



March 29, 2013

Via Electronic Mail
commentletters@waterboards.ca.gov



Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95814-0100

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RE: Draft Substitute Environmental Document In Support Of Potential Changes To The Water Quality Control Plan For The San Francisco Bay - Sacramento/San Joaquin Delta Estuary: San Joaquin River Flows And Southern Delta Water Quality (“SED”)

Dear Ms. Townsend:

I am Ronda Azevedo Lucas, an attorney who represents Mr. John Duarte, a grower and member of the Modesto Irrigation District (“MID”) and a life-long resident of Stanislaus County. I also represent Mr. Jeff Duarte and his family, urban water users within the City of Modesto; Mr. & Mrs. Jim Duarte, farmers who reside in Hughson, California; Mr. Reed Smith and his family, a farmer within MID; and Duarte Nurseries, Inc., a family owned and operated nursery located near Modesto. Duarte Nursery is the largest permanent crops nursery in the United States and provides hundreds of permanent and seasonal jobs as well as providing vital support for agriculture both locally and throughout the nation. Clearly, the continued availability of a clean, reliable supply of water and a healthy, thriving environment is of vital importance to the continued survival of my clients, as well as everyone who resides, works, and even visits any home, business, recreational facility, or any other setting within the San Joaquin Valley. To that end, my clients are deeply disturbed by the inevitable impacts that will result from the imposition of a 35% unimpaired flow for the San Joaquin River system as discussed in the California State Water Resources Control Board’s (“SWRCB”) SED.¹ The SED is arbitrary and capricious, at best, and due to its

¹ My clients recognize the SWRCB’s regulations for adoption or revision to any water quality control planning program have been certified by the Secretary of Natural Resources as being a CEQA-equivalent project. Cal. Code Regs. Tit. 23, § 3775. However, as to each identified impact, CEQA Guidelines are applied. *Id.* at § 3777.

fundamental flaws, will have little to no impact on fish populations while completely destroying the agricultural foundation crucial to all aspects of the San Joaquin Valley, which violates SWRCB's requirement to protect beneficial uses, including agricultural beneficial uses.

1. There Are Little To No Measurable Benefits To Salmon From The Proposed 35% Unimpaired Flow Objective.

Floodplain habitat is a crucial component to salmon survival. Floodplain habitat provides critical rearing and food production habitat for juvenile salmon. However, even the SED acknowledges, the preferred objective of 35% unimpaired flow ("Preferred Alternative") will not increase floodplain habitat, at all. Thus, with respect to floodplain habitat for salmon, **the Preferred Alternative offers no measurable benefit.**² In stark contrast to SWRCB's approach, the Oakdale Irrigation District, in concert with the U.S. Fish and Wildlife Service ("USFWS") cooperatively completed a project where they created floodplain habitat utilizing contemporary flows. This project was quite successful resulting in new spawning and rearing habitat that will be inundated with juvenile salmon in most years.

Bed mobilization, or the movement of gravels, both fine and coarse, particularly in the tributaries, is important for the maintenance of salmon spawning habitat. However, because the SED is focused solely on increased flows, despite scientific evidence to the contrary, there is no consideration of restoration alternatives such as gravel replenishment and physical cleaning. These alternative approaches will result in a benefit to the salmon and do so without jeopardizing agricultural beneficial uses or other species' habitats. However, the SED contains zero analysis of this type of approach, even though, **the Preferred Alternative concludes it will not result in bed mobilization in any of the tributaries and therefore results in no measurable benefits to salmon spawning habitat.**

The SED is completely devoid of any analysis of velocity and stage in the San Joaquin River system and the Delta on salmon. As such, it is not known if velocity and stage are increased for salmon under the Preferred Alternative. However, in 2001, Baker and Morhardt analyzed years of San Joaquin Basin Code Wire Tag data and concluded that higher flows **did not** decrease travel times. Similarly, in 2008, Paulsen determined San Joaquin River flows have little influence on velocities in the South Delta downstream of the Head of Old River Barrier. Within the Delta, tidal influence and exports appear to be the dominate factor. This science, therefore, suggests **the Preferred Alternative has no benefit to salmon with respect to velocity and flow and its impact on travel times.**

In its listing documents, contaminants are not identified as a major problem for Fall-Run Chinook Salmon survival and are not considered to be a limiting factor on the species. The SED's analysis of the Preferred Alternative on contaminants is, at best, inconclusive. The SED,

² State Water Resources Control Board Draft Substitute Environmental Document In Support Of Potential Changes To The Water Quality Control Plan For The San Francisco Bay Sacramento/San Joaquin Delta Estuary: San Joaquin River Flows And Southern Delta Water Quality ("SED"), December 2012, at Appendix C, p. 3-46 to 3-47.

without any evidentiary support, *infers* higher flows *may* dilute suspended contaminants, but goes on to acknowledge this issue is not well understood. The SED further acknowledges that, in fact, higher flows can actually lead to increases in contaminants. **Thus, the Preferred Alternative has no measurable benefit to salmon with respect to contaminants, and may actually harm salmon due to increases in contaminants.**

As discussed in greater detail, *infra*, predation is a major threat to salmon throughout the entire system. Because of the significant threat (greater than 95%) predation poses, turbidity within the water column becomes a very important factor. Turbidity is beneficial to juvenile salmon because it provides camouflage allowing the juvenile salmon to hide from predators. Importantly, the SED concludes the Preferred Alternative will not create turbidity. **Thus, the Preferred Alternative provides no measurable benefit to salmon through the creation of turbidity and does nothing to decrease the single biggest threat salmon face throughout the system.**

The SED's analysis regarding water temperature is questionable. Unfortunately, the SED fails to identify the criteria used to compare the alternatives' impacts on water temperature. Additionally, within this system, the driving factor influencing water temperature, particularly in the summer months, is air temperature. The SED did not indicate if it utilized California Department of Fish and Wildlife's or U.S. Environmental Protection Agency's temperature criteria in writing the SED. The SED also failed to identify which thresholds -- optimal, suboptimal, and/or lethal -- were evaluated and during which time periods. Also lacking is any discussion of the locations used to assess the Preferred Alternative's impacts on water temperature. Due to the lack of data, it does not appear that the two fundamental questions were actually analyzed: 1) Will the proposed flow changes reduce water temperatures, and if so, to what extent?; 2) What is the biological significance of potential changes in water temperature as a result of the Preferred Alternative? Because the SED failed to undertake an adequate analysis, **the Preferred Alternative provides no evidence of measurable benefits for salmon through temperature reduction.**

Despite having the potential to decimate the entire San Joaquin Valley economically, socio-economically, and environmentally, the SED's Preferred Alternative fails to adequately demonstrate any measureable benefits for salmon with respect to improving critical life functions and thereby improving salmon populations. The SED's lack of analysis and evidence is so great, there is no rational or scientific basis supporting the Preferred Alternative. The SWRCB must begin the analysis anew, with an open mind, and properly document and evaluate all alternatives available, including approaches that do not focus solely on increasing flow, to improve salmon populations within the San Joaquin Basin. Failing to re-draft the SED and consider all possible alternatives will result in a decision that is arbitrary and capricious and in violation of the law.

2. The SED Fails To Truthfully Deal With The Predation Issue.

According to the SED, "Striped bass, smallmouth bass, and largemouth bass are only a few of the introduced species that prey on salmonids, but they may be responsible for much of

the increased predation pressure”³ The SED continues by stating, “PFMC (1999) reported that the presence of striped bass in a river system near California’s San Francisco Bay Region resulted in estimated losses of 11-28 percent of native fall-run Chinook salmon.”⁴ The SED’s failure to include the most recent studies documenting the impacts of predation within the San Joaquin River system is an inexcusable, deliberate omission that jeopardizes the entire document. Moreover, it violates the law because these decisions and analyses are to be based on the best available scientific data.

In fact, the best available scientific data indicates predation kills greater than 95% of the juvenile salmon population before it even reaches the end of the San Joaquin river systems. As a result of their Federal Energy Regulatory Commission relicensing process, both the Modesto Irrigation District and the Turlock Irrigation District undertook a predation study in 2012 on the Tuolumne River (“2012 Predation Study”). The 2012 Predation Study was provided to SWRCB staff, and yet there is zero mention of this document. Its omission from the SED, in and of itself, is arbitrary and capricious in violation of the law and skews the entire analysis. The 2012 Predation Study included the Tuolumne River from La Grange Dam (River Mile 52) downstream to the confluence of the San Joaquin River (River Mile 0). The 2012 Predation Study concludes:

Losses of juvenile Chinook salmon between the rotary screw traps at Waterford and Grayson ranged between approximately 76 percent and 98 percent during 2007 - 2011, with the actual numbers of individuals estimated to be lost ranging from approximately 22,000 to 330,000. If the predation rates and predator abundances in these years were similar to those documented in the 2012 study, it is plausible that **the overwhelming majority of Chinook salmon mortality was due to predation.**⁵

The 2012 Predation Study concluded a total predation mortality for 2012 juvenile Chinook outmigrants of potentially 96%. A mere 3,000 Chinook are estimated to have survived their 25 mile migration. These results are significantly greater than what was acknowledged in the SED. Moreover, during a presentation of the 2012 Predation Study to FERC representatives, which occurred January 30 - 31, 2013, the author, in response to a question regarding increased flow impacts on predation stated that pulse flows served as a “dinner bell” to predators. At times when increased pulse flows would occur, the predators, particularly smallmouth bass would congregate just below the gates and wait for the salmon.

Recent results from the Vernalis Adaptive Management Plan (“VAMP”) indicate that Chinook survival rates within the Delta are just as dismal. The VAMP peer review (2010) found that Delta hydraulics and impacts of predation appear to have a greater affect on salmon survival rates than the impacts resulting from river flow. Since 2003, mortality rates through the Delta have consistently been greater than or equal to 88%, while flows at Vernalis ranged between

³ SED at 7-31.

⁴ *Id.* at 7-32.

⁵ Modesto Irrigation District & Turlock Irrigation District, Predation Study Report, Don Pedro Project, FERC No. 2299 (January 2013) at 6-5.

2,0000 cubic feet per second and 27,000 cubic feet per second. During 2011, with flows of approximately 5,000 cubic feet per second at Vernalis, salmon smolt mortality from Mossdale to Chipps Island was 98%.

Amazingly, the solution to this predation crisis has nothing to do with flow regimes. The most effective way to increase salmon populations is to suppress predator populations. This principal has been proven in the Pacific Northwest. "Sport anglers removed approximately 155,000 pikeminnow from the Columbia last year. The sport reward program has reduced pikeminnow predation of juvenile salmon by roughly 40 percent since 1990."⁶ Such an approach should be utilized in this system. By law, such an approach must be, at a minimum, considered in the SED's alternatives analysis.

The SED's failure to accurately assess predation impacts within the San Joaquin basin and the Delta dooms the entire analysis. Moreover, given science indicates that greater than 95% of juvenile Chinook are eaten before they make it out of the San Joaquin basin, the goal of doubling salmon populations will never be achieved, no matter how much unimpaired flow is provided. Proceeding with the illegal, arbitrary and capricious SED and its Preferred Alternative will violate the SWRCB's dual objectives, depriving other beneficial uses, including agriculture and other environmental water users, of water illegally, and imposing a regulatory economic depression on the entire region, including violating environmental justice principles because many of these communities are comprised of impoverished, minority populations, without taking any measurable steps toward achieving the goal of doubling salmon populations. This prospect is unacceptable. The SWRCB must correct its course by beginning the process anew and ensuring true science is utilized, all alternatives, including alternatives that rely minimally on increased flow, are fully analyzed, and all beneficial uses of water are considered.

3. The Plan Fails To Consider Impacts To Terrestrial Species.

Agricultural lands within the San Joaquin Basin provide up to 80% of the critical habitat for species listed under the Federal Endangered Species Act. In short, many terrestrial species very survival is directly tied to agricultural landscapes. The Preferred Alternative will result in the fallowing of more than 100,000 acres of agricultural lands within the San Joaquin Basin. The SED provides **zero analysis** of the impacts these fallowed agricultural lands will have on these terrestrial species. As an example, Swainson's Hawk requires appropriate nesting habitat in close proximity to foraging habitat. In layman's terms -- an orchard near an alfalfa or corn field. The California Tiger Salamander thrives in abandoned rodent burrows (i.e. gopher holes) near water sources. In layman's terms, vineyards near ponds, canals, or drainage ditches. These are just two examples of the hundreds available and are given to demonstrate the complete disconnect in the SED.

⁶ Sept. 28, 2012, Joint Press Release: USBR, U.S. Army Corps of Engineers, Bonneville Power Administration, *Sparing fish find more habitat, while tests show must fish getting past dams safely.*

Given the importance of these lands to these species, as evidenced by their inclusion in critical habitat designation documents and recovery plans created by the U.S. Fish and Wildlife Service, I question how the Preferred Alternative can be implemented without violating the ESA's take prohibition. I also question why terrestrial species are less important than Fall-Run Chinook Salmon. This contradiction is even starker considering the Preferred Alternative will result in little to no actual improvement in Chinook Salmon survival because it completely ignores predation impacts. A revised SED must be undertaken that at least analyzes the impacts to the ESA protected species that require agricultural lands in order to survive.

4. The SED's Modeling is Indefensible.

The SED's modeling is so fundamentally flawed, it renders the entire document arbitrary and capricious. There is an unclear connection between the modeling utilized and the proposed order. Astoundingly, in attempting to justify results, the SED makes comparisons between two different models. This approach is scientifically indefensible and violates the law. A model is only as good as the assumptions built into it and the data utilized. Rather than using the CALSIM II model for all alternatives, SWRCB staff chose to create its own model, the Water Supply Effect Model ("WSE"). Unfortunately, the assumptions built into the WSE have no basis in actual conditions and render the results virtually useless. The WSE model's annual diversions are based on an inaccurate picture of available water supply because it utilizes end-of January reservoir storage and **does not allow for consideration of runoff or updates or adjustments of allocations**. Moreover, the model requires the maintenance of "baseline" reservoir storage when, in fact, this baseline does not actually exist throughout the water year. The WSE includes the San Joaquin River Agreement and VAMP and this results in a false representation of operations for Vernalis and the tributaries. The WSE fails to account for the June 2009 biological opinion Vernalis flow requirement and a multitude of court orders and legal agreements between the U.S. Bureau of Reclamation and Central Valley Project Contractors. The WSE also fails to properly account for Oakdale Irrigation District and South San Joaquin Irrigation District diversions. These are just some of the fundamental flaws with the WSE model. The result of these flaws, and many others, is erratic modeling results with respect to compliance and non-compliance with current objectives. These results DO NOT accurately reflect the existing conditions. As such, there can be little confidence the model can accurately predict the results stemming from implementation of the Preferred Alternative.

The SED needs to either use CALSIM II for all of its alternatives and modeling runs, or completely revise the WSE before it can be utilized. Based on the current state of the WSE and the contents of the SED, there is no legal or scientific support for the Preferred Alternative.

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5. A Proper Analysis Must Be Undertaken Regarding Groundwater Resources.

The SED's approach to groundwater resources is arbitrary and capricious. The affected irrigation districts all currently use groundwater resources, and some are already in an overdraft situation. Moreover, actual experiences with past droughts have indicated groundwater will be used to make up for any loss in surface water -- leading to an overdraft situation over long periods of time. Amazingly, the SED does not adequately analyze the Preferred Alternative's impacts on groundwater resources. This omission occurs despite the irrigation districts submitting numerous reports and scientific studies detailing groundwater impacts to SWRCB staff. This lack of proper analysis must be rectified and a revised SED must be circulated before any final decision is made. Failing to take these steps violates the applicable laws.

6. The Preferred Alternative Will Violate Local General Plans Due To Its Impact On Agricultural Resources.

The SED's preferred alternative will result in the loss of thousands of acres of agricultural land, including agricultural lands that are prime or statewide or local importance. It will also result in the cancellation of untold Williamson Act contracts. All of the counties within the San Joaquin Basin have general plans that contain agricultural elements. These agricultural elements call for the protection of ag land and, in many instances, require mitigation if ag lands are lost. As such the SED violates many aspects of these general plans. Unfortunately, the SED contains zero analysis of these impacts. Moreover, it does not appear this interference with the local governments general plan processes were even considered. This violates the law and must be rectified by virtue of a revised SED. Unless further analysis is undertaken to ascertain conflicts between the affected counties' general plans and the SED's Preferred Alternative, appropriate mitigation and or changes to this Preferred Alternative will never be identified and disclosed to the public and the counties. In the event the Preferred Alternative conflicts with existing zoning for agricultural land use and/or Williamson Act contracts, CEQA requires further review and possibly mitigation. This further analysis must be undertaken immediately, and a revised SED recirculated prior to making a final decision.

CONCLUSION

The SED and its Preferred Alternative, as currently written, violate the California Environmental Quality Act ("CEQA") and a host of other applicable laws. Adoption of the Preferred Alternative will result in an arbitrary and capricious decision that does little to no good for salmon populations but destroys the San Joaquin Valley. The fallowing of thousands of acres of agricultural land, including prime, statewide or locally important farmland that is protected under CEQA, is not justified by this document. The economic and social impacts resulting from the imposition of the Preferred Alternative are not adequately disclosed, analyzed, and mitigated. The impacts to groundwater resources and other federally and state listed species are not disclosed, analyzed and mitigated. The SED, presently, is devoid of proper analysis and scientific justification. Moving forward and adopting the Preferred Alternative, at this time and based on this document, will be arbitrary and capricious, and in violation of numerous laws, including but not limited to, CEQA, the Government Code, the Water Code, and the Federal and

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State Endangered Species Acts. Rather than continue this folly, I urge you to revise the SED and undertake proper analyses of all impacts, utilizing a proper modeling program, and considering alternatives that do not rely on flow in order to achieve a doubling of the salmon populations.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ronda Azevedo Lucas', with a long horizontal flourish extending to the right.

RONDA AZEVEDO LUCAS
Attorney at Law