

TERMS of REFERENCE

regarding

A CRITIQUE OF THE NRC's SCIENTIFIC EVALUATION OF BIOLOGICAL OPINIONS ON ENDANGERED AND THREATENED FISHES IN THE KLAMATH RIVER BASIN

**American Fisheries Society
Western Division
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Purpose:

The purpose of this critique is to identify any shortcomings in the National Research Council's (NRC's) scientific evaluation of the biological opinions on listed fishes in the Klamath Basin, and to provide this information to NRC and decision makers associated with the Klamath Basin Project. This AFS-sponsored critique may be published in "Fisheries."

Key Issues:

- The U.S. Bureau of Reclamation (Bureau) disputes biological opinions issued by the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) regarding measures necessary to reduce impacts of the Bureau's Klamath Basin Project on listed fishes of the Klamath Basin, specifically coho salmon, shortnose sucker, and the Lost River sucker.
- The biological opinions included recommendations for increased lake levels and instream flows in the Klamath Basin Project to conserve listed fishes, which reduced availability of water for agricultural users in the basin. Conversely, the Bureau believed lower lake levels and reduced instream flows were adequate to conserve listed fish species.
- In 2001, a severe drought occurred in the Klamath Basin. Recommendations for increased lake levels and instream flows to conserve listed species exacerbated conflicts with agricultural water users in the basin. The economic consequences of the water conflict eventually led to a full-scale independent review of the scientific validity of the biological opinions by the NRC.
- The NRC's interim report on the matter (dated January 2002) concluded that there was no substantial scientific basis to either provide higher or lower lake levels, or instream flows, to conserve listed fishes in the Klamath Basin. The NRC review (which was conducted by the *ad hoc* Committee on Endangered and Threatened Fishes in the Klamath River

Basin) is continuing, with a final report due in March 2003. Other related technical assessments, including instream flow studies of the Klamath Basin (the Hardy Reports), are also continuing.

- Conflicts in scientific standards exist with regard to administration of the Endangered Species Act. The Act requires the use of best available science to evaluate impacts to listed species. However, where scientific uncertainty exists, the FWS and NMFS are obliged to err on the side of the species. The NRC report, on the other hand, concluded there was no substantial science to base changes in lake levels or flows to conserve listed species. These conflicts have led to recent Congressional hearings on use of science in Endangered Species Act, with the Klamath as an example, and the establishment of a Presidential work group to resolve water management issues in the Klamath Basin.

Key Information:

- NMFS' biological opinion regarding the Bureau of Reclamation's Klamath Project Operations for June 1, 2002, through March 31, 2012, on threatened Southern Oregon/Northern California Coasts coho salmon, dated May 31, 2002. 102 pp. *Available at:* <http://www.mp.usbr.gov/>
- FWS' biological opinion regarding the Bureau of Reclamation's Klamath Project Operations for June 1, 2002, through March 31, 2012, on the endangered Lost River sucker, endangered shortnose sucker, and proposed critical habitat for the suckers, dated May 31, 2002. 204 pp. *Available at:* <http://www.mp.usbr.gov/>
- NRC's Interim Report by the Committee on Endangered and Threatened Fishes in the Klamath River Basin, entitled "Scientific Evaluation of Biological Opinions on Endangered and Threatened Fishes in the Klamath River Basin," dated April 2002. 26 pp. *Available at:* <http://www.nap.edu/books/0309083249/html/>
- The "Hardy" Reports: Evaluation of Interim Instream Flows Needs in the Klamath River. Phase I. Final Report. Institute for Natural Engineering, Utah Water Research Laboratory, Logan, Utah. August, 1999. 53 pp., and related information. *Available at:* <http://aaron.uwrl.usu.edu/docs/RevisedAnnotBib.mdb>
[http://aaron.uwrl.usu.edu/docs/PhaseIIDraftFinalReportVer\(1cPrint\).pdf](http://aaron.uwrl.usu.edu/docs/PhaseIIDraftFinalReportVer(1cPrint).pdf)
<http://aaron.uwrl.usu.edu/docs/FinalReportrevised.zip> (This is the Phase I report)

Approach:

The overall approach is to provide a timely, objective critique of the NRC's interim report such that any shortcomings can be addressed in the NRC final report. The critique would be made available to all interested agencies as well as the public. In order to be timely and objective, the critique would be completed no later than November 2002, well in advance of the NRC final

report (March 2003), and be prepared by AFS members not directly associated with the Klamath project.

In terms of process, reviewers (subject matter experts in fishery biology, hydrology, and Endangered Species Act issues) would assess key information, develop comments individually, then consolidate their comments into a final draft paper that addresses major issues. The draft would be reviewed by the AFS Excom and AFS Policy Review Committee prior to release. Additional scientific peer review of the critique would occur during the “Fisheries” publication process.

Timeline:

August 2002:

Excom and EEC Chair solicit technical reviewers nominated by local AFS Chapters.

September - October 2002:

Technical reviewers prepare draft critique.

November 2002:

AFS policy review, then public release of critique.

December 2002 - February 2003:

AFS “Fisheries” scientific peer review.

March 2003:

Publication in “Fisheries.”

Format:

Format to follow manuscript style in “Fisheries,” and not exceed 5-6 pages in total length, single-spaced.

Roles and Responsibilities:

- Excom

AFS Policy level review.

- ECC Chair

Coordinate initial process, contact reviewers, and review draft critique in conjunction with AFS Excom.

Remuneration:

Up to \$1,000 per reviewer will be available to cover incidental expenses.