

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
KLAMATH RIVER FALL CHINOOK (KRFC) STOCK ASSESSMENT AND
MANAGEMENT RECOMMENDATIONS

Dr. Robert Kope presented the “Assessment of factors affecting natural area escapement shortfall of Klamath River fall Chinook salmon in 2004-2006” to the Scientific and Statistical Committee (SSC). This document is improved over the draft we previously reviewed and contains information pertinent to understanding freshwater and harvest factors affecting the current status of the KRFC. Flow, temperature, and disease are among the many environmental factors that may be affecting the productivity of Klamath stocks. In recent years, one or another of these has been unfavorable most of the time. *A priori* one would expect these factors to be important, however, it is difficult to relate any of them quantitatively to the recent low escapements. Ocean survival has also been variable, and relatively low. For escapements to be good, everything needs to be favorable. If even one factor is unfavorable then escapements can be low.

One thing that is clear is that in the three years of Overfishing Concern there have been enough ocean recruits to meet the escapement floor in the absence of harvest. In two of three years in the Overfishing Concern Period fisheries regulations targeted the escapement floor and exploitation rates were higher than modeled. In the third year, the target was below the floor. As a result, there was overfishing in those three years.

In general, the report’s recommendations outline a reasonable program for rebuilding Klamath stocks, but the SSC wanted to see more quantitative evaluation of alternative harvest policies.

Of the recommendations, the first three are most germane to Council management:

Recommendation 1, requiring three out of four years of adequate escapements to end the Overfishing Concern, appears to be reasonable, but the report does not provide an adequate justification. The SSC was concerned that this could become a precedent, but it is stock-specific and would not necessarily apply in other rebuilding scenarios.

Recommendation 2, targeting the S_{MSY} escapement of 40,700 instead of the 35,000 escapement floor is prudent, and would increase the rate of rebuilding while decreasing the likelihood of continued overfishing. However, targeting S_{MSY} leads to escapements below the goal half the time.

Recommendation 3, redefining the harvest control rule when in *de minimis* fisheries to be consistent with the S_{MSY} target, is a logical extension of Recommendation 2. However, the costs and benefits of this more risk-averse strategy have not been systematically explored.

For these three recommendations, the SSC agrees that they are risk averse and would likely lead to faster rebuilding, at some short-term cost to the fishery. Additional analysis could help quantify the likely costs and benefits of such actions.