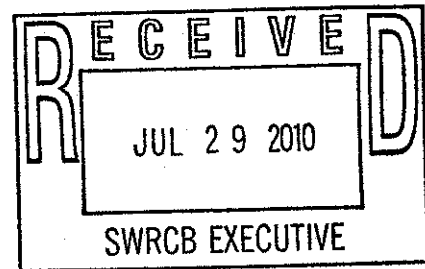


Memorandum

Date: July 29, 2010

To: Charles Hoppin, Chair
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814



From: Department of Water Resources

Subject: Department of Water Resources' Comments on Flow Report

The Department of Water Resources (DWR) appreciates the opportunity to comment on the State Water Resources Control Board's (SWRCB) Draft Report on Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem (Draft Report).

DWR understands that SWRCB interpreted its charge in Water Code Section 85086 of the Delta Reform Act to produce recommendations for Delta outflow necessary to protect public trust resources in the Delta without balancing impacts on other public trust resources within and outside the Delta, and without considering the feasibility of implementing the flow recommendations. DWR appreciates that with the limited time available to SWRCB, a more comprehensive approach to fulfilling this legislative mandate may not have been practical. DWR also acknowledges that the caveats included in the Draft Report's executive summary describe the limitations of the recommendations of the report. Nonetheless, DWR believes SWRCB's narrow interpretation of its charge and the simplified methodology used to produce the Draft Report severely limits the utility of these flow criteria recommendations.

The Delta Reform Act directs SWRCB, "pursuant to its public trust obligations, develop new flow criteria for the ecosystem necessary to protect public trust resources." (Water Code Section 85086(c).) SWRCB acknowledges on page 12 of the Draft Report that the public trust doctrine requires SWRCB to "preserve, so far as consistent with the public interest, the uses protected by the trust." (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 447.) These public interest considerations are critical to SWRCB's discharge of its public trust obligations. However, in developing the Draft Report, SWRCB takes a much more limited approach. By not considering the public interest in this report, or determining whether the flow criteria are consistent with the public trust, SWRCB fails to appropriately discharge its public trust obligations, as required by the Delta Reform Act.

Beyond the lack of consideration of the effects on water use, water quality, and flood management, the flow criteria recommendations included in the Draft Report would not be protective of Sacramento – San Joaquin River watershed fish populations. By taking a narrow focus on Delta outflow and ignoring the consequences on cold water reserves in upstream reservoirs, these flow criteria recommendations would have a severe adverse affect on anadromous fish upstream of the Delta.

The Draft Report acknowledges that increasing Delta outflows will not, by itself, likely provide the protections sought within the report. The quote on page one of the Draft Report by Dr. Fleenor regarding the futility of finding the "silver bullet" through Delta flows to solve the ills of the Delta ecosystem is especially poignant. Establishing flow criteria recommendations based on historic fish abundance without a recognition of the ecological changes that have occurred in the last 25 years, including changes in the food web, invasive species, and water quality, is unscientific, unwise and not in the public interest.

All of these considerations underscore the need to take an integrated, holistic approach to restoration of the Delta ecosystem. Both the Bay Delta Conservation Plan, under development by the BDCP Steering Committee consisting of multiple state and federal agencies and stakeholder organizations, and the Delta Plan, under development by the Delta Stewardship Council, will describe this integrated approach, and be consistent with the coequal goals outlined in the Delta Reform Act of "providing a more reliable water supply for the California and protecting, restoring and enhancing the Delta ecosystem." (Water Code Section 85054.) In addition to these general comments please see the attachment, which includes additional and more specific comments on the Draft Report.

Thank you for consideration of these comments. If you have questions, feel free to contact me.



Mark W. Cowin
Director
(916) 653-7007

Attachment

Additional DWR comments on the State Water Resources Control Board's Draft Report on Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem

General

The draft report is based upon the premise that unimpaired flows closely represent a more natural condition which is better for fish. DWR would like to point out that the calculated historical unimpaired flows used in the Draft Report do not truly represent the timing and amount of flows that would have entered the Delta under an unaltered water regime; one which would have no dams, constructed channels or levees. Care should be taken when interpreting these values for historical time periods because they do not account for the inundation, seepage, evaporation and flow attenuation that would have occurred during flooding and the potential return flows and other gains to the streams that may have occurred during the drier periods of the year. If these factors were considered, we would expect less variability in flows between the wet portions and the drier portions of the years.

The Draft Report is internally inconsistent in that for some periods of the year it proposes a percentage of unimpaired flows, but in the summer and fall it abandons this approach and proposes flows higher than unimpaired flows. The recommendation for inclusion of the fall X2 criteria set forth in the U.S. Fish and Wildlife Service's Biological Opinion is especially troubling given the National Research Council finding that "[t]he weak statistical relationship between the location of X2 and the size of smelt populations makes the justification for this action difficult to understand."¹ The inclusion of this questionable criterion is not consistent with the standard of best available science.

P. 8; Section 1.3 Background and Next Steps

If there is not always "scientific evidence to support specific numeric criteria" and this is the reason for classifying criterion in either Category "A" or "B", then why are specific numeric criteria recommended for Category "B"? Recommend removing all numeric criteria for "Category B" and replacing with a qualitative discussion.

P. 28; Section 3.3.2 Hydrology/Hydrodynamics

All figures drawing conclusions based on historical flows from periods of '49-'68, '69-'85, and '86-'05 may not be fair in that natural hydrology from the two earlier periods were wetter than typical whereas the most recent period contained a high

¹ A Scientific Assessment of Alternatives for Reducing Water Management Effects on Threatened and Endangered Fishes in California's Bay Delta". Committee on Sustainable Water and Environmental Management in the California Bay-Delta. National Research Council. 2010. Pages 40-41. (Prepublication copy.)

number of critically dry years that is not representative of the longer period. More specifically, the year types used for the three blocks of historical data were 35% wet and 0% critical for the first period, 47% wet and 12% critical for the second period and 30% wet and 25% critical for the most recent period. It would be a more appropriate analysis and best available science to filter out these hydrological biases before drawing conclusions.

Unimpaired flow calculations are based on a report provided by DWR. This report details the assumptions used in generating the estimated unimpaired runoff for the 24 sub-basins in the Central Valley. Some of the estimates are based on actual flows and others are assumed to occur based on previously reported relationships. These estimates are not available for real-time operations. In the Sacramento Valley, only 4 of the 11 required locations are routinely calculated. In the San Joaquin Valley, only 4 of the 9 required locations are available. Of these 8 locations, only rough estimates are available within the month and are based on limited information. The numbers are not made final until 3 to 6 days after the end of the month. Therefore, operating to unimpaired flow target would not be practicable.

Page 33, Section 3.3.2 Section 3.3.2 Hydrology/Hydrodynamics

The definition of OMR flows does not match the definition used for figure 8. In addition, the definition on page 33 is an empirical estimate, not a measured value (figure 8 uses model results).

Page 178, Appendix B Water Supply Modeling

Under Background, the last assumption bullet should be revised to "Full entitlement *demand* for CVP and SWP contractors". The original language could be misconstrued as full delivery of contract amounts, an assumption of demand, which is rarely satisfied, rather than requests for delivery of full contract amounts.

The key assumptions of the computer simulations done for the analysis and highlights of findings and results are well disclosed. These studies indicate the recommended criteria cannot be supported by the current water resources management system. Important results contained in Appendix B relating to the Sacramento River are:

- Deliveries to CVP and SWP settlement contractors north of the Delta are reduced 67% on average, and 73% during dry and critical years.
- To avoid severe ground water overdraft, agricultural demands north of the Delta were reduced to maintain pumping rates similar to the baseline.
- Exporting water from the Delta by the SWP and CVP was done only when water was incidentally available due to the hydrology. No reservoir releases were made to support SWP or CVP pumping in the Delta.

In spite of these reduced water supply demands, the number of months CVP reservoirs on the Sacramento River system (Trinity, Shasta and Folsom) reach dead storage increases from 3 to 33, from 9 to 40 and from 13 to 40 respectively for Scenario A. For Scenario B, the number of months is essentially twice those for Scenario A. In essence, the system is stretched beyond its ability to function.