

United States Department of the Interior

**Closing Comments Regarding the California State Water Resources Control Board's
Notice of Public Informational Proceeding
To Develop Delta Flow Criteria for the Delta Ecosystem
Necessary to Protect Public Trust Resources**

May 11, 2010

Closing Comments

The U.S. Department of the Interior (Interior) submits these closing comments on behalf of both the Fish and Wildlife Service (Service) and the Bureau of Reclamation (Reclamation), pursuant to the State Water Resources Control Board's (Board) Public Notice and Revised Notice: Public Informational Proceeding to Develop Delta Flow Criteria Necessary to Protect Public Trust Resources. Interior's main points include:

- **The fundamental components of the natural Delta flow regime, under which native aquatic species evolved and thrived, have been substantially altered by human activity. These include water project operations and export pumping, water diversions, in-Delta structures, channel alterations, the introduction of large numbers of aquatic non native species, and the establishment of numerous point and non-point sources of environmental toxins, including agricultural chemicals and ammonia from treated human waste.**
- **Fish populations dependent on the Delta are declining. It is almost universally agreed that changes in Delta flows and flow variability have contributed to the declines of multiple native fish species.**
- **Flow in the Delta is one of the primary determinants of habitat availability and an integral component of overall ecosystem function.**
- **Some other stressors, such as nutrient loading, and invasive species, are also affected by the flow regime and cannot be comprehensively addressed without considering the direct and indirect effects of flows. Management agencies need to adopt a restoration approach that jointly addresses the major stressors, including flows, in a holistic way.**
- **The development of new flow criteria needs to be the result of a structured analysis with specific biological goals and objectives at the ecosystem, community, and individual species levels. The development and implementation of measures to improve fish populations, should consider flows and other factors affecting populations. It is essential that the specific biological goals should be identified in advance to guide the development of flow criteria.**
- **This document includes a table describing San Joaquin River tributary flow recommendations derived from the CVPIA Anadromous Fish Restoration Program (AFRP) Report in 2005. Interior believes that the process undertaken by the AFRP provides a valuable example of a process that begins with an analysis that includes specific biological goals and ends with flow recommendations as a means to achieve the biological goals.**
- **Interior urges the Board to consider the best available scientific information, and scientific uncertainty, when deliberating the means to protect the trust resources in the Sacramento-San Joaquin Bay-Delta ecosystem.**

- **Interior supports the Delta Environmental Flows Group in their assertion that “...a strong science program and a flexible management regime are essential to improving flow criteria...” Delta flows have far-reaching and complex effects that change both natural ecosystems and human society. Improving flow criteria is a consequential undertaking in many ways, and to be done effectively requires a strong scientific basis and a commitment to adaptive management.**
- **If the Board decides to adjust flow requirements, the adjusted values should be considered the “starting point” for an adaptive management process to provide biological benefits while balancing all beneficial uses.**
- **Interior appreciates the complexity of the Board’s responsibilities in its current undertaking, and is interested in participating in the ongoing analysis of Delta flows.**

The process AFRP used to develop flow recommendations to achieve salmonid doubling in the San Joaquin basin is a good example of an approach the Board should consider. The process utilized the following steps: 1) Defining goals (in this case doubling); 2) Identifying species needs by life history and timing; 3) Gathering the best available scientific data to develop flow criteria; 4) Analysis and modeling to fill in areas with insufficient data to make flow recommendations; 5) Assembling flow recommendations to achieve the defined goals under scenarios of different habitat quality; 6) Conducting additional analysis on an ongoing basis to refine the flow recommendations. We believe that this process could be incorporated by the Board in its process for establishing flow objectives and protecting public trust resources under California law.

Table 1. Example: recommended streamflow (cubic feet per second) schedules on the Stanislaus, Tuolumne, and Merced Rivers predicted to meet the doubling Goals for the San Joaquin basin. Source: USFWS, 2005:
“Recommended Streamflow Schedules to meet the AFRP Doubling Goal in the San Joaquin River Basin.”

	<u>WET</u>	<u>ABOVE NORMAL</u>	<u>BELOW NORMAL</u>	<u>DRY</u>	<u>CRITICAL</u>
Stanislaus					
February	1,280	787	514	500	500
March	2,560	1,573	1,028	927	785
April	3,117	2,636	1,998	1,811	1,385
May	4,827	3,676	2,738	1,950	1,438
Tuolumne					
February	2,013	1,212	794	784	744
March	4,027	2,424	1,589	1,568	1,487
April	4,811	3,574	3,225	2,696	2,415
May	8,139	6,850	4,763	4,072	2,895
Merced					
February	1,140	582	500	500	500
March	2,279	1,165	864	651	559
April	2,559	1,941	1,498	1,375	1,112
May	4,402	3,205	2,410	1,766	1,332
Total					
February	4,433	2,581	1,809	1,784	1,744
March	8,866	5,162	3,481	3,146	2,832
April	10,487	8,151	6,721	5,883	4,912
May	17,369	13,732	9,912	7,787	5,665