SALMON ADVISORY SUBPANEL REPORT ON WORKGROUP REPORT ON CAUSES OF THE 2008 SALMON FAILURE

The Salmon Advisory Subpanel (SAS) would like to thank the panel of fishery scientists who compiled the data, analyzed the information, and made their conclusions regarding the collapse of the 2004 and 2005 broods of the Sacramento River fall Chinook (SRFC).

First we concur with the comments presented in the draft Council staff review points regarding the report titled "What Caused the Sacramento River Fall Chinook Stock Collapse?" Further we offer the following comments, some of which may overlap comments contained in the draft staff report:

1. We believe that to fully understand the magnitude of the failure, one should give greater consideration to the effects of the loss of 48 percent of the stream habitat available to spawning and rearing salmon in the Sacramento drainage. In addition, much of the remaining accessible habitat has been degraded due to mining, water withdrawals, pollution, and the introduction of exotic species that compete with and prey on indigenous species. As a result of the blockage of their migration corridors by dams, hatchery programs were offered as mitigation for the loss of habitat.

2. From 1984 to 2007, the state hatcheries each year released between 15 and 30 million salmon smolts. Most of these smolts are trucked from the hatchery to the estuary for release. In addition, Coleman National Fish Hatchery releases about 12 million smolts in the Sacramento drainage.

3. A three year study of the net-pen acclimation program (unpublished) concluded that acclimation resulted in 2.2 to 3.0 times the survival rate of unacclimated smolts. However, the percentage of smolts acclimated increased from 7 percent in 1992 to 74 percent in 2002, declining to zero in 2006, then increasing again to 27 percent in 2007 and 86 percent in 2008. Reasons given for the cessation of the acclimation program were "budget constraints" and "financial considerations" by the California Department of Fish and Game. However, no explanation is offered as to how the budget constraints and financial considerations went away, considering the financial difficulties faced by all California state agencies of late. Also, if financial considerations were the cause of cessation of the acclimation program (which resulted in a threefold increase in smolt survival), why not reduce the number of smolts produced and take advantage of the increased survival from the acclimation program? The net benefits of acclimation would offset the loss of 2/3 of the smolt production. Surely the savings provided by reducing smolt production would be many times greater than the elimination of the acclimation program.

4. While the SAS agrees that restoring diversity to the SRFC may be essential to their long-term survival, we note that diversity has been lost through habitat degradation and resulting poor survival rates to saltwater for naturally produced fish. We do not see how diversity can be restored without addressing these problems.

5. Water withdrawals from the river as well as the delta at times equal 80 percent of the river discharge. While withdrawal rates are lowest in the spring when smolts are present in the lower river and delta, the withdrawals still may result in serious consequences for smolt survival and migration. In particular, lack of freshwater flows to the estuary may impair its critical role as fish transition to saltwater.

6. The loss of 95 percent of tidal wetlands must have greatly reduced smolt survival during their transition from the freshwater to the saltwater rearing phase of their life history.

7. In the main body of the report, six different times it is stated that the proximate cause of the failure of the 2004 and 2005 SRFC broods was due to ocean conditions; we respectfully disagree. If one compares the importance of the many freshwater variables one at a time with ocean conditions rather than comparing all the freshwater variables in the aggregate with ocean conditions as was not done in the report, then the problems faced by SRFC in the freshwater portion of their life history are greater than variable ocean conditions. If your critters do not survive to reach the pasture, it does not matter how tall the grass is.

8. The report has too narrow a focus and should have taken advantage of more of the extensive historical data that are available.

PFMC
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