

August 26, 2022

Michael Tehan  
Assistant Regional Administrator  
NOAA Fisheries  
Interior Columbia Basin Office

*via e-mail*

**RE: “Rebuilding Interior Columbia Basin Salmon and Steelhead” Review Draft**

Dear Mr. Tehan:

The Public Power Council (PPC) represents the interests of non-profit, consumer-owned utilities that are eligible to purchase preference power from the Bonneville Power Administration (BPA) at cost. Our members rely on BPA for reliable, economic, and environmentally responsible power supply to serve their communities and businesses.

BPA’s public power customers fund the largest and most extensive mitigation program for salmon in the country, if not the world. There are numerous factors affecting salmon and steelhead beyond the federal hydro system, including habitat, hatcheries, harvest and of course ocean conditions. In spite of headwinds in many areas, record salmon returns this year show that mitigation efforts work – when conditions allow the federal hydro projects of the Columbia River System can support abundant returns.

PPC members have multiple commitments to cost-effective, scientific mitigation of hydro system impacts on fish and wildlife. As the funders of the program, the costs affect the communities and businesses we serve. As locally governed, non-profit utilities of the Pacific Northwest, we reflect our region’s inherent commitment to conservation.

On July 11, 2022, NOAA Fisheries released a “Regional Fishery Co-manager Review Draft” of a report entitled “Rebuilding Interior Columbia Basin Salmon and Steelhead.” This report appears unusual in its process, having been prepared in consultation with fishery managers for the Nez Perce tribe and State of Oregon. The draft report is also unattributed in terms of authorship within NOAA.

The draft purports to provide high level responses to eight “common questions” regarding “the science” of Columbia River basin salmon and steelhead recovery. Leaving aside the substantial

appearance of bias in its creation in partnership with lead plaintiffs in the Columbia River System Operations (CRSO) litigation, the draft report contains numerous flaws from a scientific perspective. Discussed in more detail below, the following are among the report's greatest shortcomings:

1. The draft report ignores substantial increases in salmon and steelhead abundance observed since ESA protections established in the 1990s. Some stocks (Sockeye, Coho salmon) are currently returning in numbers not observed over the last century, prior to construction of the FCRPS.
2. Productivity goals from Snake River stocks established in the 1990s are an order of magnitude greater than SARs observed below Bonneville Dam or in nearby basins without dams. The reasonableness of an SAR goal of 2-6% needs to be reconsidered based on coastwide declines in SARs.
3. Abundance goals in the draft report neglect to account for millions of adult anadromous and non-native fishes that are now part of the Columbia River Basin ecosystem.
4. The draft report ignores substantial contributions to the state of the science, mostly referencing publications or grey literature from within their own organizations. Including the considerable and sometimes contrary research from other entities would improve what currently appears to be outdated, if not biased, assessments.

These flaws make the document entirely unsuitable in its current form to serve as a reasonable basis to inform policymakers. These flaws are not superficial, and rather represent foundational misrepresentations and particularly omissions of scientific material that is inconvenient to its conclusions.

PPC is particularly concerned with the draft report given that its rapid completion is now a condition of the current stay agreement in CRSO litigation. To properly serve as a "final science-based report for policymakers" as described in Exhibit 2 of the stay agreement substantial revisions and changes are needed.

PPC is a party to the litigation and as such it is both necessary and appropriate for our comments on the draft report to be accepted, acknowledged and explicitly addressed in the formulation of a final report. Science is a process and mode of inquiry. Rushing to finalize what can be construed as a politically motivated draft report as the final word on "the science" of Columbia basin salmon and steelhead issues is inappropriate. Indeed, it has the potential for significant harm in terms of misguided mitigation efforts for the affected species, and also substantial socioeconomic harm to our region and the nation.

We urge NOAA and the U.S. Fish and Wildlife Service in the strongest possible terms to revise the draft report to reflect a balanced view of all the scientific information on these important topics. Technical and scientific comments are included for your consideration below.

### *Technical and Scientific Comments<sup>i</sup>*

The Draft Report lacks both information and context that is critical to recovery of salmonids in the Columbia River Basin. These include: (1) context on population status over the previous century and progress made since federal protection under the Endangered Species Act (ESA); (2) consideration of the reasonableness of both productivity (SAR) and abundance goals established in the 1990s; (3) addressing non-native species and how these populations affect recovery expectations; and (4) neglect of peer-reviewed publications that offer different perspectives on salmon recovery. Additional detail on these topics are as follows:

1. The Draft Report immediately and persistently implies that salmon and steelhead were devastated by hydroelectric development in the Columbia River Basin. While hydroelectric development and operations, particularly in the mid- to late-1900s, limited recovery, these salmon populations were severely depleted prior to construction of the first mainstem hydroelectric projects in the 1930s and 1940s. Since protections under the ESA, billions of dollars have been invested to ensure juvenile survival objectives are met throughout the system and extensive habitat restoration funded throughout the region (GAO 2002; Rieman et al. 2015; Skalski et al. 2016).

One of the longest time series on salmon abundance in the Columbia River Basin is documented at Rock Island Dam (1933–present). Average annual counts of Chinook Salmon, by decade, have averaged between 8,114 adults (1930s) and 37,067 adults (1980s; counts available from Washington Department of Fish and Wildlife and the Columbia River Intertribal Fish Commission). Protections under the ESA were broadly implemented throughout the hydroelectric system in the 1990s, when the average runs of Chinook Salmon at Rock Island Dam were 25,613 adults. Average annual counts of Chinook Salmon each decade since have been 91,072, 108,484, and 91,718 adults in the 2000s, 2010s, and 2020s, respectively (including the partial current run). This represents a 3- to 13-fold increase in Chinook Salmon over decadal averages throughout the 1900s and contradicts the assertion that progress towards recovery has not been made.

Similar trends have been observed at Ice Harbor Dam, the lowermost and oldest hydroelectric project on the lower Snake River. Average annual counts of Chinook, Coho, and Sockeye salmon and steelhead in the 1960s were 76,854, 0 (extirpated), 707, and 71,038 adults, respectively. Average annual counts for these species in the 2010s were 85% higher for Chinook Salmon, 31% higher for Sockeye Salmon, and 61% higher for steelhead compared to the 1960s. Coho Salmon, extirpated from many regions of the interior Columbia River Basin since the early 1900s (Horn et al. 2020), saw average returns to Ice Harbor of

12,518 adults in the 2010s (DART 2022). Again, these trends are counter to the notion that progress is negligible and extinction is imminent.

2. Productivity goals—measured by SARs—established in the 1990s have been reaffirmed by the NPCC (2020) and are persistently reiterated by proponents of dam removal as a primary action to expedite recovery (e.g., Storch et al. 2022). The 2-6% SAR goal “was based on Snake River and Warm Springs SARs during periods when those stocks were believed to be healthy, and on theoretical SARs associated with a range of Snake River egg-smolt survival rates from the last three decades” (pg. 41 of Marmorek et al. 1998). The recent Draft Report does not contemplate reasonableness of these goals, particularly considering that nearly three decades have passed since first established.

Hatchery Genetic Management Plans (HGMPs) developed by Oregon Department of Fish and Wildlife include SAR data from Chinook Salmon and steelhead stocks outside of the hydroelectric system. These data are obtained in the lower Columbia River (below Bonneville Dam) and along the northern Oregon Coast in rivers adjacent to the Pacific Ocean. The HGMPs indicate that median SARs for spring Chinook Salmon are 0.6% in Youngs Bay (2007-2011, ODWF 2017a), located at river mile 2 on the Columbia River (i.e., in the estuary). Similarly, median spring Chinook Salmon SARs along the north coast of Oregon are 0.4% at Cedar Creek/Rhodes Pond less than 15 miles from the ocean (1990-2007, ODFW 2016a) and 0.3% in the Trask River (< 20 miles from the ocean; 1983-1999, ODFW 2016b). Fall-run Chinook Salmon (i.e., Tule) released below Bonneville Dam also have low survival, with median SARs at 0.2% (Big Creek and Bonneville hatcheries; 1986-2008 and 2008-2012, respectively, ODFW 2016c; ODFW 2017b).

Populations in many regions of the Northern Pacific Rim that lack hydroelectric development are experiencing poor SARs and declining populations (Ohlberger et al. 2018; Welch et al. 2021; Wilson et al. 2022; Bass et al. 2022). While use of these data to make inferences to Columbia River Basin stocks or management actions may be presumptuous, it has been acknowledged that SARs of salmonid stocks throughout their range have diminished considerably (ISAB 2021). Since productivity goals (i.e., 2-6% SAR) established in the 1990s under a different ecological regime cannot be achieved in adjacent rivers free of mainstem hydroelectric dams or in locations below Bonneville Dam on the Columbia River, it stands to reason that these goals must be reassessed.

3. Similar to productivity goals, abundance goals stated in the Draft Report should be reconsidered for practicality. Table 2 in the Draft Report has a total “historic abundance” of salmonids in the interior Columbia River Basin totaling 7.7M adults and the “current abundance” totaling 0.2M adults. First, the 0.2M total “current abundance” may be misleading since the 10-year geometric mean of salmonid counts at Bonneville Dam totals 1.2M adults, including the incomplete 2022 return with record numbers of Coho Salmon expected and the fall-run Chinook Salmon just arriving. Secondly, the adult American Shad returns are ignored in the Draft Report. These non-native anadromous fish now account for

up to 92% (in 2018) of the adult fishes counted at Bonneville Dam (DART 2022). Over the last 5 years, the geometric mean of adult fishes enumerated at Bonneville Dam exceeds 7M fish when all species are considered. How American Shad fit into today's ecosystem cannot be ignored (Haskell et al. 2006; Hasselman et al. 2012; Haskell et al. 2017). The term "shad" is only used once in the draft report, parenthetically on the last page of the document.

Similar to the issue with American Shad, the Draft Report also ignores other invasive species that directly conflict with salmonids through predation or competition for resources. Smallmouth Bass and Walleye – widely-known invasive, piscivorous fishes prevalent throughout the region are also only mentioned once in the Draft Report, again on the last page of the document (note that Walleye are not at all mentioned). How other introduced fishes account for biomass, productivity, and the ecology of the modern Columbia River system cannot be ignored when considering abundance goals for native anadromous salmonids (Henderson and Foster 1957; Beamesderfer and Rieman 1991; Rieman et al. 1991; Tabor et al. 1993; Zimmerman 1999; Rubenson and Olden 2020).

4. The Draft Report ignores substantial contributions to the state of the science, mostly referencing publications or grey literature from within their own organizations. Of the 42 citations included in the Draft Report, only half (21) were obtained from refereed scientific journals. A Google Scholar search on [Columbia River Salmon Survival](#) with a filter on reports since 2018 results in over 13,000 entries. Of the first 50 references in the search results, only two are included in the Draft Report; both published by the organizations involved in the Draft Report. Including the considerable and sometimes contrary research from other entities would improve what currently appears to be outdated, if not biased, assessments in the Draft Report.

Thank you for your consideration of these comments. We look forward to working collaboratively to make continued progress on crucial work for the salmon and steelhead of the Columbia River Basin.

Sincerely,



Scott Simms  
Executive Director, Public Power Council

cc: NW Congressional Delegation  
Bonneville Power Administration  
Department of Energy  
U.S. Army Corps of Engineers

U.S. Department of Justice  
Council on Environmental Quality  
Federal Mediation and Conciliation Service  
NOAA West Coast Regional Office

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