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Gentlemen,

The Public Power Council is a not-for-profit association representing 114 consumer-owned utilities in the Pacific Northwest. One of our missions is to assure that the dollars collected from our members' ratepayers are used in the most economic manner. We are keenly aware of the effects of the federal hydrosystem on fish and wildlife resources in the Columbia River basin. We appreciate the efforts on behalf of the federal agencies to consider more efficient and cost-effective methods to assure the safe migration of juvenile salmonids from the Snake and Columbia Rivers. We offer these comments on the issue of the summer spill program reduction as proposed by Bonneville Power Administration (BPA) and the U.S. Army Corps of Engineers (Corps) dated March 30, 2004 (March 30 proposal).

**The NOAA-Fisheries (NOAA-F) Biological Opinion (BiOp) allows flexibility in actions to meet performance standards for juvenile survival during outmigration through the Federal Columbia River Power System.**

The flexibility provided by NOAA-F in the 2000 BiOp for the federal hydrosystem is particularly relevant to the use of spill to pass the only Endangered Species Act (ESA) listed fish – *i.e.*, Snake River fall chinook – that are in the river during the summer months of July and August. The latest scientific information shows that there are extremely small biological benefits for the Snake River fall chinook from summer spill.

The current strategy in the BiOp is to achieve specified biological performance standards for fish listed for protection under the ESA. The BiOp contains 199 actions in what NOAA-F calls the “Reasonable and Prudent Alternative” (RPA). In proposing these actions, however, NOAA-F is clear that significant uncertainties and gaps in our knowledge exist that require flexible implementation. In this regard, NOAA-F says

*The results from these studies and monitoring should provide better understanding about the status of the ESU’s, about which measures work, and about which measures do not work . . . Monitoring and evaluation may lead to revisions in measures the Action Agencies undertake to meet performance standards, or in the performance standards themselves . . .*

NOAA-F recognized that it is impossible to prescribe specific actions with the large gaps in our scientific knowledge of what factors actually affect salmon survivals. The flexibility provided in the BiOp for the Action Agencies to adapt actions based on the best available scientific information allows the region to pursue those actions that are both biologically effective and cost-efficient. Section 9.1.6 of the BiOp provides as follows:

*An annual, multiyear planning process to refine, implement, evaluate, and adjust ongoing efforts is critical to achieving the FCRPS hydro and offsite performance standards within the time frame covered by this biological opinion.*

Specifically with respect to the hydro system, Section 9.1.2: Hydro Actions, provides that

*NMFS may deem other combinations of measures sufficient to meet the performance standards and avoid jeopardy.*

In summary, the federal agencies should work to assure that ratepayer dollars are put to the most effective and efficient use. The March 30 proposal to reduce summer spill utilizes the flexibility available to the Corps and BPA. Yet more can be done to achieve a balance between economic issues and natural resource protection.

**Senior level policy makers must strike a balance between economic issues and natural resource protection.**

The decision to implement alternatives to summer spill is a policy decision. Technical staffs from throughout the region have, for several months, thoroughly vetted the risks and benefits of a reduction in summer spill to Columbia River Basin salmon and steelhead stocks. The federal executives are faced with two equal alternatives. It is now

their responsibility to balance the policies of their respective agency as to economic issues and natural resource protection.

**Non-ESA listed Snake River fall chinook are adequately mitigated under the offset measures presented in the March 30 proposal.**

In the most conservative case, the proposed reduction in summer spill as described in the March 30 proposal provides a benefit of about 12,600 non-ESA listed fall chinook salmon. The offset measures provide an estimated benefit of 88,662 adult fall chinook salmon returning to the Columbia River Basin. The offset measures are estimated to provide a seven-fold improvement to that provided by summer spill, and at a significantly lower cost to the ratepayer.

The proposed spill reduction will provide an economic benefit to the region's ratepayers of about \$35 to 40 million over the next three years. An additional 50,000 to 60,000 adult fall chinook returning to the Columbia River Basin will provide a significant economic benefit to both non-treaty and treaty fishers. We are encouraged by the efforts of BPA and the Corps to develop a proposal that works toward balancing economic issues and natural resource protection.

**The offset measures described in the March 30 proposal can adequately offset any adverse effects to ESA listed Snake River Fall chinook.**

The most conservative estimated benefit to ESA listed Snake River Fall chinook due to the reduced summer spill option described in the March 30 proposal is 500 juveniles or 20 adult fish. The estimated benefit of the proposed offset measures is 11 adult fish. The difference in survival of ESA listed Snake River fall chinook is nine adult fish or approximately 200 juveniles. Apparently this number was derived from SIMPAS model runs comparing various spill reduction regimes. The use of SIMPAS to provide estimates of effects or benefits at this small increment range is unsupportable.

The input parameters to SIMPAS, composed primarily of survival by route of passage and pool mortality, all have an associated range of uncertainty. The Corps and BPA declare, several times in the March 30 proposal, that they used the most conservative inputs to the SIMPAS run to derive this number. A slight improvement in any of the offset measures could produce nine adult fish, thereby more than adequately offsetting any adverse effect due to the proposed summer spill reduction. But there are several offset measures presented in the March 30 proposal will more than adequately address the minimal adverse effects to ESA listed Snake River fall chinook salmon. The offset measures described in the March 30 proposal provide flexibility to mitigate adequately for specific stocks of non-ESA listed salmon and steelhead.

**There are a variety of offset measures that provide a significant benefit both to salmon and steelhead in the Columbia and Snake Rivers, and to utility ratepayers and treaty and non-treaty fishers.**

When compelled, technical staffs with the various fish management entities were able to identify myriad offset measures that partially mitigate for a reduction in summer spill. A subset of these options is provided for comment in the March 30 proposal. There are several that will provide a significant economic benefit while increasing the populations of both salmon and steelhead on the Columbia and Snake Rivers.

Many who criticize the March 30 proposal gain an economic benefit either directly from arguing the issues, or indirectly by harvesting fish or managing the salmon and steelhead resources. The burden of paying this benefit is on the ratepayers. Our utility members gain no economic benefit from reducing the survival of salmon and steelhead. Our desire is to provide an equal or greater benefit to fish in an efficient and cost effective manner.

**A less than 1% reduction of Lower Columbia River non-tribal fall chinook harvest will adequately offset any adverse effect of the summer spill reduction on ESA-listed Snake River fall chinook.**

The non-treaty commercial fishery in the Lower Columbia River provides a minimal economic benefit to the region when compared to the loss of generation through summer spill, and exerts a significant impact to ESA listed salmon and steelhead. A less than 1% reduction in lower river non-tribal commercial harvest would more than adequately mitigate adverse effects to ESA listed Snake River fall chinook salmon. According to non-treaty commercial harvest data from 2003, a 2% total reduction in lower river non-tribal commercial harvest would result in an additional 160 ESA listed Snake River fall chinook salmon escaping upriver.

The region will gain a significant recreational and economic benefit by reducing or eliminating the Lower Columbia River non-treaty commercial fishery. A portion of the fish and concurrent ESA impacts reassigned to the sport fishery would provide approximately double the sport fishing seasons and thereby great economic benefit to fishing communities throughout the region. NOAA-F should reduce or eliminate the impact to ESA listed salmon and steelhead stocks as a result of the Lower Columbia River non-treaty commercial fishery.

**Estimates of the benefit of the Northern Pikeminnow Management Program (NPMP) are inordinately conservative.**

As described in the March 30 proposal, the benefits of the NPMP were very conservatively estimated. A more aggressive and focused removal of Northern

pikeminnow can provide a significant survival improvement to fall chinook salmon that will more than adequately offset any adverse effects of the proposed reduction in summer spill.

The Corps and BPA estimate that implementing a more aggressive NPMP will result in a catch on an additional 10,000 fish through the existing bounty program, and an additional 5,000 through site-specific removal around dams. The 2001 “heavy-up” of the NPMP resulted in an additional harvest of 40,000 pikeminnow. The estimated increase in harvest through the bounty program is extremely conservative, at 25% of that actually observed in 2001. It is very likely that an increase in the NPMP bounty will provide a more significant benefit to fall chinook.

Using a still very conservative estimate of harvest rate of 50% of the 2001 harvest, or an additional 20,000 pikeminnow, the benefit to ESA listed Snake River fall chinook is about 24 adult fish or 590 juveniles. This more than adequately offsets any adverse effects due to the reduction in summer spill. We urge the Corps and BPA to revisit their very conservative estimated benefit of the NPMP.

**Increased management of other predatory fish species will provide a significant benefit to juvenile salmon and steelhead outmigrating from the Columbia and Snake Rivers.**

Unfortunately, the Corps and BPA did not include increased management of smallmouth bass, walleye or channel catfish in their offset measures. Significant populations of these predatory fish are found throughout the basin. A minimal effort to manage these species within the boat restricted zones adjacent to the dams should provide a measurable survival benefit to outmigrating juvenile salmonids.

While managing Northern pikeminnow populations adjacent to dams, staff can also remove other predatory species. If unavailable, an acceptable estimate of benefit to juvenile salmonids could be made through concurrent studies or through those conducted at a later date. We urge BPA and the Corps to investigate reservoir operations that may be useful in reducing the populations of predatory fish species.

The Corps and BPA should consider the fact that these are species are not native to the Columbia River Basin. Moreover, these populations exert a significant mortality on both ESA listed and non-listed salmon and steelhead stocks. While difficult to implement, increased management should be considered as an efficient and cost effective option to summer spill.

**Additional or improved artificial production may be a feasible offset measure for summer spill.**

Increased hatchery production may provide benefits to specific stocks not completely mitigated by the proposed offset measures. The actual number of juvenile fish required to offset fully the proposed summer spill reduction is so small that these fish could be produced in existing facilities. There are, however, several issues to consider with this option. The hatchery program should not conflict with NOAA-F ESA policies or with state wild fish policies. Any additional fish produced through these programs should not be harvested in commercial fisheries that have an impact on ESA listed stocks.

**Removable Spillway Weir (RSW) technology has promise for significantly benefiting both the salmon and steelhead and the ratepayers.**

The RSW at Lower Granite Dam has demonstrated a higher fish passage efficiency, higher survival than spillway passage and at a more economic river operation the spillway passage. Preliminary tests on the Bonneville Powerhouse 2 corner collector are showing similar benefits. While installation of more RSWs do not meet the specific criteria required in the summer spill reduction proposal, we urge the Corps and BPA to evaluate, and, where feasible, implement similar surface bypass technologies.

**There are non-economic benefits to the region to be gained by the proposed reduction in summer spill.**

Reduction of summer spill will lead to a significant reduction in greenhouse gas emissions. The current summer spill reduction represents an equivalent of approximately 1.4 million MWh. Replacing hydro generation with that from fossil fuel power plants will result in an estimated 1.4 million additional tons of carbon dioxide. This is equivalent to the carbon dioxide produced from burning nearly 4000 railroad car loads of coal. Similarly, replacing 1.4 million MWh of hydro generation with fossil fuel-derived generation would increase the emissions of SO<sub>2</sub> by 2600 tons and NO<sub>x</sub> emissions by 2700 tons. These numbers double if the hydro generation would displace primarily coal generation.

This reduction in carbon dioxide emissions would result in a reduction in both greenhouse gas emissions and acid deposition from SO<sub>2</sub> and NO<sub>x</sub> emissions. Alternate methods are available for offsetting the effect of reduced summer spill on fish – thus this seems a perfect opportunity to help the region economically, minimize net impact to fish, and have significant positive impacts on the environment.

**We support implementation of the Libby-Hungry Horse reservoir operation.**

Modifying the summer draft of the Libby-Hungry Horse reservoirs should provide a benefit to recreation and resident fish in the upper Columbia River Basin. The actual volume of water provided to the lower river is immeasurable (very small). The Corps

and BPA should work with fish management agencies to draft these reservoirs in a manner that provides the greatest benefit to all interests.

## **Summary**

- The BiOp for the federal hydrosystem allows the Action Agencies the flexibility to meet juvenile survival performance standards in the most efficient and cost effective manner.
- It is the responsibility of senior policy staff from the federal agencies to balance natural resource protection with economic impacts of the summer spill program.
- The offset measures presented in the March 30 proposal were developed from very conservative estimates of their benefits. Increasing the scope of these offsets, especially management of predatory species, will provide a benefit to both ESA listed and to non-listed salmon and steelhead stocks in the Columbia and Snake Rivers at a significant savings to the region.
- The offset measures provided in the March 30 proposal provide a seven-fold benefit to salmon and steelhead as compared with that provided by the reduced summer spill. The survival gap for ESA-listed Snake River fall chinook is nine fish, which is within an error estimate of the SIMPAS model.
- When compelled, technical staff from natural resource agencies can identify myriad offset measures that provide a more efficient and cost effective means to mitigate adverse effects to salmon and steelhead stocks.
- A less than 1% reduction of Lower Columbia River non-tribal fall chinook harvest will adequately offset any adverse effect of the summer spill reduction on ESA-listed Snake River fall chinook.
- The estimated benefit of the NPMP as estimated by the Corps and BPA is conservatively low. Increasing the harvest rate to 50 % of that observed in 2001 instead of 25% will completely mitigate for adverse effects to ESA listed Snake River fall chinook.
- Increased management of other predatory fish species will provide a significant benefit to juvenile salmon and steelhead outmigrating from the Columbia and Snake Rivers.

- Additional or improved artificial production may be a feasible offset measure for summer spill. Fish managers should ensure that additional artificial production does not conflict with salmon recovery efforts.
- RSW technology has significant promise for significantly benefiting both the salmon and steelhead and the ratepayers.
- There are non-economic benefits to the region gained by the proposed reduction in summer spill. Implementing a reduction in spill will reduce the need to replace generation lost to that operation, thereby reducing the emission of greenhouse gasses.
- Implementation of the modified Libby-Hungry Horse reservoir operation should provide a benefit to recreation and resident fish in the upper basin.

We appreciate the opportunity to comment. We look forward to the opportunity to explore with you new avenues to balance the economic realities of the region with effective natural resource protection.

Sincerely,

A handwritten signature in black ink, reading "C. Clark Leone". The signature is written in a cursive style with a long horizontal flourish extending to the right.

C. Clark Leone  
Manager