

Reconsideration of the Sacramento River Winter Chinook Harvest Control Rule  
NMFS, West Coast Region  
February 25, 2015

The most recent biological opinion for Sacramento River winter Chinook salmon (winter-run) was completed in 2010. The Reasonable and Prudent Alternative (RPA) for that opinion was updated in 2012. The 2012 RPA describes the current harvest control rule for winter-run. The control rule includes a set of time, area, and size related management restrictions and sets limits on the age-3 impact rate for fisheries south of Point Arena, California that depends on the most recent 3-year geometric mean of spawner escapement. The control rule allows for decreasing levels of harvest as escapement levels decline but requires that the impact rate be reduced to zero for escapements below a 500 fish threshold. The Council expressed concern that the control rule was unnecessarily restrictive in years of low abundance, particularly when the 3-year mean falls below 500 fish. The Council asked that NMFS consider alternative control rules that allowed for *de minimis* levels of fishing when abundance was low without significantly increasing the risk of extinction to winter-run Chinook.

In response NMFS issued a Notice of Availability and Request for Comment on January 23, 2014 (79 FR 3783). The notice asked for comments that focused on the current winter-run control and alternative control rules that otherwise reduced the impact rate at low abundance. The request for comments closed on April 23, 2014. NMFS received 102 individual comments with all but one supporting some form of increased harvest opportunity.

NMFS took the comments received into consideration, including those from the Council but has decided not to reconsider the control rule at this time. The control rule will allow for a 19 percent impact rate on winter-run in 2015 compared to 15.4 percent that was allowed in 2014. Forecasts for adult Sacramento River fall Chinook and Klamath fall Chinook contributing to fisheries are also up a bit from last year.

However, NMFS believes it is appropriate to strike a cautionary note with regard to Sacramento winter-run Chinook that is associated with the well-known drought conditions in California's Central Valley.

The drought conditions are pervasive and a topic of intense study. NMFS is aware of recent reports indicating that rearing and out-migration conditions for Sacramento winter-run were poor in 2014-2015 and that juvenile survival rates were as low as 5% for progeny of naturally spawning fish. The life-history of winter-run is such that the fishery occurs almost exclusively on three-year-old fish. The 2014-2015 out-migrants will contribute to fisheries in 2016. Because the control rule is driven by the 3-year geometric mean of adult escapement, NMFS is concerned

that the rule may not be adequately responsive to information on low juvenile survival for a particular year.

Further, NMFS notes that there is information that suggests that ocean conditions off the west coast are very warm and hostile to early ocean survival for juvenile salmon entering the ocean in 2015. These conditions include areas off California. Potentially contributing positive conservation benefits, however, has been the actions of fishery managers to triple the production of winter-run Chinook in the Livingston Stone National Fish Hatchery's (LSNFH) conservation program for the 2014 brood year. The production increase was designed to anticipate and help mitigate the potential effects of the drought. The 2014 brood year production has been released and its outmigration also will be monitored. Preliminary data suggest that migration conditions in the river for the LSNFH releases may have been relatively favorable, presumably due to the heavy rainfall and high flows during the release period, which caused the fish to move rapidly downstream. Naturally produced fish did not likely benefit from these conditions, because most of them had likely migrated downstream earlier, during low flow conditions.

NMFS' review and conclusions related to juvenile survival information are preliminary. It is still not clear if or how NMFS may consider the information for setting harvest levels in the future. Nonetheless, the information though preliminary is substantive and leads NMFS to conclude that a review of the control rule as originally proposed that focused only of the *de minimis* provisions at low escapement levels would not adequately account for new information. NMFS' review and consideration is a work in progress. We are interested in the views of the Council and others and will seek your input and keep you informed as we move forward.

The immediate concern is our collective need to plan for ocean fisheries in 2015. Several members of the Salmon Technical Team (STT) have initiated a review that focuses on indicators of out-migration conditions and juvenile survival for the 2013 brood year which will contribute to the 2015 fisheries. Preliminary results from this review, which will be circulated for consideration to all STT members, suggest that out-migration conditions and juvenile survival in 2013-2014 were similar to those observed during the preceding five or six years and unlike the very poor conditions seen this year. Absent a signal to the contrary related to juvenile survival NMFS concludes that it is appropriate to continue to rely on the existing control rule for planning 2015 ocean fisheries. Ironically this suggests that there will be a modest increase in harvest opportunity in 2015 compared to 2014 notwithstanding our substantive concerns related to what we may face in 2016.