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*Attorney for Amicus Curiae Confederated  
Tribes of the Colville Reservation*

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF OREGON

NATIONAL WILDLIFE FEDERATION *et*  
*al.*,

Plaintiffs,

vs.

NATIONAL MARINE FISHERIES SERVICE  
*et al.*,

Defendants.

Civ. No. 01-640-RE

**DECLARATION OF STEPHEN H.  
SMITH IN SUPPORT OF  
DEFENDANTS' MOTION FOR  
SUMMARY JUDGMENT**

Stephen H. Smith deposes and says:

1. I am a consulting fisheries biologist for the Confederated Tribes of the Colville Reservation (the "Colville Tribes" or the "Tribes"). The purpose of this declaration is to summarize my analysis of the benefits to endangered Upper Columbia River (UCR) spring Chinook salmon and steelhead from the habitat and hatchery projects that will be funded by the Memorandum of Agreement (MOA) between the Colville Tribes and the Action Agencies. I also explain how my analysis of these benefits supports the conclusion in the final Endangered

Species Act – Section 7 Consultation Biological Opinion for Operation of the Federal Columbia River Power System and 11 Bureau of Reclamation Projects in the Columbia Basin (2008 BiOp) that the effects of the Proposed Action, when added to the environmental baseline and any reasonably certain cumulative effects, will not appreciably reduce the likelihood of survival or recovery of either UCR spring Chinook salmon or steelhead. Most of the analysis in this declaration was presented to the Action Agencies in the Tribes’ February 2007 comments (Corps Administrative Record (AR) C.15599) and in the Tribes’ Okanogan Anadromous Fish Recovery Initiative (Okanogan Initiative), which was attached to the Tribes’ comments (Reclamation AR 74565-74629).

2. In September 2005, I was retained by the Colville Confederated Tribes for assistance on the remand of the 2004 BiOp on operations of the Federal Columbia River Power System (FCRPS). Since October 2005, I represented the Colville Tribes in the Policy Working Group in the Remand Collaboration Process and now continue to represent the Colville Tribes in the Regional Implementation Oversight Group formed to oversee and advise the Action Agencies on implementation of the 2008 BiOp. During the Collaboration Process, I also represented the Colville Tribes in various technical committees addressing FCRPS operations, hatchery effects, and habitat. I subsequently assisted the Colville Tribes in the successful development and negotiation of a landmark MOA with the Action Agencies to promote the enhancement of upper Columbia salmon and steelhead, particularly the recovery of endangered UCR steelhead and spring Chinook salmon. *See* Corps AR A.394. The Colville Tribes’ MOA is one of several that are now known as the Columbia River Fish Accords.

3. Since late 2000, I have been the sole employee of Stephen H. Smith Fisheries Consulting, Inc., a fisheries consulting business. In this capacity, I have been consulting for

various clients on salmon and steelhead issues throughout the Pacific Northwest. I am currently a member of the Columbia Basin Hatchery Scientific Review Group, a Congressionally-established science panel created to develop and recommend hatchery and harvest reforms throughout the Columbia Basin. I have developed Summer/Fall Chinook and Spring Chinook management plans for the upper Columbia and Okanogan Rivers that apply the latest science and assessment methods in use of hatchery propagation and selective fishing techniques to promote healthy natural populations while supporting tribal ceremonial and subsistence fishing. I have served as a coordinator for the Bonneville Power Administration (BPA) and the fishery co-managers in the assessment of artificial propagation as a safety-net for survival and recovery of Snake River salmon and steelhead. I have provided scientific assessment and facilitation on the potential use of selective fishing gears in the non-treaty commercial fisheries in the lower Columbia River. I have provided technical and policy advice to the Northwest Power and Conservation Council, BPA, Bureau of Reclamation, Shoshone-Bannock Tribes and NOAA Fisheries on various artificial production projects and reviews.

4. Prior to becoming a private fisheries consultant, I worked 28 years as a federal fishery biologist for the U.S. Fish and Wildlife Service, NOAA Fisheries, BPA, and again for NOAA Fisheries before retiring in June 2000 as Chief of the Hatcheries and Inland Fisheries Branch, Portland Oregon. During my career, I assessed the effects of numerous water resource developments on fisheries resources throughout the Pacific Northwest, assessed effects of Columbia River hydroelectric development on adult and juvenile fish passage, assessed the benefits and risks of salmon and steelhead hatchery programs, and evaluated effects of ocean and freshwater harvests on salmon and steelhead populations.

5. From 1995 to 2000, I served as Chief, Hatcheries and Inland Fisheries Branch, National Marine Fisheries Service – NW Region in Portland, Oregon. In this capacity I developed and administered policy and procedures on application of the Endangered Species Act (ESA) to artificial propagation of salmon and steelhead, and to recreational fisheries throughout the Pacific Northwest. I directed activities to integrate implementation of Federal government’s ESA, tribal treaty/trust, and sustainable fisheries responsibilities throughout the Pacific Northwest. I ensured the application of best available science relating to hatchery and recreational fishery effects on the viability of ESA-listed salmon and steelhead populations. I administered a branch of 11 professional and clerical employees located in three states.

6. From 1992 to 1995, I was employed by the BPA as a Senior Policy Analyst. In this capacity I provided policy and technical analyses on ocean and river salmonid fisheries, served as project manager for research & development of Columbia River terminal (SAFE) fisheries, gillnet harvest “lease-back”, and fishing license buyouts, and analyzed Federal and state natural resources legislation pertaining to BPA’s fish & wildlife responsibilities.

7. From 1983 to 1992, I served as Chief, Fisheries Integration Branch Division of Fish & Wildlife, for BPA. In this position, I provided policy and technical recommendations for adult & juvenile fish passage improvements on the Columbia River hydrosystem; supervised research and monitoring on mainstem fish passage. I supervised BPA’s development of salmon life-cycle and hydrosystem modeling systems; PIT-tag technology and research protocols for fish passage research. I administered a branch of 17 professional, technical, and clerical employees and an annual budget of \$18 million for contracts and grants.

8. From 1973 to 1983, I was a Fishery Biologist for the National Marine Fisheries Service – NW Region, Portland, Oregon. I prepared anadromous fish impact analyses for over

40 multi-purpose water resource projects throughout the Pacific Northwest. I developed and directed multi-agency research on instream flows and riparian habitat. I coordinated, managed and developed fishery agency and tribal basin-wide recommendations on anadromous fish for the Northwest Power & Conservation Council's initial Fish & Wildlife Program. I served as the Service's technical and policy representative on the Columbia Basin Fish & Wildlife Council's Artificial & Natural Production Committee.

9. From 1972 to 1974, I was employed by the U.S. Fish & Wildlife Service in Portland, Oregon and Red Bluff, California conducting fish and wildlife assessments on proposed water resource developments and technical duties at a salmon artificial spawning channel.

10. I have reviewed key chapters of the 2008 BiOp and the earlier October 30, 2007, draft of this document. I prepared the Colville Tribes' January 4, 2008, comments to NOAA Fisheries on the draft 2008 BiOp. I reviewed NOAA's Supplemental Comprehensive Analysis and the Action Agencies' earlier Comprehensive Analysis. I reviewed the Action Agencies' Proposed Action, the earlier draft of this document, and prepared the Colville Tribes' February 2, 2007, comments on the draft Proposed Action. I prepared the Colville Tribes' August 31, 2006, comments on NOAA Fisheries' July 12, 2006, Intended BiOp Standards and Analysis and the Tribes' comments on NOAA Fisheries' September 11, 2006, memo on metrics and other information for conducting the jeopardy analysis for the FCRPS BiOp.

11. As previously stated in paragraph 2, I assisted the Colville Tribes in the development and negotiation of an MOA that is now a part of the Columbia Basin Fish Accords. The primary purpose for this MOA was to increase the mitigation commitment, specificity, and certainty for recovery of the two endangered species, UCR steelhead and spring Chinook

salmon, over that provided by the draft BiOp, and generate additional information on their beneficial contribution to reducing extinction risk and achieving a trend toward recovery. This MOA with its financial commitments, mitigation projects and estimation of project benefits is part of the administrative record, but was only minimally analyzed in the 2008 BiOp.

12. As background, the Okanogan subbasin supports one of the four remaining populations of the endangered UCR steelhead evolutionarily significant unit (ESU). Consequently, the Interior Columbia Technical Recovery Team and the NOAA's adopted UCR Recovery Plan have both emphasized that the viability of the Okanogan population is critical to the survival and ultimate recovery of this ESU. The historical Okanogan population of UCR Spring Chinook is now extinct. Reintroducing UCR spring Chinook back into the Okanogan subbasin will contribute to this ESU's survival, viability and ultimately recovery. The Colville Tribes' MOA will provide substantial survival benefits for the Okanogan steelhead population and will enhance the viability of the UCR spring Chinook through its reintroduction to enhanced historical habitats that are currently degraded.

13. The Colville Tribes' MOA will increase the habitat and conservation hatchery funding for UCR steelhead and UCR spring Chinook in the Okanogan subbasin from about \$500,000 to about \$7.3 million annually, a nearly 14 fold increase, over the next ten years. Much of the 10.6 miles of historical tributary habitat that is currently capable of sustaining natural production of steelhead will be protected and enhanced. By 2017, this available steelhead habitat is expected to be nearly tripled, increasing from 10.6 miles to 25.6 miles, with MOA funding of projects already in assessment and planning stages. Also, most of the stream miles of restored historical habitat will be of greater magnitude and quality than that available today. MOA funding will also be targeted toward projects that will put an additional 27.8

stream miles of steelhead habitat into natural production (Chris Fisher, habitat biologist Colville Tribes, pers. Com. 2008).

14. Natural steelhead production in this greatly expanded and enhanced habitat will be further increased with MOA investments by improving the productivity of hatchery steelhead spawning in the wild. The Colville Tribes will be expanding its local steelhead broodstock program from 20,000 smolts to 230,000 parr and smolts annually, thereby eliminating the historical supplementation program that uses non-local, domesticated steelhead production from Wells Hatchery. Based on the latest research on the relative reproductive success of hatchery and wild steelhead, this steelhead hatchery reform program should increase the productivity of safety-net, hatchery steelhead by 200 to 300 percent in the wild. *See* Okanogan Initiative (Reclamation AR 74611); Colville MOA (Corps AR A.394) at B-5 – B-6.

15. The MOA will also provide funding that will allow the Colville Tribes' to expand its new steelhead kelt reconditioning program, with ultimately up to 200 steelhead kelts to be reconditioned and allowed to spawn again in the wild. For a population, like the Okanogan, located above nine mainstem dams, kelt reconditioning holds significant promise for increasing natural production and population productivity through repeat spawning of fish that have demonstrated a successful life-history. Colville MOA (Corps AR A.394) at B-6. In Omak Creek, tributary to the Okanogan River, the Colville Tribes have already documented natural production of progeny from reconditioned kelts (Chris Fisher, pers. Com. 2008).

16. The MOA provides the funding to construct and operate the Colville Tribes' planned Chief Joseph Hatchery. This hatchery is designed to raise 900,000 spring Chinook smolts. Construction is expected in 2010 and full operations in 2012. Upon availability of surplus endangered UCR spring Chinook from the Methow River population, the Colville Tribes

will raise these endangered fish in Chief Joseph Hatchery for reintroduction of the ESA-listed species back into restored historical habitats, Salmon and Omak creeks, tributaries of the Okanogan River. This action is funded and planned to occur during the last five years of the MOA. At this time, there is already a surplus of hatchery-origin Methow spring Chinook necessary for the reintroduction program. *See* Colville MOA (Corps AR A.394) at B-6 – B-7.

17. The reintroduction of UCR spring Chinook back into the Okanogan River will increase the abundance, distribution, and diversity of the ESU, beyond the recovery efforts in the three extant populations. Productivity of subsequent natural-origin spring Chinook in the restored, historical habitats of the Okanogan subbasin can not be estimated at this time. With the anticipated minimum flow regime for Salmon Creek, I have estimated the natural production potential of several hundred spring Chinook adults resulting from these MOA reintroduction and habitat restoration projects. *See* Colville MOA at B-6 – B-7; Okanogan Initiative (Reclamation AR 74612).

18. In 2005, with BPA funding, the Colville Tribes implemented the Okanogan Basin Monitoring and Evaluation Program (OBMEP) to, in part, evaluate Okanogan fish population status and conduct trend monitoring at the subbasin and sub-watershed (tributary) scale. The OBMEP will also be documenting implementation of MOA mitigation projects and resulting changes to steelhead and spring Chinook habitats. These projects' effects will then be related to the trends in Okanogan steelhead and spring Chinook populations and to spawning aggregates in the tributaries of the Okanogan. The OBMEP will provide the information from which to continually monitor and assess the viability of the Okanogan population of these two endangered species. Through the MOA, OBMEP funding has been increased from \$600,000 to \$1.2 million annually. *See* Colville MOA at Appendix A, B-8 – B-9.

19. Since initiation of their Okanogan Basin Monitoring and Evaluation Program in 2005, the Colville Tribes have estimated an average annual Okanogan escapement of 150 natural-origin steelhead (John Arterburn, OBMEP head, pers. Com. 2008).

20. With the above described MOA habitat funding, I believe that steelhead spawning and rearing habitat in the U.S. portion of the Okanogan River will increase from 140 to 400 percent, far greater than the 14 percent increase conservatively estimated in the BiOp (Table 8.7.5-1) prior to the signing of the MOA. Complementing this habitat-based increase in egg-to-smolt survival, will be the improved productivity of the hatchery steelhead spawning in this expanded habitat. I believe the benefit estimates of this hatchery reform have also been conservatively estimated. Ever since wild steelhead started being incorporated into the Wells Hatchery broodstock in 1998, the Okanogan River has received smolts from hatchery by wild parents in only two years, 2005 and 2007 (Chris Fisher, pers. Com. 2008). Therefore, the productivity gains from improved hatchery practices (about 200 to 300 percent) should not yet be manifest in the Okanogan population. The full survival benefits from the expanding local broodstock program being implemented by the Colville Tribes pursuant to the MOA will be evidenced in future generations.

21. In addition to these substantial and certain abundance and productivity gains that can be expected with BiOp and MOA implementation, the high extinction risks from limited spatial distribution and diversity that were concerns of the ICTRT (BiOp page 8.7-7) should also be significantly ameliorated by the substantial increases in habitat and reformed hatchery practices. The proportion of natural-origin steelhead is already increasing in the Okanogan population. Whereas natural origin steelhead were a rarity, they now make up about 13 percent

of the population, (John Arterburn pers. Com. 2008) which will also improve population diversity.

22. Based on my review of NOAA Fisheries' quantitative and qualitative viability assessment of Okanogan steelhead contained in the BiOp's Chapter 8.7 and numerous and targeted mitigation actions that are now included in the MOA, I believe the Okanogan population of steelhead will survive in the short term and begin to trend towards recovery. The recruits per spawner for natural origin steelhead should exceed 1.0 based on BiOp and MOA implementation. The expanded OBMEP program will be sufficient to quantify the future status of Okanogan steelhead through calculation of the various viability metrics that heretofore has not been possible.

23. For UCR spring Chinook, the BiOp concludes that the species is expected to survive with adequate potential for recovery (BiOp page 8.6-33). The quantitative and qualitative information supporting this conclusion does not include the species reintroduction in historical habitats of the Okanogan River as detailed in the MOA. This reintroduction will serve to bolster the survival and recovery potential of this species by: a) increasing the abundance of both hatchery and natural origin spring Chinook, b) expanding the species' spatial distribution to a fourth subbasin, and c) increasing the diversity of the species over time through its adaptation to habitats of the Okanogan watershed.

24. The positive effects of the actions funded pursuant to the MOA thus provide further support of NOAA's conclusion in the 2008 BiOp that the UCR steelhead and spring Chinook salmon will be put on a trend toward recovery by actions that are reasonably certain to be undertaken over the next ten years. Under the 2008 BiOp and the MOA, the Action Agencies have committed to take actions over a ten-year timeframe to establish a positive trend in the

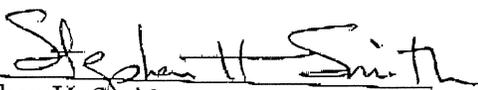
abundance and productivity of these species. During this ten-year period there will be two major reviews of BiOp and MOA actions and ESU status. If necessary, the actions proposed in the BiOp and the MOA will be further refined or adapted to ensure that each ESU's positive trend is established or maintained. Extensive monitoring, evaluation, and research will continue during these ten years to provide critical information to the sovereigns and public on the life-cycle factors that limit ESU health, and the extent of these limitations. This ongoing flow of scientific information will continue to provide clarity on actions to further enhance viability and the likely contribution of these benefits to ESU viability. In addition, the trend to recovery established via the 2008 BiOp will be further bolstered by other consultations, the effects of which NOAA has not included in the FCRPS BiOp.

25. Achieving a trend toward recovery will be a substantial milestone in our collective efforts to conserve these species. Putting these species on a trend toward recovery will preserve these species' potential for full recovery, no matter what the ultimate objective that has been or will be established through Section 4 recovery planning.

26. At the end of this ten-year life of the BiOp, the Action Agencies and NOAA will again be required to prepare a new BiOp, perhaps for another ten-year time period. Any new BiOp will have to meet the same jeopardy standard. As with the 2008 BiOp, FCRPS operations and mitigation actions will need to be sufficient to continue the trend toward recovery (positive productivity), further increasing ESU abundance, distribution and diversity through this growth and expansion of numerous ESU populations. Any actions, biological or otherwise, that may work against this positive trend will need to be countered to meet the jeopardy standard.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Dated this 23 day of October, 2008.

  
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Stephen H. Smith

**DECLARATION OF STEPHEN H. SMITH IN  
SUPPORT OF DEFENDANTS' MOTION FOR  
SUMMARY JUDGMENT -- 12**

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CERTIFICATE OF SERVICE

Pursuant to Local Civil Rule 100.13(c) and FRCP 5(d), I hereby certify that on the 1<sup>st</sup> day of July, 2008, the foregoing Declaration of Stephen H. Smith in Support of Defendants' Motion for Summary Judgment was filed with the Court's electronic filing system which will generate automatic service upon all parties enrolled to receive such service. In addition, a true and correct copy of the foregoing will be manually served via first class U.S. mail to the following at the addresses set forth below:

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