State Water Resources Control Board - Revised February 23, 2010

Informational Proceeding to Develop Flow Criteria for the Delta Ecosystem - Questions

Party submitting questions: City and County of San Francisco

Priority[1]	Question	Witness
1	**On Developing Prescriptions for Freshwater Flows to Sustain Desirable Fishes in the Sacramento-San Joaquin Delta** **Page 19; Table 3** How accurate are the prescribed flow levels—i.e., what would be the confidence intervals corresponding to each flow level, reflecting the degree of certainty that the flows are (a) necessary and (b) sufficient for the stated purpose?	William E. Fleenor William A. Bennett Peter B. Moyle Jay R. Lund
2	What exactly was the "bookkeeping" or accumulative process by which each prescribed flow was determined in Table 3—e.g., for San Joaquin basin juvenile salmon during critical water-years? Specifically, what are the data that led to a particular prescribed flow value?	
3	If there are no major physical habitat improvements in the Delta and no changes in water export operations, how beneficial in the long run would the prescribed flows in the San Joaquin River be for the San Joaquin Basin salmonid populations? Specifically, would those flows allow San Joaquin Basin salmonid populations to persist at recent-current levels or to become somewhat more viable natural populations, assuming that Delta and upriver conditions stay the same?	

4	With regard to salmon, how can the validity of the flow levels in Table 3 and of subsequent adjustments of those flow levels be determined? In other words, how do we know if the prescribed flows are “good enough” such that flow management planning may use them immediately as first steps toward the ultimate goals?	
5	Are increased flows supposed to primarily transport juvenile salmon and smolts quickly through the delta, or are the improved flows meant to allow those the juveniles to inhabit and rear in the delta areas?	
6	If the salmon populations continually fail to respond to increased flows, at what point—i.e., at what levels and durations of flows—should we conclude that the flow-enhancements for San Joaquin Basin salmon are no longer a practicable management measure?	
7	How much would prescribed flows be expected to change (either increased or decreased) by specific actions such as physical habitat improvements for juvenile salmon or reduction of pollutant stresses on salmon?	
8	Is it possible to validate the preliminary flow numbers in Table 3, or should the flow numbers be considered “first-guesses” with the understanding that adaptive adjustments will be made in conjunction with experiments that would start in the near future? If the latter, what would be the time-span of the initial period of experimentation and adjustment of flows—e.g., 15-20 years, or indefinitely?	

9	A criticism of some salmon management programs is that they have not demonstrated in a scientifically rigorous manner the factors and mechanisms that control the salmon population nor explained why the population has declined. In view of such criticism, how would the prescribed flow regime for the Delta (Table 3) be implemented such that scientifically credible assessments can be made regarding which flow components—e.g., for juveniles versus adults; or critical-dry versus normal water years—are most important to address? More specifically, how can it be scientifically demonstrated within a logically rigorous and experimentally feasible framework that each of the component functional flows in Table 3 is actually necessary and equivalent to the others in importance?	
10	How long (i.e., years, decades) would it take for increased San Joaquin River flows to significantly improve the amount of rearing habitats in the lower San Joaquin River and south delta enough to result in increased survival and production of San Joaquin basin salmon?	