crescent Bypass. However, it is evident from historical observed and metered Kings River channel flows that the modeling data used in the CVHS study is of insufficient accuracy for determining if there is adequate operational capacity to meet Project needs. Actual channel conditions in 2017 indicated a lack of capacity – relative to Project requirements – in various reaches of the Kings River. An analysis which more accurately assesses actual and specific channel hydraulic characteristics, capacities, losses, and delivery requirements is necessary for making a determination that there is sufficient channel capacity.

A complete review and analysis of capacity would include the channel section from the diversion point at Army Weir through the Kings River South Fork, as well as from the release point of Pine Flat Dam to the Army Weir diversion point and the Kings River North Fork. An analysis of the Kings River North Fork is required due to a lack of proper and appropriate safety features being included in the design; this is expanded upon below. Without this required, detailed hydraulic review, analysis, and associated mitigation to ensure channel capacities requirements are addressed, rerouting water in the manner described by Semitropic would have significant negative impacts.

Semitropic's lack of due diligence regarding determining actual channel capacities and flooding risk was evident during a December 13, 2017 California Water Commission (CWC) meeting, when Semitropic General Manager Jason Gianquinto noted, after KRCD reiterated concerns with Kings River capacities and associated flooding risk, that "our Project, at the ultimate size, is 2,100 c.f.s. [CEQA documents indicate 2,200 c.f.s.]; less than half of the peak flow. Our likely Project is probably something less given what we learned regarding the South Fork capacity." Mr. Gianquinto's statement is a clear indication that Semitropic does not have a substantive understanding of capacity constraints, delivery service requirements, flooding risk, potential environmental impacts, system losses, the required mitigation to ensure and maintain existing delivery capacity in addition to their desired capacities, or an intent to mitigate these impacts and constraints; despite the fact that these concerns were communicated to Semitropic on a number of occasions. This lack of substantive understanding is delineated in the paragraphs below.

As pertains to the above concerns and regarding specific channel capacities, Semitropic assumes the Crescent Bypass channel section can sustain a capacity of 1,500 c.f.s.; Clarks Fork 2,500 c.f.s.; and the South Fork 3,200 c.f.s. These flow rates are based upon U.S. Army Corps of Engineers (USACE) capacity data from the 1970s and do not reflect existing conditions. During June 2017 flood releases, the South Fork channel section's right bank levee breached one mile below the confluence of the Crescent Bypass and Clarks Fork channel sections. The flow rate at that time was approximately 1,400 c.f.s. This is 800 c.f.s. less than Semitropic's desired flow rate of 2,200 c.f.s. at Empire Weir No. 2 and 1,800 c.f.s. less than Semitropic's assumed South Fork Capacity of 3,200 c.f.s. Furthermore, the Crescent Bypass channel section's capacity during June 2017 flood releases was limited to less than 200 c.f.s., which is 1,300 c.f.s. less than Semitropic's assumed capacity of 1,500 c.f.s. Moreover, Mr. Gianquinto's assumptions do not consider or include additional flow increments to account for losses such as seepage, evaporation, and diversions upstream of the Project diversion point at Empire Weir No. 2. At the location of the

levee breach there was significant channel seepage and little to no levee freeboard, which from a safety standpoint would have reduced the actual capacity well below the previously noted 1,400 c.f.s. It is important to reiterate that these figures do not account for additional flow to address an increase in losses along the entire reach of the Kings River, nor losses in other channels proposed to supply waters to the Project.

Please bear in mind that, during the 2017 flood releases, the entire capacity of these channels was used for water delivery, with no excess capacity remaining. Thus, there was no capacity remaining or available to deliver any water to the Project. Under similar conditions, Semitropic would need to ensure the entire Kings River system has adequate additional capacity to accept and transport their desired 2,200 c.f.s. from Pine Flat Dam through the terminus of the Kings River South Fork/Empire Weir No. 2 diversion point. To ensure 2,200 c.f.s. can be delivered to the diversion point, the entire Kings River channel and levee system would need to be reviewed and analyzed. The review would require ensuring sufficient capacity to address both constituents' Kings Watershed needs, which would require an assessment of deliveries, seepage, evaporation, and flood water diversions, and Semitropic's request, which would require an assessment of additional seepage and evaporation associated with that request. Thus, to ensure 2,200 c.f.s. can be delivered to the Project, it is anticipated that Semitropic would need to increase the capacity of the Kings River South Fork by at least 2,275 c.f.s., increase the capacity of the Clark's Fork and Crescent Bypass by a total of at least 2,300 c.f.s., and increase the capacity of the Kings River upstream of Army Weir by at least 3,000 c.f.s. to account for their desired flow and additional seepage and evaporation losses. Similarly, whatever capacity is desired by Semitropic through the Crescent Bypass would require a similar approach to accommodate that flow along with seepage and evaporation losses for the Kings River between Army Weir and the Crescent Bypass.

Furthermore, a similar analysis is required for the Kings River North Fork, to ensure that section of the Kings River will have excess capacity to accept Project water as a result of unanticipated events. In that regard, if water intended for the Project were to be released from Pine Flat Dam, but the Project could not accept that water due to unanticipated events – such as a pumping system failure – countermeasures would need to be in place to transport and re-divert that flow. All flows released from Pine Flat dam, intended to be delivered through Army Weir, but not yet diverted, would need to be re-diverted to the Kings River North Fork. The diverted flows would require additional North Fork capacity of between 2,300 c.f.s. and 3,000 c.f.s. to mitigate for such an event. This mitigation does not address water in transit that has been diverted south through Army Weir and the Crescent bypass. A safety/spill/storage feature must be added to the Project plan to address this concern.

Ensuring increased capacity within the Kings River South Fork does not guarantee sufficient water can be delivered upstream of Army Weir, nor that it will be released by the Army Corps of Engineers. The same is true of the Kings River North Fork. This further emphasizes the critical need for a thorough and proper hydraulic review and analysis. If limitations are determined upstream, Semitropic would either have to reduce anticipated flows – even if there is sufficient capacity in the Kings River South Fork – or fund capacity improvements in said upstream channel sections, the Kings River North Fork, and all associated levees.

A complete and comprehensive review would require the aforementioned detailed analysis, as well as analyzing corresponding design costs, capital outlays, operations costs, yearly maintenance costs to maintain the needed capacity, ongoing yearly surveys, and potential power consumption. Yearly maintenance may not be possible due to wet soil conditions, making it

impossible to maintain desired flow levels during those years. Assuming the required system modifications are made, the standard of care required would be much greater, as the flows in the Kings River South Fork – and potentially the upstream reaches of the Kings River and Kings River North Fork – would be much greater relative to historical flows. These flows would also need to be maintained at a higher elevation for much longer durations. As a result, the design would need to be more robust to maintain the same pre-modification and post-modification level of safety and risk. These various factors have not been considered in determining the ability of Semitropic's Project to receive either the volume or capacity of water they are requesting to justify their Project, nor the related water right they are requesting from the State Water Resources Control Board.

Because the Project would require flow capacities higher than current channel capacities be maintained for longer durations and at higher elevations, a geotechnical stability and seepage analysis would need to occur along all Kings River reaches where there are current, modified or added levees. Because stability and seepage is currently a concern with the Crescent Bypass, Clarks Fork, and South Fork sections the stability and seepage situation in these reaches would be exacerbated. After a proper stability and seepage analysis, absent reducing Project flows within the stability and seepage limits of the existing Kings River, engineered solutions would need to be incorporated into the Project design as mitigation. This could include a variety of alternatives such as cut-off walls and pumping and tile line drawdown and recovery systems. Furthermore, because the Project would be using the existing Kings River channel from Pine Flat Dam to the Project, and the Kings River North Fork, the Project would be responsible for its proportional share of base capital, operation, maintenance, and replacement costs; costs that are currently funded through property taxes paid by constituents. Project mitigation construction work within and near the Kings River would not fall under current authorized maintenance activities, therefore said construction would be required to obtain various authorizations, permits, reviews, and the like. These include but are not limited to:

1. National Environmental Policy Act (NEPA) Environmental Impact Report (EIR) preparation or substitute
2. California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) preparation or substitute
3. Central Valley Flood Protection Board permit
4. Federal Clean Water Act Section 401 Water Quality Certification
5. Section 404 dredged or fill material permit
6. Section 408 alternation of a public work permit
7. California Department of Fish and Wildlife Section 1600 Lake and Streambed Alternation Agreement

None of the costs associated with the aforementioned factors have been considered in the Project design; the funding of which would be required for the Project to receive said waters. Additionally, increasing and maintaining channel capacities with the noted required higher standard of care will require extensive channel modifications, which will in turn cause associated environmental impacts requiring State and Federal environmental permitting, as well as initial and on-going mitigation. With respect to on-going mitigation, on-going silt removal would be required within all channels, with anticipated dredging when channel conditions do not allow for

Mr. Mitchell Moody

May 29, 2019

Page 5

other silt removal measures and means. This potential yearly silt removal and dredging may require extensive State and Federal environmental permitting and associated mitigation.

Additionally, many existing, in progress, and anticipated projects are already allocating – or will shortly be allocating – waters which the Project has determined to be available based upon historical data. Without proper consideration of impacts to the Project's anticipated and actual water availability based upon more recent and projected supplies, the viability of the Project and these aforementioned projects will be severely undermined.

The potential impacts on the Kings River service area and its constituency – in particular the disadvantaged constituency within Fresno, Kings, and Tulare counties – are enormous and merit a more extensive analysis and review than has currently been completed for the Project. Because a proper review and analysis has not been completed; all Kings River Waters are allocated; and infrequent additional floodwaters previously uncaptured will be diverted to address SGMA, ILRP, and CV-SALTS requirements; KRCD encourages the State Water Resources Control Board to reject Semitropic's application for a water right on the Kings River.

Sincerely,



Paul G. Peschel, P.E.
General Manager

PP/CM/dmr

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