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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XC958

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of Availability of a Management Strategy Evaluation for Sacramento River winter Chinook salmon; Request for Comments

SUMMARY: The Pacific Fishery Management Council (Council) has requested that the National Marine Fisheries Service (NMFS) take into consideration alternative harvest control rules for Sacramento River winter-run Chinook (winter-run), a salmon species listed as endangered under the Endangered Species Act (ESA) and impacted by ocean salmon fisheries that the Council and NMFS manage. The Council is concerned that the existing control rule may be unnecessarily restrictive in years of low winter-run abundance, particularly when the three year average escapement drops below 500 fish. The current control rule allows for zero fishery impacts at this level of abundance rather than the *de minimis* impacts that are allowed under fishery control rules that limit impacts on other ESA listed species. The Council has expressed interest in exploring alternatives that would provide some limited harvest opportunity on other Chinook stocks when winter-run abundance is low, without significantly increasing the risk to winter-run. To help facilitate consideration of such alternatives, NMFS is requesting public comment on alternative harvest control rules analyzed in a Management Strategy Evaluation (MSE) for Sacramento River winter Chinook salmon. These alternative harvest control rules

include the current control rule implemented by NMFS on May 1, 2012 as part of the ESA consultation standard on the ocean salmon fishery and additional control rules designed to be more responsive to the status of the listed species.

DATES: Information and comments on the alternative control rules described in this notice must be received at the appropriate address or fax number (see ADDRESSES), no later than 5:00pm, on [insert date]. We encourage the public's involvement in selecting and providing rationale for a preferred control rule that may be taken into consideration during the annual salmon management process.

ADDRESSES: You may submit comments on this document, identified by NOAA-NMFS-2013-0154, by any of the following methods:

- Electronic Submissions: Submit all electronic public comments via the Federal e-Rulemaking Portal: http://www.regulations.gov. To submit comments via the e-Rulemaking Portal, first enter NOAA-NMFS-2013-0154 in the keyword search. Locate the document you wish to comment on from the resulting list and click on the "Comment Now!" icon on the right of that line.
- Mail: Submit written comments to Heidi Taylor, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802. Include the identifier "NOAA-NMFS-2013-0154" in the comments.
- Fax: 562-980-4047; Attn: Heidi Taylor.

Instructions: Comments must be submitted by one of the above methods to ensure that the comments are received, documented, and considered by NMFS. Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered. All comments received are a part of the public record and will generally be posted for public viewing on http://www.regulations.gov without change. All

personal identifying information (e.g., name, address, etc.) submitted voluntarily by the sender will be publicly accessible. Do not submit confidential business information, or otherwise sensitive or protected information. NMFS will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word or Excel, WordPerfect, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT: Heidi Taylor, NMFS WCR, 562-980-4039.

SUPPLEMENTARY INFORMATION:

Background

Sacramento River winter-run Chinook salmon were first listed as threatened under the Endangered Species Act in 1989 (54 FR 32085) and their status was changed to endangered in 1994 (59 FR 440). Under section 7 of the Endangered Species Act NMFS consulted with itself on the effects of the federally-managed ocean salmon fishery on the winter-run stock and in April 2010, completed a biological opinion (Biological Opinion on the(Authorization of Ocean Salmon Fisheries Pursuant to the Pacific Coast Salmon Fishery Management Plan (Salmon FMP) and Additional Protective Measures as it affects the Sacramento River Winter Chinook Salmon (winter-run) Evolutionary Significant Unit (ESU) (NMFS 2010)) (2010 BiOp). In the 2010 BiOp, NMFS found that given the current management structure of the fishery and the measures in place to protect winter-run, it was expected that adult spawning returns of winter-run cohorts would be reduced 10-25 percent as a result of impacts associated with incidental harvest in the ocean salmon fishery. These impacts occur primarily as a result of removal of age-3 winter-run, almost exclusively south of Point Arena, when fishing activity is permitted in those areas in conjunction with the seasonal and size restrictions associated with the proposed action (NMFS 2010). The results from the O'Farrell et al. (2012a) cohort reconstruction indicate that the majority of these impacts were associated with the recreational fishery in this area. The analysis

also indicates that the ocean fishery spawner reduction rate[1] has averaged 20 percent in years when ocean fisheries occur (O'Farrell et al. 2012a), regardless of the spawning abundance of winter-run.

Over the last decade, this winter-run population (and consequently the entire ESU) has had years of positive growth (cohort replacement rates greater than 1.0) while sustaining ocean fishery impacts. The population increased to as many as 17,000 spawners in 2006. Therefore, NMFS concluded that the anticipated impacts of the fishery, based on past performance of both the fishery and the winter-run population, were not expected to reduce the likelihood of survival and recovery of the species during periods when the winter-run population is stable or increasing. To a large degree, the consultation standards and management measures described in the 2010 BiOp, which were designed to protect winter-run specifically, as well as address other stocks of Chinook salmon, have served to reduce fishery impacts on the winter-run Chinook salmon population to a level that is consistent with an expectation of survival and recovery for the species.

However, NMFS identified that the proposed action analyzed in the 2010 BiOp did not include measures that would avoid or constrain the fishery's impacts on winter-run during periods of decline or increased extinction risk. Without any explicit means to further constrain impacts after consideration of winter-run abundance in the fishery management process, the potential exists for total spawner reduction rates associated with the ocean salmon fishery to approach, or exceed, 25 percent during periods of time when risks of extinction are significantly increased. Therefore, NMFS concluded that the proposed operation of the fishery without consideration for additional protective measures that would be implemented when winter-run are

[1] The spawner reduction rate is defined as the reduction in a cohort's "potential adult spawning escapement owing to ocean fisheries, relative to its escapement potential in the absence of ocean fishing" (O'Farrell et al. 2012).

at low abundance was not sufficient to ensure that the fishery was not likely to appreciably reduce the likelihood of survival and recovery of winter-run.

Reasonable and Prudent Alternative (RPA)

The Endangered Species Act requires that, where NMFS concludes through consultation that a proposed action is likely to jeopardize the continued existence of a listed species, NMFS identify one or more RPAs to such action. By regulation, an RPA is defined as "alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that is economically and technologically feasible, and that the Director [NMFS] believes would avoid the likelihood of jeopardizing the continued existence of listed species or resulting in the destruction or adverse modification of critical habitat" (50 CFR 402.02).

NMFS' approach when developing the RPA in the 2010 BiOp was to address the foundation of the jeopardy conclusion, which is the lack of explicit controls in the ocean salmon fishery management process to constrain and reduce impacts when the abundance of winter-run is depressed and the extinction risk is increased. Specifically, the purpose of the RPA was to establish a long-term management framework that accounts each year for the abundance of winter-run and specifies a level of fishery impact that is responsive to that abundance and consistent with the requirement to avoid jeopardy. However, abundance at the time of the 2010 BiOp, the information and analyses required to establish specific management objectives or acceptable impact targets given various conditions, and the tools needed to incorporate those criteria into the fishery management process were not available. Additional analytical effort was required before this framework could be developed and implemented. Therefore, the RPA required NMFS to develop a winter-run management framework that 1) meets the objective of

the RPA, 2) is practical given the ocean salmon fishery management process as described in the Salmon FMP, and 3) that the framework be available for consideration in time for implementation as the consultation standard for the ocean salmon fishery for winter-run for the 2012 fishing season.

For the interim between issuance of the 2010 BiOp and implementation of the new framework, NMFS determined that the winter-run population had been in significant decline since 2006, and concluded that conservative management measures should be taken and fishery impacts reduced pending completion of the new management framework. The 2010 BiOp provided options to the Council and NMFS to either increase size limits or reduce fishing effort (seasonal closures) in the recreational fishery in 2010 and 2011 to produce a qualitative constraint and reduction in winter-run impacts (see NMFS 2010 for explanation of interim RPA rationale).

Management Strategy Evaluation (MSE)

In order to develop the management framework required by the 2010 RPA, the NMFS Southwest Fisheries Science Center Salmon Assessment Team (the Team) engaged in an effort to develop the analytical tools required to evaluate various fishery exploitation control rule alternatives in a formal Management Strategy Evaluation process. The term "Management Strategy Evaluation" is being used to represent all aspects of the analytical work developed to support the decision-making process and implementation of a new fisheries management framework. The purpose of the MSE was to simulate winter-run population dynamics as well as monitoring, assessment, and implementation of the fishery management system under a variety of prospective fishery management control rules. The control rules specify the allowable level of incidental take of winter-run (age-3 impact rate) for ocean fisheries in a given year. For example, a control rule which allows a fixed annual fishing impact rate could be simulated and

compared to other control rules that specify reduced allowable impact rates when population abundance is low. The goal of this simulation work was to evaluate the relative performance of various control rules in terms of conservation and fishery criteria.

In order to perform the simulations, the Team developed a model for winter-run such that the prescribed fishing impact rate under a control rule could be directly input as a source of mortality (with its attendant uncertainty). This mortality affected spawning abundance, leading directly to the generation of the next cohort, and on throughout the population simulation (Winship et al. 2012). The MSE evaluated three control rules with constant age-3 fishery impact rate target scenarios representing: no impact (0 percent), estimated historical fishery impact rate (25 percent), and current era fishery impact rate (20 percent). The MSE also considered other variations of control rules with decreasing age-3 fishery impact rates at decreasing population abundance levels (Winship et al. 2012). These are described in the paragraph titled "Public Comment and Availability of the winter-run Management Strategy Evaluation" below. The performance of alternative control rules were compared in terms of established population performance criteria and the implications for ocean fisheries. A paper consistent with the Winship et al. (2012) report describing the winter-run MSE was subsequently published (Winship et al. 2013).

Public Comment and Availability of the winter-run Management Strategy Evaluation

NMFS seeks input from the public on the control rules analyzed in the MSE as described in Winship et al. 2012 ("the MSE document"), particularly on whether commenters prefer one of those control rules over the others, and the reasons for such preference. The comment period will conclude at 5:00pm on XX XX, 2014 [90 days]. NMFS will consider all comments received by the end of the comment period as we move forward to consider potential changes to the management approach. The MSE document (Winship et al. 2012) is available at the following

website http://www.pcouncil.org/wp-content/uploads/SRWC_MSE_2012_02_28.pdf and by mail upon request. NMFS is specifically interested in comments and information regarding a preferred control rule analyzed in the MSE for ocean salmon fisheries south of Point Arena that is responsive to the abundance of the species. The control rules are described in Winship et al. 2012 as "management strategies" and are as follows: management strategy 1 allowed for a zero age-3 impact rate, management strategy 2 used a historical impact rate of 25 percent, management strategy 3 used the current era impact rate of 20 percent, and management strategies 4 through 6 required a reduction in impact rates at certain abundance thresholds. The control rule included in the current RPA (referred to as "management strategy SWR" in the Winship et al. 2012 addendum found here, beginning on page 57: http://www.pcouncil.org/wp-content/uploads/SRWC_MSE_2012_02_28.pdf) was also analyzed with results presented in Winship et al. 2012 (addendum); we welcome comments on this control rule as well.

References

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