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UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

NATIONAL WILDLIFE FEDERATION, *et al.*

Plaintiffs,

v.

NATIONAL MARINE FISHERIES SERVICE, *et al.*

Defendants.

Civil No. 01-640-RE

2008 DECLARATION OF ROCK PETERS

I, Rock Peters hereby state and declare as follows:

1. I am a Fishery Biologist for the U.S. Army Corps of Engineers (Corps) Northwestern Division (Division) currently serving as the Team Lead and Senior Program Manager on fish- related issues in the Columbia River Basin in the Planning, Environmental Resources, Fish Policy and Support Division. I have been in this position since December 27, 2004. My primary duties include overseeing and providing strategic guidance and direction to multi-district projects, directed at improving dam and reservoir survival of fish.
2. Previously I worked for the Corps at the Portland District Office as a Fishery Biologist. I was the Portland District Anadromous Fish Evaluation Program (AFEP) Coordinator. My duties included developing the District's reseach priorities, chairing AFEP committees and coordinating regional, Division, and District technical activities. I was in this position from February 1999 to December 2004. I was also the Environmental Resources Fish Passage Team Leader, overseeing 7 fishery biologists. I was responsible for establishing team priorities and overseeing their work.
3. Between December 1987 and February 1999, I was a Fishery Biologist in the Environmental Resource Branch, Portland District, responsible for fishery technical support and input to District planning and engineering activities. I provided fisheries input for all aspects of pre-authorization studies, pre-construction planning, and other District activities. I also served as study manager and coordinator on various fish research studies on the Columbia, Willamette, and Rogue rivers. From 1982 through 1987, I worked as a Fishery Biologist for the Corps on adult passage evaluations at Lower Monumental, Ice Harbor, McNary, John Day, and Bonneville dams. From 1986 - 1987, I served as the Operations Biologist at Bonneville Dam.

4. I earned a Bachelor of Science degree in Wildlife Science from Oregon State University in Corvallis, Oregon in 1977.

5. I have reviewed the briefs and declarations submitted by NWF et al., the State of Oregon, and the Nez Perce Tribe. In this declaration, I am providing relevant and factual information concerning assertions made in the Motions for Summary Judgment submitted by NWF and Oregon, and the declarations of Edward Bowles and Frederick E. Olney. In particular, I am addressing: (1) the implications of the September 2008 Independent Scientific Advisory Board (ISAB) report on some aspects of the spill and transport operations contained in the Reasonable and Prudent Alternative (RPA) of the NOAA Fisheries Federal Columbia River Power System (FCRPS) Biological Opinion (2008 FCRPS BiOp); (2) applicability of assumptions about spill volumes in any year; and, (3) the certainty of project modifications to provide safer passage via surface by-pass and other improvements to benefit listed fish.

Overview of 2008 FCRPS BiOp and Adaptive Management

6. The Biological Assessment (BA) and Comprehensive Analysis (CA) prepared by the Action Agencies - Corps, Bureau of Reclamation (Reclamation), and Bonneville Power Administration (BPA), submitted to NMFS in August 2007 included a proposed RPA for the operation and maintenance of the FCRPS. An important component of the proposed RPA was "adaptive management" allowing for adjustments in operations and modifications to the physical configuration of the dams in response to new science and information. For instance, attainment of biological performance standards through adaptive management is achieved by: (1) modifying operations, annually and in-season, to accommodate the uniqueness of each water year and the timing of fish migration; and, (2) making changes to the configuration and

operation of the Corps' FCRPS projects based on results from research, monitoring and evaluation ("RM&E").

7. The 2008 FCRPS BiOp retains the adaptive management process in the proposed RPA, which ensures that the Action Agencies, NMFS, Tribal and State experts will be informed by the best available science for future decisions on hydro-operations and configuration actions.

The ISAB Report on 2008 FCRPS BiOp Spill and Transport Operations

8. The Independent Scientific Advisory Board (ISAB) was established by the Northwest Power and Conservation Council and NMFS to provide scientific advice to the region and review topics identified as critical to fish recovery. This 11 member panel has been in place since 1996 and meets regularly throughout the year to provide independent review on key scientific uncertainties and resolve conflicting opinions on science related matters. The Federal agencies and NMFS have routinely presented, and will continue to present, key scientific issues to the ISAB for review and consider the ISAB's responses when making configuration and operation decisions.

9. Throughout the remand collaboration and development of the Action Agencies' proposed RPA and the 2008 FCRPS BiOp, several scientific questions were submitted to the ISAB. Issues such as the validity of the COMPASS model, the applicability of latent mortality on assessing post-Bonneville survival, the effect of Libby and Hungry Horse dam releases during the summer on the flow survival relationship, and the effectiveness of Dworshak flow and temperature releases during July and August were considered in preparing the proposed RPA. The Action Agencies incorporated into the development of the proposed RPA, information obtained from previous ISAB reports.

10. During the remand collaboration, spill and transport operations were discussed extensively, in large part, because of differing views of the science. To assist in resolving this long-standing issue, on March 28, 2008, NMFS requested the ISAB conduct a science review of the seasonal variation and benefits of transportation during April and May as compared to in-river passage for Snake River stocks of fish.

11. As discussed in Mr. Bowles' Declaration, at ¶ 109, on September 16, 2008, the ISAB issued its report on the questions presented by NMFS last March (ISAB 2008-5). In this report, the ISAB confirmed that the Action Agencies and NMFS considered all the available information. While noting that information may be applied differently, and therefore results may be slightly different, the ISAB acknowledged that when considering the spring spill and transport strategy identified in the RPA, most of the existing data suggest that transportation in late April through May benefits both wild and hatchery Chinook and wild and hatchery steelhead.

12. The ISAB also affirmed that when selecting the preferred transport and in-river option, we should consider within season variability for particular species, for hatchery and wild groups, flow conditions, and life history. (ISAB, 2008-5 p 9).

13. The ISAB report confirmed that the method of analysis for juvenile survival employed for hydro-operations on spill and transport appeared sound. It supported the use of the COMPASS model as a valuable tool in predicting the impact of structural and operational changes on juvenile migration survival for certain species where information was available. They also recognized that optimizing adult return rates for the various Snake River stocks presents challenges, in that one approach may benefit one stock but may be detrimental to another.

14. The ISAB recognized that considerable improvements and operational changes have occurred at the mainstem dams in recent years that are not fully reflected in the current transport and in-river adult return information. Because of the lag time between juvenile fish outmigration and corresponding adult returns, the ISAB suggested that the COMPASS tool be updated when adult return information becomes available from the 2006 and 2007 juvenile outmigration.

15. The ISAB report included other recommendations that the Action Agencies are currently reviewing. For instance, the ISAB recommended that additional studies be conducted to determine critical uncertainties related to: (1) sockeye and lamprey passage; and, (2) adult salmonid straying as a result of transport.

16. As noted above, the 2008 FCRPS BiOp adopts adaptive management as a means to be responsive to new science and information. The Federal agencies, in collaboration with sovereign partners, are currently engaging in an adaptive management process to arrive at the operations for the 2009 migration season. Utilizing the regional forums, the sovereigns are discussing new information, including the ISAB information provided on May spill and transport operations. Specifically, at the Regional Forum Implementation Team meeting on October 2, 2008, the ISAB report was discussed; and on October 23, 2008, the Studies Review Workgroup (SRWG), under the Corps' AFEP program, met to discuss development of studies to address the critical uncertainties identified in the ISAB report. (Exhibit A, Agenda)

17. On October 29, 2008 the Action Agencies and NMFS are meeting with regional sovereigns through the Regional Implementation Oversight Group (RIOG). The agenda includes a discussion of modifying 2009 spill and transport operations from May 7 to May 20 at the

Snake River collector projects: Lower Granite, Little Goose, and Lower Monumental dams. (Exhibit B, draft agenda)

18. At this RIOG meeting, consensus may be reached on 2009 operations, or alternatively, the RIOG may make an assignment to the appropriate Regional Forum technical team to develop a proposal for 2009 operations.

Applicability of Spill Volume Assumptions Characterized in Mr. Bowles Declaration

19. The Oregon brief and Mr. Bowles Declaration makes assertions about reductions in spill volumes on the Columbia and Snake rivers as a consequence of the 2008 BiOp RPA (Oregon Section III. A. pages 20-22; Bowles Declaration ¶ 136). In neither instance were citations provided to support these conclusions and there is no explanation of the assumptions Mr. Bowles used to calculate the reduction in spill volume.

20. While estimations of spill volume can be informative, this type of analysis misses the most important point, which is providing the most *biologically effective* operation. What matters most to achieving desired fish passage survival is providing the safest passage conditions, which requires targeting an effective spill operation in conjunction with other proven passage routes, including juvenile fish transportation. In other words, providing a certain amount of water or spill volume is meaningless if it does not have the desired positive biological effect on fish.

21. Recognizing that providing biologically effective spill operations is what matters to the fish, I believe it is important to provide factual information and context about Mr. Bowles' speculations concerning changes in spill volumes for fish passage at the Corps' mainstem dams. In order to calculate a spill volume, several factors must be known. First, the precise

spill operations at each dam for a given year must be determined. The spill operations are developed through adaptive management using information derived from the prior year's research results and special conditions needed for planned research. Once this information is available, tailored adjustments are made to spill percentages or volumes of spill at each project. As 2009 operations have not been finalized, any estimate of spill (or reduction in spill volume) is speculative.

22. Second, varying annual and seasonal flow conditions will result in different volumes of spill due to a variety of factors such as the actual water supply for a given year (high, medium, or low runoff volume), and the specific timing and shape of the runoff. Other variables that may influence spill volumes are in-season application of the project spill priority list (to minimize total dissolved gas ("TDG"), in high run off conditions), navigation safety requirements, and real-time generation needs to meet load demand. These are examples of factors that can contribute to an increase or a decrease in spill, and the extent and timing of these changes cannot be accurately predicted in advance of the migration season.

23. Finally, Mr. Bowles' assertions about spill volume reductions are not informative because it's not possible to predict when spill operations will end in any given year. Spill cessation triggers were identified in the 2008 FCRPS BiOp and the Fish Accords and are tied to numbers of fish and timing of fish movement. With each water year there is variability in river flow and temperatures, which influence when and how many fish are moving through the system. To attempt to estimate spill volumes in advance of knowing when spill operations will end, is certainly speculative. For instance, based on the timing and number of outmigrating fall Chinook during August 2008, spill at the lower Snake projects would have continued for 30 days in August.

24. For the reasons discussed above, Oregon's and Mr. Bowles' calculations of spill volume are merely a theoretical exercise that renders no useful information on predicted spill volumes for 2009 or any future year, and certainly not on the biological effect of spill on fish survival.

Assertions that Structural Modifications are not Reasonably Certain to Occur

25. The NWF brief mistakenly characterizes improvements to migration conditions as unrealistically optimistic because the RPA's reliance on future surface bypass modifications is uncertain. (NWF p. 45-46). The Olney Declaration states that the 2008 RPA includes installation of the same structures at the same projects that were identified in the 2000 and 2004 BiOps, purportedly giving credence to the proposition that these actions are speculative and uncertain. (Olney Declaration ¶ 12). These assertions are misinformed.

26. Since 2001, with the installation of the first Removable Spillway Weir (RSW) at Lower Granite Dam, the Corps has aggressively and systematically been moving forward with structural modifications to improve surface passage conditions for juvenile fish at its FCRPS mainstem dams. By the 2009 migration season, all lower Snake River and lower Columbia River projects will have surface passage facilities - including Little Goose Dam the last Snake River project to install a surface collector (RPA Action 24).

27. In addition to the 2001 installation of the Lower Granite RSW, another type of surface collector, the Bonneville Dam Corner Collector, was completed in 2004. Both of these structural modifications have demonstrated dam passage survival improvements and reduction in forebay delay.

28. Other surface collectors have been installed and are currently undergoing biological evaluations. These include the Ice Harbor Dam RSW installed in 2005, two surface

collectors at McNary Dam installed in 2007 (RPA Action 21), two surface collectors at John Day Dam installed in 2008 (RPA Action 20), and an RSW at Lower Monumental installed in 2008 (RPA Action 23). (BA Appendix A "Overhaul" p. A-1 A-27). While having surface passage at all mainstem projects will benefit juvenile passage survival and assist in meeting juvenile performance standards, it will also allow for evaluation of juvenile in-river survival given these surface passage improvements and associated spill.

29. In addition to mischaracterizing the status and the certainty of structural improvements to the Corps' dams, NWF misconstrues the intent of the "Configuration and Operations Plans" – or COPs. The 2008 FCRPS BiOp RPA calls for the Corps to prepare a series of COPs, which will be used to "investigate and implement...reasonable and effective measures to reduce passage delay and increase survival." (NWF p. 46). NWFs' characterization of COPs up to this point in their brief is fairly accurate. Where NWF goes astray is their attempt to mischaracterize COPs as "only a commitment to make a future plan which the action agencies may or may not adopt the suggested improvements and for which the action agencies may or may not have the funding needed to install structures."

30. Clearly NWF and Mr. Olney are attempting to portray the Federal agencies' and sovereigns' utilization of COPs, an adaptive management tool to design effective dam modifications, as uncertain. As demonstrated by the significant changes in the configuration of the FCRPS mainstem projects since 2001, the evidence strongly supports that future improvements will continue to be implemented.

31. The following discussion provides factual information about the development and use of COPs in making passage improvements at the dams. Unlike the 2000 BiOp's prescriptive list of actions, the 2008 FCRPS BiOp identifies performance standards and adopts project

specific COPs. The Action Agencies have committed to achieving the performance standards, and rely on the project specific COPs to guide identification, prioritization, and implementation of configuration and operation changes to meet these performance standards.

32. The COPs are developed collaboratively with regional sovereign experts for each mainstem project and will be updated throughout the term of the 2008 FCRPS BiOp as new information is attained. The RPA identified Phase I additional actions for each project specific COP. Examples include The Dalles spill wall, scheduled for completion in 2010 (RPA Action 19), modifications to juvenile bypass outfalls, full flow systems that allow for monitoring PIT tags at higher flows, turbine optimization, adult ladder modifications and improvements to reliability of the adult ladder systems. (RPA Actions 18-28). The RPA also provides for identifying and planning for additional actions if needed to achieve performance standards.

33. This adaptive management tool provides the flexibility needed to make changes based on the best available science, and provides a transparent process to facilitate making sound decisions on structural and operational changes.

34. Currently, COPs for Bonneville and John Day dams have been developed. A draft COP has been completed for The Dalles Dam and will be further updated this year to accurately reflect the current direction. Development of the Ice Harbor COP is scheduled for completion by the end of 2008, with COPs for McNary, Little Goose and Lower Granite dams are scheduled for completion no later than 2009. To allow for completion of the biological evaluation of the new Lower Monumental RSW, the COP for this project is scheduled for completion by 2010. (RPA Actions 18-25).

35. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed this 23 day of October, 2008, in Portland, Oregon.

Rock Peters
Senior Fisheries Biologist
Northwestern Division
U.S. Army Corps of Engineers

EXHIBIT A

Agenda
AFEP - Special SRWG Meeting
ISAB Snake River Spill-Transport Review
Summit Room-10th, Duncan Plaza, 333 SW 1st Ave. Portland, OR
Call-in number: 877-867-4413
Participant Passcode: 371600

General purpose of meeting: To discuss issues highlighted in the ISAB report and develop a plan. What is known? What is not known? How do we bridge the gap?

I. Snake River Sockeye

- What do we know about the response to transport?
- What do we need to do?
    - Study – to determine feasibility?
    - Fish availability? How many? When? Where?
    - What would be the technique(s)?
        - Index Marking?
    - Where do we collect/tag fish?
        - Dam?
        - Hatchery?
        - Traps?
    - Do we need temporal information?
- Dam survival - Compass estimates?
- System survival – Compass estimates?
- Bypass system impacts – passage data, fish condition, descaling?
- Spillway passage impacts?
- Information from Upper Columbia sockeye passage

II. Pacific Lamprey: Lamprey is being discussed in a separate forum.

III. Adult salmonid straying

- What factors affect straying of natural inriver migrants and Transported?
- What are the causal mechanisms?
- What information on straying exists?
- Impacts to other ESU's?
- What else needs to be done

EXHIBIT B

Regional Implementation Oversight Group

October 29, 2008
10:30 am - 4:00 pm

BPA Offices
707 W. Main St, Suite 500
Spokane, Wa

Call in 1.773.681.5866, passcode 7733

Gotomeeting 259-539-247

https://www1.gotomeeting.com/join/259539247

Time (PST)	Topic	Materials https://secure.bpa.gov/FCRPS_Implementation/Logon.aspx
10:30	**Welcome**	
10:35-12:00	**AA's Draft Outlines for Annual Progress Reports & Comprehensive Reports**	1. Cover for AAs Reporting.pdf 2. Annual Report Outline--10.21.08 3. Comprehensive Evaluation Report Outline--10.21.08
12:00 – 1:00	**Lunch** (on your own)	
1:00 – 2:00	**Revised RIOG Guidelines, Organization chart and next steps (AAs)**	1. Final RIOG chart.pdf 2. Revised guidelines forthcoming
2:00 – 2:45	**AA's Proposed Hatchery Funding Criteria**	1. 29 Sept2008-DraftHatchryFundingCriteria 2. CriteriaForHatchActions-22Oct08
2:45 – 3:45	**Adaptive Management per ISAB Transport Report**	isab2008-5.pdf
3:45 – 4:00	**Summary and Next Steps**	