United States Department of the Interior

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

From February 12th, 2010

Excerpts

CSPA-302

Complete document url:

- https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow/docs/exhibits/usdoi/doi_entire_exhibit.pdf

Delta Outflow (1)

CSPA-302

When X2 is in the relatively shallow waters of Suisun Bay at particular times of the year, phytoplankton growth rates are higher, productivity is maximized and fish rearing is supported. Having X2 further westward also may reduce entrainment of estuarine species into the State and Federal export facilities. (p. 7)

Delta Outflow (2)

Prior to when adult delta smelt migrate upstream, X2 explains intra-annual salvage patterns, presumably because they have a shorter distance to enter the footprint of the exports once migration occurs. However, X2 only matters in this case when Old and Middle River flows are negative. … it only takes a few tidal cycles for particles modeled with surfing behavior to move within the footprint of the exports during high outflow periods.

(pp. 7-8, citations omitted)

Source of Delta Outflow

We believe the source of flows is very important to determine Delta outflows. … This includes contributions from the Sacramento and San Joaquin Rivers and their tributaries. As stated in previous Board workshops, managing the San Joaquin system for flows only at Vernalis has not been effective in improving fish populations on the San Joaquin and its tributaries.

(p. 12)

Delta smelt and reverse flows

Recent studies show that entrainment of delta smelt and other pelagic species increases as OMR flows become more negative (Grimaldo et al. 2009; Kimmerer 2008). Kimmerer (2008) found that entrainment losses increased as OMR flows became more negative, with as much 50 % reduction in the delta smelt population during some high export years. (p. 8)

Salmon survival and QWEST (1)

- To address the biological objective of increased survival of emigrating salmonid smolts, the AFRP identified the importance of maintaining positive QWEST flows (AFRP Working Paper, 1995). (p. 8)

Salmon survival and QWEST (2)

- It's important to note, that in 1992, the Board also acknowledged the importance of maintaining positive QWEST flows, in order to protect and stop the decline of the public trust resources in the Delta, and included a new standard (requirement) that "there shall be no reverse flow for all year types on a 14-day running average in the western Delta… between February 1 and June 30." (p. 8)

Delta Inflow

- Smolt survival increased with increasing Sacramento River flow at Rio Vista, with maximum survival observed at or above about 20,000 and 30,000 cfs (USFWS, 1987, pages 35 and 36). … Providing flows that mimic the natural hydrograph will benefit the native fishes in the Delta and should be used in determining the timing and magnitude of flow needed for the Delta ecosystem. (p. 9)