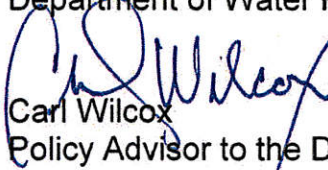


## Memorandum

Date: October 18, 2017

To: Cindy Messer  
Chief Deputy Director  
Department of Water Resources

From:   
Carl Wilcox  
Policy Advisor to the Director for the Delta

**Subject: Clarification of California WaterFix California Endangered Species Act Incidental Take Permit No. 2081-2016-055-03 Condition of Approval 9.9.4.3 to maintain spring outflow.**

The Department of Fish and Wildlife (CDFW) is providing this clarification based on discussions with the Department of Water Resources (Permittee) as to spring outflow operating criteria included in the Incidental Take Permit (ITP) for the California WaterFix Project (Project), specifically in Condition of Approval 9.9.4.3. As identified in the description of covered activities within the ITP, these criteria have the objective to maintain spring outflow through the permit term to be consistent with existing conditions and avoid a reduction in overall abundance of longfin smelt (LFS). (See ITP, page 66.)

As stated in ITP Condition of Approval 9.9.4.3, "to minimize take of LFS associated with impacts of Project operations on abiotic habitat, Permittee shall maintain Delta outflows that are protective of LFS every year from March 1 – May 31. These outflows will: 1) maintain estuarine processes and flow positively associated with LFS abundance; 2) maintain downstream transport of LFS larvae to rearing habitat; and 3) dedicate water to maintain LFS habitat quality and quantity at levels consistent with recent conditions." (See ITP, page 188.) The objective of the operating criteria in Condition of Approval 9.9.4.3, in terms of outflow, is to maintain LFS habitat quality and quantity consistent with recent conditions. (See ITP, page 188.) The ITP sets forth outflow targets in Sub Table B that require export reductions to achieve outflows consistent with simulated existing conditions.

The Project was evaluated considering all the factors that affect Delta outflow including climate, hydrology, regulations, and non-SWP demands in the Central Valley and the Delta. Only the 2009 to 2016 baseline data demonstrate outflow conditions with the 2008 USFWS biological opinion and 2009 NMFS biological opinion in place. However, historical Net Delta Outflow Index (NDOI) values from 1980 – 2016 were used to develop Sub Table B in order to achieve a sufficient sample size to evaluate a trend statistically and capture a wide range of water year types.

The linear relationship developed between the ELT adjusted historical monthly 8RI and recent historical NDOI values (1980 – 2016), as reflected in Sub Table B, cannot fully account for the unique hydrologic conditions in a given month. The targets in Sub Table B are often higher than the actual outflows under the recent historical conditions. As such, Sub Table B itself

does not represent monthly average outflow that the ITP assumes would be achieved for each and every month. Sub Table B values provide a target, the pursuit of which, is expected to achieve outflows similar to the recent historical conditions through export reductions.

Therefore, the spring outflow criteria, as described in the ITP on page 181 within Table 9.9.4-1, page 185 within Sub Table B, and page 188 under Condition of Approval 9.9.4.3, are properly interpreted as requiring Permittee to utilize the linear relationships described in Sub Table B as targets to be met to the extent export cuts down to a minimum of 1,500 cfs can achieve them. Modeling that evaluated these operations demonstrated that the targets would not be met in every year or month, but showed that using the targets as an operational criteria as described here and in Condition of Approval 9.9.4.3 would be expected to achieve outflows consistent with existing conditions in March, April, and May.

This clarification is supported by and consistent with modeling underlying the ITP effects analysis. The modeling underlying the effects analysis indicates that reducing exports from the south and north Delta facilities in an attempt to meet a monthly average target can attain outflows consistent with the recent conditions and thereby achieve the biological objective set forth in Condition of Approval 9.9.4.3.

Questions concerning this clarification can be directed to me at 707-944-5584 or [carl.wilcox@wildlife.ca.gov](mailto:carl.wilcox@wildlife.ca.gov).

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