



## Department of Energy

Bonneville Power Administration  
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ENVIRONMENT, FISH AND WILDLIFE

February 8, 2019

In reply refer to: E-4

Ms. Jennifer Anders, Chair  
Northwest Power and Conservation Council  
851 SW Sixth Avenue, Suite 1100  
Portland, Oregon 97204

Dear Chair Anders,

The Bonneville Power Administration (Bonneville) appreciates this opportunity to provide comments on the recommendations submitted to the Northwest Power and Conservation Council (Council) for amendments to the Columbia River Basin Fish and Wildlife Program (Program). For your consideration, the enclosures contain Bonneville's comments on those recommendations.

As an initial observation, Bonneville notes that many recommendations offered general support for the 2014 iteration of the Program. In our recommendations last December, Bonneville indicated agreement with the perspective that the existing Program offers a well-established mitigation framework, and one that the region has looked to over nearly 40 years of protection and improvements for fish and wildlife in the Columbia River Basin. Bonneville believes that, when reviewing the recommendations, the Council should carefully consider and narrowly tailor adoption of any further changes or additions to that framework.

The Program provides valuable guidance for fish and wildlife mitigation efforts throughout the region. However, our enclosed comments note that recommendations on certain issues appear to be beyond the intended scope of the Program as established by the Northwest Power Act. With Bonneville's mitigation budget already fully subscribed and in need of some realignment, there would seem to be little need or support for amendments that could not reasonably be expected to be implemented by any of the four agencies governed by the Act's mitigation provisions.

Bonneville's comments also acknowledge that certain recommendations concerning broad, regional matters are not easily confined to the Council's Program alone. Discussions about passage and reintroduction of anadromous fish in blocked areas, for example, would benefit from an organized forum where the entities concerned can work through considerations not only relating to the Program, but also to the necessary congressional authorizations, international implications, private entity responsibilities and other relevant matters. Similarly, recommendations that implicate regional planning processes currently underway, such as the Columbia River System Operations Environmental Impact Statement, should be considered

carefully and any resulting amendments should be flexible enough so as not to impede robust development of future system operations through such processes.

Finally, keeping with one of the themes of our initial recommendation - prioritization within the Program as an essential means to address the challenges of limited funds - Bonneville offers some comments on assessment and research, monitoring and evaluation (RM&E) focused recommendations. In short, Bonneville's comments reflect a concern that the value of data and analysis-based components of the Program can be disproportionately small as compared to the amount of investment, and therefore should be scaled and prioritized more appropriately within the constraints of limited mitigation funds.

Thank you for considering these comments on recommendations to amend the Program. I look forward to further discussion as the Council amends the Program. Please contact Dorie Welch at 503-230-5479 if you have any questions.

Sincerely,



SCOTT G. ARMENTROUT  
Executive Vice President, Environment Fish and Wildlife

3 Enclosures:

Bonneville Comments on Recommendations to Amend to the Council's Fish and Wildlife Program

Memorandum Regarding Recommendations on Grand Coulee/Lake Roosevelt Fall Operations  
2002 Wildlife Credit Letter to Council

**Bonneville Power Administration**  
**Comments on Recommendations to Amend the Council's Fish and Wildlife Program**  
**February 8, 2019**

**Passage and Reintroduction**

Many of the recommendations to the Council support the Program's three-phase approach to passage and reintroduction of anadromous fish above Chief Joseph and Grand Coulee dams. Bonneville appreciates the importance of passage and reintroduction to the region's tribes and other fish and wildlife managers. We helped fund the phase 1 habitat study and we look forward to analyzing the results and discussing what next steps, if any, they warrant Bonneville taking. To help inform that discussion, we offer several points.

- Considerations of anadromous fish passage and reintroduction above Grand Coulee and Chief Joseph dams affect two countries, four states, a dozen tribes, and at least five Executive Branch departments. Long-term solutions will take years to develop and require congressional approval. The scope of the issues raised suggests that the Program may not have the necessary breadth to accommodate the range of considerations necessary for the region to address these issues. Therefore, Bonneville and its federal partners would like to work with the region to identify a forum appropriate for considering the sensitive cultural, political, economic, and legal issues raised by the passage and reintroduction amendment recommendations.
- Financial considerations and related tradeoffs should be discussed and clearly understood before moving forward.
- We need more information about how reintroduction may interact with the existing and future activities of fish and wildlife managers. Clearly many managers in the region support the initiative, but it is unclear how it complements their plans to address northern pike in Lake Roosevelt, system operations already agreed to for fish mitigation purposes, or some of the many other priorities suggested for Bonneville funding in this amendment process.
- Bonneville will look to the Council to evaluate the data and analysis supporting the recommendations for passage and reintroduction above Grand Coulee and Chief Joseph dams. We are interested in understanding the analysis supporting some of the recommendations such as the "initial set of assumptions," "preliminary modeling," and the unsupported affirmations that "prior studies have been reviewed for relevance on this effort."

- Related to bull trout passage at Albeni Falls dam, Bonneville does not believe that the Northwest Power Act is an appropriate source of authority for pursuing passage at Albeni Falls dam, in part because Congress has in the past provided the U.S. Army Corps of Engineers with appropriations to direct to this task.

### **Proposed Deletions of System Operations Provisions from the 2014 Program**

A number of deletions in 2014 Program language regarding Columbia River System operations were recommended. Bonneville suggests that the appropriate time to update the system operations measures in the Program is after the Columbia River System Operations Environmental Impact Statement (CRSO EIS), the most comprehensive analysis of operations in a generation, is done and not before.

As the Council is aware, the Corps of Engineers, Bureau of Reclamation, and Bonneville (Agencies) are two years into a NEPA process examining alternative operations of the Columbia River System. Last month, in response to a Presidential Memorandum issued in October, the Agencies announced that they would accelerate the schedule for completing the CRSO EIS, which is now planned to be completed in September 2020. System operations will also be analyzed in biological opinions issued by NOAA Fisheries and the U.S. Fish and Wildlife Service. The Agencies will update the Fish Passage Plan with the Fish Operation Plan for detailed fish operations through the Technical Management Team and Fish Passage Operations and Maintenance regional forums, and with federal, state, and tribal review and feedback.

Given these ongoing processes, Bonneville discourages the Council from removing and replacing substantial portions of the Program related to hydrosystem operations. The basis for the proposed deletions regarding operations is unclear, and the proposed changes are out of synch with regional planning efforts. To take advantage of the best available science and resource regulators' plans, the Council should postpone a major update of this section of the Program until the ongoing analyses in the CRSO EIS and related ESA consultations are completed.

### **Flexible Spill Operation Agreement**

Bonneville agrees generally with Oregon's recommendation for new Program language regarding flexible spill operations, but would like to provide several clarifications. Any new Program language should track the Flexible Spill Operation Agreement signed in December 2018. The Agencies entered into the agreement to optimize three objectives: (1) to test increasing spring spill operations on the lower Snake and Columbia rivers to benefit juvenile spring fish passage; (2) to manage power costs of fish passage spill

operations at or below 2018 levels; and (3) to ensure that operations are feasible to implement. Annual spring and summer fish passage operations will be developed by the Agencies to encompass this agreement and continue to be coordinated with Regional Implementation Oversight Group, a team of federal, state and tribal entities that oversee policy and technical components of biological opinion implementation. Because the operations in the new agreement will be iterative, and contingent on actions by state regulators, Bonneville recommends limiting the specificity of these operations in the Program.

### **Recommendation for Permanent Changes to Washington and Oregon Water Quality Standards**

One recommendation supported permanent changes to water quality standards to eliminate any forebay Total Dissolved Gas (TDG) standard and allow TDG levels of up to 125% in the tailrace of each dam on the lower Snake and lower Columbia rivers. The Program is meant to guide four federal agencies' fish and wildlife mitigation in the Columbia River Basin, not state water quality regulators, which is what this recommendation would do.

### **Recommendation on Grand Coulee Dam Fall Operations**

The Spokane Tribe recommends late summer and fall operations of Grand Coulee Dam. The presumptive need for these operations—tributary access for spawning kokanee—has now been addressed through culvert replacement and habitat improvement projects. These kokanee operations are expensive and difficult to implement. Bonneville proposes instead the operations described and analyzed in Attachment A.

In the CRSO EIS the Agencies are evaluating increased flexibility in the management of Lake Roosevelt to a minimum elevation of 1283 feet by the end of October, rather than September 30. The analysis will include the effects of altered Grand Coulee operations to fall reservoir levels and include spawning kokanee access. The results of the CRSO EIS may be used to collaboratively pursue experimental operational changes, after the completion of the NEPA process. Bonneville expects that with access to habitat reestablished, the original biological objective of the fall operation at Grand Coulee Dam has been met. Bonneville believes the Council should adopt a more flexible approach to these fall operations, as described in Attachment A, which would save ratepayers money at no cost to fish.

## Wildlife Mitigation

Bonneville and its partners have achieved significant mitigation results through the Wildlife Program. Bonneville believes that it has met or is close to meeting its mitigation responsibilities for construction and inundation (C&I) throughout the basin. We observed that several parties raised crediting issues in their comments, including crediting ratio questions. Bonneville believes its 2002 letter to the Council on the 2:1 ratio analyzed the facts and law underlying this crediting issue, and is attached for reference.<sup>1</sup> Instead of continuing to debate this issue, Bonneville has turned its attention to negotiating agreements, such as the Willamette Wildlife Mitigation Agreement and the recent northern and southern Idaho wildlife agreements, in order to address the remaining C&I mitigation as well as operational impacts mitigation. Through these agreements, the parties relied on acres as the mitigation currency, and Bonneville continues to believe that this is an appropriate approach going forward.

Finally, with respect to operation and maintenance of existing wildlife mitigation, one recommendation suggested that “adequate funding” should be provided and defined as “annual funding approximating that of other tribes and wildlife mitigation projects” under the Program. Maintaining past mitigation investments should be the top priority for the amended Program, as explained in Bonneville’s initial recommendations. However, maintenance funding levels should be tied to the needs of the mitigation asset—not to proportional equity by region, entity, or resource—and then appropriately prioritized within the Program.

## Eulachon

We understand that eulachon are important to many of the fish and wildlife managers. Today, the Cowlitz River comprises a large proportion of the overall Columbia River abundance of eulachon.<sup>2</sup> Bonneville believes the primary threats to eulachon are climate change and ocean fisheries. While dams are also a threat, it has been noted in the Eulachon Forum that eulachon in undammed rivers appear to have the same

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<sup>1</sup> In addition, with regard to the additional wildlife mitigation recommended for Grand Coulee and Albeni Falls dams, Bonneville believes those issues were reevaluated and put to rest in the Regional HEP Team’s 2015 Final Assessment and Analysis Upper Columbia Subregion, Table 5 page 7 (for Grand Coulee), and Figure 2, page 19; Attachment I, Habitat Unit Stacking White Paper at 72-73 (for Albeni Falls). <http://www.streamnet.org/wp-content/uploads/2015/11/Upper-Columbia-HEP-Discussion-Final-20150428.pdf>. See also Bonneville, Administrator’s Record of Decision for the Northern Idaho Wildlife Agreement, <https://www.bpa.gov/news/pubs/RecordsofDecision/rod-20180829-Northern-Idaho-Wildlife-Habitat-Stewardship-and-Restoration-MOA-Agreement.pdf>.

<sup>2</sup> Council, Summary of the NPCC’s State of the Science and Science to Policy Forum (Oct. 2015) Section 7.4 of Council report.

temporal variation as those in the Columbia River. For example, the Forum recommended that “[s]imilarities and differences between Columbia and Fraser river trends should be evaluated further to inform overall dam effects.”<sup>3</sup> Bonneville believes that this would be fiscally prudent as extreme variations in eulachon returns date to the 1800s before any dams existed on the Columbia, and temporal variations between Canadian and American populations of eulachon have not been correlated with federal hydroelectric development in the Columbia River Basin.

### **Southern Resident Killer Whales**

The Council received a recommendation calling for amendments to address the needs of the endangered Southern Resident Killer Whales and one supporting the recovery of Southern Resident Killer Whales including “the propagation of salmon stocks essential for Southern Resident Killer Whale Diet. . . .” The section of the Northwest Power Act pertaining to fish and wildlife mitigation is, however, “applicable solely to fish and wildlife, including related spawning grounds and habitat, located on the Columbia River and its tributaries.”<sup>4</sup> Consequently, mitigation specifically for whales would appear to extend beyond the authorized scope of the Program. That said, Bonneville understands the importance of Southern Resident Killer Whales to the region and will be engaged in various Washington processes related to the state’s Orca task-force. Likewise, while it does not seem appropriate for the Program to focus directly on whales, we do believe that the Program provides many indirect benefits for them that result from efforts to improve Chinook productivity.

### **Recovery Plans**

Some recommendations are framed in terms of “recovery” or “recovery goals.” Recovery plans broadly address the adverse effects on listed species from many sources, not just hydroelectric dams. To the extent recovery plans provide guidance for mitigating hydroelectric dams in the region, Federal regulators and action agencies currently incorporate appropriate elements from the plans into ESA compliance documents. Recovery goals, however, apply to all sources of mortality limiting a listed species—and to the region as a whole, not just the hydroelectric dams covered by the Northwest Power Act. “Recovery” arises distinctly and uniquely as a goal of the ESA. The Program should be carefully drafted to avoid conflating the broad goals of the ESA with Northwest Power Act requirements.

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<sup>3</sup> Council, Summary of the NPCC’s State of the Science and Science to Policy Forum (Oct. 2015) Section 7.4 of Council report.

<sup>4</sup> 16 U.S.C. § 839b(h)(1)(B).

## **Toxics Contamination**

The recommendations calling for Bonneville to fund new toxics research and remediation appear to misplace the responsibility for addressing toxics. Many of the toxics studies recommended are needed, but they generally seek to address fundamental scientific questions that in many cases arise outside the existence or operation of the Columbia River System dams. The 2014 Program provisions regarding toxics struggled in places with what is an appropriate role for a power marketing agency. Revisiting those provisions would help clarify how toxic contaminants are addressed in the Program.

## **Invasive and Aquatic Invasive Species**

The Council once again received numerous requests to direct Bonneville to fund initiatives related to the environmental problems posed by invasive species such as zebra and quagga mussels. In the 2014 Program, the Council appropriately addressed such requests and should do so similarly in this amendment process. In particular, the “Regional Recommendation” portion of the invasive species section of the 2014 Program reflects both the seriousness of the invasive species problem and the regional nature of the available solutions. With the release of Bonneville’s updated strategic direction indicating that we will meet future fish and wildlife mitigation expenditures at or below the rate of inflation, it is important that the Council maintain a similar position that regional problems should have regional solutions. In addition, Bonneville notes that while zebra and quagga mussel prevention has not been funded as part of the Council’s Program, Bonneville’s power business line and technology and innovation group have funded prevention efforts and research related to early detection and response.

## **Predation**

Several entities recommended that a common metric be developed to measure the effects on salmonids of predation by fish, birds, and marine mammals. Bonneville generally supports the goal of a common method to measure the impacts of predation on salmonids. However, some of these recommendations advocated for equivalence metrics, including adult equivalents analysis. Bonneville has concerns about assumptions and cost-effectiveness associated with the development of an adult equivalency metric.

There were also recommendations calling on funding for assessments of predator control effectiveness. While such assessments could potentially provide a measure of

insight maximizing the return-on-investment for predator control actions, for a resource management issue such as this, Bonneville suggests looking to the resource managers' expertise to identify and guide the correct predation control actions.

Finally, the need to address predation by sea lions was a common theme across several recommendations. Such recommendations called for federal action agency support of Marine Mammal Protection Act section 120 permits for lethal removal, as well as expansion of sea lion control from Bonneville Dam to elsewhere in the basin where impacts occur. Bonneville does not question the benefit of controlling sea lion predation for adult salmonids and is supportive of most measures that increase adult survival. There is an on-going conversation about the role of Bonneville within this process, but generally Bonneville believes that sea lion predation control is a wildlife management responsibility that appropriately falls to the resource managers.

### **Research, Monitoring, and Evaluation**

Several recommendations proposing new research, monitoring, and evaluation (RM&E) measures raise related issues. Whether the recommendation is to evaluate progress toward escapement goals, establish a quantitative baseline for measuring progress in restoring fish populations, fund viable salmonid population (VSP) monitoring, develop a juvenile salmonid recruits-per-spawner metric, or fund status and trend monitoring similar issues are in play.

Underlying these recommendations is a common need: the region must advance the use of data exchange standards with coordinated assessments so that mitigation entities and regulatory agencies can compile and analyze collected data. To fulfill this need, all data collected must be shared publicly, in its entirety, and be accessible in data repositories. Only in this way can resource managers and policy leaders make decisions based on the most accurate and up to date information. For example, evaluating escapement levels or VSP parameters is difficult if not impossible to do with incomplete data sets and in the absence of established data exchange standards. The region urgently needs resource managers and regulators to agree on what data sets establish the common base of analysis for coordinated assessment of Program performance indicators.

All of the RM&E recommendations were for additional measures; none were for prioritizing, reducing, or eliminating ongoing RM&E activities despite a broad awareness of funding constraints and a failure to analyze or report on much of the collected data. This calls the question: what are the Council's Program priorities? Bonneville believes the overarching priority is for RM&E related to Columbia River

System operations—after all, Congress expected that the Act’s anadromous fish purposes could be substantially obtainable from the management and operation of the mainstem river system. In addition, the recently executed flexible spill operation agreement indicates that additional RM&E may be desirable to monitor effects of the altered spill operation. As the agreement states, any Bonneville funding for such research would need to come from within Bonneville’s existing fish and wildlife budget.

Many recommendations did not offer current context or explain how their RM&E proposals fit within the ongoing efforts under the Program. For example, the ongoing Fish In/Fish Out monitoring that Bonneville currently supports already provides funding for components of VSP monitoring and could be used in a summary of information on anadromous fish or for developing habitat effectiveness metrics. Bonneville currently supports anadromous fish monitoring of at least one ESA-listed population per Major Population Group for each ESU/DPS throughout the interior Columbia River Basin. In addition, Bonneville, the Council, and NOAA Fisheries are working with co-managers on a basin-wide Habitat RM&E strategy that will provide valuable guidance for habitat status and trend monitoring recommended for the Program. Until these extensive ongoing efforts are fully coordinated with resource managers and they are using common data exchange standards and reported data, Bonneville is unsure of the benefit of expanded data collection efforts.

With regard to several specific RM&E recommendations, Bonneville offers a few detailed comments.

- Some recommendations go beyond what can reasonably be viewed as a hydroelectric system manager responsibility. Summarizing all information on anadromous fish by subbasin, sub-watershed, and specific life-state would be an encyclopedic undertaking with no clear nexus to Bonneville’s responsibilities.
- One recommendation discusses new research regarding coast-wide comparison of SARs and stock-specific productivity. Bonneville believes that this new research and the issues raised by the ISAB regarding SARs should be considered as the Council reviews this element of its Program.
- The adequacy of VSP monitoring and status and trend monitoring are dependent on resource managers providing the data they collect in a timely and reliable fashion. Escapement goals and habitat effectiveness metrics cannot be developed without this information. The Program does not need more measures for additional RM&E—it needs a commitment to data exchange standards and data access via a regional coordinated assessment process. RM&E funding needs to be focused on obtaining information that translates into on-the-ground management actions for physical or biological benefits. Funding millions of

dollars to collect data that is not analyzed or reported simply does not fit within that sound business construct.

- Several entities wanted additional funding for data stewards within each agency and tribe. The importance of highly skilled technical analysts is irrefutable. As such, Bonneville already provides considerable funding to support this capacity for the states and tribes, for example through CRITFC and PSMFC, but also asks biologists to adopt data exchange standards—which can streamline and make data analysis easier—and not rely on data stewards alone.
- Bonneville supports the need to document project relationships and roles to essential functions that support the adaptive management portion of the Program; however, we cannot support the recommendations that specific projects be newly identified as permanent contractors in the Program. Establishing measures is the Council’s business, contracting to mitigate consistent with that guidance is Bonneville’s job. Through regional collaboration, these relationships and roles can be documented and mapped in proposals or through the Council’s Regional Coordination forums with subsequent Council endorsement and Bonneville support.
- Bonneville shares the concern expressed in many recommendations regarding cold water refugia in the mainstem. The Environmental Protection Agency is already working with state agencies surveying cold water refugia and is working on a report to be issued this year.<sup>5</sup>
- Before adopting a recommendation for new stock assessments, status and trend monitoring, subbasin plan revisions, or other resource surveys Bonneville asks the Council to consider two key questions.
  1. Can the assessment be scaled to isolate hydroelectric dam impacts from impacts caused by other factors?
  2. If Bonneville does not increase its mitigation budget, how will additional analysis advance Program objectives if the recommended measures are not prioritized?

## **Tributary Habitat**

Bonneville supports the recommendation that the Program move from opportunistic tributary habitat actions to more strategic implementation and target new work based on geography reflecting the limiting factors and biological needs to be addressed. These recommendations anticipate the Council’s ongoing work to develop

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<sup>5</sup> See <https://www.epa.gov/columbiariver/columbia-river-cold-water-refuges>.

strategy and criteria for habitat projects as part of the 2020 Habitat Geographic Review.

As observed in NOAA’s and Bonneville’s recommendations, going forward the Program needs to be more strategic—the specific life history requirements of target species, especially threatened and endangered species, remain essential elements in shaping the overall strategy for approaching tributary habitat improvements. To be more strategic, all projects should be reviewed and prioritized on the basis of how sponsors answer three questions: where to work, what to do, and when to do it? The *ATLAS* process, which Bonneville has successfully implemented with its partners in several parts of the basin, is a cornerstone of this strategic conservation approach. With this approach, the Program can have a more integrated framework and adaptively manage conservation priorities in light of accomplishments and new research findings and matters such as climate change.

### **Climate Change and Program Planning**

The Council has appropriately acknowledged “that global climate change is not directly caused by the Federal Columbia River Power System.”<sup>6</sup> Indeed, the Columbia River System dams are not a significant contributor to climate change and hydropower does not produce greenhouse gases. Bonneville’s fish and wildlife mitigation nevertheless helps limit the impacts of climate change in the region. The habitat protection and enhancement actions that ratepayers have funded for decades, such as creation of riparian buffers, managing water withdrawals to increase tributary flows, and restoring and connecting wetlands and floodplains to store water, help limit the adverse effects of increasing temperatures and increase species resilience in the face of climate change.<sup>7</sup> Some recommendations relating to climate change, however, attempt to avoid the substantive legal parameters established in section 4 of the Northwest Power Act for the Program beginning with its scope: it is to mitigate the impacts of hydroelectric projects on fish and wildlife. Going forward, it is important that any specific recommendations regarding climate change have a nexus to the adverse effects the region’s hydroelectric dams have had on fish and wildlife.

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<sup>6</sup> 2009 Program at pages 7-8, 51-52.

<sup>7</sup> Independent Science Advisory Board, *Climate Change Impacts on Columbia River Basin Fish and Wildlife* at pages vii, 85-89, 95-96, (May 11, 2007) <http://www.nwcouncil.org/fw/isab/isab2007-2/>.

## Deference to Resource Managers

The Council was advised in many of the recommendations to defer to the wishes of the region's fish and wildlife managers. The basis for this deference is established in section 4(h)(7) of the Northwest Power Act. Bonneville understands the deference provision as the Council itself described it in its definitive statement on the issue in its Response to Comments for the 1994 Program, Appendix F.<sup>8</sup> Congress limited the applicability of this deference provision. A recommendation to amend the Program must first clear the threshold for possible inclusion in the Program by meeting the substantive criteria in sections 4(h)(3), (5), and (6). If the recommendation meets these criteria and is inconsistent with one or more other recommendations, only then should the Council give due weight to the expertise of resource management agencies and tribes.

In addition to the matter of the Council's deference to resource managers, several recommendations suggested the Program should include provisions calling on Bonneville to defer to the resource managers implementing Bonneville-funded projects. In practice, Bonneville does look to the expertise of the resource managers to inform development and implementation of projects. However, Bonneville also has an independent responsibility as a federal agency operating under sound business principles to ensure its compliance with federal law, including legal fish and wildlife responsibilities under the Northwest Power Act and the Endangered Species Act. We accomplish this using federal contracting practices to ensure that the mitigation being funded yields the legal compliance and biological benefits that Bonneville is expecting to achieve. Bonneville cannot, however, abdicate its legal responsibilities through wholesale deference to the resource managers, and no provision of the Northwest Power Act suggests that it would be appropriate to do so.

### Projects as "measures"

Several recommendations suggested that a project sponsor's full suite of projects be adopted as "measures" in the Program. Bonneville finds this to be overly prescriptive. While it is true that certain specific projects might be appropriate measures under the Program, Bonneville believes that projects should generally be considered as implementation tools for measures, not measures themselves. For example, several unique projects may support a single measure or biological objective in the Program. Thus, while Bonneville does not, as a general matter, take exception to sponsors' advocacy for their specific projects, Bonneville does not believe that each of those

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<sup>8</sup> Council, Fish and Wildlife Program, Appendix F: Response to Comments pages F6-F8 (Dec. 1994) [https://www.nwcouncil.org/sites/default/files/apdxf\\_0.pdf](https://www.nwcouncil.org/sites/default/files/apdxf_0.pdf).

projects should be considered a measure under the Program without ensuring that recommendations for specific projects adhere to the elements of sections 4(h)(3), (5), and (6) of the Act.

Similarly, some recommendations called for the Program to incorporate the specific plans of certain entities' natural resource or fish and wildlife departments. While the Northwest Power Act instructs the Council to include Program measures that complement existing and future activities of resource managers, it is unclear how wholesale adoption of entity-specific plans would satisfy the statutory criteria of the Act, such as ensuring that recommendations are based on the best available science, and using the least cost alternative when equally effective means of achieving a sound biological objective are available.

### **Implementation of Bonneville's Fish & Wildlife Program**

Some parties asked for the Program to clarify of Bonneville's relationships with states and tribes contracted to perform mitigation work. These kinds of requests are outside the scope of the amendment process and making them part of that process would interfere with Bonneville's independent responsibility to implement mitigation. Likewise, a related recommendation suggested that the Council should review any modification to funding levels in Bonneville contracts. Bonneville will continue to ensure open communication with the Council about funding decisions, but the Council does not have a statutory contracting or funding oversight role.

### **Analysis of an Adequate, Efficient, Economical, and Reliable Power Supply**

The Council received one recommendation besides Bonneville's regarding the required analysis of whether the Program is consistent with the Act's purpose of assuring the Pacific Northwest region an adequate, efficient, economical, and reliable power supply (AEERPS). Unfortunately, the recommendation misses the statutory mark for consideration in several ways. It encourages the Council to become something that it was never intended to be. Congress did not direct the Council to develop and amend the Program by using the AEERPS analysis as an independent source of new measures that are not based on the recommendations it receives from fish and wildlife resource managers, Bonneville, utility customers, and the public. The recommendation also encourages application of the AEERPS analysis to individual proposals, such as spill

and dam removal. The AEERPS analysis of section 4(h)(5), however, goes to the Program as a whole and not its individual components.<sup>9</sup>

Finally, the recommendation suggests that the analysis be used to “describe the opportunities to mitigate power generation impacts” instead of testing whether the proposed amendments would be consistent with the power purposes of the Act. This argument has been heard before. The Ninth Circuit recently found there’s no merit in the suggestion that the Council must “undertake any and every environmental mitigation step until such point as the region’s economical and reliable power supply is threatened.”<sup>10</sup>

### **Recommendations Conflicting with the In Lieu Funding Prohibition**

Several recommendations called for Bonneville to fund actions that are authorized or required of other entities, thus setting up a conflict with the Act’s in lieu funding prohibition. For example, a number of habitat managers sought a new Program mandate for Bonneville to fund fencing and noxious weed control, yet they noted that these actions are the legal responsibility of land owners. It is important that each amendment be gauged by the principles the Act says the Council shall consider, in particular that consumers of electric power should pay only the costs to mitigate adverse impacts caused by the development and operation of hydroelectric power facilities.

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<sup>9</sup> Economic analysis of proposed individual measures is supposed to occur under section 4(h)(6)(C): when two equally effective measures are meant to achieve the same sound biological objective the Council should adopt the alternative with the least cost.

<sup>10</sup> *Nw. Res. Info. Ctr. v. Nw. Power & Conservation Council*, No. 15-71482 (9th Cir. Jul. 19, 2017).

## **Attachment A**

### **Bonneville Power Administration**

#### **Memorandum Regarding Recommendations on Grand Coulee/Lake Roosevelt Fall Operations**

**February 2019**

Beginning with the 1995 NOAA Fisheries FCRPS Biological Opinion, the Bureau of Reclamation committed to draft Grand Coulee Reservoir (Lake Roosevelt) to 1280 feet by the end of August to support ESA-listed species. In NOAA's 2000 FCRPS Biological Opinion, it added a recommendation to draft to 1278 feet by the end of August in average or below water years. In the 2003 Mainstem amendments, the Council recommended that "from September through December, [reservoir managers should] attempt to maintain a minimum elevation of 1283 feet to maximize water retention times and protect kokanee access and spawning."<sup>1</sup> The Action Agencies subsequently incorporated a minimum reservoir elevation of 1283 feet by the end of September and maintenance of that elevation as a minimum through October, in operations and planning, for kokanee to spawn in Barnaby Creek and aid in the collection of brood stock.

Through the resident fish mitigation programs of the Colville and Spokane tribes, Bonneville and Reclamation facilitated replacement of a culvert in July 2011 which improved access to Barnaby Creek.<sup>2</sup> The perched culvert was removed and replaced with two culverts which allow fish passage down to elevation 1,256.5 feet along with surface passage to migrating fish. (See Appendix A.) The culvert replacement mitigated the need for Grand Coulee Reservoir to be at or above elevation 1283 feet on September 30 for kokanee access and spawning in Barnaby Creek. (See bathymetric data from Reclamation in Appendix A that show no significant impact to fish access to tributaries.) This flexibility would result in a shift in refill timing but overall flow volume is unchanged between August 31 and November 1. The impact of simulated residence time indicates a small shift from September to October when the end of September refill is relaxed. (See Appendix B.)

Although fish can now swim freely through the culvert and enter the creek down to elevation 1257 feet, the Colville and the Spokane tribes have expressed concerns that the proposed change in operations could potentially impact redband trout, potential shoreline spawning, and also increase cultural site exposure.

In addition, with the change in operations to draft deeper than 1280 feet, Reclamation and Bonneville face increasing difficulty in filling Grand Coulee during September to 1283 feet.

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<sup>1</sup> Council, 2003 Mainstem Amendments at (pages 26 and 27).

<sup>2</sup> Chief Joseph Kokanee Habitat Enhancement Project #1995-011-00.

This is particularly evident in years when the draft to 1278 feet is called for by the Biological Opinion, and even more with the implementation of the Lake Roosevelt Incremental Storage Release Project.<sup>3</sup> This coupled with the recent trend towards drier summers and lower natural runoff has made filling Grand Coulee Reservoir during September more costly. With the reduced flows below Grand Coulee Dam resulting from filling the reservoir in September, Bonneville has to purchase additional power to meet load or not make sales when prices spike. In September 2018, purchases in the short-term markets were driven by the need to fill Grand Coulee Reservoir during a time when prices spiked due to disruption in a gas supply pipeline. Had Bonneville been able to spread the fill until the end of October with the proposed operational flexibility, Bonneville would have been better able to respond to changes in market and stream flow conditions and minimize costs associated with price spikes.

To spread impacts over a longer period, Bonneville recommends the 2019 Program include provisions supporting an experiment to operate with greater flexibility to manage the Lake Roosevelt to a minimum elevation of 1283 feet by the end of October rather than September 30.

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<sup>3</sup> Washington State Legislation bill the Columbia River Water Management Act.

## Appendix A: Culvert Replacement Photos and Bathymetric data from Lake Roosevelt



Figure 1: Photograph depicting the original Barnaby Creek culvert perched above the lake surface in 2008 (Barnaby Creek Culvert Replacement Project, 2012, p. 6)



Figure 2: Installation of the 12 ft. surface culvert with lake surface elevation at the outlet toe of 22 ft. culvert (Barnaby Creek Culvert Replacement Project, 2012, p. 13)



Barnaby Creek  
Lake Roosevelt, WA

0 50 100 200 Meters

RECLAMATION  
Managing Water in the West



Columbia River near Northpoint  
Lake Roosevelt, WA

0 25 50 100 Meters

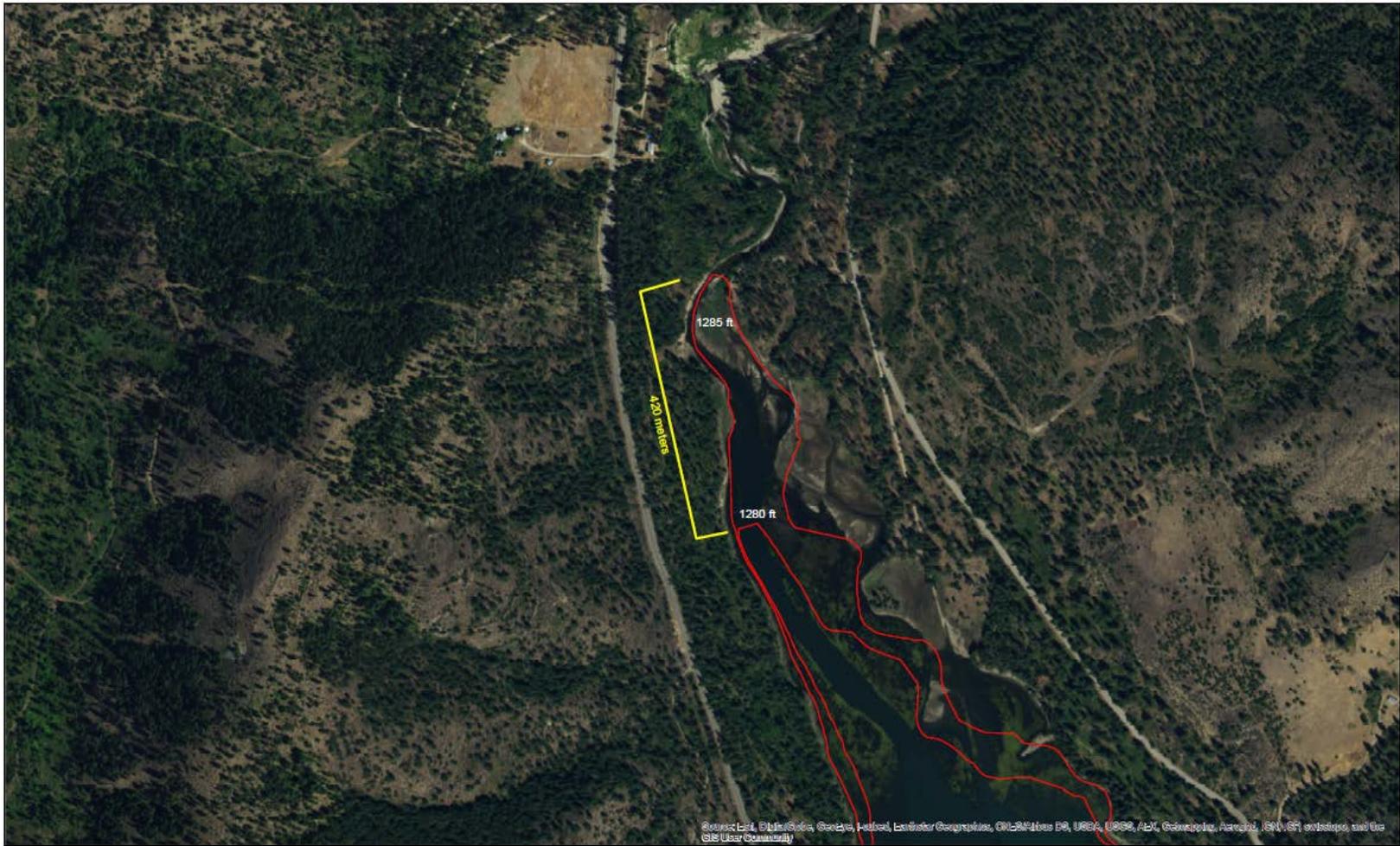
**RECLAMATION**  
Managing Water in the West



Sand Creek in Spokane Arm  
Lake Roosevelt, WA

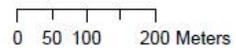
© 5 10 2010

RECLAMATION  
Managing Water in the West



Source: Esri, DigitalGlobe, GeoEye, AeroVista, CNES, Airphoto, IGN, USA, USGS, AeroGRID, IGN, SRT, and the GIS User Community

Sanpoil Creek  
Lake Roosevelt, WA



**RECLAMATION**  
Managing Water in the West



Manila Creek in Sanpoil  
Lake Roosevelt, WA

0 50 100 200 Meters

**RECLAMATION**  
*Managing Water in the West*





Nez Perce Creek  
Lake Roosevelt, WA

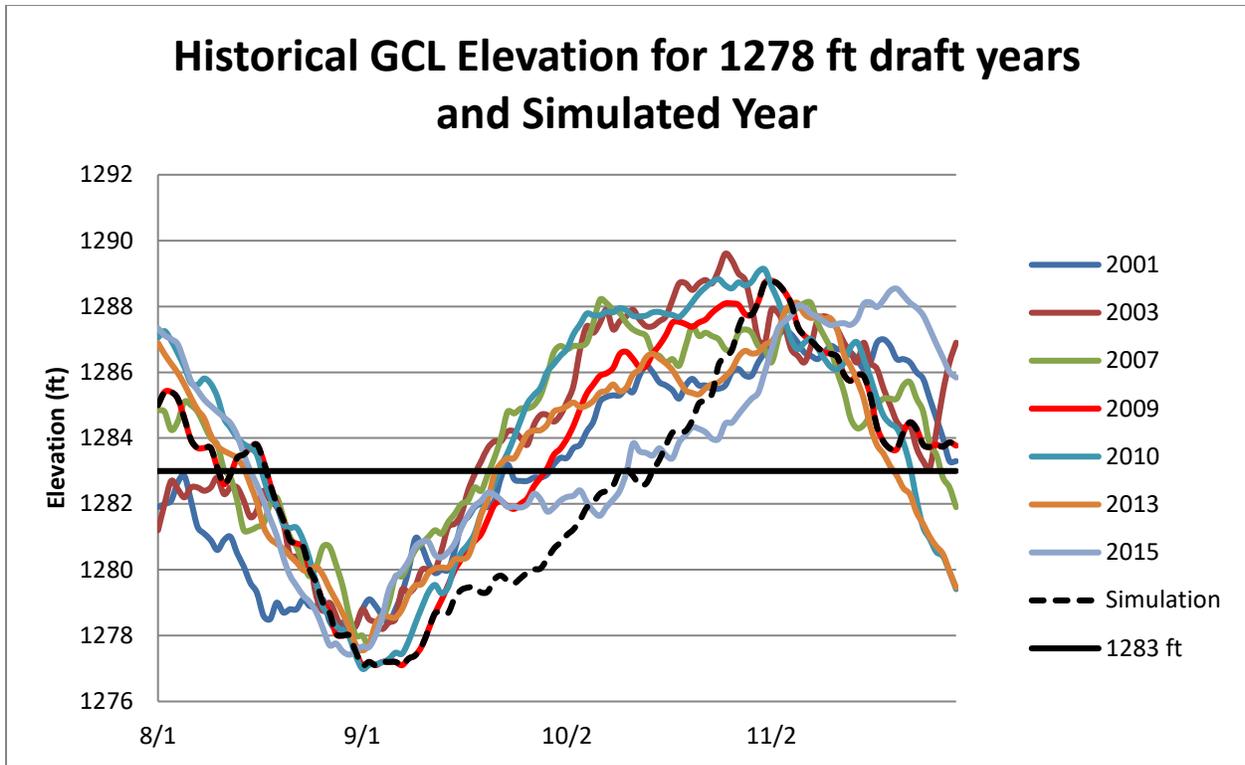
0 25 50 100 Meters

**RECLAMATION**  
Managing Water in the West

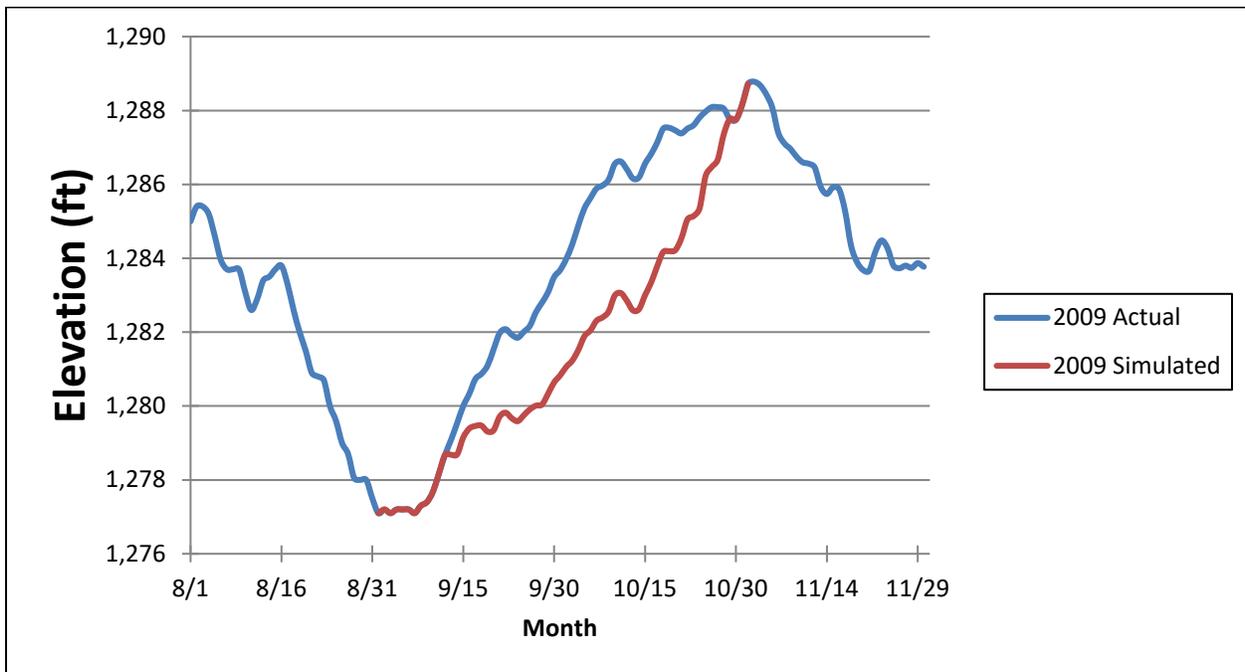
## **Appendix B: Simulated Residence Time of Water in Lake Roosevelt**

Bonneville and Reclamation are proposing to test additional operational flexibility at Lake Roosevelt to achieve 1,283 feet elevation by October 31. This flexibility would result in a shift in refill timing but overall volume is unchanged between August 31 and November 1. Two different water years were selected to simulate an alternative Grand Coulee operation. The years 2009 and 2014 were selected because they both met the 1,283 feet elevation objective at the end of September and not prior. The year 2009 was selected due to Biological Opinion guidance which called for an August 31 draft below 1,278 feet and 2014 was a year where Lake Roosevelt was drafted to 1,280 feet elevation.

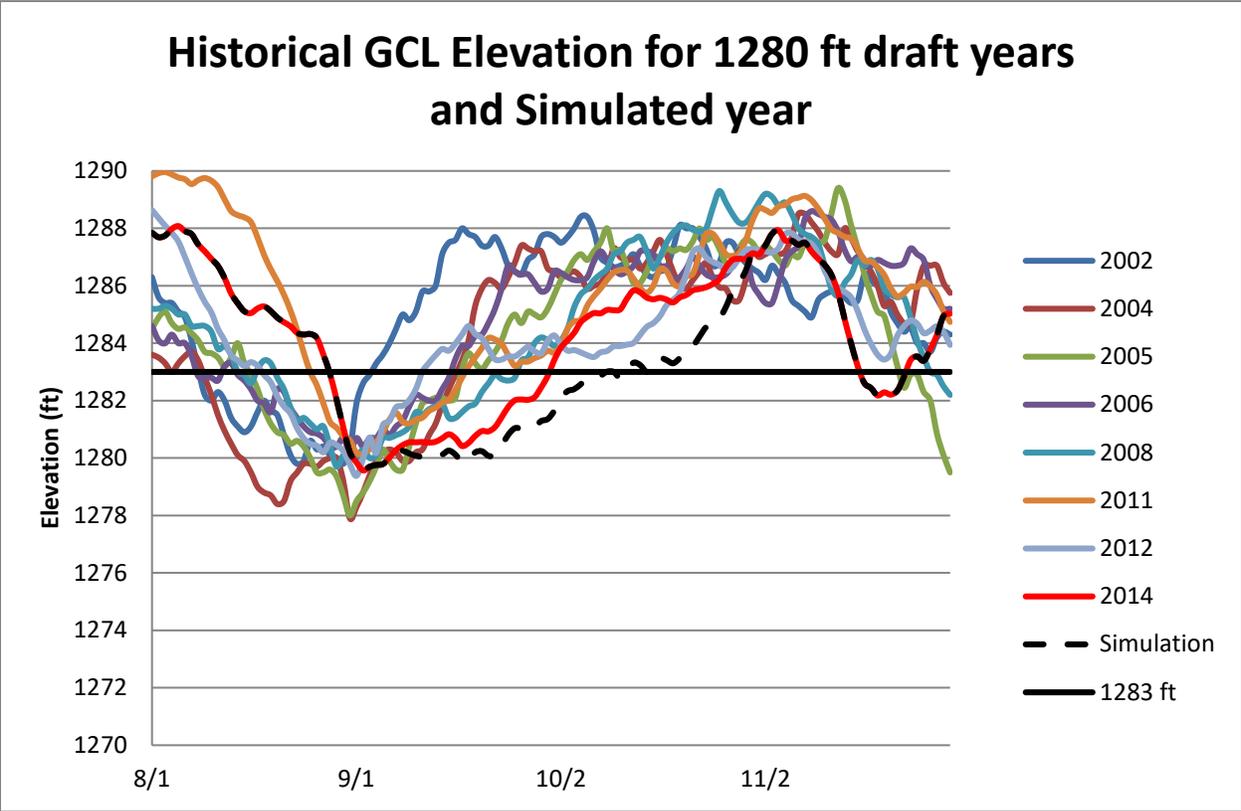
The simulation was defined to achieve the following: achieve a Lake Roosevelt elevation of 1,283 feet after September 30 and prior to October 31; match actual year elevation by November 1 for downstream flow requirements; show the impact on Grand Coulee and Bonneville flows; smooth out flows early September in the Lower Columbia; and calculate impacts to residence time at Lake Roosevelt. For 2009 simulation between September 13 and October 15, daily average flows at Bonneville that were below 85 kcfs were raised to between 87 and 89 kcfs by slowing the refill of Grand Coulee Reservoir. Between October 16 and November 1, daily average flows at Bonneville that were above 95 kcfs were lowered to between 85 and 88 kcfs by increasing refill of Grand Coulee Reservoir.



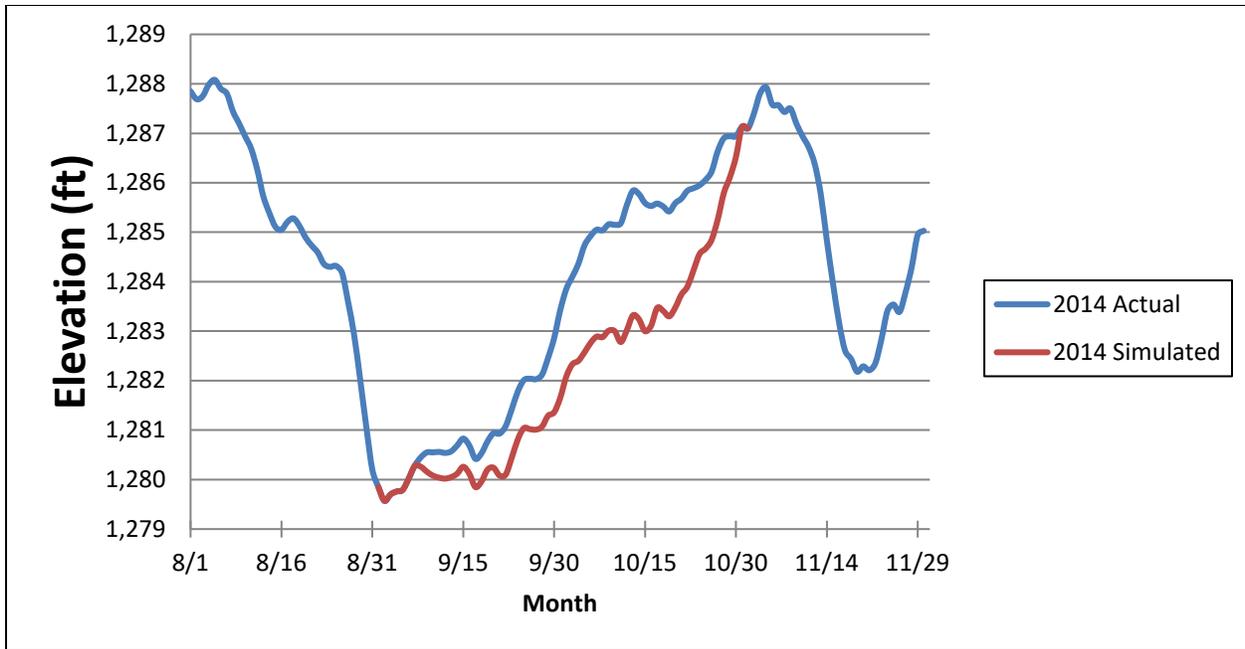
**Figure 1:** Historical years where Biological Opinion thresholds were met to require Lake Roosevelt to draft below 1,278’ and the simulated changes to 2009 shown as a dashed black line.



**Figure 2:** Lake Roosevelt elevations during 2009 are shown in blue with red showing the elevation results of the simulated 2009 operation that does not fill to 1,283 feet by September 30.



**Figure 3:** Historical years where Biological Opinion thresholds were met to require Lake Roosevelt to draft below 1,280 feet and the simulated changes to 2014 shown as a dashed black line.



**Figure 4:** Lake Roosevelt elevations during 2014 are shown in blue with red showing the elevation results of the simulated 2014 operation that does not fill to 1,283 feet by September 30.

**Table 1:** Residence time was calculated on a monthly time-step, using the storage difference over the month, with the average discharge through the month. Modeling results indicate a shift of resident time from September to October when the end of September refill elevation is relaxed.

Example Year	Lake Roosevelt End of August Draft Point (feet)	Lake Roosevelt End of September Elevation (feet)	Date when Lake Roosevelt Elevation exceeded 1283 feet.	Lake Roosevelt Residence Time in September (days)	Lake Roosevelt Residence Time in October (days)	Lake Roosevelt End of October Elevation (feet)
2009 (dry)	1277.1	1283.5	Sep 29	81	75	1288.1
2009 with adjusted end of September Refill	1277.1	1280.6	Oct 15	79	83	1288.1
2014 (wet)	1279.85	1282.9	Sep 30	68	65	1287.1
2014 with Adjusted End of September Refill	1279.85	1281.4	Oct 9	67	68	1287.1

## Department of Energy

Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208-3621

EXECUTIVE OFFICE

March 5, 2002

In reply refer to: A-7

Mr. Larry Cassidy, Chairman  
Northwest Power Planning Council  
851 SW Sixth Avenue, Suite 1100  
Portland, OR 97204

Dear Mr. Cassidy:

I understand the Northwest Power Planning Council (Council) and regional wildlife managers seek a response from the Bonneville Power Administration (Bonneville) regarding how we intend to credit wildlife mitigation actions attributable to the Federal Columbia River Power System (FCRPS) in light of the wildlife crediting provisions in the Council's 2000 Fish and Wildlife Program. I am pleased to reaffirm that Bonneville generally agrees with the Council findings on crediting with limited exceptions as noted below. Following the Council's recommendation, Bonneville will address assessments for operational losses through the subbasin planning process. Bonneville will continue to fulfill its obligations for fish and wildlife mitigation within the current \$150 million expense and \$36 million capital annual fish and wildlife Program target budget without further increasing direct wildlife expenditures at this time. It is particularly important that in apportioning investments of Bonneville funds, emphasis be placed on meeting Endangered Species Act requirements for the FCRPS while maintaining reasonable levels of investment in the broader Program goals.

Our primary point of divergence concerns the program language adopting a 2:1 ratio for crediting any land acquisitions made by Bonneville to satisfy the remaining mitigation for hydro-system construction impacts. In addition, Bonneville does not agree that annualized, secondary, and cumulative impacts are a ratepayer obligation. With these exceptions, I believe the Council's and Bonneville's approaches to crediting are consistent.

Bonneville has invested over \$145 million for wildlife mitigation since 1983 and has acquired and enhanced habitat that offsets 43% of the habitat losses identified in the Program's loss assessments. When wildlife benefits prior to passage of the Act and the tens of thousands of acres of wildlife habitat resulting from fish mitigation projects are counted, Bonneville expects to be over half way toward its wildlife mitigation goal—exceeding the Council's initial goal of 35% mitigation by 2001.

Bonneville has maintained a 1:1 crediting policy for more than a decade, starting in 1989 with the Montana Wildlife Mitigation Agreement and continuing with the 2000 Oregon Wildlife Mitigation Agreements. Bonneville and the regional wildlife managers have documented through contract terms, support for Bonneville taking 1:1 credit for habitat acquisitions and enhancements. In October 2001, Bonneville informed the regional wildlife managers by letter that we planned to continue implementing projects that mitigate the wildlife losses for construction and inundation attributable to the FCRPS and document crediting for this work at the 1:1 level.

With the recent Findings on Recommendations, the Council acknowledges that “reasonable” arguments may be made for various crediting ratios—including a 1:1 ratio. There is also recognition that unannualized loss statements are within the range of “legitimate” ways to conceptualize the losses. Moreover, looking only at a 1:1 crediting ratio underestimates the value Bonneville brings to its wildlife mitigation efforts beyond merely acquiring and enhancing habitat. These other kinds of value include the following:

- Using its discretion to recoup the non-power share of mitigation costs with section 4(h)(10)(C) authorities; Bonneville mitigates wildlife on a system-wide basis—even where the power share of a project is nominal. This expedites mitigation for dams where wildlife needs have not been addressed through appropriations for decades.
- Bonneville typically funds ongoing operations and maintenance.
- Acquisitions are protected for wildlife habitat in perpetuity, not just for a term of years or the life of the hydro projects.
- Bonneville usually secures high quality and at-risk habitats, not degraded habitats.
- Bonneville allows state and tribal wildlife managers to recommend which habitats to acquire and then to own them.
- Bonneville mitigates at a higher rate than Congress or the Federal Energy Regulatory Commission specify for other hydroelectric projects in the Columbia Basin.

In addition, we note that fish projects with wildlife habitat benefits, most enhancement actions, and pre-Act mitigation have not yet been included in the tallies of completed mitigation.

Congress did not specify exactly how much mitigation it wanted Bonneville to complete under the Act. The Act’s legislative history recognized most past impacts could not be corrected and that the power developments should not be undone. This general guidance leaves Bonneville broad discretion for interpreting and implementing sections 4(h)(10)(A) and 4(h)(11)(A)(i). The Council has accepted mitigation done to date at a 1:1 crediting ratio as have those wildlife managers who have contracted to do that mitigation. There is no guidance on the question of whether 2:1 crediting is an equally effective means of achieving the same sound biological objective at a cost less than that of 1:1 crediting, or any indication of how much lowering the crediting ratio to 2:1 would raise BPA’s costs.

For these reasons, and those discussed in greater detail in the legal opinion (enclosure), I strongly believe that Bonneville's funding of wildlife mitigation at existing budget levels, and taking 1:1 credit for acquisition and enhancement actions, is reasonable and consistent with the wildlife mitigation goals of the Program.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen J. Wright". The signature is written in a cursive, flowing style with some loops and flourishes.

Stephen J. Wright  
Administrator and  
Chief Executive Officer

Enclosure

cc:

Mr. Doug Marker, Fish and Wildlife Director, Northwest Power Planning Council  
Ms. Jann Eckman, Acting Director, Columbia Basin Fish and Wildlife Authority

## **Crediting Wildlife Habitat Projects Introduction**

For over a decade the Northwest Power Planning Council has tried to facilitate Regional agreement for how to quantify the impacts of the Federal Columbia River Power System (FCRPS) to wildlife and the means of crediting the BPA's efforts to mitigate those impacts. In the early years of the Columbia River Basin Fish and Wildlife Program, all parties agreed to quantify the construction impacts through project-by-project loss assessments based on habitat units. The Council amended those assessments into the Program in its 1989 Wildlife Rule, and BPA accepted them with few reservations.<sup>1</sup> Regional agreement on how to credit BPA's mitigation efforts, however, was not reached.

Mitigation proceeded with no universal acceptance of the extent of BPA's obligation or how to credit its mitigation. Through its mitigation contracts and comments to the Council, BPA attempted to clarify that it had adopted a 1:1 crediting policy: for every unit of habitat protected or improved, BPA took one unit of mitigation credit. Despite these efforts, through the year 2000 amendment process the Council adopted a position on crediting largely in response to regional wildlife managers' opposition to BPA's policy.

The Council's new mitigation rule has several elements. BPA generally agrees with the rule except for the adoption of 2:1 crediting methodology for future acquisitions and the inclusion of annualized and secondary impacts as part of BPA's obligation.<sup>2</sup> That the Council accepts completed acquisitions at a 1:1 ratio shows how close we are to sharing a single view of crediting. In addition, we both agree that enhancement measures should receive 1:1 credit and that operational impacts will be covered by the subbasin planning process now underway. While BPA believes it has always implemented its mitigation duties consistently with the biological objectives of the Program, strong legal and policy reasons prevent BPA from accepting the Council's recommendation for a 2:1 crediting ratio for the remaining construction impacts.

This enclosure elaborates on the origins of BPA's crediting policy and why it cannot follow all of the Council's new crediting recommendations. Interwoven throughout this enclosure are also the facts that show it would be futile for BPA to engage in another administrative process to re-establish its crediting policy. BPA has announced its position openly and consistently for years through public statements, comments to the Council, and contracts with wildlife managers. Consequently, while at times BPA has discussed the possibility of undertaking its own rulemaking or other administrative process to address crediting issues, there seems to be little value in that exercise now.

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<sup>1</sup> BPA disagreed with attempts to include a mitigation responsibility for Chandler, Rosa, Cascade, and Deadwood projects. BPA does not mitigate for these projects.

<sup>2</sup> While not part of the Program, the Council's findings also mention that an exception for 1:1 crediting of existing agreements "would be for agreements that clearly provide that the crediting ratio in the agreement was to be revisited upon final determination of the appropriate crediting ratio for the program as a whole." NPPC, Fish and Wildlife Program, Appendix E, Findings on Recommendations, 205 (2000). There are no such agreements. Many of the agreements allow for the crediting to be adjusted if the ratio changes as a result of a court order, subsequent agreement, or BPA rulemaking. The wildlife managers typically wanted this provision to ensure BPA would cooperate if a court set another crediting ratio. BPA always stressed in each negotiation that this provision simply restated existing law, including the fact that BPA could unilaterally change the crediting ratio.

## I. BPA's Obligation to Mitigate Wildlife

BPA's primary duty to fish and wildlife under the Northwest Power Act is "to protect, mitigate, and enhance fish and wildlife" of the Columbia River Basin that have been affected by the FCRPS, and to do so "in a manner consistent with the ... [P]rogram adopted by the Council . . . and the purposes of this [Act]."<sup>3</sup> The Council guides BPA but lacks the authority to legally "bind the United States in any way, manner or form."<sup>4</sup> BPA has the final authority to determine how to act consistently with the Program.<sup>5</sup> The Administrator has considerable discretion to determine when these criteria have been met,<sup>6</sup> and courts should "accord substantial deference to interpretations of an agency charged with administering the statute in issue."<sup>7</sup> BPA's construction of section 4(h)(10)(A) need not be the same as the Council's so long as it is reasonable.<sup>8</sup>

Where BPA's responsibilities under the Act are concerned, BPA respects the views of the Council and others, but only Congress, BPA, and the courts have the authority to establish BPA's legal obligations. Consequently, while BPA has participated in regional exercises to discuss and elaborate upon its mitigation duties, well-known principles of administrative law dictate that only Congress could delegate or share BPA's authority under the Act to actually interpret the law it helped draft and now implements.<sup>9</sup> It falls, then, to BPA to determine its mitigation obligations under the Act and how to credit the efforts taken to fulfill those obligations.

<sup>3</sup> 16 U.S.C. § 839b(h)(10)(A). BPA must perform this duty to protect, mitigate, and enhance fish and wildlife "in a manner that provides equitable treatment for such fish and wildlife with the other purposes for which [the FCRPS is] managed and operated." *id.* § 839b(h)(11)(A)(i). BPA has taken many actions to ensure wildlife receive such equitable treatment. Those actions are not the subject of this memorandum but are discussed in greater detail in the forthcoming BPA Fish & Wildlife Implementation Plan Final Environmental Impact Statement and also in briefs in ongoing litigation. Nevertheless, a non-exhaustive list of actions that provide equitable treatment includes:

- examining mitigation needs in ratemaking processes and budgets,
- integrating wildlife mitigation in the overall unified plan which combines ESA and NW Power Act mandates,
- addressing wildlife mitigation on a system-wide basis through the section 4(h)(10)(C) financial crediting processes, and
- preparing NEPA analysis programmatically for wildlife projects.

<sup>4</sup> 126 CONG. REC. H10681 (daily ed. Nov. 17, 1980).

<sup>5</sup> *See* NW Resource Info. Ctr. v. NW Power Planning Council, 35 F.3d 1371, 1379 (9th Cir. 1994), *quoting* Public Utility Dist. 1 v. BPA, 947 F.2d 386, 392 (9th Cir. 1991) (the Administrator is not "limited to the program in exercising [his] responsibilities under the Act").

<sup>6</sup> *See generally* Aluminum Co. of Am. v. Central Lincoln People's Utility Dist., 467 U.S. 380 389-390 (1984); Comp. Gen. Opinion B-105397 (Sept. 21, 1951).

<sup>7</sup> Utility Reform Project v. BPA, 869 F.2d 437, 442 (9th Cir. 1989).

<sup>8</sup> Central Montana Elec. Coop. v. BPA, 840 F.2d 1472, 1476-77 (9th Cir. 1988).

<sup>9</sup> For years the Region seemed to acknowledge this bright line. In the 1995 Program Amendments, for example, the Council directed BPA and wildlife managers to "develop a consistent, systemwide method for crediting new wildlife mitigation action. . . ." NPPC, Fish and Wildlife Program, Section 11.3C.1 (1995). In addition to the reasons stated above, this distribution of responsibility makes sense because as the entity charged with allocating mitigation costs under section 4(h)(10)(C), it would contravene the intent of the Act if a state entity set BPA's federal mitigation responsibility as that could affect the Administrator's allocation of mitigation costs.

## II. The History of BPA's Wildlife Habitat Crediting Policy

As early as 1995, BPA believed it had made clear its policy on wildlife habitat crediting. In its comments to the Council on the 1995 proposed Program amendments, BPA stated:

If the Program is to address credit, it should draw upon the 1989 Wildlife Rule where a 1:1 crediting ratio was used implicitly in an amendment asking Bonneville to achieve 35% of the FCRPS wildlife mitigation by the year 2000. If crediting ratios are to be addressed further in the program, *they must follow the policy Bonneville accepted. . . .*<sup>10</sup>

Acting Director of Fish and Wildlife, Robert Austin, restated BPA's position in a letter to members of the Oregon Wildlife Coalition and the Council in July 1999. He stated:

Please let me take a moment to remind you of BPA's position on crediting.

Beginning with the Council's 1989 amendments to the program, full credit has been implicitly understood through the Region to mean 1:1 crediting for habitat acquisitions. The mitigation contracts with the individual Coalition members expressly acknowledge full credit as one credit for each habitat unit acquired.<sup>11</sup>

A year later, the new Director discussed crediting with the Council's Wildlife Committee. The notes of the meeting prepared by Carl Scheeler, Crediting Subcommittee Chair, say: "Sarah McNary stated that BPA was *not inclined to move away from the current 1:1 ratio.*"<sup>12</sup> This statement definitively shows 1:1 was indeed BPA's crediting policy, it had been for some time, and BPA was unlikely to change it.

In October 2001 BPA again wrote wildlife managers and explained that "[w]e plan to continue implementing projects that mitigate the wildlife losses for construction and inundation attributable to the FCRPS and document crediting for this work at the 1:1 level."<sup>13</sup>

For at least the past six years BPA has documented to regional interests its crediting policy. BPA has continued to work with the wildlife managers to try to convince them to accept 1:1 crediting as a policy—they had already done so as a matter of law in their mitigation contracts.

<sup>10</sup> Letter from D. Robert Lohn, Director, Division of Fish and Wildlife, to Steve Crow, Director of Public Affairs, (June 15, 1995) (attachment page 8) (emphasis added). Similarly, in the same letter BPA stated it was adhering to the wildlife goals set in the 1989 Wildlife Rule. *Id.* at 9.

<sup>11</sup> Letter from Robert A. Austin, Acting Fish and Wildlife Division Director, to representatives of the Oregon Wildlife Coalition (Oregon Department of Fish and Wildlife, Confederated Tribes of the Umatilla Indian Reservation, Burns Paiute Tribe, Confederated Tribes of the Warm Springs Reservation of Oregon, and the U.S. Fish and Wildlife Service), (July 15, 1999).

<sup>12</sup> Action Notes from August 25, 2000 Meeting with BPA (emphasis added).

<sup>13</sup> Letter from Robert A. Austin, Deputy Fish and Wildlife Division Director, to Rodney W. Sando, Chairman, Columbia Basin Fish and Wildlife Authority, October 11, 2001.

But nothing in the record suggests that through this ongoing effort to reach consensus BPA changed or reopened its policy.

### III. Crediting in the Program

BPA believes the Council adopted 1:1 crediting implicitly in the 1989 wildlife rule when it directed BPA to “protect, mitigate, and enhance approximately 35% of the lost habitat units identified in Table 5 over the coming ten-year period.”<sup>14</sup> In the 1989 rule, and all subsequent rules, the Council selected “habitat units as the preferred unit of measurement for mitigation accounting.”<sup>15</sup> The habitat units amended into the Program are derived from habitat evaluation procedures (HEP) patterned after those established by the USFWS. The HEP compensation model that most closely approximates the mandates of the Act and the conditions of the Program is the equal replacement goal. “This compensation goal is to precisely offset the HU losses through a gain of an equal number of HUs. With this goal, a gain of one HU for any target species can be used to offset the loss of one HU for any evaluation species.”<sup>16</sup> There is no crediting ratio contemplated by HEP or its equal replacement goal because HUs are determined by multiplying habitat quality by habitat quantity. Ratios like 2:1 or 3:1 are unnecessary because they are meant to address the lack of a habitat quality measurement when mitigation is measured in acres. HEP contemplates that “the HU losses due to the proposed action must be fully offset by the specified acquisition and/or management measures.”<sup>17</sup> In other words, HEP does not use ratios, but if it did the ratio would be 1:1. BPA believes the Council must have embraced this view with its adoption of HUs as the measurement of mitigation accounting because that is the primary advantage of an HU approach over an acre-for-acre approach. The Program thus supports BPA’s policy of offsetting one HU lost for every one acquired as full, reasonable mitigation.

Questions of fairness also arise when contemplating a crediting at other than 1:1. Virtually all tribal, state, and federal wildlife managers in the Region have 1:1 contracts with BPA now. We have established a course of dealing. Changing to another ratio or methodology would penalize those managers who already agreed that the mitigation under contract with them is full mitigation for the duration of their long-term contracts. Such entities include the State of Montana, and the State of Idaho and the Nez Perce Tribe with regard to Dworshak mitigation.

There is also a question of fairness to ratepayers. Beginning with the first detailed wildlife rule amended to the Program in 1989, the Council has directed BPA to:

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<sup>14</sup> NPPC, Wildlife Mitigation Rule and Response to Comments, Section 1003(b)(1)(C) (Nov. 21, 1989). Looking at the equation  $35\% = .35 \times \text{loss assessment}$  suggests 1:1 crediting for acquisitions.

<sup>15</sup> NPPC, Fish and Wildlife Program, 11.3E.1 (1994).

<sup>16</sup> USFWS, Division of Ecological Services, Habitat Evaluation Procedure, 102 ESM 7 (Sept. 1980).

<sup>17</sup> *Id.*

Use publicly-owned land for mitigation, or management agreements on private land, in preference to acquisition of private land, while providing permanent protection or enhancement of wildlife habitat in the most cost-effective manner.<sup>18</sup>

Despite this guidance—that remains in the current Program—wildlife managers have consistently preferred to bring the Council proposals for acquisition of private land. Few if any of these project proposals had any evidence that acquisition was the most cost-effective means of achieving wildlife biological objectives. None of them had any detailed economic analysis supporting acquisition as a least-cost mitigation method. Nevertheless, the Council consistently recommended these projects for BPA funding. And BPA funded them. BPA acquiesced to the will of the wildlife managers and the Council, but on a condition: 1:1 credit. This condition is evidenced by the full credit provisions in the acquisition agreements. BPA needed this credit because it saw what it suspected were lower-cost opportunities being bypassed in favor of higher-cost acquisition projects. BPA believes wildlife managers should be stopped from seeking a change in crediting because they chose what may have been the highest cost/least credit means of proceeding with mitigation.<sup>19</sup> BPA based its acquiescence in their choosing acquisition as the primary method of mitigation on the assurance of full 1:1 credit.

#### IV. Council Recognition of the Reasonableness of 1:1 Credit

In the face of the Council's adoption of a 2:1 crediting ratio for remaining wildlife habitat losses from FCRPS construction, there is strong evidence that the Council recognizes the reasonableness of BPA's 1:1 crediting policy.<sup>20</sup> First, the new Program accepts all crediting done through 2000 at a 1:1 ratio.<sup>21</sup> This indicates the Council can legally, economically, and biologically justify the past use of 1:1 crediting by BPA. Second, in the current Program's Findings on Recommendations, the Council acknowledges that "*reasonable* arguments may be made for various crediting ratios."<sup>22</sup> Presumably this includes 1:1 at least through 2000. There is also an appreciation that unannualized loss statements "are in the low end of the range of

<sup>18</sup> *Id.* at Section 1003(b)(4)(C)(8).

<sup>19</sup> Program measures must reflect the minimum cost alternative when two or more alternatives are equally effective in achieving the same sound biological objective. 16 U.S.C. § 839b(h)(6)(C). The Program has no findings regarding whether acquisitions and habitat enhancements are indeed equally effective and, if so, which is the minimum cost alternative.

<sup>20</sup> BPA believes the Council based its conclusion rejecting 1:1 credit after 2000 on an incomplete record. For instance, it justifies the 2:1 ratio "as consistent with other mitigation programs in the basin" without identifying what those programs are, whether the habitat is protected permanently, whether the developer pays O&M, or whether the wildlife managers own the habitat. *Id.* (The only example cited, the Lower Snake River Compensation Plan, actually includes both 1:1 and 2:1 credit established through a negotiated agreement between the Corps and WDFW as discussed in the "Benchmarking" section below.) Absent such crucial information, BPA cannot accept the conclusion. In other ways, the Council's findings on crediting are inconsistent with the Program. With respect to inundated habitat, for example, the findings claim that "it is a given that an inundated acre has zero wildlife value." *Id.* Table 11-4 of the Program, however, lists tens of thousands of habitat units created for wintering Mallards, Lesser Scaup, Bald Eagles, and Osprey as a result of the construction of the FCRPS. This is inundated habitat, water habitat, with its value already recognized by the Region's wildlife managers and the Council.

<sup>21</sup> NPPC, Fish and Wildlife Program, Appendix E, Findings on Recommendations, 205 (2000).

<sup>22</sup> *Id.* (emphasis added).

*legitimate* ways to conceptualize the losses.”<sup>23</sup> The Findings on Recommendations can thus support both 1:1 crediting and unannualized loss assessments as used by BPA and the Program.

#### V. Existing Funding Agreements Support BPA’s 1:1 Crediting Policy

All of BPA’s wildlife mitigation agreements either express or imply acknowledgement that crediting is 1:1. In BPA’s earliest agreement, known as the Montana Trust, BPA paid Montana a fixed sum sufficient to mitigate for all the habitat lost from the development of Libby and Hungry Horse dams. Montana promised that it would indemnify BPA for claims related to the “area, amounts, and types of habitats identified” in the loss assessments, both during and after the agreement. Letters from Montana indicate it has instituted its own crediting methodology to track its progress. Montana gives itself 100% credit, that is 1:1 credit, for fee purchases “based on the assumption that lands purchased in fee title can be managed exclusively for wildlife values. . . .”<sup>24</sup> Montana further agreed to hold BPA harmless for additional wildlife mitigation for the duration of the agreement.

The Dworshak Trust with the state of Idaho and the Nez Perce Tribe says BPA will receive credit for the mitigation funded to “fully satisfy BPA’s responsibilities” to mitigate for the development of Dworshak Dam.<sup>25</sup> The amount of the funding and other consideration BPA provided was calculated to offset the habitat losses shown in the loss assessments for Dworshak Dam. No ratio was set, but a straight offset against the assessed losses amounts to 1:1 crediting. The state and tribe agreed to hold BPA harmless for 60 years for “any and all of BPA’s responsibilities” to wildlife and wildlife habitat affected by development of Dworshak.<sup>26</sup>

In the 1993 Interim Agreement, Washington Wildlife Coalition members agreed that “BPA shall receive full credit for existing habitat value for all lands that are acquired, permanently dedicated to wildlife and wildlife mitigation purposes, and provided with reasonable funding for operation and maintenance over the life of the Project.”<sup>27</sup> BPA takes credit for every habitat unit acquired and directly offsets the amounts shown in the loss assessments by this amount. In other words, the credit is 1:1. While the parties expressly agreed this crediting provision was not to set a precedent for crediting in the future, in fact subsequent agreements with Coalition members provide for full credit based on the Interim Agreement model.<sup>28</sup>

<sup>23</sup> *Id.* (emphasis added). This assumes that annualized losses would show higher losses. This is not necessarily true. Annualization may result in higher or lower loss assessments when compared to assessments based on a single point in time.

<sup>24</sup> Undated letter from Alan Wood, Wildlife Mitigation Coordinator, Montana Fish, Wildlife, & Parks to Peter Paquet, Northwest Power Planning Council. Under the terms of the agreement such crediting is unnecessary to BPA because the state already agreed the funding was adequate for all identified losses.

<sup>25</sup> Wildlife Mitigation Agreement for Dworshak Dam between BPA, Idaho, Nez Perce Tribe at Section 9(b) (1992).

<sup>26</sup> *Id.* § 11.

<sup>27</sup> Washington Wildlife Mitigation Agreement Among the Members of the Washington Wildlife Coalition of Resource Agencies And Tribes and the BPA, Section 5c(ix) (April 1993).

<sup>28</sup> *See, e.g.*, Memorandum of Agreement Between the Confederated Tribes of the Umatilla Indian Reservation and the Bonneville Power Administration for the Disbursal of Wildlife Mitigation Funds and Wildlife Mitigation

Most of BPA remaining wildlife agreements followed the Interim Agreement terms of crediting. BPA's year 2000 agreements with the State of Oregon, for instance, provide that BPA shall receive "full credit for all HUs achieved through protection or improvement activities. Full credit for protection Projects such as acquisition of an interest in real property means one credit for each habitat unit acquired. Full credit for improvement activities means one credit for each habitat unit achieved over the baseline actual HEP."<sup>29</sup> From the initial Montana Trust to the most recent agreements, BPA has consistently established and secured the legal right to claim 1:1 credit.

## VI. Benchmarking

To assess the equitable nature of BPA's wildlife policy generally, and the crediting methodology it has implemented, comparisons may be insightful. Before 1980 and passage of the Northwest Power Act, the primary law governing mitigation of fish and wildlife resources affected by federal projects in the Basin was the Fish and Wildlife Coordination Act. The Coordination Act directed agencies that constructed water projects, like the Corps and Reclamation, to provide fish and wildlife "equal consideration" in planning and development with other project purposes.<sup>30</sup> To achieve this goal, project managers consulted with state and federal fish and wildlife agencies to assess potential mitigation plans.<sup>31</sup> After providing "full consideration" of the agencies' views, the project managers could accept or reject the mitigation plans in light of "overall project benefits."<sup>32</sup> Mitigation plans like the Lower Snake River Compensation Plan (LSRCP) resulted from Corps planning and consultation based on the Coordination Act.<sup>33</sup> Because this act was the law governing mitigation prior to the Northwest Power Act, BPA looks to it as an indication of how Congress intended mitigation to be done.

Of course some observers will criticize the problems of the Coordination Act and argue that because it failed Congress enacted section 4 of the Northwest Power Act. It is true the Coordination Act had notable failings.<sup>34</sup> It is also true, however, that Congress emphasized that "[t]he goal of the program is not to increase the obligations of water project owners and operators, but rather to go beyond a project-by-project approach on a river system whose multiplicity of projects and interdependent biological species makes a project-by-project approach unsatisfactory for all involved parties."<sup>35</sup> BPA interprets this language to mean that

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Crediting, Section 15 (1997); Memorandum of Agreement Between the U.S. Fish and Wildlife Service and BPA for Tualitan National Wildlife Refuge Real Property Acquisition, Section 4 (Dec. 1999).

<sup>29</sup>Oregon Dep't of Fish and Wildlife and BPA Oregon Columbia Basin (excluding the Willamette Basin) Wildlife Mitigation Memorandum of Agreement, Section 4(b) (Nov. 9, 2000).

<sup>30</sup> 16 U.S.C. § 661.

<sup>31</sup> 16 U.S.C. § 662(a).

<sup>32</sup> *Id.* § 662 § (b)(2).

<sup>33</sup> District Engineer, Walla Walla District, Special Report: Lower Snake River Fish and Wildlife Compensation Plan at iii, 55-60 (June 1975).

<sup>34</sup> Michael C. Blumm, *Fulfilling the Parity Promise: A Perspective on Scientific Proof, Economic Cost, and Indian Treaty Rights in the Approval of the Columbia Basin Fish and Wildlife Program*, 13 *Env'tl. L.* 103, 109-111 (1982).

<sup>35</sup> H.R. REP. NO. 96-976, pt. 2, at 38 (1980).

Congress wanted system-wide, coordinated mitigation directed by the Region with a greater emphasis on increased efficiencies over increased obligations. This legislative history argues against increasing the crediting ratio from well below 1:1 to over 2:1.

The Program notes that one Coordination Act plan, the LSRCP, adopted a 2:1 crediting ratio. A close look at the agreements written to implement this plan actually include both 1:1 and 2:1 crediting. Generally, crediting for acquisitions was 2:1 because the parties agreed “to focus acquisition on lands having minimal existing habitat units, but good potential for habitat development.”<sup>36</sup> The parties made an exception for high quality habitat and allowed for those acquisitions to receive 1:1 crediting because “habitat protection of existing high quality riparian/wetland habitat will be justified when such habitat is potentially threatened by land use changes or practices.”<sup>37</sup> The Corps assumed the acquisition costs, but the holder of the mitigation sites, Washington Department of Fish and Wildlife (WDFW), was responsible for O&M and replacement costs.<sup>38</sup> Therefore, whether looking at the Coordination Act generally, or at the LSRCP as a specific instance of its application, the predecessors to the Northwest Power Act did not impose a blanket, unqualified obligation greater than 1:1 on the FCRPS project owners and operators. BPA’s routine acquisition of pristine and at risk properties, as well as its history of regular payment of O&M costs, shows that under the LSRCP agreements such actions should receive 1:1 crediting.

Some managers suggest BPA disregard the Coordination Act and focus instead on FERC hydro licensing and relicensing law. They argue that a 3:1 ratio has precedent set by FERC. There are several problems with this argument. First, 3:1 is not FERC’s mitigation policy. FERC does not have one. Instead, FERC considers policies and recommendations of state and federal agencies that comment on the relicensing application.<sup>39</sup> Second, FERC guidelines do not apply to FCRPS. This may be obvious, but it is significant because FERC regulates non-federal entities, many of which are making a private profit using a public resource. Considerations of fairness suggest those who profit using public resources should be held to a higher mitigation standard than those using a public resource at the direction of a public body for public benefit.

Third, BPA has not seen evidence of FERC requiring as much or more mitigation from any one of its Columbia Basin licensees as BPA currently provides for the FCRPS under the Program. The Idaho Power Company, for example, has performed limited wildlife mitigation for Brownlee, Oxbow, and Hells Canyon—the Hells Canyon Complex, mostly by purchasing

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<sup>36</sup>Letter of Agreement: Wildlife Compensation Goals and Evaluation Measures for the LSRCP between the Corps of Engineers, Washington Department of [Fish and] Wildlife, U.S. Fish and Wildlife Service, 3 (Mar. 24, 1989).

<sup>37</sup>*Id.* In other words, the sheer fact of purchase does indeed create or change habitat value according to WDFW and the USFWS. This is contrary to statements in NPPC, Fish and Wildlife Program, Appendix E, Comments on Recommendations at 205 (2000).

<sup>38</sup>Letter from Mathew M. Laws, Chief, Planning Division, Corps of Engineers Walla Walla District to Angus Duncan, Council Chairman (Dec. 20, 1994) (Enclosure 3).

<sup>39</sup>Policy guidance that other federal agencies might use when making recommendations to FERC in relicensing proceedings in fact allows for project developers to receive full credit for preservation under circumstances similar to BPA’s. See Corps, EPA, Natural Resources Conservation Service, USFWS, and NMFS, Federal Guidance for the Establishment, Use and Operation of Mitigation Banks, 60 Fed. Reg. 58605, 58608 (Nov. 28, 1995).

replacement habitat. It has been difficult to determine exactly what lands were purchased and for how much money. According to the Program, the Hells Canyon Complex mitigation plans for wildlife only addressed the loss of habitat for upland birds and waterfowl.<sup>40</sup> There has apparently been no mitigation for terrestrial mammal habitat.

It is also difficult to determine how much wildlife mitigation has been done by the public utility districts that own and operate dams on the mainstem. For instance, even as they prepared a competing bid to obtain the rights to operate Priest Rapids Dam, the Yakama Nation and PacifiCorp were unable to determine the nature and full extent of Grant County PUD's wildlife mitigation efforts.<sup>41</sup> It thus appears FERC has not required even 1:1 mitigation of its Columbia Basin licensees.

Any comparison of BPA's efforts to other mitigation processes must also examine the substantial biological value BPA adds over what other entities may provide. BPA adds value to its efforts by allowing state, federal, and tribal wildlife managers to own virtually all of the fee acquisitions. Many other utilities retain title to their mitigation acquisitions. Because the Council supports the managers holding the properties in fee, BPA believes this provides additional mitigation value that was not counted in the 2000 Program recommendations.

BPA's mitigation under the Program is by and large protected permanently. Most habitat acquisition agreements, conservation easements, and habitat improvement projects have enforceable provisions to help ensure the habitat is managed for wildlife in perpetuity, not just for the life of the federal hydro projects.

BPA has provided, and continues to provide, extensive funding for the operation and maintenance of the mitigation habitat. It is not unusual for a site's annual O&M funding to be about 10% of the initial acquisition cost.<sup>42</sup> While BPA cannot guarantee O&M funding in perpetuity, BPA does anticipate shouldering a substantial O&M burden for years to come. Moreover, where BPA ceases to provide O&M sufficient to maintain habitat values, many of the mitigation agreements call for BPA to reduce its credit by the number of habitat units lost in the absence of BPA funding.

The partnerships that can be leveraged with BPA funding are another source of increased intangible value to wildlife projects. BPA takes only the share of credit in partnerships that is proportional to its contribution. There is precedent in the Region, though, for crediting BPA with the full value of leveraged mitigation projects.<sup>43</sup>

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<sup>40</sup> NPPC, Fish and Wildlife Program, 135 (1987).

<sup>41</sup> Personal communications from Yakama staff to BPA staff in December 2001.

<sup>42</sup> Whether to provide O&M is not the only pertinent question here. Equally important is the question of how much is appropriate to consider a ratepayer responsibility. Past reviews by BPA have shown some state wildlife managers seek ten times more O&M funding from BPA than they dedicate to similarly situated projects where the state has the O&M obligation.

<sup>43</sup> Letter from Alan Wood, Wildlife Mitigation Coordinator, Montana Department of Fish, Wildlife & Parks, to Gail Kuntz, BPA 2 (Feb. 5, 1997) ("Failure to give full credit to partnership projects ignores the value of using [BPA]

Finally, prior to passage of the Northwest Power Act, BPA spent almost \$200 million on fish and wildlife mitigation. Most of that was spent indirectly by reimbursing the Treasury for appropriations to the Corps and Reclamation. Those reimbursements covered the power share of mitigation actions like the acquisition and development of the Umatilla (or Mid-Columbia) National Wildlife Refuge. Federal agencies acquired over 40,000 acres of habitat to mitigate for the FCRPS prior to the passage of the Northwest Power Act,<sup>44</sup> and they dedicated tens of thousands of acres of project lands to wildlife mitigation. These kinds of measures are not currently part of the crediting ledger even though they represent ratepayer dollars mitigating wildlife affected by the FCRPS.

These examples show BPA's 1:1 crediting provides much greater value to wildlife than would accrue from habitat acquisitions alone. Benchmarking BPA's wildlife mitigation against other standards in the Basin shows BPA provides more mitigation using its enhanced 1:1 crediting policy than other similarly situated entities.

#### VII. Annualization: Hindcasting Estimates of Possible Futures

In addition to questioning BPA's 1:1 crediting policy, wildlife managers encouraged the Council to adopt more than the direct impacts of the construction and operation of the FCRPS in the loss assessments by using concepts like annualization, secondary losses, or cumulative effects. BPA has often indicated its unwillingness to use these concepts.

A concern repeated by wildlife managers is that HEP requires annualization,<sup>45</sup> a process in which "HU gains or losses are annualized by summing HUs across all years in the period of analysis and dividing the total (cumulative HU) by the number of years in the life of the project."<sup>46</sup> Annualization does not result in an estimation of cumulative or additive losses, or compound interest on borrowed habitat—it averages the losses annually over the duration of the project.<sup>47</sup> BPA declines to assume a responsibility for annualization for several reasons. First, this insistence on strict adherence to HEP is inconsistent with the willingness with which the wildlife managers mold the HEP process on projects they support. HEP is a tool.<sup>48</sup> Basing a loss

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trust fund dollars to stimulate financial involvement from other organizations, thereby leveraging the funds to accomplish mitigation in the most cost effective way possible").

<sup>44</sup> Chaney, E. & S. Sather-Blair. 1984. Status Review of Wildlife Mitigation at Columbia Basin Hydroelectric Projects: Idaho Facilities. BPA; Bedrossian, K.L. et al. 1984. Status Review of Wildlife Mitigation at Columbia Basin Hydroelectric Projects: Oregon Facilities. BPA; Howerton, J., et al. 1984. Status Review of Wildlife Mitigation at Columbia Basin Hydroelectric Projects: Columbia River Mainstem Facilities. BPA.

<sup>45</sup> Actually, annualization is not required for proper application of HEP. USFWS, Habitat Evaluation Procedure, 102 ESM A.5A.

<sup>46</sup> USFWS, Habitat Evaluation Procedure, 102 ESM 5.2D.

<sup>47</sup> This is contrary to analogies suggesting annualization is supposed to compound interest on unmitigated habitat losses over time. See Beak Consultants, Inc., Council Presentation to Address Annualization and Crediting 2 (April 28, 1994).

<sup>48</sup> It is just one among possible tools. "Several assessment methods are discussed and compared to selected criteria in reaching the conclusion that a habitat approach is most appropriate *within the current legal and institutional*

assessment on HEP is no guarantee of the assessment's validity or accuracy. A study of four loss assessments shows how the use of the tool in different hands produces different results—results that cannot in some instances be duplicated, even when competent wildlife professionals completed the initial assessments.<sup>49</sup>

In a review of the assessments done for Grand Coulee, Dworshak, McNary, and Lookout Point, an independent analysis found a number of inconsistencies. They include the following: (1) wildlife managers defined the area of study differently for each assessment; (2) some managers used standardized habitat models and others used models that cannot be replicated; (3) some managers included species that had substantial habitat created by the reservoirs, others omitted these species; (4) none used the same assumptions for mapping the structural diversity of vegetation; (5) one counted beneficial impacts of existing mitigation, the others did not; (6) one used a different group of species to assess impacts and another group to evaluate habitat suitability; (7) there was no criteria for selecting the type or number of species to be used in the evaluation; (8) one assessment had 17 species models which created a likelihood of overestimation of impacts; (9) there was no attempt to coordinate field procedures between projects; and (10) none of the assessments engaged annualization comprehensively.

Considering these examples, it is likely that all of the wildlife loss assessments for the FCRPS projects relied heavily upon the subjective judgment of project proponents, not just USFWS guidelines, when conducting assessments derived from HEP. While the loss assessments serve as useful general guideposts, they are not grounded completely in science or the scientific method. As the assessment method chosen by wildlife managers and adopted by the Council, BPA has agreed to work with HEP. However, loss assessments for projects as large as FCRPS dams are inherently inaccurate; they are only as good as their underlying assumptions.<sup>50</sup> Given the array of different assumptions going into each dam's loss assessment, and the conjecture upon which estimates of past and future conditions must be based, BPA does not believe an attempt to annualize losses would be fair or accurate enough to warrant the effort and expense it would require to complete the process.<sup>51</sup>

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*constraints on the USFWS.* Other criteria can be used, and other equally valid arguments can be made in support of other approaches for impact assessment.” *Id.* 101 ESM 1 (emphasis added).

<sup>49</sup> The ability to duplicate an experiment and obtain the same result is the heart of the scientific method. The numerous subjective judgments that go into HEPs render them something considerably less than objective scientific experiments or studies. *See generally*, Samuel J. McNaughton, *What is Good Science?*, 13 *Nat. Resources & Env't.* 513-518 (1999).

<sup>50</sup> The margin for error in the Beak report was plus or minus 25%. “We assumed variation less than 25% would be acceptable for loss assessments dealing with numerous wildlife species that use thousands of acres.” Beak Consultants Inc., *Audit of Wildlife Loss Assessments for Federal Dams on the Columbia river and its Tributaries 1* (Feb. 1993).

<sup>51</sup> While Beak recommended annualization be part of the HEP process, the report noted that there were other ways to provide for adequate mitigation. *Id.* at 63. Negotiated agreements like the Montana Trust would be another way. *Id.* This was the Council's position, too, in 1989 when it expressed the opinion that it would not “be productive to attempt to judge what might have happened to inundated habitat if it had not been inundated, or to evaluate cumulative losses. Such an undertaking would be speculative, and the time and resources it would require would be better spent for on-the-ground wildlife mitigation.” NPPC, *Fish and Wildlife Program, Summary and Response to Comments*, 3 (1989).

Another reason BPA has continuously rejected calls to annualize loss assessments is that BPA has only tabulated the lost wildlife habitat units mitigated to date through protection efforts such as acquisitions in fee or conservation easements. There have been no surveys of the increases in the habitat quality on those projects.<sup>52</sup> BPA anticipates substantial increases in habitat quality, and habitat units, from having those lands become protected and managed for wildlife. These uncounted improvement or enhancement habitat units are the converse of annualization's loss over time concept for they provide uncounted habitat gains over time.

Most importantly, BPA did not have an express or direct mitigation responsibility until 1980. By that time, the FCRPS projects ranged in age from 73 years (Minidoka) to 5 years (Libby) old. After this passage of time, Congress simply said mitigate for construction and operation impacts. Nothing in this mandate requires annualization, so BPA has a great deal of discretion to determine the extent of what constitutes mitigation for construction and operational impacts.

Prior to the Act the agencies that constructed the FCRPS mitigated pursuant to the Fish and Wildlife Coordination Act which requires construction agencies to seek appropriations for funding and constructing justifiable compensation measures.<sup>53</sup> The Coordination Act has no mandate for anything remotely resembling annualization.

As for the Northwest Power Act, its legislative history discusses BPA's mitigation duty in largely prospective terms.<sup>54</sup> In fact, the emphasis on mitigation of current and future impacts was so great that Representative Dingell pointedly emphasized that BPA should mitigate for *some* past impacts, but certainly not all of them.<sup>55</sup>

Annualization is costly, time consuming, and based on numerous unprovable assumptions. There are no credible models or professional credentials for making such assumptions.<sup>56</sup> In addition, BPA has not found, and wildlife managers have not produced, a standard for annualization being used elsewhere in the Basin. To the contrary, in a similar context a recent

<sup>52</sup> Some acquisition projects also bring with them state and federal grazing leases that wildlife managers now control. Those leases are not tallied currently against BPA's mitigation obligation.

<sup>53</sup> See 16 U.S.C. § 662(c).

<sup>54</sup> See, e.g., Interior Committee Report 96-976, Pt. II, 96<sup>th</sup> Cong., 2d Sess, at 54 (Sept. 16, 1980) ("Section 8(a) amends the Federal Columbia River Transmission System Act to permit BPA to use the BPA fund to make short term power purchases and to enable BPA to meet its obligations under the fish and wildlife provisions of this bill (e.g., to buy power to replace power generating capability that may be lost through a spill for fish passage purposes at a Federal dam)"); Cong.Rec. H9858 (Sept. 29, 1980) (Statement of Rep. Bonker) ("this legislation deals with the problem of the tremendous fish mortality that occurs at each of the hydroelectric facilities on the Columbia River").

<sup>55</sup> 126 CONG. REC. E105 (daily ed. Dec. 1, 1980); *id.* at H10683 (daily ed. Nov. 17, 1980).

<sup>56</sup> Some wildlife managers have recognized as much. For example, the USFWS argued to FERC in the Lake Chelan Project relicensing process that it wanted mitigation to be to pre-project levels. The Service, however, admitted the extent of losses to fish and wildlife due to development of the project was "virtually undocumented." FERC staff concurred with the PUD "that various factors other than project development may have contributed to any decline in the fish and wildlife resources. It is therefore concluded that fish and wildlife mitigation based on pre-project resource levels is unrealistic and unwarranted." PUD No. 1 of Chelan County, Washington, Project No. 637, Order Issuing New License (May 12, 1981) 1981 W.L. 35383, \*6 (FERC).

Ninth Circuit decision told FERC not to hark back to the pre-development era when analyzing the mitigation obligations for hydropower developers. To do so “defies common sense and notions of pragmatism.”<sup>57</sup> All of these facts suggest Congress would not approve of BPA using its authorities to reach back and assume a mitigation duty to annualize losses or compound habitat “interest” beginning in 1909.

#### VIII. Secondary Losses And Other Project Purposes

Secondary losses are equally unsupported. Proponents for this loss category populate it with impacts enabled by the dams, such as industrial development, ranching, and farming. BPA has found no precedent within the Basin for mitigation being required for secondary losses at other Corps, Reclamation, or FERC licensed hydro facilities in the Region. Then there is the question of secondary gains: most niches in the Region’s ecosystems remain filled—maybe with new or different species than those present prior to hydrosystem development, but filled with wildlife, nonetheless. These gains would have to offset any secondary losses.

The extension of the secondary loss theory to development, such as irrigation, ultimately proves to be the unraveling of any reasoned justification for the inclusion of secondary losses. For many of the hydro projects, irrigation was an authorized purpose that carries its own cost allocation.<sup>58</sup> Thus, many of the secondary losses recognized by wildlife managers were actually planned, primary losses resulting from an express non-power project purpose. Or, if they were not specifically planned, they were certainly Congress’ desired outcome resulting from BPA implementing its earliest mandate “to encourage the widest possible use of all electric energy that can be generated and marketed and to provide reasonable outlets therefore.”<sup>59</sup>

Cumulative impacts are sometimes mentioned as another kind of injury to wildlife and wildlife habitat that BPA should mitigate. Cumulative impacts are not mentioned in the Act. The phrase is borrowed from NEPA. In NEPA, however, there’s a growing body of opinion that cumulative impacts are not a distinct kind of impact.<sup>60</sup> Moreover, when it comes to the Columbia Basin, adverse impacts to wildlife and their habitats come from federal projects, non-federal projects, industry, agriculture, development, logging, mining, grazing, harvesting, and recreation. Under an Act that requires that ratepayers pay for the mitigation attributable to only the development and operation of electric power facilities and programs,<sup>61</sup> a proposal for BPA to cover mitigation of cumulative impacts is untenable. For these reasons, and those articulated in earlier BPA

<sup>57</sup> *American Rivers v. FERC*, 201 F.3d 1186, 1197 (9<sup>th</sup> Cir. 2000). “To the extent a hypothetical pre-project or no-project environment can be recreated, evaluation of such an environment against current conditions at best serves to describe the current cumulative effect on natural resource of these historical changes.” *Id.*

<sup>58</sup> For a general description of project cost allocations related to BPA’s fish and wildlife funding obligations, see Memorandum from Harvard P. Spigal, BPA General Counsel, to Randall W. Hardy, Administrator, Interpretation of Section 4(h)(10)(C) of the Northwest Power Act (June 6, 1994).

<sup>59</sup> 16 U.S.C. § 832a(b).

<sup>60</sup> See, e.g., Owen Schmidt, *MASTERING NEPA* 254-257 (2001).

<sup>61</sup> 16 U.S.C. § 839b(h)(8)(B).

comments to the Council, BPA will not change its policy to one that requires mitigation using annualization, cumulative impacts, or secondary losses.

#### IX. Wildlife Credit from Fish Mitigation Measures

The Council has also recognized the wildlife benefits of many fish actions. In the 1995 Program it called upon BPA and the wildlife managers “to develop a method for crediting wildlife benefits from fish projects.”<sup>62</sup> With this measure the Council does not question the legitimacy of wildlife credit from fish projects, it simply wants an agreed upon crediting methodology.

To date, BPA has protected over 100,000 acres of wildlife habitat with fish measures.<sup>63</sup> These habitat units are not reflected in the BPA’s tally of completed mitigation. It does not matter legally what the underlying intent of a mitigation expenditure may be—there is only one BPA fund from which all measures are funded. If the implementation of a fish measure also benefits wildlife, then it is appropriate for BPA to take wildlife credit for that action.<sup>64</sup> The Act does not limit how BPA may take or use wildlife credit from fish measures. Failure to credit wildlife habitat protected or enhanced in fish mitigation projects would place a greater burden on ratepayers than Congress authorized. For these reasons BPA believes it must take wildlife credit for either construction or operational impacts to wildlife mitigated by fish measures.

#### X. Operational Impacts: A Solution of Sorts for Annualization, Secondary Impacts, and Credit for Fish Projects

In its new Program amendments, the Council recommends that operational losses, including secondary losses, be mitigated through the subbasin planning processes. This planning, combined with actions BPA will take under the National Marine Fisheries Service 2000 FCRPS Biological Opinion, will include additional habitat acquisitions and improvements. Through the course of the next decade, BPA anticipates considerable amounts of habitat to be protected and enhanced through these related efforts. In addition, there are tens of thousands of acres of wildlife habitat protected under the anadromous fish mitigation side of the Program that have not been counted toward BPA’s wildlife mitigation obligation. Between the new mitigations, and the past uncounted mitigations, BPA believes it will provide full 1:1 mitigation to wildlife for the operational impacts of the FCRPS.

The Council suggests BPA accept annualization, secondary or incidental losses, as well as operational losses as being addressed through subbasin planning. BPA declines to do so for several reasons. Most simply put, BPA has no legal obligation to mitigate for other than direct

<sup>62</sup> NPPC, Fish and Wildlife Program, Section 11.3C.2 (1995). The 2000 Program Amendments provided that directives such as this were still the Council’s recommended course. NPPC, Fish and Wildlife Program, Section IX, Transition Provisions (2000).

<sup>63</sup> Typical fish habitat projects with wildlife benefits include the purchase of Forest Service grazing permits that are then permanently retired and leases of grazing rights on tribal lands.

<sup>64</sup> And conversely, where wildlife measures provide fish benefits BPA intends to take credit toward its obligation to fish.

construction and operation losses. Then there is the absence of documented examples of other federal hydroprojects being required to mitigate for these tangential losses under the Fish and Wildlife Coordination Act or other applicable laws.<sup>65</sup> Therefore, BPA will apply credit gained through subbasin projects to operational and construction impacts only.

### Conclusion

BPA has for years publicly embraced 1:1 crediting for calculating its wildlife mitigation responsibilities against the loss assessments prepared by the Region's wildlife managers. BPA will continue to take 1:1 credit for all of its wildlife mitigation. This level of mitigation goes beyond what Congress has in the past sought from federal hydroprojects in the Columbia River Basin. It helps undo mistakes of the past without undoing the power developments. It is more than the non-federal utilities in the Columbia Basin do for their dams. It has for years been the most successful element of the Council's Program—arguably the largest fish and wildlife mitigation effort in the world. And BPA already has agreements with most wildlife managers who have accepted that BPA should take 1:1 credit for measures they help implement. Given that BPA has spent \$145 million to reach approximately 43% mitigation of the loss assessments at 1:1 crediting,<sup>66</sup> the increment to 2:1 would undoubtedly create an economically significant increase that no entity has quantified or analyzed.

BPA agrees with the Council's 2000 amendments to the program calling for loss assessments for operational losses. BPA will address these losses, at least initially, through the subbasin planning processes. In this way wildlife mitigation will continue after BPA fulfills the construction loss assessments using 1:1 crediting because fish habitat acquisition and improvement projects based on subbasin planning will have wildlife benefits as well.

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<sup>65</sup> BPA's requests from wildlife managers and Council staff for verification of these purported examples have gone unfulfilled.

<sup>66</sup>BPA, Sum of Obligations for Wildlife [by fiscal year from 1983 to 2001] (Dec. 10, 2001). This figure includes costs for all loss assessments, coordination costs, and wildlife studies as well as actual on-the-ground mitigation measures. The 43% estimate is from BPA's draft wildlife crediting spreadsheets located at [http://www.efw.bpa.gov/portal/Wildlife/Wildlife\\_Mitigation.htm](http://www.efw.bpa.gov/portal/Wildlife/Wildlife_Mitigation.htm). BPA recognizes it needs to work with the Council and others regarding what trade-offs to make when off-setting of HUs of one species for HUs of another as contemplated by HEP. *See generally*, USFWS, Habitat Evaluation Procedure, 102 ESM 6. While the crediting spreadsheets currently posted on BPA's website provide a good idea of BPA's mitigation to date, neither they nor this enclosure are intended to answer those trade-off questions.