

## SALMON TECHNICAL TEAM REPORT ON THE CENTRAL VALLEY RECOVERY PLAN

The Council requested that the Salmon Technical Team (STT) provide comments on the co-manager review Draft Recovery Plan For The Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead. The STT has three general comments on this document, and refers to more specific comments developed by Council staff.

In the Recovery Plan narrative, harvest impacts on winter run Chinook are generally noted to be small. The document asserts that changes in ocean harvest regulations since 1995 have significantly reduced harvest and that "...overutilization for commercial, recreational, scientific or educational purposes no longer appears to have a significant impact on winter run Chinook salmon populations..." (p.84). However, this assessment is in contrast to the winter run stressor matrix (Attachment A) which ranks ocean harvest as a very high stressor. The STT noted no analysis that clearly indicated that harvest impacts had changed since 1995, or that harvest impacts have a significant effect on winter run Chinook presently. The "very high" stressor ranking of ocean harvest appears to be a product of (1) the high weight of the ocean harvest specific stressor and (2) the large number of harvest/angling impact stressors from other areas of the Sacramento River system, Delta, and San Francisco Bay. It is not clear whether the ocean harvest "very high" stressor ranking is due primarily to the construction method of the winter run stressor matrix or whether the ocean harvest stressor ranking is robust to matrix construction details. The STT would prefer additional analysis of available winter run ocean harvest data that allows for resolution of the differences in the narrative of the report and the winter run stressor matrix.

The second comment from the STT concerns the omission of non-harvest ocean factors in the winter run stressor matrix. Ocean conditions can have a profound effect on salmon abundance, a key factor in population viability. However, this factor is not listed in the stressor matrix. The STT notes that winter run Chinook run size decreased sharply in the late 1970s, a time when ocean conditions are thought to have changed from favorable to unfavorable for salmon in the California Current. The opposite is true in the late 1990s, when winter run Chinook abundance increased somewhat. In the winter run Chinook stressor matrix, the only specific stressor listed for the ocean was harvest/angling impacts. The STT believes that ocean climate and ecosystem factors should be added to the winter run Chinook matrix and given attention in the report narrative.

The third comment concerns the Central Valley Technical Recovery Team recommendation for all hatchery fish to be marked in some way to allow for reliable estimation of hatchery straying to natural spawning areas. The STT notes that 100 percent marking is not strictly necessary for estimating stray rates. The recent implementation of constant fractional marking (p. 67) will allow for reliable estimation of hatchery stray rates, given adequate escapement monitoring. Without adequate escapement sampling, even 100 percent marking cannot provide reliable estimation of hatchery straying.

In addition to these general comments, the STT acknowledges and agrees with the list of specific comments from Council staff, located in Agenda Item D.3.a, Attachment 2.

PFMC  
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