



February 7, 2017

Amy Gaskill, U.S. Army Corps of Engineers
David Walsh, Bureau of Reclamation
David Wilson, Bonneville Power Administration
Attn: CRSO EIS
Environmental Impact Statement
P.O. Box 2870
Portland, OR 97208
(submitted electronically to comment@crso.info)

RE: Columbia River System Operations EIS Scoping

To representatives of the Action Agencies:

The Public Power Council (PPC) appreciates the opportunity to comment on the elements that should be considered as part of the Columbia River System Operations Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act. PPC represents the consumer-owned utility customers of the Bonneville Power Administration (BPA). As the primary customers of BPA, PPC members and their customers fund the majority of the mitigation requirements of the FCRPS Biological Opinion (BiOp). We have a vested interest in ensuring fish and wildlife mitigation efforts are comprehensive, cost-effective, and productive in mitigating the adverse effects of the FCRPS while also accounting for the fact that many other factors have adverse effects on fish and wildlife populations in the Columbia River Basin.

PPC members have invested approximately \$16 billion since 1978 to mitigate the impacts of the federal hydrosystem on fish and wildlife in the Columbia River Basin. These costs have real impacts to the ratepayers of the Northwest, and ratepayers want to know their dollars are benefitting fish populations. They also want to know their rates are not mitigating for the impacts of factors unrelated to the FCRPS. PPC is supportive of mitigation work that has been effective but is committed to ensuring that moving forward, these efforts are even more cost-effective, impactful, and clearly mindful of recent legal decisions.

Our scoping alternatives maintain a commitment to an inclusive, “All-H” (hydro, habitat, harvest, hatchery) approach because it provides the most comprehensive and long-lasting

management of the FCRPS and because it offers a look at the trade-offs and impacts of all elements affecting salmonid lifecycles. This latest EIS should be broader than the analyses the Action Agencies applied to develop prior BiOps, and should be used as an opportunity to take regional economic and social impacts into account in addition to the environmental impacts that drove prior hydro operations and investments. Even the scoping process employed by the Action Agencies has been extensive and regionally inclusive. As a result of this meaningful process, we are looking for a thoughtful and holistic EIS.

Although the EIS should be broader than prior efforts, the Action Agencies should not forget all that has been learned from existing analyses, but should instead build on this work. The EIS should consider *all economic, social, and environmental impacts of every alternative* discussed below, and that comprehensive lens should also be used on all other considered alternatives. A comprehensive approach is also the best path toward recovery of ESA-listed stocks, and will result in a durable, productive, and cost-effective path forward.

Hydropower Alternatives

The EIS should:

1. Evaluate the effects of eliminating all but overgeneration spill on juvenile and adult fish. Spilling large volumes of water can cause diminishing returns as elevated total dissolved gas (TDG) levels may adversely affect juvenile fish. In addition, confounding water conditions below the dams have been demonstrated to delay adult fish passage. Since, reduced spill would further provide more generation flexibility, the impacts of varied and lowered levels of spill should be more thoroughly analyzed.
2. Evaluate impacts of ending spill when significant numbers of juvenile fish are no longer passing the dams. “Significant” may be defined as the number of juvenile fish that would measurably affect adult fish returns. The current summer spill program uses a specification of “less than 300 juvenile fish” passing the dams to end spill. This is an arbitrary number with limited scientific justification. The EIS should study the number of juvenile fish that would need to be adversely affected to reduce adult returns. The current spill program is set to specific calendar dates. Spring and summer spill programs should be scheduled to provide protection during times a significant number of juvenile fish are passing the dams, not simply by calendar date. Spill also demonstrates, at times, adverse effects on adult passage. The EIS should evaluate the balance between spill for juvenile fish and successful passage of adult fish that have returned to spawn.
3. Model operations of FCRPS dams that maximize adult passage and survival including operations to reduce fall back and passage delay and reduce adverse water temperature effects. A variety of dam and river operations are implemented solely to protect juvenile fish passage and the EIS should provide equal focus on successful adult fish passage survival. For example, the

EIS should evaluate modification of both the volume and the timing of water spilled during the day and how those variables could provide better protection to both adult and juvenile fish.

4. Evaluate impacts of spill levels that meet pre-waiver state TDG water quality standards. Current FCRPS spill programs allow TDG levels above state water quality standards and TDG is managed at the upper limits of the allowable range. This occurs even as elevated TDG has demonstrated adverse effects on fish and other aquatic organisms. The EIS should evaluate impacts of reducing the current spill volumes to meet previously established water quality standards.

5. Evaluate impacts of maximum juvenile fish collection and transport. Juvenile fish transport can result in significantly more juvenile fish delivered to the estuary. Varied and increased collection and transport options should be more thoroughly evaluated.

6. Incorporate management effects of operating the FCRPS to meet water temperature goals to maximize survival of adult fish. Weather related high river temperatures have been demonstrated to adversely affect adult fish passage and survival. Reducing spill in the Snake River has demonstrated a positive effect on lowering water temperature and thereby providing better in-river migrating conditions for adult fish.

7. Study the effects of expanded turbine operating range on juvenile fish to increase generation flexibility in the FCRPS. The current 1% operating limits may not provide the best juvenile fish passage conditions at many dams. Allowing a wider turbine operating range would increase generation flexibility and may improve fish passage.

8. Study impacts of day-average spill versus hourly-average spill. More flexible spill regimes could increase overall fish passage survival while also being considerably more cost-effective.

9. Evaluate effects of dam and river operations to identify those which actually provide measurable fish benefit. Since installation of spillway weirs, there is limited evidence that minimum operating pool (MOP) and minimum irrigation pool (MIP) operations in the Snake River provide a measurable benefit to out-migrating juvenile salmonids. Operating outside of MOP and MIP would provide more generation flexibility while not being detrimental to fish migration.

Habitat Alternatives

The EIS should evaluate the effects of habitat investment to determine the efficacy of the investment as related to its expected benefits. The EIS should address concerns raised by the court's decisions regarding habitat actions and their probability to occur. Where expected benefits are not occurring, analysis should be developed to determine why; projects not

providing expected biological benefit should be discontinued.

Harvest Alternatives

While ensuring legal compliance with Tribes' Treaty fishing rights, the EIS should focus on the best way to minimize harvest of ESA-listed salmon and steelhead. Timing, limits, and manner of fishing are all critical considerations in reducing harvest of ESA-listed fish.

Hatchery Alternatives

The EIS should evaluate hatchery practices and production for effectiveness and impacts. Hatcheries are essential mitigation measures and should be evaluated in the EIS in relation to hydropower impacts. Ensuring and implementing best practices in hatchery production will offer more effective mitigation for the hydrosystem while also reducing impacts on wild ESA stocks.

Other Issues and Alternatives

Economy and Jobs

The EIS should:

1. Evaluate the benefits of the hydropower system, and especially the Snake River projects, on the region's economy and jobs, including transportation, irrigation, flood control, recreation, and affordable power supply. While all alternatives should consider economic, social, and environmental impacts, the EIS should specifically assess the broad value of the hydrosystem on the region's economy, considering not only the power benefits but also the transportation, recreation, agriculture, flood control, and any other benefits provided by the system.
2. Consider the carbon reduction benefits of the FCRPS, and especially the Snake River projects, across the region and the broader western United States in power production and transportation. Further, the EIS should exhibit the benefit of the FCRPS in regard to integration of other renewable resources such as wind and solar versus building firm thermal resources.

Predation

The EIS should evaluate impacts of further reduction of predators of juvenile and adult salmon and steelhead. Avian predators annually kill millions of salmon and steelhead smolt while pinnipeds currently venture miles upriver to feed on returning adults. These mostly non-native

predators cause dramatic negative impacts on ESA-listed salmonids. More aggressively addressing predator populations would likely result in higher fish returns.

Conclusion

PPC's recommended alternatives highlight the importance of taking a holistic look at the FCRPS and all related impacts to the salmon and steelhead lifecycle because that approach recognizes the complexity of these species and because that has been, and will be, the path toward continued success. While looking at the economic, social, and environmental costs of any alternatives, due weight should also be given to their benefits. This approach gives the Action Agencies opportunity to balance and analyze multiple actions and considerations that will result in a comprehensive and long-term FCRPS management plan.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bo Downen', with a long horizontal flourish extending to the right.

Bo Downen
Policy Analyst