SENT VIA ELECTRONIC MAIL

May 24, 2012

Charles R. Hoppin, Chairman
Frances Spivy-Weber, Vice-Chairman
Tam M. Doduc, Board Member
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

**Re: Floodplain Habitat on the San Joaquin River**

Dear Members of the Board:

The State Water Resources Control Board ("State Water Board") is reviewing and amending its Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Bay Delta Plan"). In its review, the State Water Board is proposing to set regulatory flow requirements to benefit fish and wildlife through, at least in part, the creation of floodplain habitat. Members of the San Joaquin Tributaries Authority ("SJTA") previously provided the State Water Board with information regarding the limitations of creating floodplain habitat on the San Joaquin River. Since this time, the State Water Board has released technical documents which indicate the proposed regulations will be controlled by surface water delivery releases on the San Joaquin River tributaries. The SJTA writes to provide the State Water Board with information regarding specific limitations of creating floodplain habitat on the San Joaquin River tributaries and express its concern regarding whether requiring flow to create floodplain habitat on the San Joaquin River and its tributaries is a reasonable use of water.

In order to set flow requirements for the purpose of creating floodplain habitat, the State Water Board must be able to quantify the benefit floodplain habitat will provide to the beneficial use of fish and wildlife. Primarily, the State Water Board needs to define "floodplain habitat" on the regulated watercourse. The definition should address optimal timing (day and month of year), duration (how long the floodplain ought to be inundated),

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and depth (how deep the water on the floodplain must be to maximize benefits and velocity on the floodplain). Once defined, the State Water Board must identify the amount, timing, and duration of flow that the regulated watercourse must provide to achieve floodplain habitat. The State Water Board should then quantify the extent to which the creation of this habitat will benefit salmon smolt outmigration, rearing, production, escapement, and/or survival.[1]

For example, if the State Water Board wished to set flow requirements in order to create floodplain habitat on the Stanislaus River, the State Water Board would first need to define the timing, duration, area, and depth of floodplain habitat on the Stanislaus River. This definition of floodplain may look something like coverage of approximately 100 to 150 acres, during 20 days in March, at a depth of approximately 12 inches. From here, the State Water Board would need to identify the quantity of flow necessary to create the identified habitat. This quantification may reflect that 0 to 3,000 cubic feet per second ("cfs") would not create any floodplain habitat, flows ranging from 3,000 to 5,000 cfs would create approximately 100 acres of floodplain habitat and flows of 5,000 or more would create approximately 150 acres of floodplain habitat. That is, differing flows may provide differing amounts, areas, and depths of inundated habitat. Finally, the State Water Board would need to quantify the benefit from the creation of floodplain habitat. The State Water Board could determine that 100 acres of floodplain habitat results in improvement in juvenile salmon growth or survival by X percent and 150 acres would improve growth or survival by approximately Y percent.[2]

The State Water Board has yet to properly define floodplain habitat, estimate the amount of flow required to achieve floodplain habitat or quantify the expected benefit it will provide to beneficial uses on the San Joaquin River or its tributaries. On January 6 and 7, 2011, the State Water Board held workshops on the San Joaquin River Flow and Southern Delta Salinity Objectives. At these workshops, the California Department of Fish and Game ("DFG") made a presentation that suggested there would be a substantial increase in floodplain habitat on the tributaries, the San Joaquin River and the southern Delta. Members of the SJTA requested State Water Board staff and DFG quantify the amount of floodplain inundation that would be created at various flows. The State Water Board staff did not address the issue in its *Technical Report on the Scientific Basis for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives (2012)* ("Revised Technical Report"). Rather, the Revised Technical Report concluded floodplain habitat is "beneficial" without providing estimates or ranges of the amount of floodplain created at certain flow thresholds, much less the amount of floodplain necessary to provide specific benefits to fish species in the San Joaquin River system. (Revised Technical Report, at 3-43, 44.) The SJTA is not aware that the DFG has provided the State Water Board with information on the habitat amounts, locations and depth of floodplain habitat created at various flow thresholds.

Only after the State Water Board has defined floodplain habitat, estimated the amount of flow required to achieve floodplain habitat and quantified the specific expected benefit it will provide to beneficial uses on the San Joaquin River may the State Water Board consider

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[1] *O.mykiss* are not known to rear in floodplain habitats. (Moyle et al. 2007.) Therefore, floodplain inundation would only benefit Chinook salmon.

[2] The numbers in this paragraph are provided for demonstrative purposes only and should not be relied upon for substantive purposes.

whether the creation of such habitat is reasonable. The reasonableness analysis would need to weigh the quantified benefit of floodplain habitat against the resulting impacts such as increased water costs, flood control implications, economic losses to agricultural and commercial lands adjacent to the rivers and competing programs that provide benefit to fish and wildlife, to name a few.

The need to weigh the reasonableness of using flow to create floodplain habitat is especially critical on the San Joaquin River system. Historic changes to the San Joaquin River system such as channelization, levees and rip-rapping make it difficult to create floodplain habitat on the San Joaquin River system because it simply does not consist of the shallow channels that historically facilitated floodplain habitat.

On December 6, 2010, the San Joaquin River Group Authority provided the State Water Board with a study on floodplain inundation on the San Joaquin River which showed that, only when flows exceeded 10,000 cfs, is floodplain habitat created on the lower San Joaquin River. (Attachment 4 to December 6, 2010 San Joaquin River Group Authority comments.) To create floodplain on the San Joaquin River tributaries, flows on the Merced River would need to be approximately 3,000 cfs, the Tuolumne River flows would need 4,000 cfs, and the Stanislaus River would require approximately 3,000 cfs. (*See* CBEC Study and Tuolumne River FERC ALJ Process.)

This data indicates floodplain inundation on the San Joaquin River or the tributaries thereto requires significant quantities of flow for an extended period of time. The significance is reflected by the fact that the maximum flows included in the flow requirements currently being proposed by the State Water Board would <u>not</u> create floodplain habitat on the San Joaquin River system. (DRAFT Agricultural Economic Effects of Lower San Joaquin River Flow Alternatives, at x-4 [Table x-1 caps maximum diversions of 2,500 cfs on the Stanislaus River, 3,500 cfs on the Tuolumne River, and 2,000 cfs on the Merced River].) The State Water Board staff expects to implement maximum flows on a 15-day running average during the time-period of June through February. Therefore, as currently proposed, the San Joaquin River flow objectives would not create any floodplain habitat on the tributaries, the San Joaquin River or in the southern Delta.

In addition to water costs, the State Water Board must weigh several other factors, including competing programs that benefit fish, against the benefits of creating floodplain habitat. For example, the National Marine Fisheries Service attributes a 50 percent increase in salmon smolt survival through the Delta from the installation of the Head of Old River Barrier ("HORB"). The HORB operates at a maximum of approximately 7,000 cfs to achieve the beneficial effects of salmonid survival.[3] This means that the approximately 10,000 cfs necessary to create floodplain habitat would compromise the benefits of the HORB installation and may preclude installation all together.

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[3] National Marine Fisheries Service. 2012 Summary of the Expected Benefits to Salmonid Survival of a Rock Barrier at the Head of Old River & Preferential Use of the Central Valley Project Export Facility. National Marine Fisheries Service, Southwest Region. (http://swr.nmfs.noaa.gov/pdf/Summary_Expected_benefits_to_Salmonid_survival.pdf)

Using the information herein and previously provided to the State Water Board, the SJTA renews its request that the State Water Board define and identify the benefits of floodplain habitat on the San Joaquin River, taking into consideration the limitations and reasonableness thereof, in its Substitute Environmental Document and when determining whether to amend or revise regulatory flow requirements on the San Joaquin River system.

Very truly yours,

**O'LAUGHLIN & PARIS LLP**

VALERIE C. KINCAID

VCK/tlb
cc: San Joaquin Tributaries Authority
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