



State of Washington
Department of Fish and Wildlife

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February 22, 2010

Mr. Barry Thom
Acting Regional Administrator
Northwest Region
National Marine Fisheries Service
7600 Sand Point Way NE
Seattle, WA 98115-0070

Dear Mr. Thom:

The Washington Department of Fish and Wildlife (WDFW) is writing this letter to provide you with an update on our actions to recover lower Columbia tule Chinook and provide some thoughts on future directions for fishery, hatchery, and habitat actions. In particular, we suggest that preserving genetic legacy populations is essential and, consistent with technical analyses, recommend a cap on lower Columbia tule exploitation rates of 0.38 in 2010. During the next 5-years, we anticipate that a phased implementation of mark-selective fisheries will facilitate a further, incremental reduction in fishery exploitation rates to 0.35 in 2015. We also support further investigation of an abundance-based harvest management approach for tule fall Chinook.

The biological opinion for the Pacific Salmon Treaty (Bi-Op) concludes that the survival and recovery of the nonlegacy populations will require a "comprehensive, coordinated, and deliberate strategy of reform." We concur and believe that the Bi-Op described an appropriate transitional strategy for these populations and, in this letter, we begin to more fully develop the strategy by identifying six key action steps. We anticipate that these action steps will not only further reduce risks to the genetic legacy populations, but also begin to increase the viability of each of the tule populations.

Before we describe the action steps, however, we would like to describe the substantive progress that has already been made in the development and implementation of the Lower Columbia Interim Regional Recovery Plan.

Interim Regional Recovery Plan – WDFW Implementation Actions

The development and content of the Interim Regional Recovery Plan was unique and sophisticated in many ways. First, the Lower Columbia Fish Recovery Board (LCFRB) was

created in state statute to provide a vehicle to effectively address conservation and recovery planning at a local level. Second, the recovery plan “identified strategic targets for reductions in impacts of listing factors needed to meet population-specific viability and improvement objectives. Targets essentially serve as listing factor objectives and provide guidance for the scale of improvement that needs to be addressed by factor-specific measures. Targets are defined in terms of impact reduction objectives for habitat (tributary and estuary), hydropower, harvest, hatcheries, and ecological factors. The plan adopted an equitable sharing strategy identifying impact reductions proportional to the magnitude of the impact.”¹

Of these factors, fishery impacts are perhaps the easiest to address in the short-term. The interim regional recovery plan found that fishery exploitation rates in a pre-listing baseline period base averaged 65%, and identified population specific benchmarks to achieve the desired increase in population productivity. Targets for primary populations ranged from 38% for the East Fork Lewis to 53% for the Coweeman. With the fishery controls put in place in 2009, the strategic targets for primary populations established by the interim regional recovery plan (under the equitable impact reduction plan) have now been achieved. The proposed level of 35% by 2015 falls within the interim benchmark range for harvest in the revised regional recovery plan.

The WDFW has also moved quickly to address the risks posed by hatchery programs. A January 2008 letter to NOAA from the Washington Department of Fish and Wildlife (WDFW) and the Oregon Department of Fish and Wildlife (ODFW) identified a number of hatchery actions that would be implemented to increase the viability of lower Columbia tule Chinook populations. Driven by the systematic scientific analysis of the Hatchery Scientific Review Group (HSRG), the WDFW developed a Conservation and Sustainable Fisheries Plan to improve broodstock management (i.e., increase the fitness of wild populations) while providing sustainable fishing opportunities. Actions identified in the plan included reductions in hatchery production (44% in Toutle completed and 77% in Washougal in progress), closure of the Elochoman Hatchery (completed), and installation of weirs to remove excess hatchery from natural spawning areas (operated in Elochoman, Grays, Toutle and Kalama rivers in 2008 and 2009 as scheduled plus Washougal River in 2010), implementation of local integrated brood stock programs (initiated in 2009), modification of monitoring programs to track the effectiveness of hatchery and harvest reform actions (initiated in 2009), implementation of alternative gears study for lower Columbia River commercial fisheries (pilot study completed in 2009 and full scale study initiated in 2010) and implementation of mark-selective fisheries in lower Columbia River tributaries (initiated in 2009). All benchmarks associated with the Conservation and Sustainable Fisheries Plan or identified in the letter to NOAA have been met. Further details regarding hatchery actions affecting each tule Chinook population may be found in Attachment #1.

¹ LCFRB. Appendix E, Chapter 12. Risk analysis for all-H recovery strategies for tule fall Chinook.

Pacific Salmon Treaty

We believe that the 2008 renegotiation of the Chinook Annex of the Pacific Salmon Treaty was an important step forward in our collective efforts to promote the conservation and recovery of Chinook salmon in Washington and Oregon. Through prolonged negotiation, the parties were able to agree upon a set of fishery regimes that will result in a reduction of about 3 percentage points in fishery exploitation rates on Lower Columbia tule Chinook.

The biological opinion for the Pacific Salmon Treaty (Bi-Op) discussed the effects of the fishing regimes relative to two population groups of Lower Columbia tule Chinook: 1) genetic legacy populations and 2) populations that have been substantially affected by hatchery programs and other limiting conditions. Drawing from the analysis of the Willamette/Lower Columbia Technical Recovery Team (WLC-TRT), the Bi-Op identified the Coweeman and the East Fork Lewis as the only genetic legacy tule Chinook populations. Consistent with the conservation importance of these populations, the Bi-Op noted that it was “particularly important that the unique characteristics of these populations be preserved as a foundation” for recovery. Fishery exploitation rates consistent with the survival and recovery of these important genetic legacy populations, the Bi-Op concluded, were 0.34 to 0.58 for the Coweeman and 0.44 to 0.52 for the East Fork Lewis.

The Bi-Op noted that all other tule Chinook populations in the Cascade and Coastal Major Population Groups (MPGs) “have been affected by past hatchery practices and other limiting conditions and will require a more comprehensive a deliberate approach to achieve the recovery objectives.” These nonlegacy populations have low productivity, and analyses indicate the populations can sustain little or no harvest. For all of these nonlegacy populations, the Bi-Op concluded that “the appropriate course to survival and recovery is through a comprehensive, coordinated and deliberate strategy of reform.”

The Bi-Op provided a solid discussion of this strategy and, because of its importance to the survival and recovery of lower Columbia tule Chinook, we have repeated it in its entirety in the section below.

“It is therefore pertinent, when considering whether an action is likely to appreciably reduce the survival and recovery of a population, or jeopardize the ESU as a whole, to consider the extent of local adaptation to natural conditions in these populations and whether it has been compromised by past practice to the point where it is no longer distinct. Populations are defined by their relative isolation from each other which presumably allows for their adaptation to unique conditions that exist in specific habitats. If there are populations that still retain their historic genetic legacy, then the appropriate course to insure their survival and recovery is to preserve that genetic legacy and rebuild those populations. Preserving that legacy should be a high priority and, if threatened,

requires a sense of urgency and implementation of actions necessary and appropriate to preserve the unique characteristics of those populations. However, if the genetic characteristics of the populations are significantly diminished and we are left with individuals that can no longer be associated with a distinct population, then the appropriate course to recover the population, consistent with the requirements of the ESA, is to use individuals that best approximate the genetic legacy of each population, reduce the effects of the factors that have limited their production, and provide the opportunity for them to readapt to the existing conditions. These circumstances will require a deliberate response, but one that may be less urgent in the sense that coordinated progress can and should be made over time to address the limiting factors. For example, if the source of individuals for the rebuilding effort is a hatchery with thousands of returning fish, then recovery will have to occur through a coordinated and deliberate strategy that reduces the effects of hatchery straying and harvest, and improves the habitat to the degree necessary for the population to adapt and rebuild. Retaining some of the hatchery fish may be important for the near term to provide an ongoing source of brood stock during the transition and guard against catastrophic loss. The transition will most often involve allowing time for habitat improvements and for the population to readapt to existing circumstances. Given the nature of these processes, it is reasonable to expect that rebuilding and recovery will take years and perhaps decades of consistent and steady progress. Our assessment of the effects of the proposed actions takes these considerations into account.”

We support the two-pronged strategy described by NOAA. The strategy emphasizes the importance and urgency of preserving the genetic legacy populations. It also recognizes that a transition period will be necessary for the nonlegacy populations, a period during which habitat improvements are essential and the population will readapt to the natural environment.

Development and Implementation of Transition Plan

We believe that there are six key action steps necessary in 2010-2015 to accelerate the transition to locally-adapted, viable wild tule Chinook populations. These steps will not only further reduce the risks to the genetic legacy populations, but also begin to increase the viability of each of the primary tule populations:

- 1) **Identify and implement habitat and predation reduction actions that have a substantive, immediate benefit to the viability of primary populations.** The interim regional recovery plan, and modeling tools currently under development, should be used to identify specific actions that can be implemented within the short-term to increase the viability of primary populations. The State of Washington through the Salmon Funding Recovery Board and LCFRB have funded 118 projects valued at over 38 million dollars for lower Columbia River tributary and mainstem habitat

restoration. The Estuary MOA, with a substantial number of projects that will be completed during the next five years, provides an example of directed actions that can be expected to have immediate benefits (see Attachment #2 for the list of Estuary MOA projects).

- 2) **Implement hatchery actions in the Conservation and Sustainable Fisheries Plan, prioritizing broodstock management actions that will improve the viability of primary populations.** Analysis by the HSRG illustrated the synergistic benefits that result when improved broodstock management is implemented in conjunction with habitat improvements. WDFW has implemented substantial reductions in hatchery programs and has identified six rivers (Grays, Elochoman, Coweeman, Kalama, Toutle, and Washougal) to operate weirs to remove excess hatchery fish from natural spawning areas. Further details are provided in the attachments for each population.
- 3) **Adaptively implement, test, and evaluate mark-selective fisheries.** Mark-selective fisheries are a tool to increase the harvest of hatchery fish, reduce the number of hatchery fish in natural spawning areas (where desired), and provide fishing opportunities. Working through U.S. v. Oregon and other forums, WDFW will adaptively and incrementally implement, test, and evaluate mark-selective fisheries as a tool to meet these objectives, and to ensure that they are implemented consistent with U.S. v. Oregon and other commitments. Implementation of mark-selective fisheries in the ocean recreational, ocean troll, Buoy 10 recreational, lower Columbia recreational, and/or lower Columbia commercial fisheries provide a substantial opportunity to further reduce fishery exploitation rates.

Our experience in implementing mark-selective fisheries suggests support from co-managers can most successfully be gained through a phased implementation plan, with demonstration at each step that mark-selective fisheries can be implemented in a manner consistent with court orders. Consistent with this experience, we propose a phased implementation of selective fisheries that will reduce fishery exploitation rates from 38% in 2010 to 35% by 2015:

2010 – 0.38
2011 – 0.37
2012 – 0.37
2013 – 0.36
2014 – 0.36
2015 – 0.35

The fishery exploitation rate limit of 0.35 in 2015 is less than the strategic target of 0.38 established in the interim regional recovery plan for primary populations of tule Chinook and is consistent with the interim benchmarks in the revised recovery plan. We believe that it will provide a positive, conservation buffer during this transitional period. In addition, during the annual North of Falcon process WDFW will investigate

Columbia River harvest strategies that may further reduce harvest impacts to coastal tule populations.

- 4) **Implement alternative commercial fishing gear in the lower Columbia River.** Working with the commercial fishing industry, the WDFW is testing and implementing alternative commercial fishing gear in the lower Columbia River that will facilitate the harvest of hatchery fish with minimal mortality to wild tule Chinook. We remain on-track with the schedule laid out in the 2008 letter from WDFW to NOAA. We initiated testing in 2009, and anticipate initiating commercial fishing with these gears in the period from 2011-2016.
- 5) **Develop and implement optimal broodstock management strategies to re-establish locally adapted populations.** Key questions that will need to be addressed for the nonlegacy populations include: a) what is the best source of broodstock to reconstruct a locally adapted population; and b) what is the optimal number and composition of hatchery and natural-origin fish to place above weirs to promote re-adaptation but limit the risk of extirpation. The HSRG has agreed to assist the WDFW in addressing these questions.
- 6) **Monitor spawners and assess the productivity of tule Chinook populations.** Empirical estimates (i.e., based on spawner and/or juvenile production) of productivity are currently available for only three populations (Grays, Coweeman, and East Fork Lewis). Assessing the effectiveness of recovery actions and identifying appropriate fishery exploitation rates will require improved monitoring of adult spawners and estimates of juvenile production (prioritizing primary populations). Enumeration of natural origin spawners will improve significantly over the next 5 years as a result of hatchery returns being identifiable with an adipose fin-clip.

Conclusion

The extensive work of the LCFRB, the HSRG, the WDFW and others has resulted in substantive actions that are leading the way to the conservation and recovery of tule Chinook in Washington. This work includes not only a comprehensive recovery plan, a systematic assessment of hatchery programs, and the estuary MOU, but hatchery, habitat, and fishery actions that are already having positive benefits to these populations.

Fishery actions now must ensure the survival and recovery of the genetic legacy populations. Analyses by NOAA and WDFW indicate that the schedule proposed by WDFW, with fishery exploitation declining from 0.38 in 2010 to 0.35 in 2015, are consistent with ensuring the survival and recovery of the Coweeman and East Fork Lewis populations.

We believe that the biological opinion for the Pacific Salmon Treaty describes an effective strategy to pursue for the non-legacy populations. The opinion states "For all of these populations, the appropriate course to survival and recovery is through a comprehensive, coordinated and

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deliberate strategy of reform." We have identified six key action steps that we will be implementing during this transition period. We anticipate that these action steps will not only further reduce the risks to the genetic legacy populations, but also begin to increase the viability of each of the primary tule populations.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip Anderson", with a long horizontal flourish extending to the right.

Philip Anderson
Director

Attachments

cc: Bob Turner, NOAA Senior Policy Advisor
Guy Norman, Regional Director
Jim Scott, Fish Program, Assistant Director