



Northwest Indian Fisheries Commission

6730 Martin Way E., Olympia, Washington 98516-5540
Phone (360) 438-1180 www.nwifc.org FAX # 753-8659

RECEIVED

March 24, 2016

MAR 28 2016

PFMC

Mr. Robert Turner
Asst. Regional Administrator, Sustainable Fisheries Division
National Marine Fisheries Service, West Coast Region
510 Desmond Drive SE
Lacey, WA 98503

Re: 2016 Pacific Fisheries Management Council (PFMC) Salmon Season Setting Process

Dear Mr. Turner:

Your February 17 letter solicited input regarding the best available information with which to model pre-season the harvest regime to be applied to the Southeast Alaska (SEAK) Chinook fisheries in 2016. The western Washington Treaty Tribes offer the following comments on the best available information for consideration in the U.S. domestic pre-season planning process.

The SEAK Chinook harvest is primarily governed by Chapter 3 of Annex IV of the Pacific Salmon Treaty. Chapter 3 stipulates that Aggregate Abundance Based Management Fisheries, such as SEAK, are to be managed by either a preseason forecast or an in-season estimate of abundance. The later applies only in instances where the Chinook Technical Committee (CTC) has determined that an in-season method provides an improved estimate of the abundance relative to pre-season indicators. Currently, no such determination has been made by the CTC regarding any method to produce in-season estimates of abundance.

The western Washington Treaty Tribes support the use of the current CTC Chinook Model as the best available scientific information for the 2016 ocean salmon season setting process. We believe that the CTC Chinook Model provides the best tool for evaluating ocean salmon season proposals for consistency with court adjudicated treaty fishing rights and the ESA. This model has a long history of bilateral acceptance and calibration procedures have recently been updated by the CTC in response to investigations to address the effects of alternative ways to project maturation rates for incomplete broods and environmental factors.

We have past experiences with Catch per Unit Effort (CPUE) based in-season update models for ocean salmon fisheries and have found that they do not produce useful estimates of abundance. The State of Alaska's proposed Catch per Unit Effort (CPUE) based in-season update model for the SEAK fisheries has been evaluated by an Ad hoc CTC workgroup. This was an abbreviated technical review completed at the insistence of the State of Alaska in which they requested the analysis be completed during the week of the Pacific Salmon Commission Annual Meeting. Time constraints precluded a full CTC review of several key aspects of the CPUE based

model, but the ad hoc committee's evaluation concluded that the CPUE model did not perform better than the CTC Chinook Model in forecasting preseason abundance and identified a number of issues such as the inability to distinguish between the Abundance Indices (AIs) as computed under the Chinook Agreement for constraining AABM fisheries and availability (stock distributions).

It has long been recognized that CPUE may not accurately reflect changes in abundance (Beverton and Holt 1957). Ample research exists in the scientific literature that concludes CPUE is not proportional to abundance and remains high as abundance decreases in commercial fisheries (Matsuishi et al. 1993; Harley et al. 2001; Gaertner and Dreyfus-Leon 2004). Reasons why CPUE might not be proportional to abundance have been investigated by simulation (Sampson 1990; Swain and Sinclair 1994; Gillis and Peterman 1998) and through examination of empirical data (Peterman and Steer 1981; Crecco and Overholtz 1990; Rose and Leggett 1991). The most common form of non-proportionality involves CPUE remaining high while abundance declines, which is referred to as hyperstability (Hilborn and Walters 1992) and can lead to overestimation of biomass and underestimation of fishing mortality (Crecco and Overholtz 1990). The western Washington Tribes believe that a thorough technical review is required of any in-season CPUE model to determine whether non-proportionality and hyperstability is an issue.

In summary, the western Washington Tribes believe that the AIs derived from calibration of the CTC Chinook model remain the best available scientific information to forecast abundance on which to base planning for the 2016 season. The CTC Model calibration provides the only means of generating AIs for the management of all AABM fishery complexes as required to assess cumulative exploitation rates and resulting escapements of stocks of conservation concern. We remain confident the CTC Model and its biological and environmental parameters have been routinely and adequately reviewed and that it accurately reflects forecasted stock abundance provided by each of the primary fishery management agencies coast wide.

Thank you for your consideration of our comments and concerns. If you have any questions please contact me or Craig Bowhay, Director of Fishery Programs for the Northwest Indian Fisheries Commission at (360) 438-1180.

Sincerely,



Lorraine Loomis
Chairperson

cc: NWIFC Commissioners
Don McIsaac, PFMC