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Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814-0100

Re: Comment Letter – 2016 Bay-Delta Plan Amendment & SED

Dear Ms. Townsend:

I appreciate the opportunity to comment on the State Water Resources Control Board's (the Board) 2016 Bay-Delta Plan Amendment and SED. My name is David Minch, and I live in the Connor Estates development at lake Tulloch, in Calaveras County, which is a lower dam below Melones on the Stanislaus River. I've reviewed most of the 3,574 pages of SED materials, and I commend the Water Board's staff on a very thorough treatment of the subject – it has taught me a lot about the importance and impact of water flows on virtually every aspect of our lives in the foothills of Calaveras County. I've considered my input to the Board at great length to assemble a compelling argument against the planned ruling increasing flow requirements on the 3 eastside tributaries, the planned ruling which usurps the water rights of water districts and farming, and have boiled my comments down to the following three subjects.

Water Supply

While I compiled nearly 30 pages of excerpts and anomalies within the SED report, I have decided that the most important points that I need to address are related to the incorrect SED analysis regarding future anticipated flows down these 3 rivers. The SED chose to create a very simplistic model over a period of time that is not representative of today's situation, illustrated by the dismissive statement in Chapter 21 (the Drought Evaluation Chapter):

"Therefore, although there were more dry years with less than average runoff during the last 12 years (**8 out of 12**), the severity of these dry year periods (i.e., cumulative deficits) were similar to other dry year periods in the historical period of 1922–2003 used for the environmental assessment of the LSJR alternatives."

The model constructed for the SED does nothing to account for two clearly obvious and noted impacts in the SED report itself: the increased frequency of drought years, and the decrease of snowpack and precipitation which result in decreased water availability in all years – wet or dry, and the cumulative impact on water storage. The SED offers no analytics on the potentials for and impacts of such.

A quick analytic study of the 10-year decadal cycles illustrated in the SED Figure 2.4 shows both increasing frequency of dry years (fewer average or wet years between the dry years), and also, more importantly, an increase in computed slope of the decrease in total rim dam water storage when water years 2010-2015 are added. Assuming 40% flow requirement and projecting this slope over the next decade for the Stanislaus shows a probability of .872 of at least 1 year where the supply assuming all of Melones carryover plus 100% diversion would be under 400,000 acre feet (which would be far short of that needed for ag and downstream human water supply), and there would be no water remaining in the river.

On just the Stanislaus river, reservoirs can hold a total of 2.85MAF of water. Quoting from the SED: “The carryover storage [of New Melones] was full (2.4 MAF) in 2011 and was reduced by about 500,000 AF in 2012, 2013, and 2014. The carryover storage at the end of Water Year 2014 was about 520,000 AF. The low runoff conditions again in 2015 resulted in reduced diversions (425,000 AF) and very low carryover storage (267,000 AF).” Note that this is considering diversions at current levels, and would be exacerbated if 40% or 50% flows were required in the preceding years to 2015.

267 TAF is a critically low volume of storage, and in another dry year such as 2014 with less than 300,000 AF total runoff, meeting the needs of core beneficial uses such as water supporting human life and farming would require emptying of all storage on the river, and would place significant burden on groundwater pumping. Moreover, it would create a completely dry Stanislaus riverbed which I would guess would not be beneficial for the fish or delta salinity at Vernalis. Again, the SED offered no analytics or probability analysis of the potential for even more frequent dry years – only statements such as the following:

“Annual precipitation may experience a declining trend, but remain highly variable, suggesting that the Sacramento Valley will be vulnerable to increased drought. Warmer temperatures will lead to increased precipitation in the form of rain, both of which will contribute to **decreased snowpack** in the Sierra Nevada. Such effects will translate into earlier snowmelt and increased potential for flooding.”

“As a result, reservoirs in the basin, including New Melones, New Don Pedro, and Lake McClure, are likely to fill earlier and release excess runoff [because these dams are also for flood control] thereby potentially limiting overall storage capability and reducing water supply (USBR 2014, 2016) [even in normal and wet years]. These changes have implications for water quality, water supply, flooding, aquatic ecosystems, energy generation, and recreation throughout the region (USBR 2014, 2016).”

I will note here without further quotes from the SED, but all of this is supported by statements in that document, that the overall impact of decreased water storage is a decrease in clean energy from hydroelectric plants, an increase in groundwater pumping which increases electrical demand, and both adverse impacts will peak during the hottest part of the summer and early fall when agriculture needs and air conditioning demands are greatest. Without hydroelectric power, electric plants burn gas or oil which increases the CO2 load and depletes our natural resources, and, of course, thermo-electric production is one of the greatest users of clean water. Finally, clean water for consumption and daily living becomes even more costly for those families who can least afford it.

I would ask that the Water Board staff prepare detailed analyses of the cumulative water storage impact of implementation of the LSJR Alternatives 1-4, with and without adaptive Implementation, first showing **what would have happened** if those alternative flow requirements had been put in place in 2004 at the end of the

last decadal cycle, and performing the analysis across water years 2004-2015, and then projecting over the next 10 years assuming 10% reduction in total rainfall in all years, and a continuation of the current trend of dry to wet years using the last 30 years (not 1922-2003).

Fish

I'm sure that the Water Board has heard a lot about fish in the many hearing sessions, but I would just like to provide one quote from the SED by the Board's own hired expert reviewers relative to any program of increased flows:

The Independent Review Panel concludes that “the very low recent survival rates seem unlikely to be high enough to support a viable salmon population, even with favorable conditions for ocean survival and upstream migration and spawning success for adults” (Hankin et al. 2010).

The SED offered no probability analysis evaluating cost against the likelihood that even with increased flows and added pulse flows fish will not return in any significant numbers. Many people have stated in the various hearings that the economic impact numbers in the SED are far short of reality, and others have asserted that habitat and many other factors not affected by flows are also critical to repatriation of native fish. In fact, there has not been an objective measure of success established in the report – how do we even know that the effort and expense has been worth the cost?

It would be useful to the Board's and public's understanding of the futility of trying to restore some unstated number of fish to create a probability model that provides cost-benefits across a range of realistic scenarios, and taking into account the expected destruction of habitat that dry riverbed would cause based on the suggested modelling above.

Water Quality

On the subject of water quality for protection of southern delta farming, the SED points out that current flows are maintaining reasonable salinity levels, so no added flows are necessary at this time. This is partially because (as pointed out in SED table 3.6) the combined CVP/SWP export ratio is based on the flow at Vernalis. I can only conclude, therefore, that the reason for including this objective is looking toward the future when the Governor, and I assume through actions of this Water Board, allow additional transports of northern delta water south through the CVP and SWP which today has pumping contracts totaling 8.34 Million Acre Feet (although they pump only about 3 MAF annually). It is certainly true that removing another 1.5 MAF from the Delta would require significant mitigation in southern delta flows to keep the salinity at levels conducive to crop production.

On that subject, as an anecdote for consideration, I submit to you that the Governor's "Twin Tunnels" proposal would cost between \$20B and \$50B depending on the source of information. The Carlsbad Desalinization plant in SoCal cost just south of \$1B and produces 60,000 AF of clean water /year. Instead of tunnels which still rely on NorCal water, if the state was to build 25 desalinization plants like Carlsbad – their combined output would be nearly 1.5 MAF – equivalent to ½ of all water currently imported to SoCal and the Central valley today, and more than sufficient to satisfy the needs that the tunnels will supposedly fill. This alternative has the unique benefit of being independent of seasonal rainfall and virtually immune to climate change.

California needs a greater water supply and not more creative ways to allocate and divert water. There have been several national and international studies on ways to produce clean water from desalinization, industrial discharge, and grey water, and the Board and public should be demanding that California move efforts forward toward increasing supplies and storage and quit playing the diversion game. The SED is silent on alternatives to increasing river flows which could greatly enhance water availability in the southern delta.

Conclusion

So, to conclude, I would like to remind the State Water Board of their highest priority based on their authorizing legislation – the Porter-Cologne Water Quality Control Act, which the SED cites as the authority for these decisions states clearly in section 106:

“§ 106. It is hereby declared to be the established policy of this State that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation.”


And, further, in section 275:

“§ 275. The department and board shall take all appropriate proceedings or actions ... to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state.”

Given the statements in the SED, and the summary of CEQA Significance Determinations in table 18-1 where “Significant” and “Significant and Unavoidable” impacts dominate the increased flows columns, it is **clearly unreasonable** to try to turn the clock back 100 years to a time when we guess that fish populated the rivers, although don’t really know in what numbers, we don’t really know what the flows were, nor do we really know the conditions leading to their survival, and we certainly don’t know if any strategies we take today will bring the fish back.

What we do know with absolute certainty is that climate change is here to stay, and its cumulative impact will be less water for California. If the State and its various agencies do not take action now to significantly increase the available clean water supply, and storage for that water, no water games the Board can play will save the State from disastrous economic consequences.

In the words of Joshua, the computer from the 1983 movie War Games: “Sometimes the only winning move is not to play”. Thank You.



David A. Minch

Citizen and Resident of the Great State of California