KARIN J. IMMERGUT, OSB #96314
United States Attorney
STEPHEN J. ODELL, OSB #90353
Assistant United States Attorney
District of Oregon
600 United States Courthouse
1000 S.W. Third Avenue
Portland, OR 97204-2902
(503) 727-1000

SUE ELLEN WOOLRIDGE
Assistant Attorney General
ROBERT L. GULLEY, Senior Trial Attorney
robert.gulley@usdoj.gov
RUTH ANN LOWERY, Trial Attorney
COBY HOWELL, Trial Attorney

Wildlife & Marine Resources Section
Benjamin Franklin Station, P.O. Box 7369
Washington, D.C. 20044-7369
(202) 305-0500 (ph)
(202) 305-0275 (fx)

Attorneys for Federal Defendants

UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

NATIONAL WILDLIFE FEDERATION, *et al.*,

Plaintiffs,

v.

NATIONAL MARINE FISHERIES SERVICE *et al.*

Defendants

Civil No. CV 01-00640-RE

SECOND DECLARATION OF D. JAMES FODREA, JR.

1. My name is D. James Fodrea, Jr. I received a Bachelor of Science degree in Civil Engineering from the University of Idaho in 1972. Since that time I have worked in various positions with the Bureau of Reclamation (Reclamation) and the Corps of Engineers (COE) related to the operation of the Reclamation and COE projects that are the subject of the November 2004 FCRPS BiOp and UPA. This work in four decades has allowed me to observe and participate in the evolution of the operating of the Federal Columbia River Power System (FCRPS) projects since the last of the large FCRPS dams were completed in the 1970s. I have observed the transition from the operation of the 1970's that focused on power, flood control, irrigation and navigation, to the present operation that incorporates numerous other objectives, including actions for listed species of fish. From 1974 to 1982 and from 1986 to 1988 I coordinated and scheduled daily and seasonal operations of FCRPS projects in the COE's Reservoir Control Center in Portland, Oregon.

2. From 1988 to 1990 I directed the COE' Power Section of the Water Management Branch in Portland, Oregon in its role as a regional and national center for expertise for reservoir operation and hydropower analyses. Activities included the analyses of river operations in the Columbia River Basin for numerous activities involving Pacific Northwest issues. I was part of the COE team that formulated the original need and scope for the Columbia River System Operation Review (SOR). The SOR was a NEPA activity conducted by Reclamation, the COE, and Bonneville Power Administration to review the operation of 14 FCRPS projects, examine trade-offs between different operating strategies, and identify a preferred alternative.

3. From 1990 to 1994 I worked for Reclamation in its Columbia River Coordination Office in Portland, Oregon as part of its management team for the conduct of the SOR. I was a key contributor to SOR analyses on the effects of varied operation strategies on multiple uses of the FCRPS projects. From 1995 to 1998 was program manager for Reclamation's Water Resources Management group in Boise, Idaho. I continued my participation in FCRPS operations in regional forums including the Technical Management Team and the Implementation Team.

4. I have been working in Reclamation's Columbia/Snake Salmon Recovery Office since 2001. I manage Reclamation's program to implement actions, including hydro operations, relevant to the 2000 BiOp RPA and the 2004 UPA. I was the Reclamation lead in activities associated with developing the 2004 BiOp and developing Reclamation's hydro and habitat improvement actions included in the 2004 Updated Proposed Action (UPA). This experience highly qualifies me to discuss the effects of implementing Plaintiffs' requested flow changes in the Columbia Rivers in 2006.

5. As a collateral duty since January 1997, I have been a member of the Columbia River Treaty Permanent Engineering Board Engineering Committee (PEBCOM). In this capacity I advise the Permanent Engineering Board (PEB) on technical and operations matters related to the operation of the Treaty projects in Canada. The PEB annually reports to the governments of the United States and Canada on the results being achieved under the Treaty.

6. PURPOSE OF DECLARATION. The purpose of this declaration is to address the flow measures requested in the Plaintiffs' Motion for further Injunctive Relief filed October 31, 2005, as supported by the declaration of Mr. Robert Heinith and the Memo in Support of Motion filed by the Treaty Tribes, particularly as they relate to the Bureau of Reclamation's Federal Columbia River Power System (FCRPS) projects (Grand Coulee Dam which creates Lake Roosevelt, Banks Lake, and Hungry Horse Dam and Reservoir). My declaration will explain that: 1) Plaintiffs' proposal rests on inaccurate assumptions and understandings of FCRPS operations; 2) Plaintiffs' requested operation would not appreciably change the spring and summer flow regimes from the Updated Proposed Action (UPA) operation evaluated in the 2004 Biological Opinion issued November 2004 by National Marine Fisheries Service (NMFS), and 3) there would be significant adverse effects to Congressionally-authorized FCRPS multiple purposes if Plaintiffs' proposals were implemented.

7. My declaration begins with an overview of the relevant operations that achieve the purposes that Congress has authorized at Reclamation's projects which are part of the FCRPS, including the many considerations and complexities that must inform those operations. I will then proceed to an analysis of Plaintiffs' proposal, including the nature of the information that they relied on from Mr. Heinith. Finally, I will explain that, as a result of their fundamental lack of understanding of FCRPS operations, the Plaintiffs' proposed operations and Mr. Heinith's supporting information do not accurately reflect the likely flow outcomes of their proposals and do not address the adverse impacts that are likely to result. My evaluation was complicated by fact that the GENESYS model output provided to me by the Plaintiffs did not accurately reflect their requested operations for relief.

8. OVERVIEW OF FCRPS, UNDERLYING COMPLEXITIES, UNCERTAINTIES, AND CHALLENGES, WITH FOCUS ON RECLAMATION OPERATIONS. A general overview of the complexities and competing obligations of FCRPS operations is presented in the declaration of Cynthia A. Henriksen (COE). My declaration will complement that declaration by providing an overview of Reclamation's role in FCRPS operations and addressing those aspects of Plaintiffs' proposed operations that will most directly affect Reclamation's operations.

9. Multiple purpose authorities. Reclamation operates Grand Coulee and Hungry Horse Dams, and Banks Lake, for multiple purposes as authorized by the Congress. Grand Coulee and Hungry Horse Dams are two of the fourteen coordinated hydro projects commonly referred to as the FCRPS, which is at the heart of this litigation. The authorizations for Grand Coulee, Hungry Horse, and Banks Lake occurred at separate times and are specific to each project. Both projects were initially authorized for flood control, navigation, regulating the flow of streams, irrigation, power production, and other beneficial uses. Further, the Congress has made Grand Coulee an integral part of the Columbia Basin Project, which includes Banks Lake. Subsequent to their authorizations and construction, the projects' operations became coordinated with projects in Canada as part of the 1964 Columbia River Treaty with Canada.

10. Reclamation operations must be conducted in a manner consistent with project-specific authorized purposes, state water law and other Congressional directives in Reclamation law (43 U.S.C. §371 *et seq.*), the Endangered Species Act, National Environmental Policy Act, Clean Water Act, Pacific Northwest Power Planning and Conservation Act, and others. Reclamation also recognizes the Federal Government's trust responsibility to all of the thirteen Native American Tribes that are most directly affected by the operation of the FCRPS.

11. Complexities for Decisionmaking. To carry out the authorized purposes I have just described, Reclamation must carefully balance a mix of legal, social, economic, and environmental factors. These are responsibilities Congress has assigned to Reclamation. Reclamation decision-makers do this in coordination with numerous federal, state, and tribal decision-makers and stakeholders in numerous forums. Most notably, we coordinate our multiple-use operations affecting ESA-listed fish through the Regional Forum (Technical Management Team, Implementation Team, and Executive Committee, *etc.*,) established under the 1995 FCRPS Biological Opinion issued by the NMFS. In addition, as directed by this Court, we are currently engaged in another collaborative process with regional state and tribal sovereigns to discuss the long-term operation of the FCRPS.

12. Hydrologic Uncertainty. Making decisions on FCRPS operations is significantly further complicated by the fact that as a federal water management agency, Reclamation must operate in an arena of great hydrologic uncertainty. In spite of the many sophisticated tools available to us (satellites, snow courses, stream gauges, historic records, computer models, *etc.*), there is no perfect method to predict the future. We therefore must make daily operating decisions to store or release water based on *today's* conditions and *currently available* weather forecasts. Our decisions can have effects into the future far beyond our ability to predict the precipitation and temperatures that will affect the system flows. Consequently, we are constantly adjusting our operations to adapt to ever changing weather forecasts. For example, for several months in any given year we may be making operational decisions based on forecasts predicting a high-flow year. Such a forecast would direct us to release

significant flows from a storage project in order not to exceed the upper rule curve[1] (URC) for flood control. We may receive a subsequent forecast that predicts dramatically less flow. The new forecast may require us to dramatically shift course by cutting back sharply on outflows to store water for spring or summer flow augmentation.

13. Storage Limitations. Compounding the weather and streamflow forecasting element complications is the fact that the system is relatively short on storage, compared to the volume of potential annual run-off. Contrary to Mr. Heinith's implication (¶ 5, p.2), the Columbia River does not have sufficient storage to be a "highly regulated large river" in my opinion. Unlike other regulated river systems such as the Missouri or Colorado Rivers, we simply do not have the capability to store sufficient water from year to year to significantly alter the amount or pattern of stream flow that naturally occurs in the river. U. S. storage reservoirs on the Columbia River can store about one-fourth of the annual average flow of the river. In contrast the Missouri and Colorado River reservoirs can, respectively, store 3 and 4 times their average annual flow. This enables those systems to significantly improve flows in low runoff years or moderate flows in high runoff years. However, on the Columbia, drought years remain drought years and high flow years have high flows. We cannot substantially change the natural flow patterns nor carry large enough amounts of water over from an above-average water year to substantially improve drought year stream flows. Consequently, the shape of the hydrograph in the river with our operations is similar to a hydrograph that would result naturally. The limited storage capability of the FCRPS merely allows us to moderate some of the extreme highs and lows of the river's flow.

14. EVALUATION OF PLAINTIFFS' PROPOSED OPERATIONS

15. Overview. Plaintiffs have asked the Court to order Reclamation to adjust its operation of Lake Roosevelt and Hungry Horse to generally hold them at their "upper

[1] The upper rule curve (URC) is defined as the highest elevation a reservoir can be at while still providing adequate space to capture runoff to meet flood control objectives.

flood control rule curves," or URCs, from February 1, 2006 to April 30, 2006, and to verify that the reservoirs are at their URC on a biweekly basis (the 15th and 30th of each month). They have also asked us to provide up to 630,000 acre feet of water from a combination of Grand Coulee and Banks Lake for summer flows if that amount of water cannot be obtained from non-Treaty space in Canadian reservoirs.

16. It is my opinion that the Plaintiffs' proposed operations could not be implemented in the manner they describe and provide the flows they anticipate without substantial adverse effect to other authorized uses. To place their request in context, I have provided an overview of the operation of Grand Coulee, Banks Lake, and Hungry Horse in Attachment A. This attachment describes in general terms the seasonal operation of these projects to meet current multiple use objectives and how their operations have been changed to improve spring and summer flows for anadromous fish following the ESA listings in the 1990s. In the following portions of this declaration, I will explain why the Plaintiffs' flow proposal is not feasible to implement, and how their proposed changes will adversely affect operations for other Congressionally-authorized purposes, including operations to benefit other anadromous fish and other listed species. My evaluation was complicated by fact that the GENESYS model output provided to me by the Plaintiffs to support their proposed operation was of little use. It included operations that: 1) could not be implemented without the concurrence of Canadian entities, 2) ignored Reclamation's responsibilities to protect other ESA-listed species (e.g., Bull trout and chum salmon), 3) severely impacted the Hanford reach fall Chinook, and 4) resulted in Clean Water Act violations. Consequently, I have relied on the modeling conducted by BPA to discuss the effects of their proposal. I have included as Attachment B a summary of my findings of GENESYS deficiencies to support this conclusion.

17. Plaintiffs' Request to Hold FCRPS Reservoirs at URC On a Bi-weekly Basis and Extending the Storage Period Is Unlikely to Result in Additional Water Being Available for Flow Augmentation from Reclamation Projects.

18. Effects of Targeting Upper Rule Curve (URC) on Bi-Weekly Basis. The Plaintiffs propose maintaining storage reservoirs at the URC for flood control on a bi-weekly basis from February 1 through April 30 (¶ 2(a) of Plaintiffs' Motion). The 2004 UPA calls for similar measures. Reclamation and COE operate their storage reservoirs with the intent of reaching end-of-month URCs in January through April, which should provide a high probability of being at the April 10 URC called for in the 2004 UPA (pp. 46-48), subject to minimum flow requirements.

19. We operate, to the extent possible, to maintain a 75%[2] (Hungry Horse) to 85% (Grand Coulee) likelihood of reaching the April 10 URC to improve flow augmentation for spring salmon migrants. However, operating below URCs is often necessary to maintain flows that will benefit other species including ESA-listed chum salmon below Bonneville Dam, mid-Columbia fall Chinook near Vernita Bar, and ESA-listed resident bull trout below Hungry Horse. In addition, we may be below the URCs for other reasons. About half the time we will be below the Hungry Horse April 10 URC due to the combination of carryover effects from the previous year's summer flow augmentation releases and minimum fall and winter project outflows for ESA-listed bull trout. At Grand Coulee we may be below the URC because of project maintenance, URC changes due to forecast change, and flows for ESA-listed chum salmon. We may also operate below URCs for power production during the winter if we can still maintain the previously stated probabilities of reaching URCs.

20. To support the Plaintiffs' assertions that the biweekly targeting is necessary, Mr. Heinith selectively cites and relies on operations that occurred in 2004 and 2005 (Heinith, ¶ 7, p.4). He states that federal operations were for power production and provided less water for spring flows than the Plaintiffs' proposed operation. As I discuss below, Mr. Heinith is incorrect as there are other factors besides power involved for Reclamation's operation of Grand Coulee and Hungry Horse. The 2004 winter operation of Grand Coulee reflects some power drafts in January, but the

[2] Contrary to the Treaty Tribe claim (Treaty Tribes' Memo, p.7), the 75% and 85% probabilities were developed as part of the NMFS 1995 BiOp (p. 95) as an April 20 objective. The April 20 objective was

primary reason for being below URCs was the uncertainty of operating to a forecast and the effects of a forecast change to the URC. In 2004 Reclamation coordinated with the Technical Management team to adjust its operations each month based on forecast updates that showed a constant decline in water supply. Reclamation was targeting to be at the URC based on the last official forecast issued in early March. When the April forecast was issued on April 7 the forecast change and the upstream storage adjustments caused the April 30 targeted URC to rise by an unprecedented 28 feet. This reflects the inherent challenges and complexities of operating the system in the context of inevitable forecast change and uncertainty, *not* any result of the Action Agencies' power flexibility. Thus, under the water supply forecast and runoff conditions of 2004, operating to URC throughout the winter would not have avoided the consequence of this forecast change.

21. Similarly, the fall 2003 and winter 2004 drafts at Hungry Horse were not driven by hydropower generation. The Hungry Horse reservoir was below the URC on April 10, 2004 as the result of releasing water for summer migrants in 2003 and minimum flows for bull trout in the fall of 2003 and winter of 2004 as required under the U.S. Fish and Wildlife Service BiOp issued in 2000. These releases were further compounded by poor water supply in 2004. Eliminating winter power flexibility and operating to February through April URCs in the winter of 2004 would not have changed available water supply from Hungry Horse for the spring of 2004.

22. The Plaintiffs also assert (Plaintiffs' Memorandum in Support, p11) that power generation from U.S. storage reservoirs in 2005 led to less water available for spring flows. Their assertions are incorrect. At Grand Coulee, we were below URC on April 10 because Lake Roosevelt had been drafted for much needed drum gate[3] maintenance, not for power. This work had actually been postponed from previous

---

advanced to April 10 in the NMFS 1998 BiOp (p. III-4). This was continued as part of RPA Action 19 under the 2000 BiOp issued by NMFS, and remains as an objective in the 2004 UPA and BiOp.

[3] Lake Roosevelt levels are maintained by eleven large spillway drum gates along the top of the dam. Each gate opening is 135' long by 30' high. The gates must undergo maintenance that requires drafts below elevation 1255 feet every three to four years. This is usually scheduled to occur during above average water years when URCs require drafts below elevation 1255. Routine gate maintenance is necessary to reduce the risk of gate failure and subsequent uncontrolled releases of water.

years in consultation with salmon managers per discussions at Technical Management Team (TMT) meetings (TMT notes excerpts are provided as Attachment C). Requiring an operation on the URC in the winter of 2005 would not have precluded the need for this maintenance and the draft required to complete it.

23. Effects on Lake Roosevelt of Request to Hold Canadian Reservoirs at URC. The Plaintiffs propose that the Columbia River Treaty projects in Canada be operated to their URCs. The Plaintiffs are essentially proposing that UPA strategies be used in the Canadian reservoirs (i.e., keep reservoirs as full as possible without compromising established flood control). If implemented there would be offsetting effects at Lake Roosevelt, as there would *have* to be an increase in flood control space (*i.e.*, lowering of URCs) at Grand Coulee to offset the reduced space in Canadian reservoirs (See declaration of Cynthia A. Henriksen). The Grand Coulee URCs could be lowered as much as 33 feet on the end of March and 17 feet on the end of April according to studies conducted by BPA. Each foot of additional draft can expose about 500 acres around the lake shore. Without this adjustment in U. S. flood control space flood control protection for the United States would be seriously compromised. This would result in exacerbating the adverse reservoir effects that already occur as the result of drafts for flood control or other purposes. These adverse effects include the additional exposure of cultural resources of importance to Native Americans, lower levels for recreation, and adverse effects on resident fish (reduced water retention time and entrainment at the dam). This resident fishery is of great importance to the upper river tribes as an offset to the anadromous fishery lost when Grand Coulee Dam was constructed.

24. Plaintiffs' Requests for Additional Summer Flows. Plaintiffs also request that the Federal Agencies provide "at least 500,000 acre feet of water from non-treaty Canadian storage or Lake Roosevelt (if necessary), and an additional 130,000 acre feet of water from non-treaty Canadian storage or Banks Lake for summer flow augmentation." (Plaintiffs' PI Motion, p. 2).[4] For this declaration I assume that

[4] This request is probably careless drafting on their part in view of the fact that we *currently* provide from 791,000 to 942,000 acre feet from Lake Roosevelt alone.

Plaintiffs are seeking an *additional* 500,000 acre feet from Lake Roosevelt, and a total of 630,000 acre feet from Lake Roosevelt and Banks Lake over the current UPA operation. Based on my Columbia River Treaty experience with the PEBCOM, it is my opinion that water will very likely not be available from non-Treaty storage in Canada (See declaration of Richard M. Pendergrass). Consequently, I will presume that volume must come from the Lake Roosevelt and/or Banks Lake. While Reclamation could potentially provide additional flow augmentation from the Lake Roosevelt in the summer, it could not be provided without significant tradeoffs between various Congressionally authorized project purposes. Tradeoffs would also be required between ESA-listed species and resident species the Colville and Spokane Tribes consider trust assets and replacements for anadromous fish runs lost when Grand Coulee Dam was constructed. I discuss those impacts further in ¶¶ 34 and 35 of this declaration.

25. The Plaintiffs' Proposal for a Peaking Hydrograph. The Plaintiffs also propose (Memorandum in Support, p. 13) managing flows "to produce a peaking hydrograph with average May flows of approximately 345,000 cfs." Plaintiffs and Mr. Heinith inappropriately compare their peak hydrograph to the spring and summer *flow targets* (under the 2004 BiOp), when they should have compared them to *actual flows yielded* from the UPA operations that use the targets as objectives. I am including Figure 1 to show that the BiOp storage operations conducted since 1995, when implemented in conjunction with other river flows and runoff, *do achieve* shaping objectives similar to what Plaintiffs desire. The storage operations in the 2004 UPA are almost identical to the operating strategies that have been implemented since the 1995 BiOp and are reflected in the 1996-2005 timeframe flows on Figure 1.

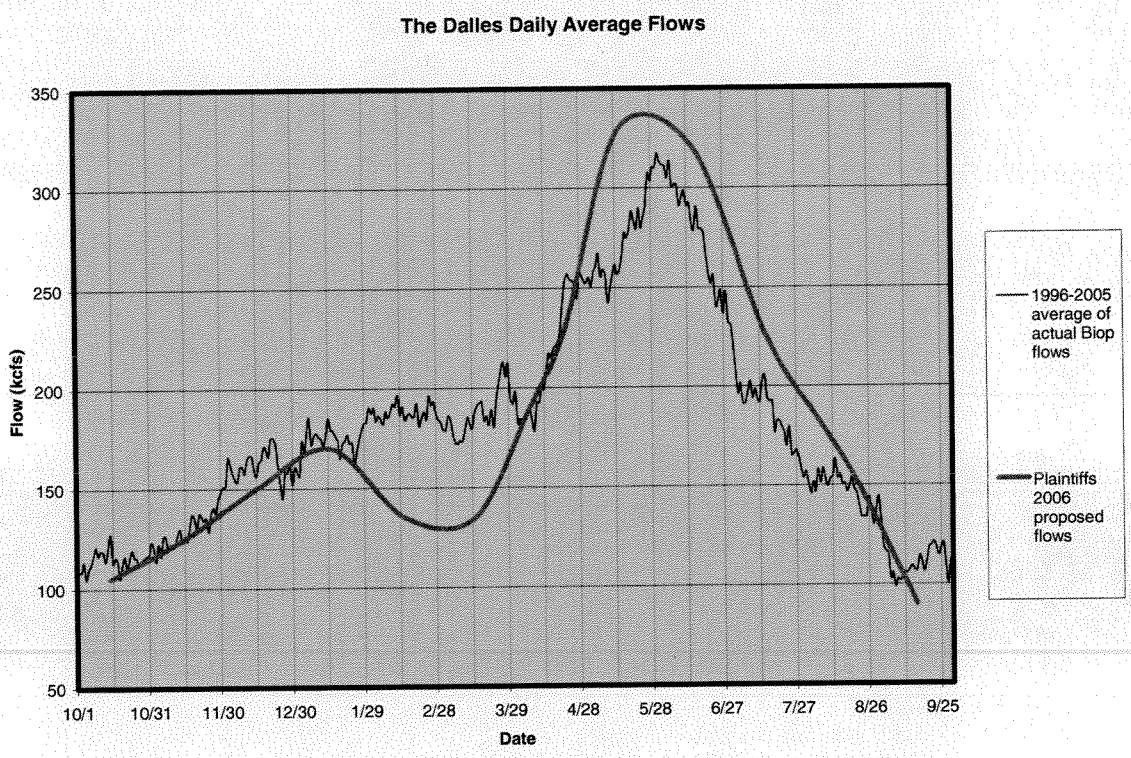

Figure 1

26. THERE WOULD BE ADVERSE EFFECTS TO MULTIPLE USES, INCLUDING ESA-LISTED FISH, IF PLANTIFFS' PROPOSAL IS IMPLEMENTED.

27. Adverse Effects from Operating to URC from February 1 through April 30. The current UPA strategy calls for having Grand Coulee and Hungry Horse at their URC on April 10, an approximate date for the start of spring juvenile fish migration. Since we already operate to target the URC on or around April 10 subject to meeting minimum downstream flows, the primary difference between our UPA and the Plaintiffs' proposal is keeping reservoirs at URC from February 1 through April 30. The Plaintiffs' proposal suggests there will be significant improvements in operating reservoirs at URCs until water is needed for spring salmon migrants. However, there are several downstream requirements that result in operating below URCs. These requirements are intended to provide benefits to both ESA-listed and non-listed fish species as discussed in the following paragraphs.

28. For example, at Hungry Horse, we maintain minimum flows for ESA-listed bull trout in the Flathead River. Consequently, about half of the time we will be below URC as

a result of the previous year's summer draft for flow augmentation and providing fall and winter flows for bull trout. Operating to URCs at Hungry Horse would require that we either reduce the previous year's summer draft, reduce the amount of minimum flow for bull trout, or a combination of both actions. Such a change for Hungry Horse may require re-initiation of ESA consultation with the U.S. Fish and Wildlife Service, and potentially additional National Environmental Protection Act (NEPA) analysis.

29. Operating at URCs at Grand Coulee could have several negative effects, especially to ESA-listed Chum Salmon that spawn in early winter and rear through early April below Bonneville Dam. Mr. Heinith's declaration, (footnote 10, p. 6) states that preliminary Fish Passage Center studies indicate that keeping reservoirs at URC can support Chum spawning, although they recognize that some additional flows may be needed from upstream storage in some cases. I disagree. According to modeling conducted by BPA (Declaration of Roger Schiewe), the Plaintiffs' proposal reduces the protection of chum salmon significantly. The UPA provides protection in 31 of 50 years, while the Plaintiffs' proposal provides protection in only19 of 50 years.
30. Lake Roosevelt is also the principal water source used to help protect unlisted Hanford Reach fall chinook that spawn in early winter and rear through early April at Vernita bar below Priest Rapids Dam. The Hanford Reach Chinook provide an important fishery for the Treaty Tribes, who consider the fishery to be a significant treaty and trust resource. The UPA provides protection in 49 of 50 years, while the Plaintiffs' proposal provides protection in only19 of 50 years.
31. Reclamation allows modest operations for power production that may draft reservoirs below URCs in the winter months as explained in Attachment A of this declaration. These drafts for power are limited by the requirement to be at upper rule curve with specific probabilities by April 10. The draft limits are updated throughout the winter to reflect new water supply forecasts. This limited drafting is necessary to meet winter power demands, provide for power emergencies, and other short-term power needs, and economic purposes. Limiting or eliminating these winter power drafts will have adverse effects to the power system. These effects are included in the system power effects discussed in the declaration of Roger Schiewe.

32. The Plaintiffs also propose that all FCRPS storage projects and Treaty projects in Canada operate to their URCs from February 1 through April 30. It is my opinion that implementing the Plaintiffs' proposal would have the adverse effect of reducing inflows to Lake Roosevelt during the late fall, winter, and spring. This would limit the flexibility to protect chum and fall chinook during their spawning and rearing periods with Grand Coulee storage releases.

33. Adverse Impacts of the Plaintiffs' Requested additional Water for Summer Flows. The Plaintiffs propose to draft 500,000 to 630,000 additional acre feet for summer flows from Canadian non-Treaty storage, or in the alternative from Grand Coulee and Banks Lake. As stated in the declaration of Richard M. Pendergrass, the federal agencies cannot direct Canadian actions. Therefore the only certain source of this water is from Lake Roosevelt and Banks Lake.

34. If 630,000 acre feet were released from Lake Roosevelt (500,000 acre feet) and Banks Lake (130,000 acre feet), we would expect substantial adverse effects. In May 2004 Reclamation completed an EIS on drafting of Banks Lake to provide an additional 130,000 acre feet for flow augmentation. Mr. Heinith is selective in citing the reasons Reclamation rejected the alternative (¶ 15, p.10). In addition to the impacts to cultural resources (which may be some of the oldest in the area) cited by Mr. Heinith, Reclamation *also* found significant impacts to vegetation, resident fish and wildlife, recreation, power production, and the local economy as noted in the Executive Summary of the EIS (Attachment D). Taking into account all the information yielded by that study, and given the significant impacts evaluated in the EIS, Reclamation chose not to implement the additional draft at Banks Lake as noted in its June 2004 Record of Decision (Attachment E).

35. The Plaintiffs are proposing to release an additional 500,000 acre feet *beyond* the UPA operation if we have correctly interpreted their proposal (Plaintiffs' Motion For Further Injunctive Relief ¶2(b), p. 2). Drafting an additional 500,000 ace-feet would result in lowering the level of Lake Roosevelt by about 7 feet. This draft would be in addition to the 10-to-12 feet of draft from full already provided by the UPA. This would result in a total draft of Lake Roosevelt to elevation 1273 or 1271 by the end of August. This operation would occur during the peak of the summer recreation

season. Lake Roosevelt is a National Recreation Area administered by the National Park Service. The lake attracts millions of visitors annually. Visitation peaks in the summer. For example, the National Park Service reported over 312,000 visitors in August 2004. We would expect reduced visitation and consequently economic impacts in the local area. Included in the impacts would be tribal business enterprises. Significant impacts would occur to the house boat rental business which provides several million dollars a year to the Colville Tribes. There would be increased vandalism, looting, and damage of cultural resources and human remains on Lake Roosevelt due to the additional exposure of these resources at the peak of visitation. Mr. Heinith (¶15, p. 10) implies that impacts to cultural resources could be alleviated with increased patrols. Mr. Heinith may fail to appreciate the scope of the problem as Banks Lake and Lake Roosevelt have over 650 miles of combined shoreline. Correspondence received from the Spokane Tribe contradicts Mr. Heinith. They describe several effects that will result from the additional drafts. In addition, non-tribal business enterprises would be adversely affected. Attachment F includes information from numerous entities that describe the adverse effects of additional summer drafts. Furthermore, the additional drafts could adversely affect resident fish and wildlife, e.g., reservoir nutrient impacts and have potential to negatively affect resident fish spawning in September.

36. In summary the Plaintiffs' proposal would have several adverse effects including:

- Reduced protection of ESA-listed chum salmon below Bonneville Dam.
- Reduced protection of mid-Columbia River fall Chinook below Priest Rapids Dam.
- Reduced summer drafts and/or reduced bull trout flows from operating to URCs at Hungry Horse.
- Economic losses to Tribal and other businesses at Lake Roosevelt and Banks Lake if increased drafts for summer flow augmentation occur there.
- Cultural resource losses to Tribes on Lake Roosevelt and Banks Lake if increased drafts for summer flow augmentation occur there.
- Adverse effects to resident fish in Lake Roosevelt
- Reduced power generation in the winter.

CONCLUSIONS

37. The Plaintiffs proposal does not identify any actions that have not been considered in developing the current UPA or other past proposed actions or reasonable and prudent alternatives (RPAs). In past evaluations, similar proposals have be considered, but not implemented because of impacts to Congressionally authorized project purposes and adverse impacts to: a) listed and unlisted species; b) tribal treaty and trust resources; c) cultural resources; d) tribal and non-tribal economic interests; and e) other impacts to resources such as resident fish and wildlife, *etc.,* described in this declaration.

38. The Federal Agencies are currently working closely with regional interests in the collaboration process on the remand to explore additional ways of increasing benefits for salmon while recognizing and providing for other authorized project purposes. We will continue to make improvements by evaluating the best information available and making appropriate changes

39. In conclusion, it is my opinion the Plaintiffs have not provided a credible alternative to the flow operations described in the 2004 UPA.

39. I declare under penalty of perjury that to the best of my knowledge the foregoing is true and correct. Executed this 21st day of November, 2005, in Boise, Idaho.

D. James Fodrea, Jr.
Program Manager
Columbia/ Snake Salmon Recovery Office
PN Regional Office
U.S. Bureau of Reclamation