

SALMON TECHNICAL TEAM REPORT ON
FISHERY MANAGEMENT PLAN AMENDMENT 15 (*DE MINIMIS* FISHERIES)

The Salmon Technical Team (STT) has reviewed available products from the Ad Hoc Salmon Amendment Committee (SAC). The SAC has completed a tremendous amount of work in a very short time and should be commended for its efforts. Our comments will relate to four areas of SAC work and the amendment process:

- 1) Alternatives for public review
- 2) Biological analysis
- 3) Economic analysis
- 4) Adoption schedule

Alternatives for public review.

The alternatives in the current draft of the proposed fishery management plan (FMP) range from the status quo of no fishing when the Klamath escapement is predicted to fall below the 35,000 floor to a 16% age-4 ocean impact rate cap. Intermediate alternatives authorized by the Council include a sliding scale of allowable impacts and a 5% impact cap. The SAC has also completed an analysis of impacts at a 10% impact cap. The STT recommends this analysis of a 10% impact cap be included as an additional alternative. The STT believes that the 16% age-4 ocean impact rate cap alternative effectively ignores the spawning escapement status of Klamath fall Chinook. Under this alternative, when *de minimis* rules are not in effect, the 16% age-4 harvest rate cap on Klamath fall Chinook is in effect to protect California Coastal Chinook under the Endangered Species Act (ESA). When the *de minimis* rules are in effect, the 16% cap age-4 impact rate cap on Klamath fall Chinook is in effect to protect Klamath fall Chinook. While the ‘driver stock’ changes under the two scenarios, the harvest impacts to the Klamath stock are effectively the same. We recommend that this alternative be dropped from further consideration.

In addition to the impact rate alternatives, two additional ‘features’ have been proposed (alternatives five and six), which could be applied separately or together to alternatives one through 4. Alternative five limits *de minimis* fisheries to no more than three consecutive years. Alternative six prohibits ‘credit card’ fisheries the fall and winter following a year with *de minimis* fishing. The STT believes that at a minimum alternative six, the no credit card fisheries alternative, should be included in the analysis of all alternatives.

Biological Modeling - the Stochastic Stock Recruitment Model (SSRM).

The STT has reviewed in some detail the inputs and algorithms in the SSRM and has identified several inadequacies that should be addressed before the model is ready to use to evaluate *de minimis* alternatives.

- 1) The error structure employed to estimate variance around the preseason prediction of harvest rates by the Klamath Ocean Harvest Model (KOHM) versus postseason harvest rate estimates is static in that it does not change through time. One result of this static error structure is that predicted ocean harvest rates are biased high. In reality, the

structure of the KOHM has changed over time, and annual recalibration of the model should reduce both the magnitude and the bias of error in management. The error structure employed should be changed to reflect this or an analysis of the adequacy of the current error structure should be completed.

- 2) Hatchery production is assumed to be constant and independent of parent broodstock size. Hatchery stock survival is assumed to co-vary with wild stock survival. Data on hatchery releases and hatchery stock survival rates are readily available from coded-wire-tag cohort analysis and should be incorporated independently.
- 3) Currently the model computes the tribal share of the annual harvest after the non-treaty ocean harvest has been observed. In fact, the tribal share of the harvest is set pre-season based on the forecast ocean abundance. The adequacy of this allocation scheme in the model has not been demonstrated.

Economic analysis of alternatives.

The STT believes that the economic analysis contained in Agenda Item H.2.a, Supplemental Attachment 2, which concentrates on impacts only during years when the *de minimis* rules would be in effect, are a useful addition to the analysis.

The STT is concerned that no accounting for loss of infrastructure is included in these analyses. When faced with little or no opportunity, fishers, processors, and buyers may leave the industry and never return for a variety of reasons. Some may drop out altogether, others may change target species.

The STT is also concerned about the lack of economic analyses for any inriver fisheries. While we understand some of the difficulties associated with valuation analyses of tribal fisheries, at a minimum the impacts to freshwater sport fisheries should be assessed.

Adoption schedule.

We understand that the Council is considering several time schedules for final adoption of the FMP. The STT believes that all schedule options listed in the situation summary are optimistic. Therefore, of the options listed in that summary, we recommend that the Council choose the schedule that includes selection of the preferred alternative in November of this year, and final adoption at the March 2007 Council meeting.

PFMC
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