November 2005
G.3.d Supplemental KFMC Report
Klamath River Fall Conservation Objectives

The Klamath Fishery Management Council (KFMC) and the Klamath River Technical Advisory Team (KRTAT) have reviewed the Salmon Technical Team's (STT) report titled *Klamath River Fall Chinook Stock-Recruitment Analysis* (September 2005). The KFMC appreciates the opportunity to comment on this critical issue.

In general, we find that the technical basis of the stock recruitment analysis is sound and, given the limited time and data available to complete the analysis, is an adequate response to the PFMC's assignment. We believe that Model 2 of the analysis best represents the stock recruitment relationship of Klamath River fall Chinook. Based on the STT's analysis and the diverse results of each of the three stock-recruit models, the KFMC recommends that the current Salmon FMP conservation objectives for Klamath River fall Chinook (2/3 maximum spawner reduction rate and a minimum 35,000 fish natural spawning escapement floor) are appropriate and reflect the uncertainty inherent in the STT's stock-recruit analyses.

While we found that the STT's use of the available stock recruit data was sufficient to complete the primary assignment from the PFMC (maximum sustained yield stock-recruitment analysis), we believe that the correlation analysis (as assigned by the PFMC) was inconclusive and did not adequately reflect the breadth of available hydrological and life history data for Klamath River fall Chinook. Moreover, this analysis was confounded by the lack of a direct measure of smolt to adult survival for the natural production component. Further analyses of this nature need to be more comprehensive and involve pertinent experts within the basin.

The KFMC recognizes that significant uncertainty remains with regard to the ability of the PFMC and NMFS to implement *de minimis* fisheries. If there is not sufficient flexibility under the Magnuson-Stevens Fishery Conservation and Management Act to implement *de minimis* fisheries through emergency rule, the KFMC recommends that PFMC proceed with the plan amendment process, confined in scope to addressing the potential for *de minimis* fisheries. The KFMC also recommends that any such amendment regarding *de minimis* fisheries be based upon a prudent, precautionary approach regarding the protection of sub-stocks within the Klamath basin, and should be scaled to projected stock abundance.

The KRTAT (Prager and Mohr 1999) evaluated the use of a *de minimis* management policy during years of low abundance and concluded that "Such a policy had little, if any, discernable effect on average catch, year to year variability of catch, or median natural escapement." The KRTAT made no recommendation regarding the use of such a policy; however, they noted that while their study showed no adverse effect of fisheries up to a 20% spawner reduction rate, there could be disproportionate impacts to smaller sub-stocks, thus reducing long term yield. They recommended that if such a fishery was established, a maximum spawner reduction rate of 10% should be adopted, subject to review after a period of years.

Based on the KRTAT analysis (Prager and Mohr 1999), the KFMC recommends that whenever "without-fishing" natural spawner abundance is predicted to be 39,000 or less, *de minimis* fisheries should be considered, with a maximum spawner reduction rate of 10%. We also recommend that the *de miminis* fishing rate reduce linearly from 10% to 0% as a function of projected stock abundance. The KFMC also recommends that whenever *de minimis* fisheries are adopted, a technical review of the anticipated escapement shortfall shall be completed prior to the adoption of regulations for the following season. If fishery impacts are found to be a major cause of a substantial shortfall, *de minimis* fisheries shall not be proposed in that subsequent season.