

California-Nevada Chapter



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March 8, 2017

Jeanine Townsend
Clerk to the Board State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000
commentletters@waterboards.ca.gov

Subject: Comment Letter – 2016 Bay Delta Plan Amendment & SED

Dear Jeanine Townsend:

I am writing on behalf of the American Fisheries Society, California-Nevada Chapter, regarding the "Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and the recirculated draft revised Substitute Environmental Document (SED) dated September 2016. The American Fisheries Society was founded in 1870, with over 500 members associated with the California-Nevada Chapter. The mission of the American Fisheries Society is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals.

The California-Nevada Chapter is very concerned about the health of fish populations within the San Francisco Estuary, including the Sacramento and San Joaquin rivers and their tributaries. The poor condition of many native Central Valley fish populations is reflected in listings under the Federal and State Endangered Species Acts, as well as the California list of Fish Species of Special Concern. This includes Sacramento River winter-run Chinook Salmon, California Central Valley spring-run Chinook Salmon, California Central Valley steelhead, Green Sturgeon, Delta Smelt, Longfin Smelt, Sacramento Splittail, and Pacific Lamprey. The decline of these species is revealed in information identified by the Water Resources Control Board. In addition

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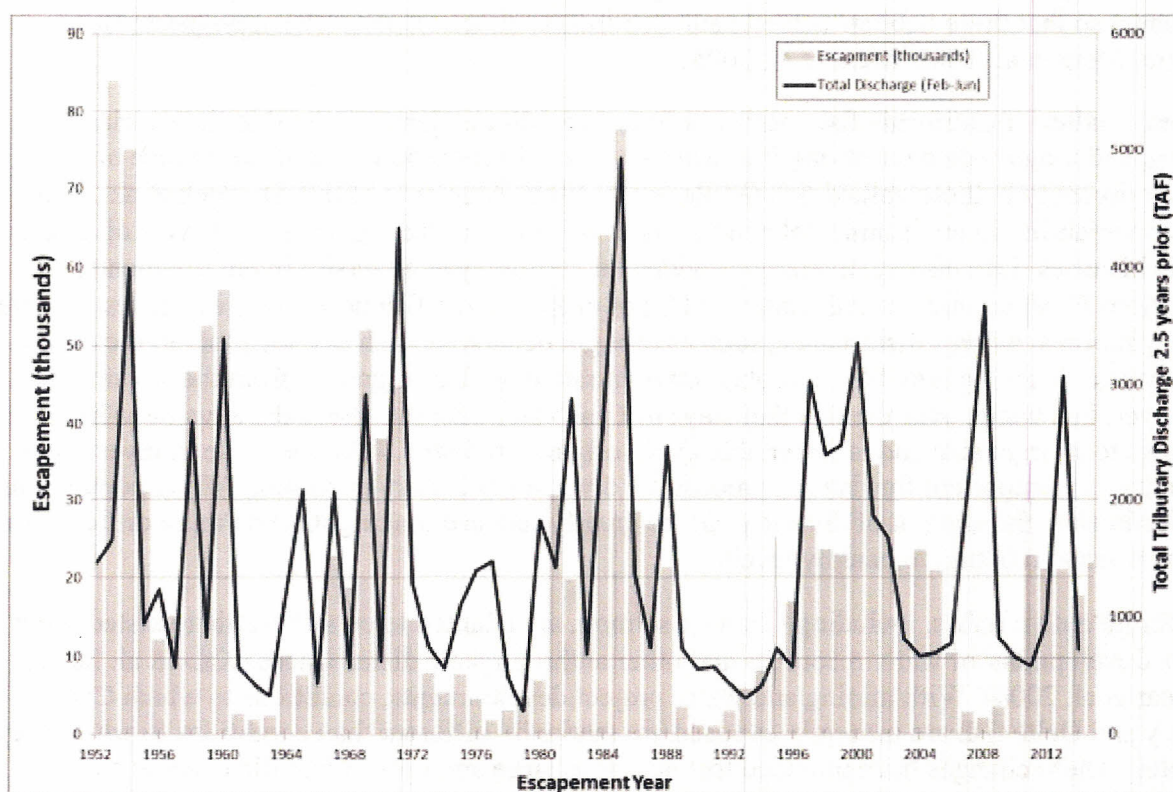


Figure 19-2. Relationship between adult salmon returns to the San Joaquin basin and the river flows they experienced as juveniles. Fall-run Chinook salmon returns (escapement) to the Stanislaus, Tuolumne, and Merced rivers combined from 1952-2014 relative to the total discharge (Thousand Acre-Feet) during the February through June outmigration period they experienced 2.5 years prior as juveniles. Salmon data from CDFW GrandTab 2014.04.22 and GrandTab 2016.04.11. Flow data for the Stanislaus, Tuolumne, and Merced Rivers combined from USGS gages 11303000, 11290000, and 11270900 respectively. Note that adult abundance estimates have not been corrected for age distributions (we assumed that all adults returned at age 3), or for out-of-basin straying. The large deviation in 2007 reflects poor returns that were attributed to poor ocean conditions (Lindley 2009) and resulted in the closure of the fishery. Adapted from Sturrock et al. 2015.

Native Central Valley fish have evolved with the flow and temperature template of the California Mediterranean climate. Not only the reduction in flow, but the timing, duration, and magnitude of flows are paramount to their population maintenance and resiliency. Similarly, the temperature template must mimic the seasonal periods that each species' life history has evolved with. Altered timing of flow and temperature can decouple fish from their habitats due to missed cues, altered maturity, and overall decrease in health. Finally, the physical template of streams

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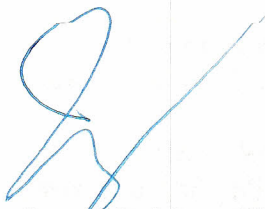
California and the United States have both identified a goal of doubling Central Valley Chinook Salmon populations, from what they were in the 1967 to 1991 period. The analysis conducted by the California Department of Fish and Wildlife in 2010 identified the South Delta flows needed to double Chinook Salmon smolt production. These flows at Vernalis were identified as ranging from 7,000 cubic feet per second (cfs) in a critical water year to 15,000 cfs in a wet water year.

California's fish assets are a public trust resource that depends on flowing water in our rivers. It is important for the State Water Resources Control Board to manage the public's instream flows in a manner that provides for the recovery of California native fish populations. Flows and water quality management to support native fish species is important throughout the year. Protecting one life stage of a species is inadequate if they cannot be supported throughout their life cycle. This means that flow and temperature on regulate streams must also take into account management of reservoir conditions (e.g., inflow, temperatures, water deliveries, reservoir carry over).

The California-Nevada Chapter of the American Fisheries Society recommends that the State Water Resources Control Board implement an iterative process of robust decision making for water resource management using an adaptive management approach. Adaptive management should incorporate all relevant state and federal policy initiatives related to water resources and fish populations of concern (e.g., The California Water Action Plan, California Water Plan, and Central Valley Recovery Plan for Central Valley Steelhead and Salmon) into a working definition of adaptive management that is sustainable for administration of the many entities competing for water resources. We suggest that decision making processes be clearly defined, including the process for adjusting water management measures that are intended to protect aquatic resources.

We urge the Water Board to develop and implement a Plan that uses best available science to restore California's aquatic ecosystems to healthy conditions, and to restore native fish populations to levels that support vibrant ecosystems, and recreational and commercial fisheries.

Sincerely,



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- Yoshiyama, R.M, Fisher, F.W., Moyle, P.B., 1998. Historical Abundance and Decline of Chinook Salmon in the Central Valley Region of California. *North American Journal of Fisheries Management*, 18:487-521.
- Zeug, S.C., Sellheim, K., Watry, C., Wikert, J.D. and Merz, J., 2014. Response of juvenile Chinook salmon to managed flow: lessons learned from a population at the southern extent of their range in North America. *Fisheries Management and Ecology*, 21(2), pp.155-168.