April 13, 2020

D. Peter Helmlinger, PE.
Brigadier General
U. S. Army
Division Commander

Elliot Mainzer
Administrator
Bonneville Power Administration
U.S. Department of Energy

Lorri Gray
Regional Director, Columbia-Pacific Northwest
Bureau of Reclamation
U.S. Department of Interior

Re: Columbia Rivers System Operations – Draft Environmental Impact statement

Dear Brigadier General Helmlinger, Administrator Mainzer, and Director, Gray,

Please accept these comments on behalf of the Sierra Club regarding the Columbia River System Operations (CRSO) Draft Environmental Impact Statement (DEIS). These comments are supplemental to those we have co-signed with other groups and submitted separately.

The Sierra Club has over a fifty year history of work to protect habitat and watersheds of the Columbia/Snake River Basin and to protect and restore its salmon, steelhead, lamprey and other species. The DEIS was prepared in response to a court order in May 2016 to provide a new and comprehensive review of measures that can restore the wild salmon and steelhead of the Snake and Columbia Rivers. This court decision is the fifth by three different judges over the past twenty five years to find the Biological Opinion’s developed by the federal agencies inadequate and illegal. The court requested an evaluation of stronger measures including the potential removal of the four lower Snake River dams.

The collapse of the Columbia Basin salmon and steelhead runs has seriously impacted coastal and inland fishing economies and communities. It has had devastating effect on tribal culture and their communities and economies. It is contributing to the demise of the Southern Resident Population of Killer Whales (SRKW). Taxpayers and ratepayers have invested over $16 Billion over the past thirty years to attempt to protect these remaining wild salmon and steelhead runs. While this massive investment, along with court decisions to increase spill at the dams, has helped to keep these runs from extinction it has not recovered a single population of these fish.

Sadly, the federal agencies, have once again failed to select a proposal that will prevent extinction let alone put us on the road to recovery. The DEIS serves as stark reminder that the federal agencies, if left to their own accord, will continue to imperil our fish, orca and communities and perpetuate the cycle of
failure and litigation. That is why our region needs a new fresh approach that enables stakeholders, agencies, and political leaders to work together to forge a lasting durable solution that works for everyone. We firmly believe that a restored Snake River is essential to recover these endangered fish and restore abundant harvestable runs. And that we can, and must, do so in a manner that assures strong vibrant farm and fish communities and a clean, affordable/reliable energy system. A restored river will benefit sport, commercial and tribal economies and communities. Smart investments will position our communities for the futures. The stakes are too high to allow this merry-go-round of failure to continue.

The DEIS Alternatives and Analysis is Inadequate:

The range of alternative is limited, inadequate, and fails to provide the “hard look” and “meaningful comparison of the environmental consequences” of all alternatives as intended by the National Environmental Policy Act. The federal agencies also made a decision in the statement of purpose and need to select and unreasonably narrow and inadequate goal for conservation of wild salmon and steelhead.

The ESA defines “conservation” as returning a species to a self-supporting and sustainable condition in its native ecosystem. Yet the federal agencies arbitrarily decided to narrow their focus to only assuring their actions do not...“reduce appreciably the likelihood of both the survival and recovery of a listed species...” NEPA does permit this kind of arbitrary limit to performing analysis on the effects of the alternatives to this narrow scope of the ESA without a fully rational explanation. However, the federal agencies do not provide any such rational explanation. So, once again, the federal agencies are selecting a “goal” that does not achieve recovery and very likely doesn’t avoid extinction or jeopardy. Additionally, other statutes require even more of the agencies. Specifically, the Northwest Power and Conservation Act requires conservation and rebuilding of salmon and steelhead populations, e.g. “adequately protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat”. To honor our treaties with the Tribes of the Columbia Basin also requires healthy harvestable fish runs. The federal agencies never explain why these statutory and treaty requirements are not relevant to the purpose and need for the CRSO EIS or examine how or to what extent which of the alternatives they do consider would meet these requirements.

Of the alternatives identified only MO3 (Dam Removal) and MO4 (spill to 125%) have any real potential for recovering salmon and steelhead and meeting the requirements of law. The No Action Alternative which is used for baseline comparison was found inadequate and illegal by the Court in 2016. The alternatives, other the Preferred Alternative and MO3 and MO4, provide even lower benefits for salmon recovery. The Preferred Alternative (PAA) is essentially the flex spill agreement that was agreed to by the states of Washington and Oregon, the Nez Perce Tribe, and BPA. At the time of the agreement it was put forward as an interim, short-term, measure not a long-term solution. We supported the flex spill agreement as a short-term action that provides some benefit to young fish migrating downstream. It was never intended to be a long-term solution and indeed it not sufficient to recovery our endangered salmon and steelhead. The CSS evaluation of the PAA demonstrated that the Smolt to Adult Returns (SAR’s) it would produce would be inadequate for recovery.

The SAR’s are the consistent standard that must be used to evaluate the relative effectiveness between alternatives rather than selected metrics that only look at potential benefit for smolts passing from the forebay to the tailrace of the dams themselves. The Northwest Power and Conservation Council have selected SAR’s as the key metric for recovery and identified a 4% SAR as the objective to achieve. A 2%
SAR means we are simply at replacement level for our depleted and endangered runs of salmon and steelhead. The Chinook of the Snake River hover near 1% meaning a population decline over time with the risk of genetic and geographic extirpation. SAR’s of 4% and above demonstrate a trend toward recovery. Only MO3 (dam removal) showed an ability to achieve SAR’s of this level with any degree of consistency. MO4 (higher spill) also showed beneficial SAR’s but not as consistent or strong as dam removal. The PAA seldom achieved any consistent SAR’s within the magnitude of recovery.

Not surprisingly the DEIS identified MO3 as providing the most benefit for recovering salmon and steelhead. Then chose not to select this option based on an inaccurate assessment of costs and benefits. However, the conclusion of MO3 (dam removal) is consistent, and builds on the abundant evidence, of prior analysis regarding the benefit for salmon recovery from dam removal. In 1998 The Plan for Analyzing and Testing Hypotheses (PATH), commissioned by the federal agencies, concluded that a natural river (breaching the dams) was the only option that would provide high probability for recovering salmon. This option had the greatest certainty for success and lowest risk of failure. In its 2000 Biological Opinion for operation of the dams on the Snake and Columbia Rivers, NOAA Fisheries also concluded that: “breaching the four lower Snake River dams would provide more certainty of long-term survival and recovery than would other measures”. Additional reports and studies in the intervening years have also pointed to the lethal impacts of the dams and slack water on the lower Snake River for salmon and steelhead. And, the Cumulative Survival Study repost (CSS) of 2019 predicts a two to three fold increase in salmon abundance with removal of the four lower Snake River dams. And, a potential for a four-fold increase if dam removal is combined with maximum spill over the lower Columbia River dams.

A new alternative should be formulated and evaluated that is a combination of MO3 and MO4. The CSS 2017 Annual report looked at a combination of removing the four lower Snake River dams and spilling to 125% at the four lower Columbia River dams. This alternative was also presented to the CRSO-EIS Fish Technical Team on September 21, 2017 by the CSS Committee. The initial CSS analysis indicated that this combination of dam removal and spill produced the highest SARs leading to recovery yet the federal agencies did not consider it in the DEIS. This is a glaring failure and must be remedied.

**The DEIS Fails to Adequately Evaluate Energy Replacement for Dam Removal**

The DEIS is woefully inadequate in evaluating the socio-economic aspects of dam removal and reasonably exploring and analyzing how to mitigate potential impacts. Mostly the DEIS identifies impacts, often with unreasonably high costs associated with them, and then fails to perform a serious (or in some cases any) analysis of how to effectively mitigate the impacts. The DEIS also fails to evaluate the benefits of dam removal and a restored river and salmon runs to inland sport fishing communities and coastal fisheries. Thus, it fails to provide a balanced approach to evaluating costs and benefits of dam breaching.

A particularly glaring example of the failure to provide a reasonable analysis is the treatment of replacing the lost power if the lower Snake River dams are removed. The good news is that the federal agencies confirm that you can breach the dams and replace the power with clean energy and maintain electric system reliability. And, as previously stated, the DEIS also shows that dam removal provides the best opportunity for restoring our salmon and steelhead runs.

However, the DEIS analysis of replacing the power from the dams is seriously inadequate, fails to meet industry standards, and results in costs that are hugely inflated and not realistic. The energy analysis
does a huge disservice to the region and public in making reasoned decisions on the benefits of dam removal and the ability to replace the lost energy. Key elements contributing to this failure are:

- Decision to only look at solar and storage batteries as the replacement portfolio. There is no effort to look at the full range of clean energy options (energy efficiency, demand response, wind etc.) and identify a portfolio of least cost options. There is no effort to optimize the possible replacement resource portfolios.
- Selection of an arbitrary and unrealistic date of 2022 as the implementation date. Using a static, near-term, year rather than a multi-year analysis of the replacement portfolio needlessly drives up the costs. The NWPCC and utilities across the Northwest would perform an Integrated Resource Planning (IRP) approach and examine energy and capacity needs over a span of 20 years, explore demand requirements and assess resource options, then test and optimize combinations of possible replacement resources.
- Costs chosen for clean energy resources are much higher than current prices as evidenced by recent responses to RFP’s. This is further skewed by using the single year 2022 implementation date thus eliminating the ongoing decline in cost curves for renewable energy.

The Northwest Energy Coalition (NWEC) in 2018 commissioned a study by Energy Strategies to determine the feasibility of replacing the power and services provided by the lower Snake River dams with clean energy resources. The NWEC study – using the same modeling tools as used by the regions’ power planners conducted a comparative analysis that the DEIS failed to do. Their analysis found that with a mix of efficiency, demand response, wind and solar power you could replace the energy from the dams without any loss in reliability and at less than one-third the cost suggested by the DEIS. The NWEC analysis did not optimize the resource portfolio but suggested that that such an evaluation be done. Performing such an optimization analysis along with the ongoing decline in the costs of renewable resources would undoubtedly result in even a lower cost replacement strategy.

The failure of the DEIS to perform this kind of analysis and use a standard industry IRP approach is both puzzling and deeply disappointing. This should be rectified in order to provide the region and decision-maker’s valid information on the cost of power replacement.

**DEIS Does Not Evaluate the Alternatives and the Impacts of Climate Change.**

The DEIS has discussion of climate change in general (Chapter 4) and includes additional discussion in several other places. However, the DEIS does not analyze climate change and how it would impact the effectiveness of any of the alternatives. This is a serious and significant failure of the DEIS and, once again, leaves reviewers in the dark about what the implications are for fish recovery in a climate change world.

For example, the federal agencies acknowledge that “a warming climate could cause moderate to severe declines in salmon and steelhead populations” (DEIS 4-33). The federal agencies further acknowledge that a changing climate will most likely increase the adverse effects and lower the benefits from the alternatives. But there is no attempt to analyze these effects. There is no attempt to discern how much climate change may modify the projected results for “improving” the conditions for smolts and adult salmon and steelhead. Most importantly there is no effort to evaluate which of the alternatives may have the best ability to address salmon needs in a climate change world. There is reason to believe that removing the dams and restoring the Snake River will reduce water temperatures. Nor does the DEIS evaluate how the cool water that is delivered from Dworshak dam may change or diminish in benefit if
the dams are or aren’t removed? How would removing the dams benefit the reduction in invasive predator fish that thrive in warm water? How much more damage to juvenile salmon and steelhead may occur if warmer waters from climate change increase populations of these non-native predator fish.

A serious and substantive evaluation of the impacts of climate change on water temperature and how it will impact the projected results of the different alternatives is urgently needed and missing in whole from the DEIS.

**DEIS Fails to Evaluate Impacts to Southern Resident Killer Whales.**

The leading scientists who work with Southern Resident Killer Whales (SRKW) are united in their opinion that removing the four lower Snake Rivers is essential to preventing the extinction of the orcas. Several letters were sent to Governor Inslee and the Orca Recovery Task Force in 2018 making a strong case for removing the dams as an essential action to save starving orca. Extensive comment letters were also submitted to the federal agencies during the scoping process focused on the important connection between Columbia Basin salmon and SRKW’s.

Despite this extensive set of comments and record the federal agencies gave only a cursive look at orca and were quick to dismiss any potential benefit to orca from any of the alternatives without any valid citation. Indeed, without any citation, the DEIS claims that, “[t]he food available to Southern Resident killer whales from the lower Snake River population is only a small percentage of their overall diet. Changes to food availability may change the whale’s foraging behavior patterns slightly but will not change their overall condition or population dynamics”. This bold statement is not backed up with facts or evidence and is manifestly false and inaccurate.

The DEIS falsely concludes that any increase in salmon, under any of the alternatives, would provide on a minor benefit to the orca. This is false for several reasons.

First, the Snake River salmon are currently, and historically, important food forces for Southern Resident orca. Whale researchers, using both scat analysis and geo-tagging, have demonstrated that all three pods spend substantial time foraging for their primary prey (chinook salmon) off the west coast in late winter and spring. During this period they spend substantial time at the mouth of the Columbia River foraging for salmon as they return to spawn in the Columbia and Snake Rivers. Historically, the Snake River has produced just under 50% of all the chinook salmon from the Columbia Basin. In the predam period when there were substantially more salmon these runs would have made up an even larger part of the orca diet.

Two, the Snake River Chinook salmon are particularly important to Southern Residents because of their size and high nutritional (fat) content. These rich fatty fish are a high pay-off prey for the orca. The Snake River provides the single best opportunity to restore salmon abundance anywhere on the west coast. Restoring the Snake River salmon will provide more salmon to our starving orca than any other action we can take.

Three, we must restore salmon to all parts of the Southern Resident orca’s range to have successful recovery. The DEIS argues that salmon recovery should focus on the Salish Sea. The science clearly shows we must restore salmon throughout their range. Indeed, in the 2008 Recovery Plan for the Southern Resident Orcas, the National Marine Fisheries Service state that “perhaps the single greatest change in food availability for resident killer whales since the late 1800’s has been the decline of salmon.
in the Columbia River basin”. There is a serious disconnect between this statement and the attempt in the DEIS to dismiss the role and value of recovering Snake River chinook salmon for orca.

The federal agencies must revise their analysis and evaluate the benefits of restored salmon, or failure to do so, for Southern Resident orca’s.

**Conclusion**

With 8,000 pages the DEIS is immense and dense. Yet it still fails to provide the hard analysis that NEPA calls for and the region so much needs. The final EIS must include a new option that includes removing the four lower Snake River dams and higher spill to 125% at the lower Columbia River dams. It should fully and fairly analyze relevant impacts and benefits of removing the dams. It must look at the ability for the different alternatives to deliver the projected results in a climate changing world. Restoring the Snake River is the only alternative that demonstrates an ability for recovery as measured by SAR’s. Removing the four lower Snake River dams address the lethal corridor that currently prevents full utilization of the 5500 plus miles of excellent habitat in Central Idaho, Northeast Oregon, and Southeast Washington.

We have the ability to forge a solution that restores abundant harvestable runs of salmon and steelhead and assures strong, vibrant communities and a clean reliable and affordable energy system. The final EIS should serve as a stepping stone to achieving this solution not an impediment due to faulty and inadequate analysis.

We urge the federal agencies to do the serious evaluation that NEPA calls for and correct the numerous deficiencies and flaws before the final EIS is released.

Bill Arthur
Chair, Snake/Columbia River Salmon Campaign
Sierra Club