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November 5, 2019

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Staff

SUBJECT: Review of public comments on draft Fish and Wildlife Program amendments (draft 2020 Program Addendum)

BACKGROUND:

Presenter: Staff

Summary: At the November Fish and Wildlife Committee meeting, staff will discuss the comments received on the draft 2020 Addendum to the 2014 Columbia River Basin Fish and Wildlife Program, issues identified in the comments, and options for proceeding.

Relevance: The Council is currently in a Program amendment process.

Workplan: Amending the Fish and Wildlife Program is described in the Fish and Wildlife Division Workplan.

Background:

The Council released the draft 2020 Addendum in July 2019, which initiated a public comment period that included public hearings throughout the Basin, consultations with interested partners, and written comments. The comment period closed on October 18, 2019 and the Council received 114 written comments, including comments from seven state fish and wildlife agencies and other state and state-supported agencies; 13 Columbia Basin Tribes and tribal organizations; four federal fish and wildlife and other federal agencies; four Bonneville customers, other utilities and utility organizations,

other river users and user groups; nine environmental and fishing groups and similar non-governmental organizations; and hundreds of individuals. During this comment period, the Council held eight public hearings and one large-group technical consultation and engaged in many consultations.

During the November Fish and Wildlife Committee meeting, staff will discuss and review the comments with the Committee members. Council staff synthesized the comments into a summary document that is enclosed as Attachment 1. Council staff provided the Council with the complete set of comments on October 22, 2019.

Staff has also distilled a list of preliminary issues raised in the comments. This issue list is enclosed as Attachment 2. During the November Fish and Wildlife Committee meeting, staff is not intending to propose resolutions for these issues, with one exception: how the Council should proceed with Part I of the Addendum.

Part I process and recommendation for next steps

The Council received comments from some of the state fish and wildlife agencies and tribes asking the Council not to adopt Part I as it is, and instead to begin a process to work together to determine what are the most appropriate goals, objectives, and indicators for the program. They also seek to collaborate in a broader policy/technical discussion regarding how the Council and others will gather, synthesize, report, assess, and use program performance information over time. How the Council wants to proceed in the face of these comments will determine the immediate nature of the work of the staff and Council on this part of the Addendum.

Reviewing together both Part I and all the comments received on this part, two possible paths forward are obvious if the Council intends to complete Part I on schedule in January. One path would be to adopt Part I in January with substantive revisions based on the substantive comments received, while also including a description of an ongoing collaborative process after the close of the amendment process to further work on indicators and objectives and discuss the broader questions of how reporting will occur and how the information will be used. A second path that mirrors many of the comments would be to adopt a greatly reduced Part I in January that focuses on a schedule and a description of a process to work with the fish and wildlife agencies and tribes over the next 12 to 24 months to develop the goals, objectives, and indicators for the program and discuss the broader issues of reporting and use.

Staff recommendation for proceeding on Part I

While these are two obvious bookend options for proceeding, staff proposes another path forward that remains grounded in the comments calling for the Council to work with the region before adopting the goals and objectives, but also takes into account the significant momentum the Council has created on this effort through the draft addendum and the program amendment process.

Staff recommends that the Council hold open Part I of the addendum past January for a defined period of time. During this time, staff would work with the fish and wildlife agencies and tribes in a focused process to revise Part I. In this process, collaboration would occur both on how to express the goals, objectives, and indicators and on ideas regarding how to gather, synthesize, report, assess, and use this information in the future for program performance. Another aim of these conversations would be to agree as much as possible on a description of an ongoing process that will continue past the amendment process to be able to move forward with this program performance effort in a collaborative manner. The product of the extended collaborative effort would be a revised draft of Part I, which the Council would then release for public review and comment before finalizing. In holding open Part I of the addendum for this purpose, the Council would also make clear that the process must build from the goals, objectives and indicators in the current draft addendum and that at the end of this period the Council would adopt a Part I with substantive provisions, not just a description of a process.

Staff estimates that roughly 6 months would be needed for this process. This factors in the time needed for public review and comment and the Council final adoption process. However, Council members will need to determine precisely the appropriate length of time to extend the amendment process for Part I of the Addendum.

At the November meeting, staff is seeking informal Council concurrence to move forward on the staff recommendation or one of the alternatives. If the Council is agreeable to the staff recommendations, staff will schedule a formal Council decision at either the December or January meeting to extend the final decision on Part I.

Regarding Part II of the Addendum, staff recommends that the Council stay on schedule to make a final decision in January 2020. Staff will be working on draft responses to the comments received and the issues raised on Part II to bring to the Council for review, input and consideration at the December Council meeting. Additional work sessions may be required either before or after the December meeting.

Summary of Comments on Draft 2020 Addendum (*Draft 11/1/19*)

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I. Part I, Program Performance and Adaptive Management

Recommendations and resulting addendum (more to form)

(*Montana Fish Wildlife & Parks and NOAA Fisheries*) Recommendations largely reflected in addendum and responsive to prior comments.

Appreciate the stated purpose of the addendum (*Chinook Indian Nation*). Support the focus of the 2020 Addendum on refining Program implementation, identifying new priorities for implementation, evaluating Program performance, and better incorporating the adaptive management framework into the Program (*Washington Department of Fish and Wildlife (WDFW)*). Overall, we believe that the Addendum improves the content and organization of the Program (*Idaho Fish and Game (IDFG)*, *Idaho Office of Species Conservation (IOSC)*). Support the Council's incremental approach to this round of Program amendments given the regional processes underway and the already extensive program. Preparing an addendum that complements and supplements the Program is pragmatic. (*Confederated Tribes of the Colville Reservation (Colville)*)

(USFWS) The Council is recommending modest adjustments and modifications to the Program rather than a major revision. This reflects the maturity of the Program, and the need for continuity and certainty. We anticipate future Program amendments would follow a similar pattern of modest adjustments rather than a major shift in direction

(Montana Natural Resource Damage Program) Supportive of the 2020 Addendum to the 2014 Columbia River Basin Fish and Wildlife Program specifically as it relates to continued support of the CBWTP and partnering on flow projects in the UCFRB.

(NOAA Fisheries) Supportive of the 2014 FWP and encourages the Council to make progress in all areas of it that are called for in NOAA's relevant recovery plans and biological opinions throughout the Columbia River Basin.

(Nez Perce Tribe) Third paragraph (page 5) Re-order "how it is implemented" and "how we assess and report on program performance" to be consistent with order of Parts I and II of the Addendum.

Accomplishments List

(Nez Perce Tribe and Columbia River Inter-Tribal Fish Commission (CRITFC)) Accomplishments (pages 5 and 6) associated with 2014 Fish and Wildlife Program (Program) are not expressed in or linked to Program Goal or Objective terms, most notably adult abundance. As written, the Accomplishments seem better suited for an annual summary status report of specific actions. Accomplishments in a Program amendment should represent priority actions and outcomes that will be consistently summarized over time

- a.) How do the first and second bullets differ? Is the second bullet (specific to lower Columbia and estuary) a subset of the first bullet?
- b.) Add Johnson Creek Artificial Propagation Enhancement (JCAPE; spring/summer Chinook), Snake River Fall Chinook Acclimation Ponds (FCAP; fall Chinook), Nez Perce Tribal Hatchery (NPTH; fall Chinook) to conservation hatchery program list (sixth bullet). Exclusion of these hatchery actions from the list of conservation hatchery accomplishments is concerning given their success and high level of review in front of the Council.
- c.) Clarify how the Program directly contributed to improved mainstem water management (eighth bullet) (i.e. Fish Passage Center provided technical analysis to Fish Managers).
- d.) Reevaluate or justify how the 2019-2021 Spill Operations Agreement (eighth bullet) can be claimed as a Program Accomplishment; the Agreement was reached outside of any Council process, by select fish and wildlife managers and Action Agencies.
- e.) What type of validation has been done on the CBFish.org implementation database (i.e. Are the CBFish.org based data summaries accurate and/or inclusive of actual Program project accomplishments)?
- f.) Categories of "Accomplishments" not currently included, but worthy of consideration includes: adult abundance metric relative to Program goal, number of hatchery-origin returns from Program hatchery releases, total hatchery

production released from Program hatcheries and percentage relative to total hatchery releases in Columbia River Basin, summary statement on effectiveness of hatchery programs, summary statement on effectiveness of habitat restoration programs, summary statement on effectiveness of predator management programs, summary statement on conservation enforcement programs, list and total number of forums hosted and/or lead by COUNCIL, summary of the number and types of entities contracted to do work under the Program. Alternatively, summary statements for each Program Addendum strategy.

g.) Reorganize accomplishment bullets into topical groupings with sub-bullets for specific details. Several bullets are redundant or are nuanced differences from other bullets.

(Bonneville) Overall, we believe there is a need for a more comprehensive assessment of past accomplishments, as well as further evaluation and prioritization within the Program, before the Council makes substantive changes. It is critical to stress the importance of evaluating the Program's performance through the appropriate legal and historical context. Understanding long-term achievements and providing a more comprehensive retrospective of the region's progress over nearly four decades is an essential threshold issue that should be addressed prior to making substantive changes to the Program. Bonneville supports the Council's efforts to quantify on-the-ground accomplishments, such as habitat improvement actions implemented over the last five years; in addition to citing mitigation statistics, though, Bonneville would be particularly interested in the Council's assessment of how such accomplishments demonstrate progress towards the overarching fish and wildlife purposes of the Northwest Power Act.

(Bonneville) The following accomplishments and achievements should be included in a more comprehensive review to recognize full and ongoing compliance with the Northwest Power Act's mandates applicable to Columbia River System operations and management:

Recent measurements of juvenile fish passage survival at the Columbia River System dams for spring and summer migrants were 96% and 93%, respectively,³ as compared to when the Northwest Power Act was passed and the estimated average juvenile mortality at each main-stem dam and reservoir complex was 15-20% with losses recorded as high as 30%.⁴

Travel time has improved for yearling Chinook and juvenile steelhead through the system thanks to the combination of spill and spillway weirs and other surface passage routes, even in low flow years such as 2015.⁵

Total In-River survival has improved for migrating juvenile salmon and steelhead. Comparing two time periods reported in National Oceanic and Atmospheric Administration's ("NOAA") reach study,⁶ (1997-2007 and 2008 – 2017), there has been a nearly 10% survival increase for hatchery and wild sockeye salmon, a 2% increase in hatchery and wild Chinook (3% for wild), and a 20% survival increase for hatchery and wild steelhead (13% for wild).

For Pacific lamprey, the Corps has implemented fish ladder improvements at all eight lower Columbia River and Snake River dams, including two ladder entrance modifications and two prototype bypass flumes that are still being evaluated, and

modified juvenile bypass screen operations at McNary Dam and redesigned bypass collection raceway screens at transportation projects.

Significant federal investment in structural improvements and operational changes to the system are helping to achieve these results.

Wildlife mitigation achievements have been extensive, far exceeding those acknowledged in the draft addendum. (*Bonneville*)

(*Chinook Indian Nation*) Appreciate the accomplishments. In ways suited to our locale, expertise, and resources of time and personnel, we would like to assist toward further accomplishments.

(*Kootenai Tribe of Idaho*) The listing of accomplishments over a five-year period seems too narrowly focused and does not show the scope and significance of accomplishments over the long-term. A more comprehensive look at the progress over the last four decades would be beneficial. In addition, the five-year list is missing several important accomplishments during that time period, including the building of the Kootenai Tribe's Twin Rivers Sturgeon and Burbot Conservation Hatchery

(*Public Power Council (PPC)*) The Draft Addendum should more fully recognize the accomplishments of the program to date

II. Part I, A. Program Goals, Objectives, and Performance Indicators

Elements: How the Council should proceed with Part I

(*Oregon Department of Fish and Wildlife (ODFW)*) Appreciate the Council's efforts in developing the program goals, objectives and performance indicators identified throughout Part I of the Addendum and recognize that this work represents a step in the right direction; however, the Council should establish and articulate in the addendum a collaborative and iterative regional process with the fish and wildlife managers to refine the indicators prior to adoption into the Program.

(*WDFW*) The Council should include in the final addendum a more fully articulated regional process that better links all program goals, objective indicators and reporting processes. This process should involve Columbia Basin Fish and Wildlife Managers and be completed in one to two years -the end result will be a more efficient performance assessment program that is based on the best available science and provides for good stewardship of ratepayer fish and wildlife dollars. This process would allow the region to develop a more comprehensive list of performance indicators and unite behind these indicators.

(*Kootenai Tribe*) The Council should continue to work with the Tribes and state and federal fish and wildlife managers to determine if there is consensus for the performance indicators and what utility they may have.

(Colville) In support of the Council continuing to work with the state and federal agencies and region's Indian tribes to refine program objectives and indicators

(Nez Perce, Confederated Tribes of the Umatilla Indian Nation (CTUIR), Yakama Nation, CRITFC and Confederated Tribes of the Warm Springs Tribes Reservation of Oregon (Warm Springs Tribes)) The adaptive management concept is sound; however, further refinement is needed at every level. The Addendum lacks important details to inform the framework including the means and mechanisms to populate the framework with information. The Council should not adopt this incomplete and flawed framework, in whole or in part. We recommend the Council close this amendment cycle without adopting any portion of the framework and close the process with a commitment to a collaborative process led by the Council where it sets a schedule over the next 12-18/18-24 months to work with the managers to finalize what the Council's draft amendments have started. Refrain from taking any action at this time to approve or adopt any of Part I and focus its efforts on developing a process and schedule for undertaking and completing the work, in collaboration with the managers. Considerations that should be considered when setting schedule include, phase II of the partnership, CRSO EIS, ongoing efforts to improve RM&E and section 4(h)(6) of the act. The process should start with a policy-level discussion in the region about the Council's new role and emphasis in basinwide accountability for progress towards our basinwide goals and objectives.

Elements: Connection between the Power Act and the Addendum and the Addendum and the 2014 Program

(Colville) In general, the indicators are useful guides and benchmarks for assessing progress, but need to clarify how the indicators will be used relative to the Power Act Requirements given the indicators are not intended to be formally part of the Addendum.

(Bonneville) The Addendum incorporates goals developed outside the Council's process and implicate factors outside of Bonneville's control or authority to address. We ask that the Council articulate a clear strategy for how it will separate out responsibility relating to both Federal and non-Federal hydrosystem mitigation from responsibility for other impacts that are beyond the Program's purview.

(Bonneville) The Council needs to articulate how the strategy performance indicators flow down from specific statutory mitigation mandates before determining that they are appropriate 'tracking tools' for the program. Bonneville asks the Council to omit any external objectives and indicators from the addendum. The value of any tracking effort is unclear unless it is placed in the context of what the Act requires, what's been done, and what then remains.

(Nez Perce Tribe, CTUIR, CRITFC, Yakama Nation and Warm Springs Tribes). The Program should be structured in a manner that links Goals, Objectives, and SPIs in a logical sequence. The current version of the Addendum does not adequately address the full suite of goals and objectives identified in the 2014 Program. It is not clear what is being supplemented and what is being reorganized. There are 22 goals identified in the 2014 F&W Program (Appendix D), yet only 6 goals are addressed by this

Addendum. Several of the goals in the 2014 Program have been reworded, added, or changed to objectives or SPIs as expressed in this Addendum, and of particular concern are changes to abundance goals that shift the assessment location from Bonneville Dam down to the mouth; removal of the 2025 timeframe and eliminating “interim” (discussed again below).

(Nez Perce Tribe, CTUIR, CRITFC, Yakama Nation and Warm Springs Tribes) The Addendum should identify a process for the fish and wildlife managers to review all the Program fish and wildlife goals and objectives and reorganize them into an adaptive management structure that would support reporting on an appropriate time scale. Should work collaboratively to develop a cross walk between the goals and objectives in the 2014 Program and Addendum

(WDFW) Develop strategy indicators for all Program goals and a process to identify strategy indicators. With the new indicator data in the addendum, recommend the Council identify responsible entities and the mechanism to report this data to the Council.

(Idaho Fish and Game and Idaho Office of Species Conservation) For each listed indicator, the goals, objectives, relevant strategies, and measures should be listed in the Addendum and referenced back to the Program with the respective page numbers.

(Nez Perce Tribe, CTUIR, CRITFC, Yakama Nation and Warm Springs Tribes) Unclear how indicators will be used to support future decision-making, and indicators are missing, including dam counts, total abundance, juvenile system survival, smolt-to-adult returns, reintroduction efforts, white sturgeon harvest, lamprey translocation, lamprey pattern of risk, lamprey passage improvements. Not adopting indicators into the program is confusing and potentially misleading, and adopting standards from other forums as indicators risks adopting a standard that is inadequate to achieve program objectives and establishing dueling targets if values are changed in the other forums.

(Nez Perce Tribe, CTUIR, CRITFC, Yakama Nation and Warm Springs Tribes) The word “Objective” is a term of art in the Northwest Power Act found in sections 4(h)(2) and 4(h)(6). It appears that the term “Objectives” as used in the Addendum is for the purpose of Adaptive Management, which is a different definition than provided in the Northwest Power Act. If so, this is a major amendment to the Program, not simply the addition of useful tracking metrics.

(Warm Springs Tribes, CTUIR,) The draft amendment "Addendum" purports to not substantively modify the existing 2014 Fish and Wildlife Program. As such, it is unclear to us if the material it contains is expected to be taken into account by the federal agencies in the same manner that pre-existing 2014 Fish and Wildlife Program provisions are under Section 4(h)(10) and 4(h)(11) of the Northwest Power Act. Further it is unclear what role the content of the Addendum would have as the Council implements Section 4(h)10(D) of the Act. Similarly, we see significant policy statements presented in the Addendum. The adopted Fish and Wildlife Program has long been a valuable expression of regional policy objectives and positions, and again, setting aside our agreement or concerns about those for the moment, it is unclear if the statements of

policy this non-amending "Addendum" offers are actually on equal footing with those expressed in the adopted 2014 Fish and Wildlife Program. We would like to work with the Council to develop a conclusion to this amendment process that clarifies these matters

(CTUIR, Yakama Nation, CRITFC and Warm Springs Tribes) Losses for resident fish and wildlife appear to be relegated to Objectives and Performance Indicators and are not clearly spelled out as goals. Some objectives in this Addendum were goals in previous Programs (e.g.; SARs).

Elements: Developing, updating and tracking indicators, goals and objectives
(WDFW, Idaho Fish and Game, Idaho Office of Species Conservation) Should identify and address process for modifying, adding or updating the indicators

(WDFW) Should define or create a forum to define what constitutes adequate progress toward the SAR goals and partnership goals.

(Nez Perce, CTUIR, CRITFC, Yakama Nation, Warm Springs Tribes) Performance Indicators should be phrased in the form of measures and the current description of indicators is not adequate to relay specifically what information will be reported, where the data will be obtained and what the SPIs are intended to demonstrate. Indicators should be phrased in the form of measures and identify what data will be presented, in what format, where data will come from, where it will be reported and on what time scale, and what a trend or metric will be indicative of. Each indicator could be defined in terms of measures directing specific projects to deliver specific information for the purpose of informing future decision making. Indicators could be reviewed annually in a coordination forum with the managers. Indicators should directly support development of RME strategic plans.

(Nez Perce, CRITFC, CTUIR, Yakama Nation, Warm Springs Tribes). To the extent possible, incorporate consistent language for goals, biological objectives and strategies for fish and wildlife. *(WDFW)*. The Addendum lacks a standard definition and expectation for objective content. Objectives should be SMART (Specific, Measurable, Attainable, Relevant, and Time-bound)

(CTUIR, Yakama Nation, CRITFC and Warm Springs Tribes) Council should acknowledge that the FW managers should be primarily responsible for developing the who and how indicators are tracked and reported.

(Nez Perce, CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) Identification of the timeframe for realizing goals has been dropped. The Program goal has been to double the runs by 2025. Removing the time element from the goals and objectives eliminates a sense of urgency and accountability for achieving them. Changing the time element should be done through a collaborative process with the fish and wildlife managers.

(NOAA Fisheries) We encourage the Council to utilize the work (to refine the current proposed list of indicators) that originates from the Tributary Habitat Steering

Committee, the Habitat Research Monitoring and Evaluation Steering Committee, and other related regional efforts that will be establishing a variety of indicators, metrics, and program priorities related to habitat performance over the term of the Addendum.

(Bill Bakke) Numerical values are important but by themselves do not provide information necessary to maintain productivity or fisheries. Biological goals should also include more information such as the number of fish by species and population counted at their natal stream relative to established escapement criteria. Biological Objectives need to include life history diversity criteria for each population contributing to the numerical goal of each geographical area. Numerical goals alone cannot maintain the productivity of each stream and geographical area. The Council must make sure that the FWP numerical goals, escapement goals by stream, and life history diversity are maintained by stream to support fisheries, productivity, and recovery of salmon and steelhead in each geographical area.

(Public Power Council) The NWPCC should assure that all projects have clearly defines goals, strategies and metrics. The goals should identify the desired outcome of each project and include the plan or method for achieving the stated goals for each project. The metrics developed for each project should be quantifiable measurements that capture the efficacy, performance, or quality of a plan, process, or product.

General comments related to Part I

(Upper Columbia Salmon Recovery Board) Committed to ongoing engagement as to the best ways to monitor progress toward achieving implementation and adaptive management objectives, including refinement of quantitative indicators. Should align existing regional efforts with that of the RM&E strategy.

(CTUIR, Yakama Nation, CRITFC, Nez Perce Tribe, Warm Springs Tribes) The evaluation of program performance can and should be manageable, efficient, objective and clearly linked to objectives and strategies, and much of the necessary information is routinely available. Council staff should take advantage of existing information and fish manager expertise where possible to avoid the need for Council staff to undertake redundant, costly, and data-intensive analyses that some of the performance indicators imply.

(Confederated Tribes of Grand Ronde) These draft objective values virtually become the full mitigation target. Concern regarding adopting the MAFAC values as absolute values in the program, however, supportive of the inclusion of these quantified objectives given the program states that achieving these objectives is not the same as achieving the program's goal. Recommend a link to the current draft document, or if a document has not been created, that the Council assemble a dated summary as reference material from the work compiled from the CRB Partnership. The linking of Strategy Indicators and Biological Objectives is somewhat confusing. Be a little clearer if you link the indicators in order. Would like to work with those interested in making the Pacific lamprey, resident salmonids, and native aquatic focal species more quantitative.

(WFDW, Idaho Fish and Game and Idaho Office of Species Conservation) Update figure 1 to explain the figure and the process it represents, including definitions and monitoring. Monitoring should be included between the implementation and

performance indicators in the figure as it provides the data necessary to inform the indicators.

(Nez Perce Tribe) Figure 1 (page 9) is inconsistent with 2014 program boxes. It lacks measures or linkage to Strategic Performance Indicators (SPIs). Change box colors and structure to differentiate: foundational (scientific foundation, Measures), strategic (Vision, Program Goals, Biological Objectives, Ecological Objectives), performance (indicators), and Communication and coordination (program tracker, project review, progress tool) categories. Consider adding other information sources that inform the Program.

(Idaho Wildlife Federation) Appreciate the Council's efforts to better articulate the program's goals, objectives and strategy performance indicators but are troubled by the lack of accountability still present in the new framework. It is particularly disturbing that each section of indicators is prefaced with the statement "These indicators are not adopted into the program." IWF urges the Council to formally adopt the performance strategy indicators presented in the draft addendum, as revised through the commenting process.

(Idaho Wildlife Federation) It is imperative the Program develops performance indicators regarding the overall mortality of smolts as they traverse the entire Snake and Columbia river system, not just the physical dams, to mitigate for the hydrosystem's total impact. These values have already been developed for adults (pp. 11-12 in the draft addendum), meaning they can also be developed for smolts. The Program should seek to align itself with the goals and metrics of the Columbia Basin Partnership Task Force, as it agreed to in 2015. It should also heed the recommendations presented by the Independent Scientific Advisory Board in its Review of the 2014 Columbia Basin Fish and Wildlife Program, which was requested by the Council.

(NOAA Fisheries) As with past BiOps on the Federal Columbia River Power System (FCRPS), we anticipate that there will be a strong nexus between our 2020 CRSO and the Council's Fish and Wildlife Program (FWP). Given the timing of these broad sweeping and relevant documents to the FWP, and taking into account the Council's stated authority and precedence, NOAA Fisheries would like to engage with the Council in discussing and delineating the process to make any necessary adjustments to the 2020 FWP Addendum and its implementation.

(WDFW) When data are available strategy indicators should be specific with quantifiable indicators for abundance, survival/productivity, diversity, or spatial structure as was done for anadromous salmon and steelhead.

(Bonneville) The 2019 NOAA Fisheries Columbia River System Biological Opinion, however, does not call for dam-specific survival monitoring. Consequently, it is our understanding that the Corps does not currently plan to continue to test performance against the 96% and 93% survival standards for spring and summer migrants, respectively, as called for in past biological opinions and in the current draft of the Council's addendum.

(Public Power council) Support the improved adaptive management opportunities identified in the Addendum, and urge the Council to improve cost-effectiveness evaluation of projects to help identify actions that have the greatest expected benefit per dollar and the highest likelihood for generating those benefits in the shortest period.

Anadromous Salmon and Steelhead

(WDFW) Important to retain existing goals such as 5 million fish, the SAR ratio in the 2-6 percent range, and the agreed upon mitigation goals for hatchery programs. Recommend the full range of partnership goals (delisting to high) be listed in the biological objective S1.

(Bonneville) Council should evaluate current evidence and science related to the Program's goal for anadromous fish before reaffirming that goals based on citations to earlier programs.

Strategy indicators should be reported separately for hatchery and wild fish because hatchery and wild fish performance is often different. *(WDFW)* SAR values are probably different for wild or hatchery fish, so each should be evaluated separately. *(Bill Bakke)*

(Bill Bakke) It is important to continue evaluation of SAR for salmon and steelhead in the Columbia River. However, it should be extended to each tributary rather than confined to the mainstem Columbia and Snake River. The present SAR criteria should be reviewed by the Council's science panels to determine whether they are an adequate standard for wild or hatchery salmon, and steelhead under present conditions including river specific escapement requirements for each species and race.

(Bill Bakke) The actual survival range is not provided along with the adult performance standard on page 11, so no comparison. In addition, for adult steelhead and sockeye is the fall back and associated mortality a factor in accurately estimating adult passage?

(Bill Bakke) Hatchery and natural production should be measured by smolt production so that hatchery and wild fish production is comparable by stream.

(Nez Perce Tribe, CTUIR, Yakama Nation, Warm Springs Tribes, CRITFC) The assessment location for the salmon and steelhead goal has been moved from Bonneville Dam down to the mouth of the Columbia. The 2000 Program clearly states on Page 17: "Increase total adult salmon and steelhead runs above Bonneville Dam by 2025 to an average of 5 million annually in a manner that supports tribal and non-tribal harvest." Subsequent Programs have weakened the goal to "emphasize runs above Bonneville Dam" but have not moved the goal post from Bonneville to the mouth of the Columbia, as is done in this Addendum. This is a significant change, resulting in a reduction in tribal harvest opportunity.

(WDFW) Change the last sentence in the first paragraph on page 10 as reflected in bold: "While the program has always assumed artificial production will be one of the strategies used to achieve this goal, the proportion of **wild** fish contributing to this goal should increase as natural production increases."

(USFWS) On page 10, revise the following statement as reflected in bold: While the Program has always assumed artificial production will be one of the strategies used to achieve this goal, the proportion of **wild** fish contributing to this goal should **increase** as natural production increases.”

(Colville) Page 10, Biological Objective SI & page 14 (Wild Fish Strategy Indicators). It is confusing to reference "delisting values" for non-ESA populations. Although footnote 7 (page 44) explains why values for a non-listed species such as UCR fall Chinook were used, there is no information on how the values were determined. It may be preferable simply to reference the low, medium and high goals in the MAFAC report and as a default establish the next higher goal as the target for the biological objective.

(Colville) Page 11 (dam passage survival indicators). The dam passage survival rates are for passage at the concrete only. Is it possible to include (or establish separately) quantifiable juvenile performance standards the reservoir environment as well? This would potentially allow fish and wildlife managers and the agencies to address survival concerns specific to the reservoirs such as temperature and predation. With respect to adult survival, it is unclear why a different, lower standard applies to UCR steelhead (84.5%) relative to Snake River steelhead and UCR spring Chinook (90.1 %). This should be explained.

(Colville) Page 14 (Wild Fish Strategy Indicators), we suggest the following revision to the last sentence before the table: The program recognizes the provisional medium and high escapement abundances developed through the collaborative regional **effort but, for ESA listed stocks, near-term focus will be on** contributing to the following low natural-origin spawner escapement target. **For unlisted stocks that are already exceeding the low goal, the focus will be on achieving medium and high targets.**

(Colville) Pages 11-14. The strategy performance indicators were developed in the MAFAC Columbia Basin Partnership Take Force process with fish passage and reintroduction upstream of Chief Joseph and Grand Coulee dams. These goals cannot be met without access to that habitat or hatchery production for those areas. We recommend that this be explained as important context for the indicators.

(Nez Perce, CTUIR, Warm Springs Tribes, CRITFC, Yakama) The Salmon and Steelhead Goal should be characterized as “Interim.” Removing “Interim” essentially caps the ultimate Program goal at 5 million fish, 3 million fish less than Council loss assessment of 8 million. The draft indicators further reduce short-term abundance expectation to 2.4 million fish as “near-term provisional goals.”

(Chinook Indian Nation) Aside from restoring the health of the estuary for fish en route from and back to the waters above Bonneville Dam, we believe that restoring habitat for fish populations that originate below Bonneville Dam is also important.

(NOAA) NOAA Fisheries requests that the Council also utilize qualitative goals from the Basin Partnership.

(NOAA) Update flow and passage standards with what is in the 2019 BiOp.

(NOAA) Unclear how the proposed indicators would be used to evaluate habitat improvements. To evaluate program effectiveness for ESA-listed salmon and steelhead, additional information, including population targeted, rationale for a particular action (e.g., was the action targeting a limiting factor identified based on a watershed assessment), change in habitat conditions pre- and post-treatment, change in habitat capacity for limiting life-stages, fish use of improved habitat, and improvements in population abundance and productivity would be more useful indicators of program effectiveness.

(Bonneville) Bonneville suggest that any indicators or measures relating to juvenile passage and survival in the addendum should focus on maintaining current levels of reach survival, based on reach survival estimates collected as part of the fish and wildlife program and reported to Bonneville annually by NOAA fisheries. If the Council sees a need to link the addendum to specific performance indicators for purposes of Program tracking, Bonneville recommends indicators that track the performance and impacts of system-wide dam operations, including the specific portion of which apply to the Columbia River System, relying on information in currently applicable biological opinions rather than standards derived from past biological opinions.

(Public Power Council) Current SAR goals provide no function in the program and are an inappropriate basis for the Council to base any program decisions.

White Sturgeon

(USFWS) On page 16 in the "White Sturgeon Strategy Indicators" table, the target should specify that it refers to **wild** adults.

(USFWS) Kootenai River White Sturgeon Recovery. On page 16 the table states that an adult population size of 8000-10,000 is "for delisting". That's not correct. The delisting criteria for Kootenai sturgeon in the 2019 revised Kootenai River White Sturgeon Recovery Plan is: "the number of Kootenai sturgeon wild recruits (offspring that survive to sexual maturity at 25 years) that are added to the adult (25 years or older) population annually should average at least 250 individuals per year over 10 years. In addition, the population should include at least 10,000 wild juveniles, ages 3 to 24 years."

(Idaho Fish and Game and Idaho Office of Species Conservation) On Page 16, the population abundance listed for the White Sturgeon Kootenai Management Unit should be edited to the following: "[T]he current down-listing criteria is a population that demonstrates natural production of at least 700 wild age-3 juveniles in at least three of 10 consecutive years, and the current delisting criteria is a population that averages at least 250 individuals recruited to the adult population annually over a 10 consecutive year period and includes 10,000 wild juveniles aged from 3-24 years." (USFWS 2018)

(Spokane Tribe of Indians) Add the following language in bold to White Sturgeon WS1: For Lower Columbia River sturgeon, contribute to maintaining a stable healthy

population and support sustainable fisheries. For the other seven sturgeon population management units, halt declining trends and make progress toward healthy populations to support sustainable **subsistence and recreational** fisheries. Healthy populations are defined as abundant, productive, genetically diverse, and spatially distributed in areas of historic sturgeon range within the Columbia River Basin.

(Spokane Tribe of Indians) Add the following language in bold to the target for the Transboundary Upper Columbia Management Unit: Ensure interim adult populations of 2,000 in the Canadian Transboundary Reach and 5,000 in the US Transboundary Reach. **Maintain a subsistence and recreational fishery harvest objective of 2,000 fish per year.**

(Nez Perce Tribe, CTUIR, CRITFC, Yakama Nation and Warm Springs Tribes) Missing indicators include white sturgeon harvest.

General comments re: White Sturgeon

(USFWS) The program should acknowledge the revised Kootenai River White Sturgeon Recovery Plan and ensure consistency.

(Chinook Indian Nation) Concur with the goal and biological objectives. Must be more of an emphasis on management below the dams.

Pacific Lamprey

(Nez Perce Tribe, CTUIR, CRITFC, Yakama Nation and Warm Springs Tribes) Indicators are missing for lamprey translocation, lamprey pattern of risk and lamprey passage improvements.

(Grand Ronde) Would like to work with those interested in making the Pacific lamprey indicators more specific.

Resident Salmonids

(Montana Fish Wildlife and Park) Adopt common language for bull trout, cutthroat trout, kokanee, and redband trout that combines the attributes of self-sustaining, broadly distributed and interconnected populations with intact genetic and life history diversity.

(Montana Fish Wildlife and Park) Revise the bull trout mitigation strategy indicators (R1-1, Addendum, page 20) to better align with the objectives outlined in the US Fish and Wildlife Service's 2015 bull trout recovery plan

(USFWS) Bull Trout Recovery. The quantitative goals for bull trout recovery on page 20 of the Addendum are outdated. We recommend the Council adopt the recovery criteria in the revised Bull Trout Recovery Plan into the Program (See USFWS Bull Trout Recovery Plan 2015). Specifically, we recommend the recovery criteria outlined in Table 1 (page 47) of the Bull Trout Recovery Plan be adopted into the Council's Program, particularly for the Mid-Columbia, Upper Snake, and Columbia Headwaters recovery units.

(Grand Ronde) Would like to work with those interested in making the resident salmonids indicators more specific.

(Confederated Salish and Kootenai Tribes) Page 25 of the draft program, bullet should be revised to read: "Protect or restore 448 miles (721 km) of suitable habitat that is closely equivalent to the habitat blocked by Hungry Horse Dam within the Flathead River watershed." Further, the time frame of 2024 is unrealistic and should be significantly extended or dropped.

Native Aquatic Focal Species

(Spokane Tribe of Indians) Add the following bolded language to NF1 to recognize the current situation in the areas above Grand Coulee Dam: Contribute to maintaining a stable and increasing population trend for eulachon, burbot, freshwater mussels, and other native aquatic focal species. **Within the Blocked Area above Grand Coulee Dam protect existing populations of native mussels and increase abundance of native mussels throughout their native range in numbers that contribute to ecological integrity and self-sustaining persistence.**

(Grand Ronde) Would like to work with those interested in making the native aquatic focal species indicators more specific.

Ecological, Communication, Assessment and Coordination Objectives and Strategy Performance Indicators

(Montana Fish, Wildlife and Park) Revise the resident Fish Mitigation Strategy Indicators for the Flathead Subbasin (Addendum, page 25) to include the 448 miles (721 km) of suitable stream habitat that was blocked by Hungry Horse Dam

(Montana Fish, Wildlife and Park) Revise the resident Fish Mitigation Strategy Indicators for the Kootenai Subbasin (Addendum page 25) to replace the bullet calling for protecting or restoring 600 acres of suitable stream or reservoir habitat in the Kootenai River Basin by 2020 with an indicator consistent with the one used for the Flathead (E1-5): protecting or restoring 87 miles (140 km) of suitable stream habitat in the Kootenai River by 2028. This will provide similar metrics for both subbasins that are tied directly to the corresponding mitigation plans.

(Chinook Indian Nation) We would like to identify, perhaps working alongside some of the Council's scientific partners, any of these species that might live on the lower river; subsequently, we could consult with these partners on mitigation strategies. Regarding habitat restoration: On the shorelines of our territory, non-native grassy plants were introduced many decades ago by cargo ships offloading protective packing material. One effect of this encroachment is to crowd out much of the native basket grasses used from time immemorial to create woven baskets and garments. Other possible effects include habitat diminishment. This area must be researched and mitigated in efforts to restore the vital estuary.

(Idaho Fish and Game and Idaho Office of Species Conservation) Support progress on the asset management plan and support the next step to develop a long-term funding

strategy to protect these assets. We recommend that the Council add language in this section of the Addendum (and on page 26) to recognize the need to support and develop a solution that addresses similar issues with the operation/maintenance, and capital construction/improvements of other hatchery programs supported indirectly through BPA or other funding sources (e.g., LSRCP hatcheries).

(NOAA Fisheries) We recommend that the Council's indicators incorporate the Expert Regional Technical Group's landscape-level priorities for restoration planning: Ensure at least one large habitat complex is available within each of the eight hydrogeomorphic reaches near key transition zones (i.e., near the reach boundaries and at river confluences) along both estuary shores (Washington and Oregon); Minimize potential stress and predation risks to salmon by reducing travel distances (to < 5 km where possible) between existing large natural or restored habitat patches in each reach; Restore small off-channel patches and/or improve the structure and function of the surrounding riparian and shoreline "matrix" habitat along the salmon migration route where shallow rearing habitats are naturally limited or impractical to recover (e.g., largely constrained by hardened shorelines and levees).

(Public Power Council) CRSO EIS is the proper venue to consider any long-term changes to spill regimes and TDG concentration limits.

Wildlife

(Kootenai Tribe) Additional citations are needed to clarify where the Council's figures originated regarding wildlife mitigation and the addendum should identify that there is no consensus in the region regarding the remaining construction and inundation mitigation.

(Kootenai Tribe) Wildlife mitigation strategy indicators are missing recommendations for non-native and invasive species strategy indicators. Not clear how the public engagement strategies relate to the wildlife program.

(WDFW) Modify W4 as follows: "Contribute to maintaining and improving habitat quality on land purchased **or managed to mitigate** for hydrosystem impacts on wildlife by developing and using approved land management plans for all parcels purchased under the program."

(WDFW) Modify language in final box on page 30 to: "Each land parcel funded by the program has an updated stewardship agreement that is evaluated on a five-year cycle to verify that it is being managed as required by the applicable agreement."

(Idaho Fish and Game and Idaho Office of Species Conservation) The Upper Snake wildlife mitigation amount should be 16,645 acres not 16,555 acres.

(Idaho Fish and Game and Idaho Office of Species Conservation) Under W1, the Dworshak Dam line of the table should differentiate between the Idaho Department of Fish and Game and the Nez Perce Tribe. Both were signatories to the Dworshak Dam settlement agreement; however, the terms were different for each entity.

(Idaho Fish and Game and Idaho Office of Species Conservation) In Table 1, unable to verify the estimate for the Upper Snake projects; believe that it may be 7,258-760 = 6,498. In any case, this figure should be confirmed by all parties.

(Idaho Fish and Game and Idaho Office of Species Conservation) On page 28, (for W1), we suggest deleting "and/or" and adding "acquiring and protecting the following measures in either habitat units (HUs) or acreage (acres) amounts."

(Idaho Fish and Game and Idaho Office of Species Conservation) On page 29 (For W3), we suggest that the mitigation responsibility acreage for both Deadwood and Albeni Falls be agreed to with the state of Idaho. Also, the Deadwood figure should be 665 not 655 on page 29 and page 30. In this same table, the figure under "Mitigation Responsibilities in Acres" represents Idaho's half of the agreed upon operational impacts for all the Southern Idaho projects, not just Deadwood dam; therefore, the additional Southern Idaho projects (Anderson Ranch, Black Canyon, Minidoka, and Palisades) should be included on this line.

(Idaho Fish and Game and Idaho Office of Species Conservation) Wildlife ecological objectives should be supplemented to include an additional objective focused on monitoring the effectiveness of the mitigation programs.

(Idaho Fish and Game and Idaho Office of Species Conservation) For Objective W4, we suggest that this objective be amended as follows: "Maintain and improve habitat quality on land protected by mitigation for hydrosystem impacts on wildlife by developing, approving, using, and funding land management plans for all parcels purchased under the program." In this same table, the footnote indicates that program funded parcels have an updated stewardship agreement that are evaluated on a 5-year cycle to verify their management as required by the applicable agreement. No Idaho Department of Fish Game parcels are encumbered by a stewardship agreement or easement according to the agreement with BPA. Instead, parcels purchased by BPA for wildlife mitigation by the state of Idaho have a covenant inserted into the deeds of these properties. We suggest this important information be included.

(Kalispel Tribe of Indians) Correct the losses table for wildlife construction and inundation at Albeni Falls Dam. The new version of the losses table for wildlife construction and inundation ("C&I") at Albeni Falls Dam is exaggerated and exceeds the original losses statement. There was no functional split of HUs or mitigation among the parties to the Albeni Falls Interagency Workgroup, and the table should not reflect any assumed or presumed allocations between the parties. Identifying "splits" for this mitigation is unfounded. The Kalispel Tribe has analyzed data from several mitigation parcels and has concluded that C&I mitigation is completed and meets BPA's obligation under two conditions: 1) BPA fully funds operations and maintenance costs that are reasonable to maintain investments, and 2) BPA fully restores habitats as identified within each mitigation parcel's management plan. Additional acreage or HUs are unnecessary to meet this obligation.

(Kalispel Tribe) We do agree that operational and secondary impacts need to be addressed for Albeni Falls Dam outside the partial single settlement agreement for Idaho Department of Fish and Game.

(Bonneville) Despite the assertion that the draft addendum does not replace or supersede the 2014 Program, the effect of the addendum's wildlife objectives is a doubling of portions of the wildlife loss assessments for construction and inundation in Table C-4 of the 2014 Program. What's more, the wildlife objectives in the draft addendum ignore, or even contradict, the Council and region's earlier, comprehensive efforts to assess the status of wildlife construction and inundation mitigation to date: the Council's own Wildlife Crediting Forum Final Report in 2011—which was “accepted by the Council” according to Appendix J in the 2014 Program—and the Regional Habitat Evaluation Team's final work products, the regional mitigation assessments completed in 2015. The wildlife objectives enumerate the purported “under-mitigation” in terms of political entities, not fish and wildlife needs, contrary to both Bonneville's and the Council's interpretation of Northwest Power Act mitigation responsibility. Finally, the draft addendum's wildlife objectives continue to assert certain remaining wildlife mitigation as measured in habitat units. As Bonneville has noted repeatedly, there is no longer a regional entity with capacity to independently track wildlife mitigation using the habitat unit metric, so the presence of habitat units in the 2014 Program already presented an obstacle to practical implementation. Doubling of any remaining habitat units through the addendum would only compound that problem. Bonneville cannot accept these significant amendments to the Program's wildlife provisions. We urge the Council to omit all of the draft addendum's provisions regarding wildlife and, at most, refer back to its 2014 Program guidance. A more complete review of habitat mitigation and wildlife crediting is necessary to provide a defensible basis for any substantial changes to the Program's wildlife provisions, particularly if such changes would be contrary to the conclusions of earlier comprehensive analyses.

(Scott Levy) The Council has completely failed to follow their legal duty of the Northwest Power Act (aside from the Wildlife side of the program which has been exemplary

III. Part I, B. Assessing, Monitoring and Reporting

(OWEB) Support for the approach to develop the research and monitoring framework. Include CHaMP data as part of the data sources referenced in the addendum and to continue to manage and make publicly available.

(Nez Perce) Tribes and tribally generated data and products are excluded from the sub-bullet on page 34 that specifically includes states, consultants and non-profits.

(CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) Provide an index or table of contents of their web tools in order to be clear on what will be reported by the Council, where, and how often updates will occur.

(CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) Clearly describe how “Evaluations” will be completed using the data collected through the Program and through other funding sources.

(CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) Please add detail and specifics for which “current information-gathering and data-management capabilities” should be retained.

(CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) The council refers to the “existing Bonneville database.” Please clarify that this is the CBFish.org website and that all project-level information should be housed there with open public access.

(CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) Clarify where the “historical and current and supporting program data and products” will be housed and maintained.

(CRITFC, CTUIR, Warm Springs Tribes, Yakama Nation) There are references to work that is being performed or should be performed by CRITFC, StreamNet, Coordinated Assessments, Fish Passage Center, etc. without clearly identifying these projects as Measures that should be implemented and for what purpose. The Council could outline the roles and responsibilities of these projects in managing and delivering the expected data to support reporting of the indicators.

(Bonneville) The strategy performance indicators are not appropriate to include in the addendum or the Program; they do not track with Bonneville’s statutory responsibilities and therefore cannot be “standardized” into existing project tracking databases or connected to contract.

(Public Power Council) Ensure a robust and efficient Research, Monitoring and Evaluation (RM&E) Program but need to reduce the overall costs which now represent half the entire cost of the Program. We urge the Council to reallocate a larger percentage of these funds to on-the-ground actions that are known to benefit fish and wildlife populations. The Council should establish a policy framework to prioritize and recommend RM&E projects based on an evaluation of cost, risk, and certainty. Council should also delineate research from ongoing monitoring, then evaluate if the research is pertinent to adverse effects to the FCRPS. If not pertinent, it should be reduced, eliminated or partners found.

IV. Part II, Program Implementation

Comments on Program Strategies addressed in Part II

Comments on other Program Strategies and substantive Program provisions not Included in Part II

General comments on Part II approach and content and on Program and Implementation

Comments on Program Strategies Addressed in Part II

Climate Change

(WDFW) Part II of the Addendum is generally consistent with WDFW near-term priorities, including climate change. WDFW supports the Council establishing a standing science-policy forum on climate change to help the Council and others to better understand its implications for regional power, fish, and wildlife management; look forward to working with the Council in this area. As the Council notes, the Program faces an overarching challenge of improving environmental conditions for fish and wildlife in the face of continuing and accelerating climate change impacts.

(ODFW) Appreciates the acknowledgement of the importance of climate change considerations in all aspects of the Program and specifically the establishment of a Council standing science-policy forum on climate change; look forward to participating in the collaborative development and integration of climate change considerations into future programs and projects.

(Upper Columbia Salmon Recovery Board) Climate change is an overarching, growing issue to which the UCSRB is responding in a coordinated manner with support from regional partners, including NOAA. Indicators of climate change and associated effects have been integrated into Chinook and steelhead life-cycle models for the Wenatchee and Entiat sub-basins and used in development of the Okanogan Ecosystem Diagnosis and Treatment habitat model. Such ongoing efforts in the UC are critical to planning and evaluating restoration efforts. Council's acknowledgement of the need to develop and refine meaningful quantitative indicators presents a key opportunity for engagement with the UC Regional Technical Team (RTT), which has already begun to incorporate climate change indicators into its update to the UC Biological Strategy.

(NOAA Fisheries) Supports the Council establishing a science-policy forum focused on climate change. Climate change is an overarching and complex subject that affects nearly all aspects of what is contemplated in the 2020 Addendum and the 2014 FWP as well as the work that NOAA Fisheries engages in. We welcome opportunities to discuss the state of the science and a forum within which creative solution-based policies and actions can be hatched and ultimately deployed.

(EPA) Commends the leadership of the Council and the existing language in the 2014 Program recognizing water quality, specifically toxics contaminants and water temperature. We also commend the Council for continued recognition and increased

attention of the importance of water quality to promote ecosystem restoration, and fish and wildlife recovery in the Columbia River Basin. We recommend continued attention to toxics contaminants and water temperature in the 2020 Addendum. EPA encourages the Council to continue to emphasize the importance of restoration and protection of Cold Water Refuges in the Columbia River due to climate change and increased water temperatures. Maintaining existing cold water refuges through protection measures including ongoing implementation of federal forest plans, state forest practice regulations, state programs to manage water and groundwater withdrawals, and consideration of updates to water quality standards to help keep the tributaries cool, is critical to assure that fish have refuges in a warming River system.

(Nez Perce Tribe) Provide a description of the Climate Change science-policy forum membership ensuring Nez Perce Tribe inclusion.

(Upper Snake River Tribes Foundation) Update climate change section of the Fish and Wildlife Program. Tribes have continued to work on climate vulnerability assessments, and have completed, or are nearing completion, of tribal resiliency plans and will soon be implementing projects and programs; programs will help tribal communities across the Columbia Basin begin to address the severe impacts of climate change on their air, water, and natural and cultural resources now and into the future. Suggested edits followed, especially focused on vulnerability assessments followed by linked adaptation/protection plans.

Measure: Develop a comprehensive vision to assess and mitigate likely future climate change impacts to discharge regimes, water temperatures, and fish and wildlife within the Columbia River Basin. Impact analysis should be informed by vulnerability assessments of focal species and populations. Development and prioritization of a portfolio of adaptation actions and strategies to offset current and future impacts should first focus on mainstem and tributary portions of the basin but ultimately include the entire system, (e.g. estuary, plume, and the ocean). Take action to promote and fund implementation of adaptation actions and strategies. NPCC should include a basin-wide assessment of the financial impacts of climate change on the fish and wildlife program, including economic impacts on flood risk management, hydropower production, and fish and wildlife.

Recommendation 1: Collect and synthesize existing climate change modeling and literature to inform the best available predictions of future Columbia Basin hydrologic and water temperature change.

Recommendation 2: Consider existing vulnerability assessments on focal fish and wildlife species and habitats in the Columbia Basin.

Recommendation 3: Develop and prioritize a portfolio of strategies and adaptation actions to compensate for current and predicted climate change impacts scalable from site specific to basin-wide scale.

Mainstem, Tributary and Integrated Measures: BPA, the Corps of Engineers, and the Bureau of Reclamation, in consultation and with approval from the Basin's tribes, states, and the Council should implement the following actions: [both expand and refine information and implement a set of management actions - details in comments]

(Chinook Indian Nation) We are well aware of research and reports of “global warming” or “climate change” resulting from increased carbon dioxide in the atmosphere as a result of burning fossil fuels. We wonder if consideration of climate also includes research into the effects of solar minimums (reduced sunspot activity), which tend to cool Earth’s atmosphere. Evidently, we have just entered a “solar minimum” period of reduced solar activity. One such period, known as the Dalton Minimum, lasted from about 1790 to 1830 or 1796 to 1820. During this period, Lewis and Clark, the Astor Expedition, and others experienced deadly cold and other fierce weather at the mouth of the Columbia and elsewhere along their journeys. How were, or how might, fish and wildlife be affected?

(Bill Bakke) Columbia River summer temperatures have been increasing since 1938 and are now reaching periodic lethal temperatures illustrated by the estimated 250,000 wild sockeye kill in 2015; this will continue and become a lethal migration path for wild and hatchery summer and fall chinook, sockeye and summer steelhead. Addressing this issue is a necessary priority for the Program. Recommend establishment of a 68 degree F temperature trigger on the Columbia and designate thermal refuges (all have been identified) where heat stressed salmon and steelhead seek relief; close fisheries in thermal refuges until the Columbia River temperature is less than 68 degrees F. Even if the four lower Snake River dams are removed, protection of thermal refuges and their sources from the mouth of the Columbia upstream will be necessary.

(Western Montana G&T Coop) Rather than just considering the implications of climate change through a policy forum, the addendum should consider the benefits that the Federal hydrosystem provides to keep carbon emissions in the Pacific Northwest extremely low. In light of the climate change benefits and reliability role provided by the hydrosystem, the Council should carefully evaluate the implications of dam breaching and provide a technical analysis of the contributions of the hydrosystem towards maintaining power system reliability while contributing to reductions in greenhouse gas emissions rather than simply viewing fish and wildlife and power planning as separate issues.

(Ed Averill) Oppose fossil fuel export terminals - another addition to climate change and rising temperature effects that destroy fisheries and also therefore orca.

Mitigation in Blocked Areas

Mitigation in Lake Roosevelt/Spokane River area above Grand Coulee/Chief Joseph dams

(Spokane Tribe) Generally supports the addendum's additions to the "Mitigation in Blocked Areas" section of the 2014 Fish and Wildlife Program. Directing the Bonneville Power Administration ("BPA") to fund an appropriate mitigation package that is commensurate with the losses. Applauds the Council for recognizing the inadequate mitigation and funding devoted for the impacts caused by the construction and continued operation of Grand Coulee and Chief Joseph Dams. These two facilities

account for a significant portion of the power generation of the entire FCRPS and have caused the greatest unmitigated losses and environmental degradation in the Columbia River Basin that have plagued this area is long. The Tribe requests that the language leave no room for interpretation and strongly suggests that the Council change the language to mandatory wording such as "shall" instead of "should." Also, important to ensure the language in this section is appropriately clear and inclusive of other mitigation measures. Recommended edit for the Addendum language:

Bonneville ~~shall should~~ begin a comprehensive effort over the next five years to intensify, expand, and then sustain the mitigation effort for this part of the basin. In developing this comprehensive effort, Bonneville ~~shall should~~ work with the Spokane Tribe of Indian ~~and to address, including but not limited to,~~ the Tribe's list of mitigation measures recommended to the Council. Bonneville and the Spokane Tribe of Indians should consult with the Confederated Tribes of the Colville Reservation and Washington Department of Fish and Wildlife and coordinate with their ongoing work in the Lake Roosevelt area. The Council expects annual reports from Bonneville and the Spokane Tribe of Indians detailing progress made in this mitigation effort **beginning in July 2020 and occurring annually or more frequently as the Council determines necessary.**

(Colville Tribes) Colville has long advocated for more equitable mitigation of the hydrosystem's impacts in the UCR, and we appreciate the NPCC's particular emphasis on mitigation in this part of the Basin. We further appreciate the NPCC's recognition that the part of the Basin above Grand Coulee and Chief Joseph dams "has suffered the loss of anadromous fish and other fish and wildlife species directly due to hydropower development at a scale at least comparable to and in most cases greater than, other areas in the basin." Colville, which has been impacted by the dams for nearly 80 years, has been deeply engaged in correcting this historic injustice and undermitigation of the hydrosystem's impacts in the UCR, including through our work with Bonneville and other Accord partners since 2008, and we intend to continue this vital effort. However, since our participation in the amendment process has been limited and we did not make a specific recommendation on this issue, we leave it to the NPCC and the fish and wildlife managers of the UCR, working with Bonneville, the Corps and Reclamation as appropriate, to implement this near-term priority consistent with the requirements of the Northwest Power Act. Colville stands ready to work with the Spokane Tribe and WDFW as a co-equal fish and wildlife managers in the region, as well as Bonneville, whether through consultation as the draft addendum suggests, or any other viable coordination mechanism that respects CTCR's sovereignty and priorities for its reservation, the Colville people and the UCR as a whole.

(Kalispel Tribe) Modify Addendum to require Bonneville to work with fish and wildlife managers in blocked area to develop and implement a list of mitigation measures to address fish and wildlife losses attributable to Grand Coulee and Chief Joseph dams. Prescribe a strategy to ensure that the list of mitigation measures is timely implemented – and integrated into future fish accords or other agreements.

(USFWS) Strongly support the recommendation that federal agencies begin a comprehensive effort to intensify, expand sustain fish and wildlife mitigation in blocked area.

(Bonneville) With respect to the draft addendum's assertion that mitigation in certain blocked areas of the basin should "increase significantly," Council needs to present an analysis supporting its reasoning on this point, particularly when the effect of the Council's conclusion is an expectation of a significant ramp-up in work and investment by Bonneville. Bonneville has consistently followed the guidance of past programs, none of which identified what is now being cast by the Council as an "obvious gap" in mitigation. The mitigation Bonneville has funded in the Upper Columbia over the years, consistent with past and current Council programs, demonstrates the adequacy of the existing mitigation for purposes of compliance with the requirements of the Northwest Power Act. Recent examples include hatchery construction and improvement actions for Chinook, sturgeon, burbot, and trout; habitat restoration actions mitigating operational impacts; and new resident fish mitigation protecting thousands of acres in Montana, including extensive trout habitat that also provides significant wildlife benefits.

(Snohomish PUD) Encouraged that Council recognizes the importance of meeting Program needs within an overall management approach that maintains fish and wildlife costs at or below inflation. However, Addendum suggests potentially costly exceptions to this management approach, such as exempting the cost of mitigation for blocked areas, that can jeopardize the foundational purposes stated in section 2 of the Northwest Power Act.

(Spokane Riverkeeper) Encouraged by the Council's focus in the Program Addendum on expanding the efforts to mitigate the loss of anadromous fish above Grand Coulee Dam. Region suffered immensely from the operation of the Federal Columbia River Power System with the loss of salmon and steelhead as well as other fish; mitigation efforts in the blocked area above Grand Coulee Dam is long overdue. Change the current language in the draft from "shoulds" to "shalls" or "musts" where appropriate; Council must ensure that the Bonneville has a clear mandate to provide expanded mitigation above Grand Coulee Dam with powerful language. As part of this, ensure that Bonneville funds measures to protect native redband trout in the Spokane River; native redband trout are of critical importance to the health of the Spokane River ecosystem. Especially need to fund measures to eradicate Northern Pike from Spokane River/Lake Coeur d'Alene system, as Northern Pike poses a significant threat to redband; additionally State of Idaho should ensure Northern Pike do not enter Spokane River. Additionally, need to fund control measures on small mouth bass in upper Spokane River. (also, *Helen Sargeant*)

Anadromous fish reintroduction above Grand Coulee and Chief Joseph Dams

(Spokane Tribe) Generally support the Addendum's language regarding the continued support for the phased approach to reintroduction. Widely supported measures. Tribe urges the Council to sharpen the language in the Addendum to ensure further progress and not rely solely on the previous section in the Addendum to address this important measure. Recommended edits to language for that purpose and also to address federal

agencies' recent blocked area mitigation initiative.¹ The purpose of the latter comment is to ensure that any creation by the federal agencies of a forum for this purposes shall include the Council, Tribes and States, and ensure actions adhere to federal trust responsibility and consistency requirements of Northwest Power Act.

(Colville Tribes) Supportive; appreciates that the draft Addendum calls out this measure as a near-term priority, asks Bonneville and others [to c]ontinue to make progress on the program's phased approach to evaluate possibility of reintroduction. Colville places a high priority on work toward achieving passage and reintroduction of salmon above Chief Joseph and Grand Coulee dams.

(WDFW) Part II of the Addendum is generally consistent with WDFW near-term priorities, including continued progress on the Council's phased reintroduction for salmon above Chief Joseph Dam.

(NOAA Fisheries) Supports the Council in advancing its strategy for investigating fish passage and reintroduction in the Upper Columbia through completion of feasibility assessments and study. We have expertise and a long history of fish passage implementation and welcome discussions about engaging our expertise. NOAA Fisheries remains supportive of efforts to explore the reintroduction of anadromous salmon and steelhead to formerly occupied areas. While the reintroduction of fish to

¹ Except:

Bonneville and others: Continue to make progress on the program's phased approach to evaluate the possibility of reintroducing anadromous fish above Grand Coulee and Chief Joseph dams.

Continuing to assess the feasibility of reintroducing anadromous fish is one measure in the suite of mitigation measures recommended by the Spokane Tribe of Indians (see previous measure). Continuing to make progress on this measure received substantial support in the amendment process from many governmental and non-governmental entities. **BPA shall fund and prioritize the completion of the 2014 Program's Phased Approach as described below along with any additional actions recommended during the ISAB Review of the Upper Columbia United Tribes' Phase One Report:**

Phase One shall be completed after the following actions are taken and the Council shall act no later than September 1, 2023 on how best to proceed based on the information developed through the below projects and actions.

- I. Adult Salmonids Selective Release Project ***
- II Juvenile Survival & Migratory Success Project Utilizing Selective Releases ***
- III. Habitat Seeding - Eyed Egg Outplanting Selective Release Project ***
- IV. Passage System Modeling Project ***
- V. Habitat Capacity Project ***

General Provision

For all releases in the above action plan, project sponsors must conduct pathogen screening and exercise biosecurity measures to minimize pathogenic risk posed to resident species in the region.

Fish Management in Blocked Area Initiative

If the Region's Federal partners embark on the creation of a new forum to discuss the management of the reestablishment of anadromous fish above Chief Joseph and Grand Coulee Dams they shall include the Council, interested States, and Tribes, and ensure their actions adhere to the federal trust responsibility and the consistency requirements of 16 U.S.C.A. § 839b(h)(II)(A) & (B).

blocked areas is not identified as an essential recovery action in current recovery plans for ESA-listed salmon and steelhead in the Upper Columbia Basin, we acknowledge reintroduction can have myriad benefits, including increasing the resiliency of species to climate change, enhancing ecosystem functions, expanding harvest opportunities, and supporting tribes and local communities.

(USFWS) Reintroduction of anadromous fish into blocked area as outlined in 2014 Program must be a cornerstone of intensified mitigation effort in this area. Also encourage an improvement in the passage of resident fish beyond just salmonids, and an improvement in ecological connectivity within these areas.

(Public Power Council) Study and proposals related to reintroduction of anadromy above Chief Joseph/Grand Coulee must be approached with substantial caution and full public transparency. Council should assess and share the relevant details about the costs and associated relative success against established metrics developed for other Northwest juvenile fish collectors. Several juvenile fish collectors have been installed in small reservoirs in the Pacific Northwest; few, if any existing surface collection systems are meeting their fish collection goals. The forebay above Grand Coulee is much larger than any of the other reservoirs, which will further complicate the operation of a juvenile collector. Also, opportunities are many to improve existing habitat below Chief Joseph and Grand Coulee Dams. Reintroduction of anadromy should not be prioritized until mitigation opportunities in the lower basin are completed.

(Western Montana G&T Coop) Council's emerging priorities to focus on new mitigation projects and reintroduction above Grand Coulee and Chief Joseph dams should very carefully consider the importance of these projects to reliable and affordable hydropower generation. The Council should ensure the compatibility of reintroduction efforts with the hydropower generation provided from the two most important projects on the Federal Columbia River Power System. Conflicts that might serve to reduce or impact hydropower generation must be identified and avoided.

(Spokane Riverkeeper) Give clear instructions to Bonneville, Reclamation and Corps to complete Phase One of the salmon and steelhead reintroduction measure above Chief Joseph and Grand Coulee Dams. (also, Helen Sargeant)

(Sierra Club and many other organizations, groups and individuals) Support the proposal of upper Columbia River tribes to evaluate the feasibility of reintroducing anadromous fish above Grand Coulee dam, which currently blocks all upriver passage to historic salmon areas.

(Orca Network; Whale and Dolphin Conservation) Move forward with requiring BPA's accelerated mitigation and reintroduction efforts to recover salmon above Chief Joseph and Grand Coulee dams; this area of the Columbia River Basin suffered the greatest loss of fish and wildlife species due to hydropower development than any other area in the surrounding Basin.

Anadromous fish mitigation and reintroduction above Hells Canyon Complex (not addressed in draft Addendum)

(Upper Snake River Tribes Foundation) Amend Addendum to include USRT's Fishery Resource Management Plan for the Upper Snake River Basin (<https://bit.ly/2QLpsf8>). Provides a long-term vision for salmon and steelhead reintroduction into the currently blocked, but historical anadromous fish habitat, in the Upper Snake River Basin and is one of the highest priorities for USRT member tribes. Consistent with the strategy in the 2014 Program. the overall goals of the plan are to use unlisted fish in a phased approach:

- I. Re-establish anadromous fisheries on unlisted, hatchery origin spring/summer chinook salmon and/or steelhead in select tributaries to provide subsistence, cultural, and recreational harvest opportunities.
- II. Restore naturally reproducing unlisted populations of salmon and steelhead within select tributaries upstream of the HCC to meet harvest, cultural, and ecological needs.
- III. Restore fall chinook salmon in the mainstem Snake River (as a long-term goal – likely 20-30 years or more after FERC license issuance), dependent, in part, upon restoration of mainstem habitat (i.e., mainstem water quality improvements) and effective of innovative mainstem collection measures. [More details in comment.]

Reintroduction in blocked areas generally or in other areas (not addressed in draft Addendum)

(Spokane Tribe) Supports all Tribes in the pursuit of reestablishing anadromous fish within their waters, and all blocked current and available historical habitats; encourages the Council to utilize the framework of the 2014 Program's Anadromous Fish Mitigation in Blocked Areas Strategy to pursue measures that implement that strategy as recommended by the Tribes' in those areas throughout the Basin.

(Mark Davis) Add the Deschutes River Basin to the Addendum's Mitigation in Blocked Areas; address fish mortality from Bend Hydro Dam.

Ocean

(NOAA Fisheries) Supportive of the manner in which the Council is intending to continue to advance the ocean work and the language found in the draft Addendum. Indicators used in the ocean conditions stop light chart continue to change with new information about nearshore ocean conditions and juvenile salmon responses from the Newport Hydrographic Line and the Juvenile Salmon Ocean Ecology Program. The Council has recognized this in its updated implementation strategy (e.g., "Continue to develop, use, and improve indicators for ocean conditions") but should note the evolving nature of these indicators in this section, as well.

(Public Power Council) Program should continue to support ocean research that identifies the effects of ocean conditions on salmon and steelhead.

(Bonneville) We ask that the Council demonstrate and articulate a specific, case-by-case connection to hydrosystem impacts and accounting for the share of responsibility that can be apportioned fairly to other factors. We also caution that justifications such as regional “interest and participation” are not a statutory basis for action and are insufficient to support a Bonneville decision to fund a project – followed by a reference to the page in the draft Addendum regarding the Ocean strategy.

(Western Montana G&T Coop) Concerned that Council must ensure measures have clear connection to mitigation of specific impacts from the FCRPS. A good example of this concern is the demand of the Addendum to restore BPA funding for the ocean research program. While this may be a very important program, using BPA ratepayer funding for a research program not directly related to FCRPS impacts runs counter to the NW Power Act. The Council should identify funding sources other than BPA for projects like this that do not have a direct nexus to a FCRPS impact.

(Chinook Indian Nation) These waters are our territory, where saltwater intermingles with freshwater. We support the Council’s recommendation to Bonneville to restore and sustain the funding and implementation of ocean research at the level recommended by the Council and supported by the ISRP, especially concerning the “correlations between salmon, their survival, and the ocean environment.” We also support the Council’s recommendation to continue to investigate links between freshwater actions and conditions to responses by salmon in the ocean” as well as “predator and prey relationships for salmon in the ocean.

(Ed Averill) Learn how to intervene both in river fisheries and ocean ones; we have lost massive kelp forests that supported fish populations with both food and oxygen; learn how to replant them.

Estuary

(NOAA Fisheries) Agrees that the Corps of Engineers landscape-scale monitoring will be an important component of the ongoing estuary program. However, we suggest you add that BPA should have an ongoing role in monitoring action effectiveness at the site scale. In addition, we recommend that the Council program incorporate the goals for landscape-level restoration planning developed by the Expert Regional Technical Group in 2019. This includes the group’s landscape-level priorities for restoration planning:

- Ensure at least one large habitat complex is available within each of the eight hydrogeomorphic reaches near key transition zones (i.e., near the reach boundaries and at river confluences) along both estuary shores (Washington and Oregon)
- Minimize potential stress and predation risks to salmon by reducing travel distances (to < 5 km where possible) between existing large natural or restored habitat patches in each reach

- Restore small off-channel patches and/or improve the structure and function of the surrounding riparian and shoreline “matrix” habitat along the salmon migration route where shallow rearing habitats are naturally limited or impractical to recover (e.g., largely constrained by hardened shorelines and levees) ERTG (2019) intends that these priorities ensure that Bonneville's restoration projects re-establish the continuity and complexity of the estuarine landscape to satisfy the foraging and shelter requirements for diverse Columbia River salmon stocks and life history types.

(Chinook Indian Nation) These waters are our territory, where saltwater intermingles with freshwater. We are quite interested in and wish to be of service regarding the Corps of Engineers’ research that is recommended for continuation. This research “sampled juvenile out-migrating salmon at several sites in the Lower Columbia River and estuary to assess benefits of estuarine use by interior salmon stocks.” We understand that this is a fairly new focus of research – the Chinook Indian Nation’s own mission to protect the natural resources of our lands and waters, which includes our goal of assessing and restoring habitat within our territory, converges with the Council’s and the Corps of Engineers’ emerging focus there. We see this as an area of potential beneficial partnership.

Mainstem Hydrosystem Flow, Water Management and Passage Operations

Libby and Hungry Horse operations

(Montana Fish Wildlife & Parks) Encouraged that our recommendations are largely reflected in the Addendum; specifically, language supporting refinements to the Montana Operations at Libby and Hungry Horse dams. These operational refinements are designed to improve habitat conditions for resident fish and wildlife, while considering the needs for flood control, power generation, and downstream river flows for anadromous fish species.

(Kootenai Tribe) Note that the Kootenai Tribe’s December 2018 recommendations submitted contained specific recommendations with respect to this section, including the need to address winter operations for ecosystem function.

(IDFG/IOSC) Idaho should be included in participants to work with Corps and Reclamation, as Idaho has projects, reservoirs and river downstream from Libby and HH (e.g., Albeni Falls) that could benefit from operational adjustments similar to those recommended by Montana. This includes use of project-specific inflow forecasts to meet draft and refill targets rather than water supply forecasts at The Dalles, adjusting storage reservoir diagrams to decrease reservoir drawdowns and/or increase reservoir infill during dry water years, and better accommodating water variability among subbasins.

(USFWS) Appreciates the effects to improve operations at Libby and Hungry Horse to benefit fish and wildlife resources. Refinements in operations called for in Addendum has potential to affect listed bull trout in Idaho and Montana; FWS would appreciate an opportunity to ensure bull trout are not adversely affected by these refinements.

(NOAA Fisheries) Supportive of considering opportunities to create successful solutions for local dialogue and actions for Hungry Horse and Libby Dam and reservoir operations within the context of and while retaining the obligations necessary for the entire federal Columbia River System.

(Chinook Indian Nation) While the Libby and Hungry Horse dams are in Montana, far from our territory, we support the continued working partnership between Montana Fish Wildlife and Parks and our friends and relatives the Confederated Salish and Kootenai Tribes and the Kootenai Tribe of Idaho.

Flow and passage operations generally (not addressed in draft Addendum)

(WDFW) Council should signal interest in the Addendum for helping the region assess and prepare for other more aggressive future hydropower management actions, should they prove necessary to conserve salmon and steelhead. (WDFW)

(NOAA Fisheries) Revise the draft Addendum to ensure that the flow and passage provisions and standards are the most up-to-date as those represented in the 2019 Columbia River System Biological Opinion.

Spill (not addressed in draft Addendum)

(WDFW) Makes sense for the Council to position the Program, via the Addendum, to provide technical support for optimization of flexible spill operations.

(Public Power Council) Council should not address potential increases in TDG limits. The Columbia River System Operations (CRSO) Environmental Impact Statement (EIS) is the proper venue to consider any long-term changes to spill regimes and TDG concentration limits.

Adult passage and other measures at Albeni Falls Dam (not addressed in draft Addendum)

(Kalispel Tribe)

- Require the federal action agencies to restore upstream passage for native resident fish at Albeni Falls Dam by 2024. Require the federal action agencies to apply cost-effective value engineering procedures to the fishway design using an independent third-party firm
- Require the federal action agencies to implement habitat enhancement actions to improve water temperature conditions to benefit native fish harmed by the absence of passage
- Require the federal action agencies to make operational changes at Albeni Falls Dam to moderate downstream water temperatures for native fish during all

critical time periods beginning in 2023 if fish passage is not on schedule to be constructed by 2024²

Grand Coulee fall operations (not addressed in draft Addendum)

(Spokane Tribe) In its amendments and comments sought to ensure that BPA did not unilaterally move forward with changing the fall refill target of 1283' elevation for Lake Roosevelt from the end of September to the end of October; discussions have occurred and BPA agrees to continue with discussions and possibly fund necessary study implementation prior to requesting the fall refill change; Tribe is concerned that the proposed fall flexibility will negatively impact access for native resident fish to the tributaries within Lake Roosevelt and other potential impacts to species that have adapted to the current operation.

Lower Snake River dam breaching (not addressed in draft Addendum)

(Nez Perce Tribe) Status and trends of salmon and steelhead signal the need for actions such as breaching the four lower Snake River dams, which in turn may reveal opportunities to modernize the Northwest Power Act.

(Western Montana G&T Coop) Addendum should consider the benefits that the Federal hydrosystem provides to keep carbon emissions in the Pacific Northwest extremely low. In light of the climate change benefits and reliability role provided by the hydrosystem, the Council should carefully evaluate the implications of dam breaching and provide a technical analysis of the contributions of the hydrosystem towards maintaining power

² Kalispel took issue with the findings on this issue: "Although the Draft 2020 Addendum contains no justification for the omission of the recommendations above, Council Staff's Draft Findings (July 2019) offer two reasons for their exclusion. First, the Draft Findings claim that the existing Fish and Wildlife Program is sufficient to support Kalispel's recommendation because it already contains a provision "explicitly calling for the Corps and the other agencies to restore passage for native resident fish at Albeni Falls Dam if feasible" (p. 68). Kalispel respectfully disagrees with this claim. The U.S. Army Corps of Engineers ("Corps") has determined that upstream fish passage at Albeni Falls Dam is both technically feasible and biologically necessary. The relevant questions at this point are how and when to restore passage. Our recommendations answer the how question by suggesting that cost-effective engineering be used to ensure that the Corps' 30% design is as fiscally responsible as possible. They answer the when question by using a date that coincides with the Council's next iteration of the Fish and Wildlife Program and is within a project timeline previously issued by the Corps. Considering that Albeni Falls Dam is a blockage within the Blocked Area, restoring fish passage at the facility should be one of the Fish and Wildlife Program's highest priorities. This demands precision in outcome, not generalities.

"The Staff Findings also suggest that the Kalispel Tribe's recommendations are already covered by its Fish Accord with the federal action agencies and represent a breakdown of that agreement. To the extent any recommendation is already covered by our Fish Accord, there is no harm in reiterating the recommendation if consistent with the Northwest Power Act. To the extent Council Staff feels that our Fish Accord is in shambles, it most definitely is not! Our Fish Accord has been the vehicle through which the Corps has reached its determination that fish passage is feasible and necessary, through which we have learned that operational changes at Albeni Falls Dam can reduce downstream water temperatures under certain circumstances, and through which temperature mitigation work is being funded. Council's endorsement of Kalispel's recommendations will ensure that this work continues either through the Fish and Wildlife Program or a renewed Fish Accord."

system reliability while contributing to reductions in greenhouse gas emissions rather than simply viewing fish and wildlife and power planning as separate issues.

(Sierra Club and many other organizations, groups and individuals) Add provision calling for breaching of lower Snake River dams to restore salmon while also planning for clean energy replacement. Needed for the benefit of chinook salmon and steelhead and orca to save from extinction; need to address Columbia/Snake passage, temperature and climate issues.

(Orca Network; Whale and Dolphin Conservation) Suggested addition for recovery actions in the Columbia River Basin should include the Lower Snake River system, as it provides some of the most untouched, pristine wilderness, with the promise of reaching those higher annual fish return goals originally set by NWPCC. Breaching the dams would be a bold step toward recovering this system in an accelerated manner for two species heading quickly toward extinction. Support the third-party stakeholder process currently underway that is discussing the delicate balance between salmon survival, regional livelihoods, and the best course of action for the four Lower Snake River dams.

Predator Management

General

(WDFW) Part II of the Addendum is generally consistent with WDFW near-term priorities, including predator management of Northern Pike, pinnipeds, and avian predators.

(Public Power Council) Several predator management programs have been developed to protect adult and juvenile salmon and steelhead populations in the Columbia River Basin. Council should build on the success of past accomplishments and support more aggressive control measures for marine mammals, birds and fish populations that feed on significant numbers of salmon and steelhead.

(Chinook Indian Nation) Support the Council's recommendation to maintain necessary funding for this growing area of need. Working alongside some of the Council's scientific partners, we'd like to identify any of these species/problems within our territory and consult with these partners on mitigation strategies.

(Cardno) Agree with the call for an ecosystem-wide, multi-predator, multi-prey and multivariate approach in evaluating the potential impacts of predation on Columbia Basin threatened and endangered salmonids. To implement such an approach, recommend the development of an integrated modeling framework. Key components of the suggested modeling framework include spatially explicit food web/ecosystem modeling of salmonid population dynamics throughout the Lower Columbia River and Estuary – extending to locations above Bonneville Dam as necessary.

Northern Pike

(Spokane Tribe) Very concerned about the continued attempt to deflect the responsibility of the Northern Pike problem away from the FCRPS to others in the region. Simple fact is that Northern Pike would not survive in the upper Columbia River but for the existence of Grand Coulee Dam, regardless of how they arrived in Lake Roosevelt. Change language in Addendum to say Bonneville “shall fully” fund Northern Pike removal project (rather than just Bonneville “should” fund the project) and remove clause at end that notes “as this is an issue broader than a federal hydrosystem responsibility.”

(Colville Tribes) Appreciate the focus placed on this issue in the addendum – emphasizing predator management in general, and Northern Pike suppression in particular, as aspects of the 2014 Program that should be near-term priorities for implementation and funding. Consistent with importance reflected in the Colville Accord Extension and Colville's decision to put additional funds toward this work. Committed to continuing to work with the Spokane Tribe, Washington Department of Fish and Wildlife (WDFW), and others on this critically important issue, including through implementation of the Accord Extension.

(Kalispel Tribe) Specify that suppression of Northern Pike in Pend Oreille River is necessary to help control spread to the Columbia.

(Upper Snake River Tribes Foundation) Recommend comprehensive strategy to prevent the introduction of non-native and invasive species in the Columbia River Basin and suppress and/or eradicate non-native and invasive species where they negatively impact salmon, steelhead, and native resident fish. Much of the focus is on non-native mussels and the like, but also addressed non-native predators including especially Northern Pike.

(NOAA Fisheries) remains supportive of the Council's efforts to detect, manage and prevent the expansion and impact of harmful invasive species including but not limited to Northern Pike.

(Upper Columbia Salmon Recovery Board) Council ongoing commitment to combat Northern Pike is critical. USCSRB agrees that additional and sustained infusions of resources to relevant partners are needed over time to help combat and manage this immediate threat to the region. UCSRB and partners, including federal and state resource managers and tribes, have been tracking this evolving issue since its onset. Colville Confederated Tribes, other tribal partners and WDFW are intensively studying this invasive species and working to prevent its migration below Chief Joseph Dam.

(Western Montana G&T Coop) We are concerned about calls for BPA funding for Northern Pike removal programs, but we are encouraged however that the Addendum recognized this effort should be coordinated with state agencies and tribes to solicit and obtain contributions from other affected entities. We agree that this is an issue broader than a federal hydrosystem responsibility and funding should not fall only on BPA customers.

(Spokane Riverkeeper) Fund measures to eradicate Northern Pike from Spokane River/Lake Coeur d'Alene system, as Northern Pike poses a significant threat to redband; additionally State of Idaho should ensure Northern Pike do not enter Spokane River.

(Cardno) Coordinated efforts to suppress Northern Pike in Lake Roosevelt/Upper Columbia are notable, but they are not collective nor integrated at an ecosystem level - not informed by the fullest examination of compound action effects nor to the extent that confounding and complementary factors may influence, or even negate, the ultimate suite of actions available to managers for consideration. Support the development of a species distribution model to identify and assess areas within the basin that are likely to be successfully invaded and where viable populations of Northern Pike are likely to become established. Reducing (to a practical extent as possible) access to key spawning habitats could pose a population bottleneck for this invasive species and potentially slow its downriver migration to the point where removal programs become increasingly effective at controlling the Northern Pike population in the Columbia River. An integrated spatial analysis of potential of potential spawning habitat locations within the Basin with population viability analysis models could help evaluate the timeframe for Northern Pike invasion and establishment downriver from Grand Coulee Dam and be used to guide allocation of resources for fish removal to obtain the greatest likely reductions in pike populations per unit investment.

Pinnipeds

(ODFW) While supportive of the Predator Management language in the draft Addendum, language is not strong enough to clearly reinforce the emerging need for action agency funding of actions to support the lethal removal of problem pinnipeds as part of the program. Pinniped predation suppression, particularly on adult salmon, steelhead, and sturgeon, is likely to be one of the most effective predation reduction actions available to the region in terms of its likelihood to achieve real benefits toward recovery of healthy and abundant stocks in the basin.

(IDFG/IOSC) Council should specifically recognize and support additional funding for pinniped efforts. The new legislation and pending permit authorize state and tribes to expand current effort by targeting greater number of Stellar and California sea lions at Bonneville Dam and tributaries; will require considerable time and resources in addition to what is current provided.

(NOAA Fisheries) Has supported research and monitoring activities in the Columbia Basin to better understand the impacts of pinniped predation on at-risk fish stocks, and to implement management actions to reduce pinniped predation impacts for more than 20 years. NOAA Fisheries is committed to continue to provide this support to further reduce pinniped predation on at-risk fish stocks, and will continue to work with all of our recovery partners to help manage and reduce the threat that pinniped predation poses on the recovery of at-risk fish stocks in the Columbia Basin.

(Colville Tribes) Supports the emphasis placed on addressing pinniped and avian predation under existing legislation and management plans, as these species continue to have significant adverse effects on UCR salmon and steelhead.

(Upper Columbia Salmon Recovery Board) Supports the position that pinniped and avian predation remain ongoing threats that will require additional collaboration to address. Actions to reduce pinniped and avian predation have potential to produce significant survival improvements for UC populations over time. Upper Columbia Spring Chinook and Steelhead Recovery Plan specifically identifies pinniped predation as one of the factors that contributed directly to the listing of Upper Columbia populations and a factor that can significantly affect population viability; pinniped predation rates on populations of migrating Upper Columbia spring Chinook between the estuary and Bonneville Dam has been as high as 35% in some years. Predator management actions alone are not enough to achieve recovery, but remain a critical part of the integrated approach called for in the UC Recovery Plan.

(Cardno) Engage in a comprehensive analysis of the trade-offs of sea lion removal in terms of potential increased predation by other competing pinnipeds (e.g., seals). Comprehensive pinniped management model will be required to help understand the implications of individual species removal programs on overall pinniped predation on adult salmonids. Recommended modeling activities could be undertaken using the integrated aquatic food web/ecosystem and pinniped population models that was previously outlined in support of understanding and managing predation on salmonids in the Basin.

Avian predation

(ODFW) Remains concerned regarding the current disconnect between the actions, measures, and goals implemented under action agencies' avian predation plans and actual effective avian predation reduction in the basin.

(USFWS) Remains committed to working with partners in the region to reduce avian predation. Not convinced reducing avian predators is the correct approach – Council should revise Addendum language on pg. 40 to “reduce avian *predation*,” not “reduce avian *predators*.” Dissuasion, habitat management and other non-lethal measures are effective and have best chance of long-term success. FWS also recommends continuation of PIT-tag detections at avian nesting colonies - an important component of measuring and evaluating level of predation.

(NOAA Fisheries) Supportive of the program's apparent shift from reducing numbers of avian predators at specific sites, such as East Sand Island, to the problem of avian predation across the Columbia basin. Encourage the Council to review the draft Avian Predation Synthesis Report (expected in March 2020) funded in part by BPA and the USACOE. Based on the recommendations that come from this report, we recommend that the Council play a supporting role in efforts to further reduce avian predation on listed salmon and steelhead regardless of whether a site is in federal ownership or not (e.g., support Oregon's efforts to address the growing nesting colony of double-crested cormorants on the Astoria-Megler Bridge). We also agree that BPA and the Corps must

sustain any gains to date through ongoing passive and active dissuasion efforts at East Sand Island. Add that Reclamation should continue its efforts to exclude Caspian terns from nesting on Goose Island in Potholes Reservoir because establishing vegetation that would serve this purpose has not been successful. Further recommend that the Council include the need to sustain and improve the effectiveness of avian predation management in the tailraces of the CRS dams.

(Colville Tribes) Supports the emphasis placed on addressing pinniped and avian predation under existing legislation and management plans, as these species continue to have significant adverse effects on UCR salmon and steelhead. In particular UCR steelhead, which migrate through the foraging range of 14 different bird colonies, suffer significant losses due to Caspian tern and other avian predation, which research from 2008 through 2019 indicates "consume more smolts during that migration period than all other mortality sources combined." Vital that the region continue to actively manage this "dominant mortality factor" and other fish predators to protect the investments made in recovering salmonid populations.

(Upper Columbia Salmon Recovery Board) Supports the position that avian and pinniped predation remain ongoing threats that will require additional collaboration to address. Actions to reduce avian and pinniped predation have potential to produce significant survival improvements for UC populations over time. Avian predation of UC species can exceed 30% of out-migrating smolts; UC steelhead historically endured a relatively disproportionate level of pressure from avian predators. Predator management actions alone are not enough to achieve recovery, but remain a critical part of the integrated approach called for in the UC Recovery Plan.

(Cardno) Design and implement quantitatively rigorous monitoring programs that describe the spatial-temporal dynamics of the metapopulations of avian predators in the Basin, including the discovery of newly colonized areas. Previous analysis of population viability of similar species (e.g., least tern, piping plover) emphasizes the importance of the number of breeding pairs as key to long-term population success. Similar analysis of colonial, piscivorous water birds in the Basin might identify key population demographic attributes that can be impacted by management to control population sizes/locations and reduce predation impacts on Basin salmonids.

Fish predation (not addressed in draft Addendum)

(Public Power Council) Council should support removal of predatory fish species collected in any anadromous portion of the Columbia River, including inside the Boat Restricted Zones (BRZs). Managers currently catch pikeminnow in the BRZs, returning all other species back to the river, including non-native fish. Non-native, predatory fish should be removed from the river when possible.

(Spokane Riverkeeper) Fund control measures on small mouth bass in the upper Spokane River, as part of effort to protect native redband trout.

Sturgeon

(WDFW) Part II of the Addendum is generally consistent with WDFW near-term priorities, including identification of white sturgeon recruitment and productivity limiting factors.

(USFWS) Revised Fish and Wildlife Program should acknowledge that the FWS has completed a revised recovery plan for Kootenai River White Sturgeon and ensure program is consistent with that plan.

(Bonneville) Draft addendum asks Corps and Bonneville to “[c]ontinue to make progress in developing the program’s comprehensive approach to white sturgeon.” Bonneville appreciates its input being considered as the program’s mitigation measures are developed or revised, but wholesale development of program strategies do not fall within its appropriate role under the Northwest Power Act; that task is better left with the Council.

(Chinook Indian Nation) Concur with the Council’s recommendation for federal agencies to continue to support this work, including the recommended areas of attention focus on the Lower Columbia below McNary Dam, Priest Rapids Dam, and in the Lower Snake River.

Comments on other Program Strategies and Substantive Program Provisions Not Included in Part II

Ecosystem Function

Habitat Protection and Improvement

(Bakke) Improving habitat without commitment to fully seed the habitat with wild salmon and steelhead ignores potential and purpose. Recommend that subbasin plans and spawner requirements by species be used as the fundamental structure of the FWP for recovery for species threatened with extinction. While habitat conditions are addressed and solutions recommended in subbasin plans, none include spawner escapement requirements for wild salmon and steelhead. Consequently, the subbasin plans are not complete.

Columbia Basin Water Transactions Program

(Montana Natural Resource Damage Program) Supportive of 2020 Addendum to the 2014 Program specifically as it relates to continued support of the Water Transactions Program and partnering on flow projects in the Upper Clark Fork River Basin.

Non-Native and Invasive Species

(Public Power Council) Council should continue to support a region-wide effort to control invasive mussels. Invasive mussels will significantly harm important investments the region has made on fish passage systems in the FCRPS. PPC supports a continued regional approach to establish a defensive perimeter to keep invasive mussels out of the Columbia River Basin. As a regional issue with potential impacts to multi-purpose federal assets in the Columbia River system, funding for programmatic efforts to control invasive mussel species should be funded at a regional level and not by BPA rate payers.

(Upper Snake River Tribes Foundation) Recommend comprehensive strategy to prevent the introduction of non-native and invasive species in the Columbia River Basin and suppress and/or eradicate non-native and invasive species where they negatively impact salmon, steelhead, and native resident fish. Much of the focus is on non-native mussels and plants.

Water Quality

[Note: Water Quality matters concerning temperature and dissolved gas are captured in Part II of the Addendum in the Climate Change and Mainstem sections. Summarized here are comments on aspects of the Water Quality strategy not covered in Part II of the Addendum, most notable on toxic contaminants.]

(EPA) Commends the leadership of the Council and the existing language in the 2014 Program recognizing water quality, specifically toxics contaminants and water temperature. We also commend the Council for continued recognition and increased attention of the importance of water quality to promote ecosystem restoration, and fish and wildlife recovery in the Columbia River Basin. We recommend continued attention to toxics contaminants and water temperature in the 2020 Addendum. EPA encourages the Council to continue regional leadership in highlighting the importance of identifying, assessing and reducing toxic contamination in the Columbia River Basin, and promoting actions to reduce toxic contamination reduction as a part of the implementation of the Columbia River Basin Fish and Wildlife Program. Encourage the Council's continued participation in the Columbia River Toxics Reduction Working Group, now evolved to become the Columbia River Basin Restoration Working Group under Clean Water Act, Section 123, Columbia River Basin Restoration Act. EPA appreciates the leadership of the Council in the development of the 2018 PAH Toxic Contaminant Story Map located on the Council website; look forward to future opportunities to map and share information with the public on toxic contaminants in the Columbia River Basin. Encourage the Council to increase dialogue and conversation on the scientific effects of toxic contaminants on fish and wildlife to better understand impacts on fish and wildlife recovery efforts. Encourage the Council to have regular scientific updates on the state of the science of toxics impact on fish and wildlife recovery efforts and sharing successful work efforts to reduce toxics.

Wildlife Mitigation

[Note: Bonneville's extensive comments on Wildlife mitigation obligation covered in summary of comments on Part I of draft Addendum – outcome will affect implementation, too.]

Fish Propagation including Hatchery Programs Wild Fish

(USFWS) Infrastructure depreciation, especially of hatchery facilities, is becoming a significant concern; if overall budget increases are expected to be limited to rate of inflation, expect cost of maintaining hatchery system to consume a larger proportion of program budget in near future.

(Public Power Council) Continue to promote hatchery production that supports and does not conflict with conservation objectives. The NWPPC should require implementation of the Hatchery Science Review Group recommendations as well as explicitly incorporating adaptive management strategies for Program-funded hatchery efforts. Also, continue to support selective harvest methods and policies that reduce the incidental catch of ESA listed and naturally spawning fish but increase harvest of hatchery origin stocks. Program should assess the extent to which harvest slows recovery of naturally reproducing populations and implement adaptive management strategies for harvest measures in the Program. Council should also work with the region to assure that artificially produced fish are not exceeding the carrying capacity of freshwater, estuarine and marine habitat.

(Bakke) Use information provided to evaluate effectiveness of hatcheries; largest commitment of public funding is provided annually to the hatchery programs out of all programs in the Columbia River Basin, yet we do not have enough information to actually evaluate their cost-effectiveness. Program also does not include an economic evaluation of hatchery production so that costs to provide hatchery fish available for harvest and cost effectiveness of the hatchery programs is reported annually. Program assumes that wild salmon and steelhead populations can be rebuilt and recovered using hatchery fish supplementation even though there is no scientific support for that assumption. Program does not establish viability criteria and escapement requirements for wild salmon and steelhead by natal stream ensuring that recovery of species threatened with extinction is impossible; program also ignores the genetic and ecological impact of naturally spawning hatchery fish on wild salmon and steelhead. Improving habitat without commitment to fully seed the habitat with wild salmon and steelhead ignores potential and purpose. Need spawner escapement requirements for wild salmon and steelhead for each subbasin.

Lamprey

(Public Power Council) Council should continue to support programs that have successfully improved lamprey passage survival and reintroduced populations into extirpated areas. Several actions to date at the dams have improved lamprey passage survival and improved lamprey populations in the Lower Columbia River Basin. Reintroduction programs have successfully repatriated lamprey into historical habitats. Further opportunities to repatriate lamprey into former habitats should be explored and implemented where feasible. Support continued expansion of these programs where savings can be found within the existing Program budget.

(Sierra Club and many other organizations, groups and individuals) Support for funding and work to restore lamprey and freshwater mussels to watersheds they have historically occupied; provides important ecosystem services as well as restores historic first foods used by native people.

Subbasin Plans

(Bakke) Dust off and use subbasin plans in FWP Planning. Council's subbasin plans are an important accomplishment that is not being used as a structure for the FWP. While habitat conditions are addressed and solutions recommended, none include spawner escapement requirements for wild salmon and steelhead. Consequently, the subbasin plans are not complete, because improving habitat without commitment to fully seed the habitat with wild salmon and steelhead ignores their potential and purpose. Recommend that subbasin plans and spawner requirements by species be used as the fundamental structure of the FWP for recovery for species threatened with extinction.

Program Measures

Relationship of Part II of Addendum to Accord Extensions/Biological Opinions/Recovery Plans/Mid-C HCPs (not explicit in draft Addendum)

(CRITFC) Council should include a section in Part II that expresses support for, and inclusion of, Accord Extension projects as measures in the Program. Accord Extension agreements occurred since adoption of the 2014 Program and were specifically recommend for inclusion by the lower river Tribes. (Warm Springs Tribes; Umatilla; Yakama; Nez Perce – all joined in the coordinated CRITFC comments)

(USFWS) Revised Fish and Wildlife Program should acknowledge that the FWS has completed a revised recovery plan for Kootenai River White Sturgeon and ensure program is consistent with that plan. FWS also revised the bull trout recovery plan in 2015; Program should adopt recovery criteria in plan.

(NOAA Fisheries) Revise draft Addendum to ensure that the flow and passage provisions are the most up-to-date as those represented in the 2019 Columbia River System Biological Opinion.

(Public Power Council) Need to recognize other processes, such as the requirements of the Endangered Species Act and National Environmental Policy Act compliance. Program should incorporate by reference and ensure consistency with provisions of the most recent BiOps. Incorporate by reference and not be in conflict with Accord Extensions and Bonneville/Wash MOA.

(Chelan PUD) Recommend adding language relative to the Mid-Columbia HCP's as outlined in our recommendation letter (see paragraph 4). [In the 2009 Program, the Council recognized the Mid-Columbia HCPs "performance standards and the mainstem spill and bypass provisions as part of the baseline objectives and measures in the Columbia mainstem plan". In addition, the Council noted they expected the parties of the HCPs to work together to successfully implement the Plans. The District recommends that the Council again recognize the HCPs and their role in the protection and recovery of listed and unlisted salmon and steelhead while including recognition of the no-net-impact achievements that have been realized. The District recommends that the Council include the language from the 2009 Program (Mid-Columbia Hydroelectric Projects-pg.56) as updated in the new amended program.] We believe that the added language will provide important context to the work that Chelan PUD and others implement on the Columbia River

[No comments on Strongholds; Protected Areas and Future Hydroelectric Development; Resident Fish Mitigation; Eulachon]

General comments on Part II Approach and Contents and on Program Implementation

(WDFW) We support the focus of the 2020 Addendum on refining Program implementation, identifying new priorities for implementation, evaluating Program performance, and better incorporating the adaptive management framework into the Program. Addendum is responsive to our original recommendation to place additional emphasis and acknowledgment of how to better understand and address the synergistically negative effects of climate change, non-native and invasive species, and predation on ecosystem function and native species recovery. Part II identifies near-term priorities for implementation and funding, as well as program guidance on project implementation including climate change, mitigation in blocked areas, ocean, estuary, mainstem hydrosystem flow and passage operations, predator management, sturgeon, and how the program is implemented - these are generally consistent with WDFW near-term priorities, such as climate change, continued progress on the Council's phased reintroduction for salmon above Chief Joseph Dam, predator management of Northern Pike, pinnipeds, and avian predators, identification of white sturgeon recruitment and

productivity limiting factors, eulachon, and cost-effective implementation of fish and wildlife strategies in the program.

(ODFW) We look forward to working with the Council to ensure the Program protects, mitigates, and enhances Columbia Basin fish and wildlife resources affected by construction and continued operation of the hydropower system. We intend to work closely with the Council, Bonneville Power Administration, and the Basin's other fish and wildlife agencies and tribes, to set priorities for Program implementation, as well as for coordination and review. We expect that this partnership will be based on full recognition of deference due under the Northwest Power Act, including the principles articulated in section 4(h)(2), 4(h)(6), and 4(h)(8).

(Upper Columbia Salmon Recovery Board) Appreciates that the draft 2020 Addendum highlights critical ongoing and emerging science and policy issues that will require new or increased, and then sustained, collaboration and resources to achieve mitigation and recovery objectives for these UC populations. Examples of such management issues include the continued threat of Northern Pike, ongoing avian and pinniped predation, and climate change – topics that can potentially impact the success of restoration and recovery efforts in the UC.

(OWEB) Bonneville has recently taken a more active role in various aspects of watershed restoration projects, under the umbrella of their HIP III permitting process. Involvement in projects can provide benefits such as proactive communication and collaborative problem solving; also has the potential to greatly increase the time needed for coordination on planning, survey, reviews, etc. Additional time may cause schedule delays that result in unintended consequences, such as missing in-water work windows and raising concerns from landowners who were expecting a more expedient timeline for implementation. Because BPA is an important co-funder of FIP and other investments made by OWEB, we encourage the agency to work closely with local implementation partners with the intent of maximizing the effectiveness and efficiency of the BPA's engagement in project planning and implementation.

(Colville Tribes) Preparing an addendum that complements and supplements the Program, while the 2014 Program remains in effect, is appropriately pragmatic and cognizant of these other processes and the new scientific information, analysis, and public participation involved.

(Spokane Tribe) Applauds Council for recognizing the inadequate mitigation and funding devoted for the impacts caused by the construction and continued operation of Grand Coulee and Chief Joseph Dams. These two facilities account for a significant portion of the power generation of the entire FCRPS and have caused the greatest unmitigated losses and environmental degradation in the Columbia River Basin. Release of the draft "Findings on Recommendations and Responses to Comments for the 2020 Addendum to the 2014 Fish and Wildlife Program" ("Draft Findings") was helpful to the Tribe in its review of the Addendum. Accordingly, if either document significantly changes the Tribe expects the Council to consult with the Tribe prior to finalization.

(CRITFC) Part II on Program Implementation identifies a set of near-term priorities for implementation and funding. Encouraged the list of priority issues includes “climate change” and “ocean conditions”; very concerned that list is not comprehensive. Focus is on blocked area populations and issues downstream of Bonneville Dam; fails to reaffirm measures/issues affecting populations that directly impact the CRITFC member tribes. While the Addendum may not explicitly discount measures in the Snake Basin and mainstem Columbia, the reality of capped/flatlined budgets means funding “new” or “emerging” priorities requires shifting/reducing money currently addressing ongoing priority measures. Council expresses some support for BPA’s 2018-2023 Strategic Plan objective for carefully managing fish and wildlife program costs to at or below inflation. However, the populations in the Columbia River cannot currently be described as healthy and harvestable. Council should acknowledge that new, different, or additional measures may be required in the future if the performance indicators adopted into the Program through this Addendum process reveal that the current Program is not achieving its goals. Council leadership and Program must have a sense of urgency and sufficient funding to realistically achieve Program goals. (*Warm Springs Tribes; Umatilla; Yakama; Nez Perce – all joined the coordinated CRITFC comments*)

(*Nez Perce Tribe*) Dworshak Dam located on the Nez Perce Reservation, the four dams on the lower Snake River, and the cumulative impacts of all the FCRPS dams have severely reduced the Nez Perce Tribe’s opportunities to exercise Treaty-reserved fishing rights for salmon, steelhead, Pacific lamprey, White Sturgeon, Westslope Cutthroat Trout, and other native fish species. While beneficial, Program actions to date have yet to achieve the goals of the Program, perpetuating the hydroelectric system’s impact on Nez Perce Tribe Treaty-protected resources. Program has assisted in implementing necessary and important habitat restoration work, monitoring and evaluation, and hatchery actions; core work will need to continue. Bonneville is facing a very different set of financial circumstances than it was four decades ago, and the status and trends of salmon and steelhead signal the need for actions such as breaching the four lower Snake River dams, which in turn may reveal opportunities to modernize the Northwest Power Act. Against this larger backdrop, reorganization and refinement of the Council’s Program framework is positive; it will help demonstrate Program successes and adaptively manage “measures” to achieve their desired results, yet the Draft Addendum remains incomplete. For one, need to expand the statement of priorities in Part II on implementation. Encouraged that list of priority issues includes climate change and ocean conditions, however, we are very concerned that the list is not comprehensive. Focus is on blocked area populations and issues downstream of Bonneville Dam; fails to reaffirm measures/issues affecting populations in the heart of Nez Perce country that have been, and need to remain, funded. Draft Addendum may not explicitly discount measures in the Snake Basin and mainstem Columbia, the reality of capped and flat-lined budgets means funding “new” priorities would require shifting or reducing money currently addressing ongoing priority measures. Finally, throughout Part II, define and clarify who “and others” includes. We request that “tribes” be specifically referenced, as opposed to being omitted or lumped with non-sovereign entities.

(*Warm Springs Tribes; CTUIR*) Addendum Part II appears disconnected from the promising policy level proposals of Part I - part II drifts back into project-level budget

oversight issues, renders some judgment on BPA's response to long-standing versus "emerging" priorities and funding allocations across the basin, and offers suggestions that we would characterize as Program planning or goal/objective development. And yet none of what is presented is supposed to change the existing 2014 adopted Program. Our coordinated comments provide additional details regarding Part II that we ask that the Council fully consider; we do not believe that the 2014 Fish and Wildlife Program is enhanced or better clarified with what is provided in Part II. And juxtaposed against Part I, we see inconsistencies. There are certainly issues that should be engaged by the Council (e.g. climate change, predator reduction, etc.), in the right context, but we believe that it would be most productive for the region to continue to collaborate and complete what is offered in Part I, and with that completed, consider issues of priority, resource allocation, and program implementation in a future amendment cycle against that backdrop.

(Chinook Indian Nation) Our voice must be elevated in this, and the broader Columbia River Treaty, conversation. We appreciate the stated purpose of the addendum. We also appreciate the accomplishments. In ways suited to our locale, expertise, and resources of time and personnel, we would like to assist toward further accomplishments.

(Bonneville) Our initial recommendations asked the Council to largely retain the 2014 Program; similarly, our comments on recommendations had emphasized that any changes or additions should be carefully crafted to account for historic accomplishments and to accommodate other regional planning processes currently underway. We appreciate the Council's intent to retain the 2014 Program. However, as we discuss in our enclosed comments, BPA is concerned that, in substance, the draft addendum goes beyond its intended purposes of reorganization or supplementation, and instead would amend the Program by significantly expanding the mitigation that the Council recommends. [Further:]

- Bonneville's Strategic Plan provides important context that has informed our review of the draft addendum and will continue to drive our implementation of mitigation consistent with the Council's Fish and Wildlife Program and the purposes of the Northwest Power Act. Strategic Plan calls for taking a more disciplined approach to managing the total costs of our fish and wildlife program. Like other programs throughout the agency, Bonneville intends to manage its fish and wildlife program costs at or below the rate of inflation, inclusive of any new obligations.
- Other objectives established in our Strategic Plan include prioritizing fish and wildlife investments based on biological effectiveness and ensuring a nexus between mitigation and impacts of the federal hydrosystem. This context underscores our continued need for careful review of the Program and addendum's mitigation guidance and our concern that certain aspects of the draft addendum suggest mitigation that Bonneville lacks a clear responsibility to address.
- Certain categories of issues raised in Part II of the draft addendum have an uncertain relationship to federal hydropower impacts or otherwise are broader regional issues that should not fall exclusively to the Council's Program as hydrosystem mitigation responsibilities. We appreciate the Council's sensitivity in

acknowledging that “the program’s goals should be understood in terms of protecting fish and wildlife and mitigating for the adverse effects of development and operation of the Columbia River hydroelectric facilities.” However, we ask that the Council help facilitate Bonneville’s consideration of mitigation recommendations by demonstrating and articulating a specific, case-by-case connection to hydrosystem impacts and accounting for the share of responsibility that can be apportioned fairly to other factors.

- We understand the Council’s keen interest in how Bonneville implements mitigation, with the final pages of the draft addendum devoted to that topic. Bonneville has long been committed to independent science, regional collaboration, and strong partnerships to ensure we get the highest value for our fish and wildlife investments. We continue to support ongoing communication and coordination with the Council with respect to implementation of mitigation.
- The draft addendum’s implementation provisions are sometimes challenging to understand though, because they appear throughout the entirety of the draft and at times create confusion about who is being asked to do what. Although the Program is meant to guide Bonneville and three other federal entities, there are numerous instances in which the Council provides direction to itself, or fails to specify who is being directed, or seems to direct one entity to undertake a task better suited for another.
- A comprehensive review and evaluation of all mitigation completed under the Northwest Power Act is needed to support substantive changes in the Program’s scope, scale, or recommended mitigation. A thorough evaluation of Program accomplishments would provide critical information that needs to be considered before calling on Bonneville to “begin a comprehensive effort” to “intensify, expand, and then sustain” significant new mitigation. If such evaluation indicates a need for the significant increase in mitigation that the Council suggests exists, Bonneville stands ready to work with the Council and the appropriate mitigation sponsors on a strategy to address it.
- Bonneville continues to believe there is a need for a prioritization framework within the Program, particularly when the draft addendum calls for funding of emerging issues as well as “significant increases” without compromising existing mitigation efforts elsewhere in the Program. A prioritization framework would, ideally, provide further insight and detail from the Council as to how these emerging issues and other increases should be handled within Bonneville’s existing fish and wildlife program. In addition to any guidance from the Council on this issue, Bonneville intends to continue exploring options for prioritization and effectiveness methods that can be incorporated into its fish and wildlife program, consistent with our Strategic Plan. Such options might include compliance, effectiveness, and cost-benefit metrics that may help Bonneville continue to document its ongoing compliance with the Northwest Power Act mitigation mandates while doing so in a more biologically sound and cost-effective manner. We look forward to coordinating on these efforts with the Council and mitigation partners across the region. A prioritization strategy may also help inform the issues with spreading any cost management efforts “equitably” across the Program.

- The Northwest Power Act does not include mandates or purposes relating to equity within the Program. Thus, any reallocation of mitigation funding should be based on the comparative needs of the fish and wildlife resources of the Columbia River basin—the exclusive subject of the Act’s mitigation mandates.

(Public Power Council) Emphasize the following considerations in finalizing the program:

- Nexus to federal hydro system and recognition and the statutory mandate of the NWPCC for Program elements is essential. The NWPCC needs to manage the program’s focus and ensure a hydro nexus; distinguishing between FCRPS impacts and other human impacts.
- Recognition of other processes such as the requirements of the Endangered Species Act and National Environmental Policy Act compliance. Program should incorporate by reference and ensure consistency with provisions of the most recent BiOps. Incorporate by reference and not be in conflict with Accord Extensions and Bonneville/Wash MOA.
- Prioritization of projects based on biological and economic impacts. Prioritize mitigation efforts, eliminate redundancies and create efficiencies during this process. Establish a methodology to prioritize potential projects and reach agreement on the projects of highest priority before recommending them to BPA. Continue ISRP science review and be responsive to it in recommendations. Prioritize recommended actions based on list of criteria:
 - Links to hydropower impact
 - Produces in-place, in-kind mitigation
 - Improves ecological functionality, alleviates limiting factor(s)
 - Produces broad biological benefits
 - Provides benefits to ESA listed species/stocks
 - Improves the effectiveness of other projects or efforts
 - Produces easily measurable results
 - Represents a unique work effort (does not duplicate another project or effort)
 - Utilizes cost sharing
 - Represents the least-cost alternative
- Objective, independent, and scientific evaluation of project effectiveness. Focus mitigation recommendations on resources where improvements can be affected.
- Recognition of program maturity and BPA Strategic Plan, which calls for flat overall spending and prioritization of new projects within existing budgets. Acknowledge finite budget. Where increased spending is needed, this should come from reductions in other areas that may have outlived their purpose or usefulness within the program. cost savings should be returned to BPA to offset future wholesale power rate increases.

(Also - Snohomish PUD supported PPC’s comments and added its own similar comments on nexus, effectiveness, prioritization, budget maintenance and the like)

(Western Montana Electric Generating and Transmission Coop) Continue to be concerned about fish and wildlife costs and ongoing mission creep. Council must balance costs of protection and mitigation with also ensuring an adequate, efficient, economical power supply. Council has also lost sight of clear requirement that programs

must have clear connection to mitigation of specific impacts from federal hydrosystem. Appreciate that the Addendum recognized BPA's need to strengthen its financial health and manage costs carefully; concerned, however that the Addendum appears to then ignore this need to manage costs carefully by calling for implementation of emerging priorities while inserting itself into BPA's budget control efforts in an apparent attempt to limit those efforts. The Addendum also questions efforts to control budgets instead calling for a process to identify a plan to increase budgets. This is in direct conflict with cost management efforts and should be removed from the Addendum. Calls to equitably share the results of cost savings efforts are also a concern. We believe that any cost savings identified should be returned to BPA ratepayers through reduced Fish and Wildlife Program costs rather than being re-allocated to new or expanded projects.

(Sierra Club; various versions of the same theme from many other organizations, groups and individuals) Proposed program falls woefully short of what is needed to meet the requirements of the Northwest Power Act, the Endangered Species Act, and Tribal Treaty responsibilities, as salmon are in dire straits/danger of extinction. Program's SAR objective are generally good, but proposed actions will not come close to achieving these desirable goals. Fish and Wildlife Program Addendum is a disappointment - continues a too little, too timid approach rather than develop a plan that will work to recover salmon and steelhead in the Snake and Columbia Rivers. Salmon are running out of time, and the orca that need chinook salmon from these rivers are running out of time as well; while protecting orca is not the direct responsibility of the Council, it would be short-sighted and irresponsible not to acknowledge the important connection to salmon and steelhead. Council should bring its substantial analytical expertise and leadership to restore the Snake River, and support salmon growth while creating clean energy solutions for communities.

(Orca Network; Whale and Dolphin Conservation) For benefit of salmon and steelhead and for especially for orca, mitigation and recovery efforts for salmon populations utilizing the Columbia River Basin must be accelerated to achieve abundance and healthy population number. Prioritize actions for salmon recovery that meet the 4-5 million annual fish returns goal. Matter is urgent and therefore requires largely supported, urgent plans of action, in conjunction with recommendations of the Orca Recovery Task Force. Steward the development of quick and creative solutions for wild salmon recovery and clean energy projects; ensure a healthy Bonneville, and healthy eastern Washington communities, by finding ways forward that serve salmon and all interested parties.

(Bakke) Structure of the Fish and Wildlife Program cannot prevent extinction of wild salmon and steelhead in the Columbia River basin; fails to recognize that the hatchery program and the fishery cannot be sustained by having access to healthy and abundant wild populations. Program is not focused on performance measures that benefit the public trust responsibility for actions paid for with public funds; instead it is focused exclusively on harvest and hatchery production to benefit user groups.

Save the fishies! *(McKenzie McDougal)*

V. Part II, How Program is Implemented

(WDFW) Part II of the Addendum is generally consistent with WDFW near-term priorities, including cost-effective implementation of fish and wildlife strategies in the program.

(Bonneville) Bonneville intends to explore options for prioritization and effectiveness methods consistent with their Strategic Plan, which can be incorporated into the program.

(Public Power Council; Snohomish PUD) provide a series of criteria to prioritize projects and comment that a methodology should be put into place to prioritize projects and reach agreement on highest priority before recommending projects for BPA funding. SnoPUD additionally comments that project reporting should occur more frequently than annually to manage budgets.

(Bonneville) A prioritization strategy will help spread cost management efforts equitably across the program.

(Western Montana G&T Coop) The Council must ensure that Program measures have a clear connection to the mitigation of impacts from the FCRPS and that the Council's role should not expand beyond this.

(Nez Perce Tribe) Recommends Part II of the Draft Addendum be expanded to clarify how the near-term priorities relate to ongoing measures and provide assurance that ongoing work will not be jeopardized, i.e., that money will not be shifted away from the Nez Perce Tribe and others working to achieve healthy and harvestable fish populations in the Snake Basin). Also needs to accurately portray funding needs; implementing the Program and achieving its goals requires funding commensurate with the scope of measures in the Program. Council's confidence that existing funding levels are generally adequate to meet Program needs is simply inaccurate and misleading program has not met its goals and populations in the Columbia River cannot currently be described as healthy and harvestable. Thus Tribe recommends that statement be replaced with a statement about the urgency of achieving Program goals and sufficient funding to realistically achieve those goals.

(CRITFC and its member Tribes) comment that as new priorities arise, the current and ongoing work should not be jeopardized.

(Nez Perce Tribe, CTUIR, Yakama Nation, Warm Springs Tribes, CRITFC) the addendum should detail how near-term priorities relate to ongoing measures.

(SBT) concerned that Bonneville's budget cuts are impacting their day-to-day operations, limiting their opportunity to collaborate with non-tribal landowners, and making it difficult to participate in regional activities and keep their staff trained and up to speed.

(Public Power Council; Snohomish PUD; Western Montana G&T Coop; and commenters at the Boise and Kalispell hearing representing Idaho Consumer-Owned Utilities, Flathead Electric Cooperative, and Lincoln Electric Cooperative) Call for BPA to control costs, the Council to spend its money wisely and with AEERPS in mind, and the addendum to speak more to BPA's finite budget.

(Public Power Council and Snohomish PUD) Further increasing funding increases the risk of funds expended unproductively and wastefully, and call for the Council to critically evaluate project and program recommendations that require more study and an increasing budget of RM&E.

(Colville Tribes and USFWS) The final bullet point in Part II under the heading "How the Program is Implemented" provides as follows: "Plan future implementation of the Fish and Wildlife Program. The Council will work with the state and federal fish and wildlife agencies and tribes to consider initiating a process to plan future implementation of the fish and wildlife program." More details on this item would be helpful so wildlife agencies, tribes and others can fully understand what the NPCC is proposing.

(CTUIR, Yakama Nation, Warm Springs Tribes, and CRITFC) A review and overhaul of project review and budget management processes to find efficiencies is long overdue, and that conducting such an overhaul would free up several million dollars each year for on-the-ground work.

(CTUIR, Yakama Nation, Warm Springs Tribes, and CRITFC) The Council's project review process has grown dramatically over the last two decades and diverts resources that could be dedicated to on-the-ground activities.

(IDFG) supports COLA increases by Bonneville and the Council but comments that they should be distributed in equitably across the program.

(Spokane Tribe) Concern for, and a need to recognize, inequality of funding amongst tribes.

Five-percent threshold

(Kootenai Tribe, CTUIR, Yakama Nation, Warm Springs Tribes, CRITFC, Public Power Council, Snohomish PUD, Western Montana G&T Coop) Suggest the Council is overstepping its bounds with the proposed 5% threshold on project budget increases and decreases. The proposed threshold is in conflict with the contractual relationship between the Tribes and BPA in their Long-Term Agreements and Fish Accord Extensions. *(Kootenai Tribe, CTUIR, Yakama Nation, Warm Springs Tribes, CRITFC, and Bonneville)*

(Kootenai Tribe, CTUIR, Yakama Nation, Warm Springs Tribes, and CRITFC) This would greatly increase administrative burden.

(CTUIR, Yakama Nation, Warm Springs Tribes, and CRITFC) The Council should not adopt this threshold and instead focus on the broad programmatic and regional commitments to meet program goals.

(Bonneville) Bonneville does not support or agree with this proposal for two primary reasons: it imputes a budget oversight role to the council that is not based in the statute and that properly resides with Bonneville. Budgets and contract administration are matters between Bonneville and individual project sponsors. And second, initiation of Council review for budget changes of 5% or more would divert a substantial amount of time and effort, for both Bonneville and project sponsors, to a process that does not provide any apparent value or address anything more than a hypothetical concern. In the Fish Accords and in other agreements, Bonneville and certain project sponsors have agreed to project budgets adequate for implementation of the projects, and, as part of those agreements have also established budget management tools to promote efficient use of mitigation funding, such as by allowing for funding to be transferred between projects. Bonneville and its partners have found this to be a flexible and effective structure for implementing mitigation work.

(Public Power Council and Snohomish PUD) The Council should carefully consider the tradeoffs between benefits and administrative burden in thresholds for monitoring specific projects.

(Western Montana G&T Coop) The threshold is in direct conflict with cost management efforts and should be removed from the addendum.

Cost savings

(Spokane Tribe of Indians and several utility groups) Stronger language and further refinement of the cost savings process in the addendum including an obligation that the Council and BPA work together to identify cost savings and that 100% of the savings be reinvested in the program. STI provides potential program language to more closely tie the cost savings process to the emerging priorities and includes a coordinated process with state and federal fish and wildlife agencies and tribes as part of an improved public process.

(Public Power Council, Snohomish PUD and Western Montana G&T) Any cost savings should be returned to Bonneville.

Asset Management

(IDFG) Supports on the asset management plan as a program emerging priority.

(USFWS) Infrastructure depreciation, especially of hatchery facilities, is becoming a significant concern; if overall budget increases are expected to be limited to rate of inflation, expect cost of maintaining hatchery system to consume a larger proportion of program budget in near future.

Issues

From the comments, staff identified the following list of issues:

Part I: Program Performance

Part I – How to proceed:

We received comments from some of the state fish and wildlife agencies and tribes asking the Council not to adopt Part I of the program, and instead work with the agencies and tribes to develop a collaborative process to refine the objectives, goals and indicators and to conduct a policy-level discussion about this role for the Council and how the Council and others will use the information to be gathered on program performance. Options for proceeding, including a staff recommendation, are set forth in the Overview memorandum.

- How the Council chooses to respond to these comments and proceed will determine the course for our work over the next few months, including how we address the next issue.

Part I – Goals, objectives and indicators:

We received a number of specific comments on the goals, objectives and indicators. The following are some examples:

- Anadromous Salmon and steelhead
 - measure Hatchery and natural production by smolt production so that hatchery and wild fish production is comparable by stream
 - retain the SAR ratio; consider recruits per spawner as a biological objective instead of SARs; reconsider the use of SARs
 - update indicators to reflect 2019 BiOP
 - reference the low, medium and high goals in the MAFAC report; as a default establish the medium as the target for the biological objective or list full range of partnership goals in biological objective
 - utilize qualitative goals from partnership
 - include indicator for mortality of smolts
 - characterize salmon and steelhead goal as interim and the indicator for short-term abundance as “near-term provisions”
 - Any indicators relating to juvenile passage and survival should focus on maintaining current levels of reach survival
- Resident Salmonids
 - better align objectives with 2015 Bull Trout Recovery Plan
 - adopt recovery criteria outlined in Bull Trout Recovery Plan
- White Sturgeon
 - include indicators for white sturgeon harvest

- the indicator table should specify that the target refers to wild adults and update indicators consistent with Kootenai River White Sturgeon Recovery
- Lamprey
 - Include indicators for lamprey translocation, pattern of risk, passage improvements

A handful of comments say that in the Addendum, the assessment location for the salmon and steelhead goals had been moved from Bonneville Dam down to the mouth of the Columbia, which commenters say is a significant change that results in a reduction in tribal harvest opportunity.

Comments received for Figure 1 of the addendum ask for definitions and description of the process it represents to be added, and to include monitoring in the figure.

A number of comments ask the Council to better articulate what is being supplemented and what is being reorganized from the 2014 Program, and to develop a cross-walk between the goals and objectives in the 2014 Program and the draft Addendum.

- Each of these comments vary in levels of difficulty to address and will require some discussion for resolution, and likely discussion with partners in the region. The Council's direction on the first issue will inform staff's path for responding to these comments and refining and finalizing in the near term.

Part I – Wildlife:

The wildlife section of Part I received a fair amount of comments. Some comments call for additional objectives and indicators (i.e., wildlife ecological objectives should be supplemented to include an additional objective focused on monitoring the effectiveness of the mitigation programs; indicators are missing for non-native and invasive species strategy). Some comments call for minor corrections to the acreage listed in the tables (i.e., the deadwood figure should be 665 not 655). And other comments state that the wildlife provisions of the addendum are not acceptable. To this point, comments state that the addendum doubles the portion of the wildlife assessments for construction and inundation that are contained in the 2014 Program and, by doing so, contradicts the 2014 Program and the region's earlier comprehensive efforts. Beyond this, the comments also raise issue with the Addendum enumerating the "under-mitigation" in terms of political entities and not fish and wildlife needs, and that the remaining mitigation is measured in habitat units, which, as stated in the comments, has been and remains an obstacle for practical implementation.

- This is a unique issue because it relates to the indicators and specific provisions of Part I of the Addendum, but the concerns implicate broader policy decisions on wildlife mitigation, including the Wildlife provisions in the 2014 Program and could also impact Part II of the Addendum.

Part I – Accomplishments list:

Many comments were received on the accomplishments list. Many identify missing accomplishments or make the point that the list needs to be more comprehensive and not be limited to the last five years. Some are unclear on how something listed is a council accomplishment (i.e., spill operations agreement). Others state that accomplishments are not appropriately linked to the program goals or objectives and should be for this document.

- Should the Council invest time in creating a more comprehensive list of accomplishments in this amendment process and the addendum?

Part II: Program Implementation

[**Note:** – the Council received some comments that, if accepted, would result in minor edits to sections without substantially changing the section. Examples include: various comments on the Hungry Horse and Libby operations; NOAA’s comments on the Estuary section; comments on avian predation; and a number of comments on the Sturgeon section. Staff did not highlight those here.]

Part II – Climate change:

Council received a number of comments on the Addendum’s section on climate change, although few provided specifics about significant changes or additions in that provision. However, one set of comments mirrored a number of original recommendations that asked the Council to revise the Climate Change strategy in the 2014 Program language in a way that would have the Council and the region engage in substantial climate change planning.

- Should the Council edit this section to initiate a climate change planning effort?

Part II – Mitigation in Blocked Areas:

Mitigation in Lake Roosevelt/Spokane River area above Grand Coulee/Chief Joseph dams

Comments supported the current language, and some called for it to be strengthened, while others commented that a significant increase in the level of mitigation is not justified and/or concerns that the Bonneville budget should not be expanded.

- Should the Council stay the course in this sub-section or either strengthen or weaken as indicated by comments?

Anadromous fish reintroduction above Grand Coulee and Chief Joseph Dams

Specific to the topic of reintroduction in this blocked area of the upper Columbia, the Spokane Tribe in particular commented seeking explicit detail on actions and timelines; other commenters supported the draft language; some commented with concerns about the future of reintroduction but do not call for the Council to change course.

- Should the Council stay the course in this subsection or add detail as indicated by comments?

Anadromous fish mitigation above Hells Canyon Complex (not addressed in draft Addendum)

Upper Snake River Tribes in particular call for the Addendum to recognize the Upper Snake Management Plan.

- Should the Council recognize the Upper Snake Management Plan in some way in the Addendum?

Part II – Ocean:

Comments were received that show support of the Council advancing the ocean work, while others commented to reduce or remove the language, particularly with concerns that activities related ocean conditions do not have a nexus to the hydrosystem.

- Should the Council stay the course with this section?

Part II – Mainstem:

Flow and passage operations generally (not directly addressed in draft Addendum)
Spill (not addressed in draft Addendum)

- Should the Council recognize the 2019 Biological Opinion explicitly in the Addendum, including the flow and passage operations and standards? Should the Council in some way provide explicit recognition and support for flexible spill operations and further development and commit to providing technical support when needed?

Adult passage and other measures at Albeni Falls Dam (not addressed in draft Addendum)

- Should the Council include in the Addendum explicit recognition and details on Albeni Falls fish passage and habitat enhancement activities as recommended and commented by Kalispel Tribe?

Lower Snake River dam breaching (not addressed in draft Addendum)

Many commenters call for lower Snake dam breaching to be included in the Addendum and supported by the Council.

- The Council's approach for many fish and wildlife programs is that mainstem dam breaching is not our issue under the Northwest Power Act? Any reason the Council should change course?

Part II – Predator management:

Northern Pike

Support was provided overall on the Council's language on predator management. This is true for the Northern Pike provisions in particular, although Spokane Tribe calls for more responsibility to be put on federal hydrosystem and Bonneville, while other commenters (Western Montana G&T Coop) commented with concerns about calls for Bonneville funding on what is a broader issue.

- Should the Council alter the current statements in the Addendum on Bonneville responsibility and on shared responsibility for Northern Pike efforts?

Pinnipeds

Much support for pinniped predator management, although Oregon and Idaho support even stronger language and additional funding.

- Should the Council include a call for additional funds for pinniped predator management actions?

Part II – Measures (not addressed in draft Addendum):

Several comments call for the Council to use the Addendum to explicitly recognize and incorporate recent developments, including the Accord Extensions, the 2019 Biological Opinion, and the revised Kootenai sturgeon recovery plan.

- The draft findings make clear the Council considers the actions in these documents to be part of the updated measures of the Program. But should the Council include an explicit statement in the Addendum that these measures are incorporated into the Program?

Part II – How the program is implemented:

There is support for the asset management plan and other aspects of this section.

There is significant opposition from various entities on the 5% threshold budgeting mechanism.

- Should the Council pursue the 5% threshold mechanism?

Comments on cost savings show a difference of opinion on whether it should stay in the program for reinvestment or returned to Bonneville with the intention of reduced power rates.

- Should the Council refine cost savings and specify how the money will be used?