

## HABITAT COMMITTEE REPORT ON IDENTIFICATION OF STOCKS NOT MEETING CONSERVATION OBJECTIVES

In regard to the failure of Klamath Chinook stocks to meet conservation objectives, the Habitat Committee (HC) is tasked with helping to identify the causes for the current stock decline and to suggest measures to improve productivity in the future.

The low flows beginning in 2000 and continuing through 2004 resulted in low juvenile survival and subsequent poor spawner returns in 2004, 2005, and 2006. A September 2002 fish kill involving 35,000-70,000 spawners contributed to low returns this year. Last year, the 2003 brood year produced the second lowest jack return in history, suggesting that extremely low returns will continue at least until next year.

During the past seven years, the HC has written a series of letters to the Bureau of Reclamation, the Federal Energy Regulatory Commission (FERC), the Department of the Interior, and Secretary of Commerce\*. The key issues the HC has identified for loss of stock productivity include:

- **Policy decisions**, such as the decision not to implement Hardy Phase II flows, prioritizing some water uses over the needs of fish, delaying the implementation of Biological Opinion flows, and managing on a single-species basis.
- **Storage and withdrawal of water** leading to **low water flows**, which increase temperatures, reduce habitat, increase fish density and susceptibility to disease, and reduce scouring and natural movement of gravels.
- **Unnatural flow timing** that strands fish, reduces juveniles' ability to migrate, increases temperatures, and lowers water quality.
- **Water quality problems** (such as increased temperatures, nutrient loading, and sedimentation) caused by water storage, agricultural activities, etc. In turn, water quality problems can lead to diseases and parasitic infections.
- **Lack of fish passage** and loss of habitat at hydroelectric dams.
- **Other human activities** including gravel mining, removal of riparian vegetation, splash damming, road building, etc., which degrade habitat.
- **Hatchery management** including timing and distribution of hatchery releases, which may exacerbate disease problems in low flow conditions and cause competition for rearing and spawning grounds with wild stocks.

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\* December 15, 2005, to U.S. Bureau of Reclamation (BOR) on management of Klamath water flows; April 21, 2005 to U.S. Department of the Interior (DOI) on flow management and essential fish habitat (EFH) in the Klamath basin; April 23, 2004 to FERC on EFH concerns related to PacifiCorp Klamath River Hydroelectric Project FERC-2082; July 7, 2003 to BOR on EFH concerns related to the Klamath project; April 23, 2003 letter to the DOI related to water flows in the 2003 Klamath operations plan; April 22, 2003 to FERC on relicensing rules; December 4, 2002 to the DOI and Secretary of Commerce on the adverse impacts of reduced flows to Klamath salmonids; May 13, 2002 to FERC on EFH conservation responsibilities; April 22, 1999 to BOR on the Klamath project environmental impact statement. Letters available at <http://www.pcouncil.org/habitat/habdocs.html>.

- **Harvest**, which removes potential spawners from the population and decreases potential genetic diversity of wild stocks.
- **Ocean productivity factors.**

While habitat restoration measures are long-term efforts, some actions could be taken immediately. For example, to improve productivity of Klamath stocks, we suggest a precautionary harvest regime. A March 29 report from NOAA Fisheries notes that it is not unusual for post-season abundance estimates to be 50% higher or lower than the preseason estimate. For this reason, a precautionary approach is called for. Unlike most actions to improve habitat, this falls directly under Council jurisdiction. However, such sacrifices from the fishing community are meaningless if the juveniles resulting from these returning spawners cannot survive due to poor freshwater habitat. Proper water management needs to be in place to ensure adequate survival of the progeny of this year's returning adults.

The following measures to improve stock productivity are critical:

- The Bureau of Reclamation should reinitiate consultation with National Marine Fisheries Service (NMFS) regarding the effects of water project operations on chinook and coho salmon essential fish habitat (EFH). Analysis and flow recommendations must include a credible biological basis. Tools could include purchases of water rights and habitat, among other measures.
- Develop credible long-term solutions to water management problems within the Klamath Basin, including upper basin water right issues. This could include the purchase of water rights by Oregon and a moratorium on any additional water withdrawals. In addition, the Oregon Water Resources Department should resolve ongoing adjudication of water rights (settle ownership of water rights for groundwater and instream diversions).
- Improve flow conditions by implementing the draft Hardy Phase II recommendations.
- Support studies of juvenile survival and health (including parasite monitoring) and provide adequate funding for Klamath monitoring programs.
- Assure that water within and downstream from the Scott, Shasta, and Trinity systems maintain adequate flows and temperatures for salmon reproduction and rearing.
- Remove the dams (see Agenda Item C.1.a, Supplemental Attachment 1) and deal with other fish passage issues.
- Improve habitat above the dams.
- Increase marking levels at Iron Gate hatchery so they are similar to levels at Trinity River hatchery for the purpose of improving monitoring and evaluation.

The HC is willing to work with other Council advisory bodies and agencies to further develop and prioritize these concepts, to help assure the continued survival of Klamath River salmon, and to fulfill our obligations under the Salmon Fishery Management Plan.

PFMC  
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