MEMORANDUM OF UNDERSTANDING

Through mediated discussions in *National Wildlife Federation v. National Marine Fisheries Service*, 3:01-cv-640-SI (D. Or.) (*NWF v. NMFS*), *Pacific Coast Federation of Fishermen's Associations v. Bonneville Power Administration*, 20-73761 (9th Cir.) (*PCFFA v. BPA*), *Coeur d'Alene Tribe v. Bonneville Power Administration*, 20-73762 (9th Cir.), and *Spokane Tribe of Indians v. Bonneville Power Administration*, 20-73775 (9th Cir.), the National Wildlife Federation et al. Plaintiffs, the State of Oregon, the State of Washington, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Nez Perce Tribe, and the United States (the "Parties") have entered into this Memorandum of Understanding ("MOU").

WHEREAS, the U.S. Fish and Wildlife Service ("FWS") and the National Marine Fisheries Service ("NMFS") issued biological opinions on Columbia River System ("CRS") operations in July 2020, the U.S. Army Corps of Engineers ("Corps"), the Bureau of Reclamation ("Reclamation"), and the Bonneville Power Administration ("Bonneville") completed a Final Columbia River System Operations Environmental Impact Statement in July 2020, and the Corps, Reclamation, and Bonneville issued a Final Record of Decision in September 2020;[1]

WHEREAS, in *PCFFA v. BPA*, the National Wildlife Federation et al., Plaintiffs ("NWF Plaintiffs")[2] filed a petition for review in the Ninth Circuit Court of Appeals against Bonneville in December 2020; and in *NWF v. NMFS*, the NWF Plaintiffs filed an eighth supplemental complaint in January 2021 (ECF 2311, as corrected by ECF 2396), the Spokane Tribe of Indians filed a complaint-in-intervention in February 2021 (ECF 2320), Oregon filed a fifth supplemental complaint in March 2021 (ECF 2325), and the Coeur d'Alene Tribe of Indians filed a complaint-in-intervention in March 2021 (ECF 2330);

WHEREAS, NWF Plaintiffs and Oregon filed and the Nez Perce Tribe supported motions for injunctive relief in *NWF v. NMFS* in 2021 (ECF 2390; ECF 2392; ECF 2387);

WHEREAS, in *NWF v. NMFS*, the United States, the NWF Plaintiffs, the State of Oregon, and the Nez Perce Tribe jointly requested a stay of litigation through July 31, 2022 to implement certain negotiated short-term CRS operations while the parties worked to develop and begin implementing a long-term comprehensive solution that could resolve the claims in the litigation (ECF 2411), which the district court granted (ECF 2415); and the parties to the Ninth

[1] For purposes of this MOU, the Columbia River System (CRS) consists of 14 Federal dam and reservoir projects addressed in the 2020 CRSO EIS and 2020 CRSO EIS ROD: Libby, Hungry Horse, Albeni Falls, Grand Coulee, Chief Joseph, Dworshak, Lower Granite, Little Goose, Lower Monumental, Ice Harbor, McNary, John Day, The Dalles, and Bonneville dams.

[2] For purposes of this MOU, the NWF Plaintiffs are: the Pacific Coast Federation of Fishermen's Associations, the Institute for Fisheries Resources, Sierra Club, Idaho Rivers United, Northwest Sport Fishing Industry Association, NW Energy Coalition, National Wildlife Federation, Columbia Riverkeeper, Idaho Conservation League, and Fly Fishers International.

Circuit proceedings subsequently sought to administratively close their petitions for review through August 2, 2022, which the Ninth Circuit granted (ECF 25);

WHEREAS, the United States, the NWF Plaintiffs, the State of Oregon, and the Nez Perce Tribe, joined by the Coeur d'Alene Tribe and the Spokane Tribe of Indians, subsequently moved to extend the litigation stay through (1) August 2023 (ECF 2423), which the district court granted on August 4, 2022 (ECF 2425) and the Ninth Circuit granted on August 11, 2022 (ECF 42); and (2) through October 2023 (ECF 2438), which the district court granted on September 1, 2023 (ECF 2441) and the Ninth Circuit granted on September 6, 2023 (ECF 47);

WHEREAS, during the litigation stay, the United States engaged the Federal Mediation and Conciliation Service ("FMCS") and, with the assistance of FMCS, participated in mediated discussions with States, Tribes, and other parties on timely, basin-wide, durable solutions that have the potential for resolving the litigation (ECF 2423-2);

WHEREAS, on March 21, 2022, the United States convened a Nation-to-Nation consultation between Federal departments and agencies and various leaders and representatives from the Tribes of the Columbia River Basin, where the Federal representatives heard clearly the request for accountability for United States Government ("USG") actions that have caused harm to the ecology of the river, its tributaries, and importantly, its first residents;

WHEREAS, on March 28, 2022, the Secretary of the Interior, the Secretary of Energy, the Assistant Secretary of the Army for Civil Works, the Chair of the Council on Environmental Quality, and the Under Secretary of Commerce for Oceans and Atmosphere/NOAA Administrator committed to identifying a strong and lasting path forward to restore healthy and abundant wild salmon and other native fish to the Columbia River Basin;[3]

WHEREAS, the Parties continued to engage through good faith mediation, including the United States' production of documents relevant to the mediation process, such as NOAA's September 30, 2022, Rebuilding Interior Columbia Basin Salmon and Steelhead Report (Rebuilding Report) (*see* https://media.fisheries.noaa.gov/2022-09/rebuilding-interior-columbia-basin-salmon-steelhead.pdf; *see also* ECF 2429; ECF 2430; ECF 2433; ECF 2434 (mediation progress reports);

WHEREAS, on March 21, 2023, President Biden announced a call to action to bring healthy and abundant salmon runs back to the Columbia River System;[4]

WHEREAS, on September 21, 2023, the United States entered into an agreement with the Coeur d'Alene Tribe, the Confederated Tribes of the Colville Reservation, and the Spokane Tribe of Indians to support and fund the Tribally led effort to restore salmon to the blocked habitat in the Upper Columbia River Basin above Chief Joseph and Grand Coulee Dams,

[3] Columbia River Basin Fisheries: Working Together to Develop a Path Forward, *available at* https://www.whitehouse.gov/ceq/news-updates/2022/03/28/columbia-river-basin-fisheries-working-together-to-develop-a-path-forward/.

[4] https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/03/21/remarks-by-president-biden-at-the-white-house-conservation-in-action-summit/.

including the habitats above private dams on the Spokane River. In accordance with the agreement, the Coeur d' Alene Tribe, the Spokane Tribe of Indians, and United States moved to stay and voluntarily dismiss without prejudice to reinstatement the existing litigation relating to the Coeur d'Alene Tribe's and Spokane Tribe of Indians' complaints-in-intervention (ECF 2442) and petitions for review, which the district court granted on September 28, 2023, and the Ninth Circuit granted on October 11, 2023;

WHEREAS, on September 27, 2023, President Biden issued a Memorandum on Restoring Healthy and Abundant Salmon, Steelhead, and Other Native Fish Populations in the Columbia River Basin ("Presidential Memorandum")[5] that identified a priority for the Administration "to honor Federal trust and treaty responsibilities to Tribal Nations — including to those Tribal Nations harmed by the construction and operation of Federal dams that are part of the Columbia River System;"

WHEREAS, the Presidential Memorandum further directed that all relevant Federal agencies "work with the Congress and with Tribal Nations, States, local governments, and stakeholders: to pursue effective, creative, and durable solutions, informed by Indigenous Knowledge; to restore healthy and abundant salmon, steelhead, and other native fish populations in the Basin; to secure a clean and resilient energy future for the region; to support local agriculture and its role in food security domestically and globally; and to invest in the communities that depend on the services provided by the Basin's Federal dams to enhance resilience to changes to the operation of the CRS, including those necessary to address changing hydrological conditions due to climate change;"

WHEREAS, during the mediation, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Nez Perce Tribe, the State of Oregon, and the State of Washington (the "Six Sovereigns") provided to the United States a proposed Columbia Basin Restoration Initiative ("CBRI" (Attachment 1)), which they intend to advance. The CBRI is informed by decades of collective experience and represents the collaborative efforts of the Six Sovereigns to develop a comprehensive solution to shared and complex challenges in the Columbia River Basin;

WHEREAS, the United States worked with the Six Sovereigns to review, evaluate, and respond to the CBRI, which culminated in the United States Government's Commitments in Support of the CBRI ("USG Commitments" (Attachment 2)), including 10-year interim operations (2024-2033) for the four lower Snake River and four lower Columbia River dams ("USG Operations" (Attachment 2, Appendix B));

WHEREAS, as set forth in this MOU, the Parties agree to seek a five year stay of litigation from the district court and to move to extend the litigation stay for an additional five years if the Parties are continuing to work in partnership on Columbia River Basin restoration and have not terminated the MOU; the Parties further agree not to litigate over the USG Operations for a period of 10 years so long as this MOU remains in effect, to enable fulfillment

[5] https://www.whitehouse.gov/briefing-room/presidential-actions/2023/09/27/memorandum-on-restoring-healthy-and-abundant-salmon-steelhead-and-other-native-fish-populations-in-the-columbia-river-basin/.

of the USG Commitments and allow for additional collaboration and partnership between the Parties to further advance the objectives of the Presidential Memorandum and the CBRI;

WHEREAS, the Parties remain committed to good faith collaboration with the regional sovereigns, and with other non-Party litigation participants as appropriate, including coordination on this MOU, the USG Commitments, USG Operations, and addressing questions or concerns over the MOU, the USG Commitments, and USG Operations;

NOW, THEREFORE, THE PARTIES STATE THE FOLLOWING UNDERSTANDING:

1. Parties. The signatories to this MOU are the United States, acting through the Federal agencies, the States of Washington and Oregon, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Nez Perce Tribe, and NWF Plaintiffs.

1.1. "Federal agencies" refers to the U.S. Army Corps of Engineers, the Bureau of Reclamation, Bonneville Power Administration, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service.

1.2. "United States Government" or "USG" refers to the Departments and Agencies involved in salmon and native fish restoration and include, but are not limited to, the Executive Office of the President, the Departments of Interior, Commerce, Army, Energy, Transportation, and Agriculture, the Departments' component agencies, and the Environmental Protection Agency.

1.3. "Non-Federal Parties" refers to the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Nez Perce Tribe, the State of Washington, the State of Oregon, and the NWF Plaintiffs.

2. USG Commitments in Support of the Columbia Basin Restoration Initiative. Subject to the provisions of the MOU, the Federal agencies agree to implement the USG Commitments, consistent with the Presidential Memorandum and in partnership with the Six Sovereigns and other stakeholders in the region, to make headway on the objectives in the CBRI. The Parties agree that nothing in this MOU is intended to modify, or will be interpreted as modifying, the USG Commitments, Presidential Memorandum, or the CBRI.

2.1. The Parties recognize that the USG Commitments and actions identified in this MOU are conditioned on and subject to the completion of any potential new and/or supplemental environmental compliance, as needed, under the National Environmental Policy Act ("NEPA"), the Endangered Species Act ("ESA"), and other laws. The Parties recognize that the USG Commitments and actions identified in this MOU could change depending on (1) the outcome of the environmental compliance and associated Federal agency decision-making processes, or (2) congressional action to authorize and fund the breach of the four lower Snake River dams, and that such changes could lead to modification or termination of this MOU in accordance with the terms of this MOU.

2.2. To the extent the Federal agencies' new or supplemental environmental compliance, or congressional action to authorize and fund breach, leads to actual or potential impacts to the USG Commitments or this MOU, the Parties agree to work collaboratively to consider modifications to the USG Commitments or this MOU in the new or supplemental environmental compliance documents or other forums as appropriate. This includes considering any actions that could be needed to complement, mitigate, or offset any potential modifications to the USG Commitments or this MOU.

3. USG Operations. While the MOU is in effect, the Federal agencies will implement the USG Operations for a 10- year period, and the Parties agree the USG Operations will remain in place: (1) unless the Federal agencies modify operations after completing any potential new or supplemental environmental compliance; (2) subject to any adaptive management consistent with the USG Commitments and other provisions identified therein; or (3) unless and until the Corps awards construction contracts for breach following congressional action to authorize and fund the breach of the four lower Snake River dams. If circumstances arise as identified in this section, the Parties agree to work together to consider modified operations in light of changed circumstances.

3.1. The Parties further agree that the Federal agencies will use the provisions contained in the 2023 Water Management Plan, 2023 Fish Passage Plan, and 2023 Fish Operations Plan for in-season management unless expressly modified by or through implementation of the USG Commitments.

3.2. As addressed in the USG Commitments, the Parties agree to work in partnership to continue monitoring and evaluating the USG Operations during the term of this MOU.

3.3. Consistent with section 9.2, the non-Federal Parties agree that they will not seek injunctive relief that would modify the USG Operations while this MOU is in effect for that Party.

4. Ongoing Collaboration on Restoration; Additional Actions. In accordance with the USG Commitments' expectations for continuing senior leadership engagement, the USG recognizes that additional actions will be needed to advance the shared interests in restoring healthy and abundant salmon and other native fish to the Columbia River Basin, including pursuing increased funding in support of basin-wide restoration as set forth in the USG Commitments and Presidential Memorandum. The Parties therefore agree to continue collaborating over development and implementation of additional actions that may be undertaken by the Parties to meet the shared goals. The Parties do not intend for this commitment, however, to include the renegotiation of the USG Commitments and USG Operations.

5. Compliance with Applicable Laws.

5.1. The Federal agencies have requirements to prepare certain analyses under Federal law when taking actions described in the USG Commitments or this MOU. The USG Commitments and the actions identified in this MOU therefore are conditioned on,

and subject to, completion of any required environmental compliance and compliance with all applicable laws. No provision of this MOU shall be interpreted as, or constitute, a commitment or requirement that the United States, acting through its departments and agencies, act in contravention of NEPA, the National Historic Preservation Act, the ESA, the Pacific Northwest Electric Power Planning and Conservation Act, the Clean Water Act, the Administrative Procedure Act, the Federal Advisory Committee Act, the Information Quality Act, or any other law or regulation, either substantive or procedural (including applicable State and Tribal law).

5.2. The USG agrees to use all appropriate legal authorities to fund, support, and implement this MOU. This MOU shall not be interpreted as binding any Federal agency to expend in any one fiscal year any sum in excess of appropriations made by Congress and available for purposes of this MOU for that fiscal year, nor as involving the United States in any contract or other obligation for the further expenditure of money in excess of such appropriations. The Parties agree that nothing in this MOU shall be interpreted as or constitute a commitment or requirement that any Federal agency take action in contravention of the anti-lobbying act, 18 U.S.C. § 1913, or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341.

5.3. Any obligation of State Parties to make any payment or expend any funds under this MOU attributable to commitments performed under this MOU after the last day of the current biennium is contingent upon the State Parties receiving from the applicable Legislative Assembly (including but not limited to its Emergency Board) appropriations, limitations, or other expenditure authority sufficient to allow the State Parties, in the exercise of their reasonable administrative discretion, to continue the commitments contemplated by this MOU.

5.4. Nothing in this MOU shall be construed to affect or limit the Parties—Federal, State, or Tribal—from complying with their obligations under, or affect their discretion under, any applicable laws; the MOU also does not affect or limit the Parties when engaging in—or predetermine the outcome of—any environmental, cultural resource review, administrative review, regulatory, or appeal process.

6. Communication Protocol. Given the timeline and the adaptive nature of the CBRI and the USG Commitments, it is not possible to anticipate all contingencies or eventualities. The Parties therefore commit to continue to engage in regular, good faith discussions to address any issues or questions that may arise.

6.1. Points of Contact. Each Party will identify point(s) of contact for receiving notices and managing their respective obligations under this MOU; each Party also will identify, in writing, any changes to those point(s) of contact within one month of a change.

6.2. Monthly Status Briefings. The Parties' points of contact will convene monthly informal status calls concerning implementation of the CBRI, the USG Commitments, and any additional actions needed to advance the Parties' shared interests

in restoring healthy and abundant salmon and other native fish to the Columbia River Basin.

6.3. Information Sharing. Upon request, the Parties agree to timely share documents developed in furtherance of the CBRI and the USG Commitments that are not internally confidential or privileged to a Party. The Parties also agree to provide each other with as much advance notice as practical of actions or events that have the potential to affect the USG Commitments, the CBRI, the Presidential Memorandum, or this MOU.

6.4. Annual Meetings. In addition to the meetings outlined in section 6.2 above, the Parties—including senior leadership within the USG, States, Tribes, and NWF Plaintiffs—agree to meet annually to review the progress made in implementing the CBRI, the USG Commitments, this MOU, and any additional actions needed to advance the Parties' shared interests in restoring healthy and abundant salmon and other native fish to the Columbia River Basin. The Parties agree to jointly develop and post online a concise annual progress report, and to jointly file an annual status report in the district court litigation. The Parties further agree that additional leadership meetings may be required from time to time, corresponding to actions or milestones in the USG Commitments, such as the finalization of any supplemental or additional environmental analysis.

7. Dispute Resolution. The Parties agree to use best efforts to pursue the good faith implementation and support of the USG Commitments and this MOU. The Parties understand that questions or concerns may arise regarding Party compliance with the spirit or intent of the USG Commitments and this MOU, including but not limited to the results of Party conferral on issues arising when implementing the USG Commitments and this MOU and adjustments or modifications to the USG Commitments or USG Operations (if adjusted by the Federal agencies following environmental compliance and associated decision-making processes). It is the intent of the Parties that these procedures will permit the Parties to resolve disputes outside of court, and that litigation will be used only as a last resort after good faith efforts to resolve disagreements are unsuccessful and the MOU is terminated according to the provisions below.

7.1. Point of Disagreement. Any Party may raise a formal "point of disagreement" to initiate the dispute resolution processes of this MOU. A Party raising a formal point of disagreement shall provide all other Parties written notice that it is raising a formal point of disagreement. That written notice shall include a summary of the disagreement, the Party's position on the appropriate resolution(s) of the disagreement, and any documents or supporting materials that assist in describing the disagreement and/or supporting the Party's position on an appropriate resolution. If the Party raising the point of disagreement believes that emergency circumstances exist, a complete explanation of the emergency and a request for expedited dispute resolution to resolve the emergency shall be included. All Parties shall strive to provide notice of a point of disagreement at the earliest possible time.

7.2. Informal Dispute Resolution. The Parties will first work to resolve the point of disagreement at the staff level. The Parties' points of contact will endeavor to timely

facilitate consultation and resolution. If a dispute cannot be resolved through informal dispute resolution, the Party or Parties raising the dispute may leave the dispute unresolved, obtain unanimous agreement to bypass formal dispute resolutions and proceed directly to withdrawals from or termination of the MOU, or pursue formal dispute resolution.

7.3. Formal Dispute Resolution. If the Parties are unable to reach agreement through informal dispute resolution, the Parties shall elevate the point of disagreement to each Party's senior leadership for timely consultation and good faith efforts to timely resolve the point of disagreement. The Parties agree that these good faith efforts to resolve points of disagreement at the senior leadership level are the primary method of formally resolving disputes under this MOU. However, if the point of disagreement remains unresolved following good faith efforts to do so at the senior leadership level, any Party may request mediation of an unresolved dispute with a settlement judge (or, with consent of all Parties, a non-judicial mediator or mediation body, like the Federal Mediation and Conciliation Service). The Parties agree that good faith efforts to resolve any disagreements shall be exhausted prior to requesting mediation and that, absent an agreement otherwise, the requesting Party shall provide at least 7 days' notice to the Parties' counsel before requesting mediation under this provision. The Federal agencies agree that, in mediation, they will coordinate with each other prior to advancing positions during the formal dispute resolution proceedings. The Parties agree to prioritize mediation to the extent practicable. The Parties agree to use best efforts to resolve the dispute resolution process within 90 days of the initial notice of point of disagreement.

7.4. If any Party provides notice in writing to all Parties that formal dispute resolution, including mediation as set forth in Section 7.3, has been unsuccessful, or the Parties unanimously agree to bypass all or part of the formal dispute resolution procedures, any Party may withdraw from this MOU pursuant to Section 9.1 below.

8. Effective Date. The MOU shall become effective upon full execution by all Parties. Within 30 days of full execution, the Parties agree to move to stay the *NWF v. NMFS*, 3:01-cv-640-SI (D. Or.) litigation; and dismiss without prejudice to reinstatement, administratively close, or stay the *PCFFA v. BPA*, 20-73761 (9th Cir.) petition, in accordance with the following provisions:

8.1. The Parties agree to jointly request the stay of the district court litigation for an initial period of five years. The Parties agree to meet and confer no later than 90 days before the expiration of the five-year stay to evaluate the progress of the MOU and USG Commitments. Any Party may withdraw from this MOU following good faith conferral within the 90-day conferral period without complying with the dispute resolution or termination procedures set forth in this MOU. Unless this MOU is terminated, all remaining Parties will jointly move for an additional five-year stay to match the spirit and intent of the USG Commitments and the Presidential Memorandum.

8.2. In keeping with Ninth Circuit General Order appendix A #27, the USG and NWF Plaintiffs agree to dismiss the Ninth Circuit petition without prejudice to

reinstatement upon the occurrence of stated conditions, namely: (1) the termination of the MOU or (2) the occurrence of a dispute requiring mediation. The Parties agree they may modify the Ninth Circuit filings to jointly move for administrative closure or a stay of the petition for review.

8.3. If all or part of the district court and Ninth Circuit litigation is not stayed, administratively closed, or dismissed without prejudice to reinstatement (consistent with section 8.2 above) within a reasonable time following full execution of this MOU by the Parties, this MOU shall become null and void.

9. Termination and Withdrawal

9.1. Withdrawal by Notice. Any Party may provide written notice to the other Parties of that Party's withdrawal from this MOU (1) after exhausting the dispute resolution provisions in section 7, (2) after conferring with the Parties during the 90-day conferral period addressed in section 8.1, or (3) in accordance with section 9.2 below. Said withdrawal is effective as of the day it is received by the Parties.

9.2. Withdrawal Due to Litigation. This MOU serves as the basis for a cessation of litigation in *NWF v. NMFS*, 01-cv-640-SI (D. Or.), and *PCFFA v. BPA*, 20-73761 (9th Cir.) as follows:

9.2.1. While the MOU is in effect for any non-federal Party, that Party agrees: (a) not to pursue claims in the above cases; and (b) not to initiate new litigation that arises from the same or substantially similar factual allegations or asserts the same or substantially similar claims for relief. If any Party initiates, re-initiates, joins in, or participates in litigation by supporting the same or substantially similar claims for relief, the USG may automatically withdraw from this MOU without complying with the dispute resolution procedures above.

9.2.2. If any non-Federal Party initiates, re-initiates, joins in, or participates in litigation that challenges environmental compliance for the CRS for the actions identified in the USG Commitments, any Party may withdraw from the MOU after complying with the dispute resolution procedures of this MOU.

9.2.3. For clarity, nothing in this section or the MOU shall prohibit any non-Federal party from filing claims or participating in lawsuits challenging Bonneville Power Administration's decisions made in any rates proceeding, with the exception that the non-Federal parties agree not to challenge Bonneville's recovery of the costs of the $300 million funding commitment (or portion thereof) identified in the USG Commitments;

9.2.4. To the extent not addressed in Section 9, this Agreement does not address the rights of the Parties to assert or defend their inherent, reserved, or delegated rights.

9.3. Termination by Withdrawal. If a Party withdraws in accordance with the provisions of this MOU, the non-withdrawing Parties may concurrently provide notice of, and withdraw from, the MOU. The MOU, including any underlying commitments to implement the USG Commitments and USG Operations, is terminated upon the withdrawal of the USG, or upon the withdrawal of all non-Federal parties.

9.4. Termination by Duration. Unless terminated by withdrawal, this MOU will terminate 10 years from the effective date.

10. Enforceability. The Parties agree that the MOU is not to be construed as a consent decree enforceable as a court order in any litigation. The Parties further agree that the MOU shall not be used as the basis for contempt proceedings, for any lawsuit arising under the APA or related citizen suit authorities, or for any action for breach of contract, specific performance, monetary damages, or declaratory or injunctive relief. The sole and exclusive remedy for any alleged non-compliance with, or unresolved dispute under, this MOU is to withdraw from the MOU, and the MOU is not otherwise enforceable.

11. Miscellaneous Provisions

11.1. Entire Agreement; Modification. The MOU, including Attachments, sets forth the entire understanding between the Parties regarding the basis for a stay of litigation of the claims and requests for relief in *NWF v. NMFS*, 01-cv-640-SI (D. Or.), and *PCFFA v. BPA*, 20-73761 (9th Cir.). All previous understandings, agreements, and communications between the Parties, whether verbal, written, express, or implied, with reference to this MOU are superseded. This MOU may be modified only by a written amendment that is expressly agreed to and signed by all Parties.

11.2. No Admissions or Concessions. The Parties agree that they will not use the MOU against any Party as evidence of wrongdoing or liability on any claim for declaratory or injunctive relief in the *NWF v. NMFS* or *PCFFA v. BP*A litigation, or in any subsequent litigation between the Parties. The Parties agree that this MOU establishes no principle or precedent with regard to any issue addressed in this MOU.

11.3. Reservation of Rights. Nothing in this MOU is intended to abrogate, modify, or affect in any way any right of the Parties, and the MOU shall not be construed to have any such effect. Nor is anything in this MOU intended to create, abrogate, modify, or affect any of the United States' Treaty or trust obligations to Columbia Basin Tribes.

11.4. Force Majeure. No Party shall be required to perform due to any cause beyond its control. This may include, but is not limited to, court order, fire, flood, terrorism, pandemics, strike or other labor disruption, act of God, or riot. The Party whose performance is affected by a force majeure will notify the other Parties as soon as practicable of its inability to perform and make all reasonable efforts to promptly resume performance once the force majeure is eliminated. If the force majeure cannot be eliminated or addressed, and the Parties cannot agree as to whether the MOU should remain in force or be modified considering the force majeure, the Party whose

performance is affected by a force majeure may withdraw from the MOU after complying with the dispute resolution procedures of this MOU.

11.5. Costs, Including Attorneys' Fees. The Parties agree that each Party to this MOU shall bear its own attorneys' fees, costs, and expenses for creation, negotiation, and administration of this MOU, and that no Party may seek reimbursement or an award of attorneys' fees, costs, and expenses for creation, negotiation, or administration of this MOU. For purposes of this section, "administration" includes filing a request to the court to stay, administratively close, or dismiss without prejudice to reinstatement the *NWF v. NMFS* and *PCFFA v. BPA* litigation. This MOU does not otherwise affect a party's claim for fees and costs, or any defenses to any claim for fees and costs, arising in the underlying *NWF v. NMFS* and *PCFFA v. BPA* litigation; however, no Party may seek reimbursement or an award of attorneys' fees, costs, and expenses related to the litigation while this MOU is in effect for that Party.

11.6. Section Titles for Convenience Only. The titles for the sections are used only for convenience of reference and organization, and will not be used to modify, explain, or interpret any provision of this MOU or the intentions of the Parties.

11.7. Signing in Counterparts. This MOU may be executed in any number of counterparts, and each executed counterpart will have the same force and effect as an original instrument as if all the signatory Parties to all of the counterparts had signed the same instrument. Any signature page of this MOU may be detached from any counterpart of this MOU without impairing the legal effect of any signatures, and may be attached to another counterpart of this MOU identical in form having attached to it one or more signature pages.

APPROVED:

For THE STATE OF OREGON

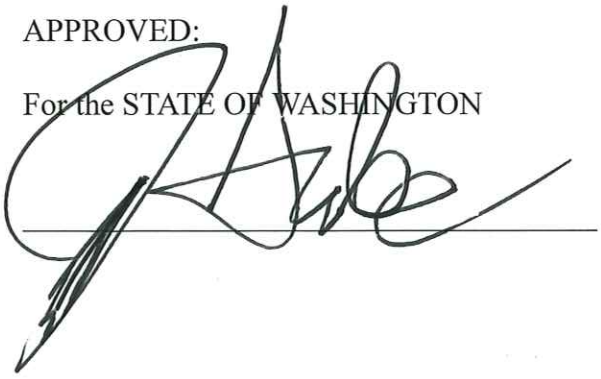
Governor Tina Kotek

12/13/23

Date

APPROVED:

For the STATE OF WASHINGTON



12/12/23
Date

APPROVED:

For the CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION

George Lewis Sr. 12-13-2023

Gerald Lewis, Tribal Council Chairman
(Or authorized designee)

Date

APPROVED:

For the CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION

for:

Gary Burke
Chairman, Board of Trustees

12-13-23
Date

APPROVED:

For the CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON

DocuSigned by:
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Jonathan W. Smith, Sr., Chair
Tribal Council

12/13/2023
Date

APPROVED:

For the NEZ PERCE TRIBE

12-13-2023

Date

Shannon F. Wheeler, Chairman

APPROVED:
For the NATIONAL WILDLIFE FEDERATION et al. Plaintiffs

Senior Advisor – Conservation
Fly Fishers International

December 13, 2023
Date

December 13, 2023
Date

Abby Tinsley
Vice President for Conservation Policy

December 13, 2023
Date

Miles Johnson, Legal Director

Liz Hamilton, Northwest Sportfishing Industry Assn.

12/13/2023
Date

December 13, 2023

Glen H. Spain, Executive Director
Pacific Coast Federation of Fishermen's Associations (PCFFA) and Institute for Fisheries Resources (IFR)

Nicholas Nelson
Executive Director
Idaho Rivers United

12.13.2023
Date

Aaron Isherwood
Sierra Club

12/13/2023
Date

December 13, 2023

Nancy Hirsh
Executive Director
NW Energy Coalition

12/13/23
Date

Justin Hayes
Executive Director
Idaho Conservation League
PO 844,
Boise, ID. 83702

APPROVED:

For THE UNITED STATES

Dec. 13, 2023

Michael L. Connor
Assistant Secretary of the Army
(Civil Works)

Date

DEC 12 2023

Laura Daniel-Davis
Acting Deputy Secretary
U.S. Department of the Interior

Date

12/11/2023

Dr. Richard W. Spinrad
Under Secretary of Commerce
for Oceans and Atmosphere
and NOAA Administrator

Date

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John L. Hairston,
Administrator and Chief Executive Officer,
Bonneville Power Administration

Date

December 14, 2023

David M. Turk, Deputy Secretary
U.S. Department of Energy

Date

ATTACHMENT 1

Columbia Basin Restoration Initiative

A proposal to the Biden Administration from the "Six Sovereigns"[1]

Confederated Tribes and Bands of the Yakama Nation

Confederated Tribes of the Umatilla Indian Reservation

Confederated Tribes of the Warm Springs Reservation

Nez Perce Tribe

State of Oregon

State of Washington

[1] This proposed Columbia Basin Restoration Initiative (the "CBRI") is informed by decades of collective experience, and represents the collaborative effort of the Six Sovereigns to develop a comprehensive solution to our shared and complex challenges. Moving forward, all Six Sovereigns support the CBRI as the basis for continuing discussions with the federal government and other regional sovereigns and stakeholders.

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Introduction

The past 150 years has brought enormous change to the Columbia River Basin: free-flowing, cool rivers once provided between 10-18 million salmon to the basin. Those salmon nurtured Tribal people's religion, culture, economies and physical health and the health of Columbia Basin ecosystems for thousands of years. For a time, those salmon populations provided significant economic benefits for early non-tribal settlers in the Pacific Northwest. But rapid population growth and development; prior overharvest in non-tribal fisheries; development of millions of acres of land for industrial, commercial, and agricultural uses; construction, and operation of 14 federal dams on the Columbia and Snake Rivers; and installation of hundreds of small private dams and weirs on the tributaries drastically reduced Columbia Basin salmon populations and the many benefits they once provided to the region, its inhabitants, and ecosystems.

While these transformational changes brought economic growth and new uses of the Basin's waters, these changes also brought devastating adverse impacts to the original peoples of the Northwest, the environment, and salmon. When Tribes in good faith signed treaties with the US Government that provided for settlement of millions of acres of aboriginal lands, the Tribes expected that in return their Treaty rights to fish would be honored, and that the right to fish meant there would be fish in the rivers. The settlement occurred, but honoring the Treaty right to fish is long past due. It is time to rebalance the allocation of the natural resources of the Columbia River Basin.

Plummeting wild salmon and steelhead runs resulted in the extinction/extirpation of many stocks while putting others on the brink of extinction. Critical habitats have been lost or rendered inaccessible. Today, this crisis is further exacerbated by climate change, which threatens local and regional ecological, cultural, and economic resilience. Elevated air and water temperature, increased drought, reduced snowpack and poor ocean conditions accelerate the decline of imperiled fish stocks and amplify regulatory constraints, water scarcity, fire risk, invasive species, and pathogens that impact numerous economic sectors.

Wild salmon and steelhead from the Snake River Basin are in dire straits, in spite of the fact that the Snake River Basin contains the largest accessible amount of pristine, protected habitat remaining in the Columbia Basin. As the National Oceanic and Atmospheric Administration (NOAA) has recognized, restoring these stocks to healthy, harvestable populations and reducing the currently high likelihood of further extirpation and allowing them to fully utilize high elevation, climate resilient habitat will require breaching the four Lower Snake River dams. Consistent with the Inslee-Murray recommendations, we must act now to invest in replacing the dams' benefits in order to make breaching a viable policy action. These investments can best ensure a future that includes healthy and abundant salmon and steelhead, reliable and affordable energy systems, a robust economy, and valuable ecosystem services throughout the Columbia River Basin.

To do so, we must take advantage of this unique moment in history. We must commit ourselves to restoring and upholding Tribal and Treaty rights and the sovereign interests of the States. Learning from past mistakes, we must respect the indigenous technological and ecological knowledge of the Tribes who are recognized co-managers of the fishery resource and embrace sound science and engineering to chart a sustainable path forward. Only with bold leadership can we collectively create a future for the Northwest where ecological and cultural resiliency are embraced as a key component of economic prosperity, rather than a casualty of it.

Advancing a Comprehensive Proposal for a Columbia Basin Restoration Initiative

The proposed Columbia Basin Restoration Initiative (CBRI)[2] strives for a true win-win outcome. The CBRI helps bring forward the Tribal people and fisheries left behind in the rush of development by restoring salmon and steelhead with other native species and their habitats and investing in fisheries infrastructure. In so doing, the CBRI also protects and enhances other key service sectors by modernizing and investing in clean energy, agriculture, and transportation, helping restore vital ecosystem functions and services essential for local and regional resilience and adaptation to climate change.

The Initiative provides a framework for a durable long-term strategy that restores salmon and other native fish populations to healthy and abundant levels, ensures a clean energy future, supports local and regional economic resilience, restores ecosystem function and honors longstanding unmet commitments to Tribal Nations.

To achieve this win-win scenario, the status quo is not an option, and inaction is simply unacceptable. Much like the determined steps necessary to decarbonize our energy system, decisive action is necessary to recover Columbia Basin salmon – incremental action will not be effective and will be more costly in the long run. The rapidly changing economic, energy and climate conditions – not to mention the dire status of the fishery resources - require leaders to plan now for inevitable changes during the coming decades. We must act now with necessary federal investments across the whole of government to be successful.

[2] This Initiative directly addresses fish populations originating from the interior Columbia River and its tributaries above Bonneville Dam, though actions may benefit additional fish and wildlife populations.

Purpose

Advance "… a durable long-term strategy to restore salmon and other native fish populations to healthy and abundant levels, honoring Federal commitments to Tribal Nations, delivering affordable and reliable clean power, and meeting the many resilience needs of stakeholders across the region."[3]

The stay of long-running litigation (three decades) over the federal dams and salmon on the Columbia and Snake rivers and the associated mediation process provides an unprecedented opportunity to accomplish the vision offered by the proposed CBRI.

Objectives

Objective 1: Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports; and (b) complete the actions and investments necessary to secure continuity of services[4] associated with Lower Snake River (LSR) restoration prior to LSR dam breaching.

Objective 2: Ensure that all species, regardless of ESA-listing status, are considered in the comprehensive strategy in a way that improves ecosystem function in the Columbia River and its tributaries.

Objective 3: Ensure interim fish measures minimize additional generational decline of fish populations.

Objective 4: Invest in and support communities and economic sectors (e.g., energy, transportation, agriculture, and recreation) in a manner that: is consistent with meeting decarbonization goals and mandates an integration of renewables; delivers "affordable and clean power"; improves resiliency and adaptability to climate change and supports "the many resilience needs of stakeholders across the region"; and "[honors] commitments to Tribal Nations".

Objective 5: Secure necessary regulatory compliance, authorizations, and appropriations for implementation of the strategy proposed in Objective 1 above with an urgency reflecting the needs of the fish.

Objective 6: Ensure that the strategy proposed in Objective 1 and associated federal actions "honor Federal commitments to Tribal Nations" and address past and ongoing inequities related to the federal hydro system to reflect and uphold federal Treaty and trust responsibilities to Columbia Basin tribes.

[3] Joint Motion for Stay of Litigation, *Nat'l Wildlife Fed'n et al. v. NMFS et al.,* Case No. 3:0l-cv-00640-SI (D. Or. Aug. 4, 2022) (docketed at ECF 2423, 2423-1, 2423-2).

[4] Continuity of services refers to the end service provided, not necessarily the existing means of providing that service. Examples of services associated with Lower Snake River dams include commodity transport, energy (production and transmission), water supply (agriculture, municipal, domestic) and recreation.

Recommended Approach: A Columbia Basin Restoration Initiative

A comprehensive Columbia Basin Restoration Initiative achieves the purpose and objectives described above and advances the following items:

- Ensure that federal hydropower mitigation efforts in the Columbia Basin are directed by joint recommendations of tribal and state fish management entities in coordination with federal fisheries services.
- Significantly increase funding for restoration to levels sufficient to address identified mitigation needs and obligations and support "healthy and abundant" fisheries recovery goals. Address the significant backlog of authorized and recommended, but historically underfunded, actions necessary for the safe and effective operation of critical fisheries infrastructure, assets, and programs.
- Replace the benefits of the LSR dams with due urgency to enable breaching to move forward,[5] and ensure interim fish measures are adequate to minimize additional generational decline of fish populations.
- Implement the Upper Columbia United Tribes' Phase Two Implementation Plan to reintroduce and provide passage of priority anadromous species above Chief Joseph and Grand Coulee dams.
- Establish a long-term biological performance monitoring and reporting program to measure progress and support accountability towards the qualitative and quantitative recovery and abundance goals identified in the CBP Phase II Report.

Implementation of the proposed Initiative should be structured to ensure a transparent "whole of government" approach, where federal agencies coordinate to use their funds and authorities to prevent salmon extinction and restore healthy and abundant Columbia Basin fisheries.

The Administration should use all available funding tools to implement the elements of a comprehensive approach to prevent salmon extinction and restore salmon in the Columbia Basin, including but not limited to opportunities associated with the President's budget, Congressional appropriations, a cross-cut budget approach, an expansion of funding available through the Northwest Power Act Fish and Wildlife Program by expanded use and/or adjusted authorities for use of (4)(h)(10)(c) crediting, and by better reflecting the Northwest Power Act's goals for equitable treatment for fish and wildlife with other purposes of the hydrosystem.[6] Funds that are collected by BPA from ratepayers to meet fish and wildlife obligations should be fully spent on fish and wildlife actions.

Some parts of the proposed Initiative can and should be advanced by the President and federal agencies under existing authorities and appropriations. Other parts will require Congressional support through additional appropriations or legislation, or both. Time is of the essence in both cases to meet the urgent needs of Columbia Basin fisheries and communities, and the inevitable changes facing the Region.

[5] NOAA Rebuilding Report, p. 21.
[6] Northwest Power Act Section 4(h).

Key Elements and Actions

Objective 1: "*Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports; and (b) complete the actions and investments necessary to secure continuity of services[7] associated with Lower Snake River (LSR) restoration prior to LSR dam breaching."*

Key Elements and Actions for Objective 1(a)

- Establish accountability for clear and measurable fisheries rebuilding goals that reflect "healthy and abundant" levels as per the overarching federal commitment.
    - Utilize NOAA Rebuilding Report to frame the starting point for "healthy and abundant" levels, consistent with the CBP mid-level abundance goals[8] and the NPCC F&W Program 2020 Addendum (e.g., 5 million fish and 2-6% SAR).
- Identify and advance centerpiece actions from NOAA Rebuilding Report.
    - For Snake River stocks, the centerpiece action identified by NOAA is LSR restoration via breaching the four lower Snake River dams (subsequent to replacement or mitigation of lower Snake River dams' services as described in the Inslee-Murray recommendations). See Appendix A for additional context and details.
    - For upper Columbia River stocks, the centerpiece action identified by NOAA is reintroducing fish into blocked areas, starting with implementation of the Upper Columbia United Tribes' Phase Two Implementation Plan.
    - For mid-Columbia River stocks, including but not limited to the mainstem and tributary habitats from Bonneville to McNary Dams, the centerpiece action identified by NOAA is improved passage through lower mainstem dams coupled with improved water quality and quantity and passage survival in focused areas of low- to mid-elevation tributary habitats.
- Identify and advance additional necessary fish actions consistent with NOAA Rebuilding Report and the habitat and predation actions identified in the NOAA 2022 5-Year Status Reviews for Columbia River stocks (see Appendix A for additional details). These actions include:
    - Estuary and tributary habitat protection and restoration, including improved water quality and quantity and fish passage.
    - Fish passage at other priority sites (e.g., Yakima River, Upper and Lower Deschutes River, Walla Walla River watershed, Dworshak Dam, Hells Canyon dams).

[7] Continuity of services refers to the end service provided, not necessarily the existing means of providing that service. Examples of services associated with Lower Snake River dams include commodity transport, energy (production and transmission), water supply (agriculture, municipal, domestic) and recreation.

[8] In addition to CBP abundance goals, Table 1 of CBP Phase II Report states: "Within 25 years reverse and prevent declines of both listed and non-listed salmon and steelhead; achieve delisting for at least some salmon ESUs and steelhead DPSs; make significant and measurable progress toward broad sense recovery of all salmon and steelhead; make significant progress toward rebuilding spatial distribution and run timing of salmon and steelhead at local and Basin wide scales, including to study, develop, and implement plans for restoring salmon and steelhead to currently inaccessible areas within their historic range; and rebuild salmon and steelhead runs that are adaptive and resilient to climate change and other environmental perturbations."

- Predator reduction and control.
- Interim (pre LSR dam breach) and long term (post LSR dam breach) Columbia River System (CRS) operations that optimize fish passage and survival (direct/delayed) and water quality characteristics while meeting other authorized purposes.
    - Operate the CRS with ecosystem function and fish survival as core priorities.
    - Ensure interim CRS operations help minimize additional generational decline of fish populations.
    - Ensure long-term CRS operations help optimize generational growth of fish populations necessary to meet "healthy and abundant levels".
- Focused hatchery and harvest actions, identified through existing forums, including necessary investments to remedy infrastructure maintenance backlogs and necessary investments to improve fishery forecasting and monitoring.
    - Address the significant backlog of authorized and recommended, but historically underfunded, actions necessary for the safe and effective operation of critical fisheries infrastructure, assets, and programs.
- Focused actions to better understand and forecast ocean conditions and improve or mitigate for those conditions where possible for salmon.
- Enhance the stability and economic contribution and resilience of fisheries by improving the status of weak stocks within mixed stock fisheries, in a manner that reduces constraints on harvest.

Key Elements and Actions for Objective 1(b)

". . . complete the actions and investments necessary to secure continuity of services associated with Lower Snake River (LSR) restoration prior to LSR dam breaching."

- In coordination with appropriate entities, build upon existing information to identify and advance investments and actions necessary to secure continuity of services provided by the LSR dams and reservoirs prior to breaching.
- Identify a federal lead agency or agencies to develop detailed plans to fund and implement each service.
- Address the potential loss of energy and capacity from LSR dams to inform short- and long-term power and transmission planning (see Appendix A for additional details). Invest in a clean energy portfolio that would rely primarily on solar and wind generation, energy storage, energy efficiency, and demand response.[9]
- In coordination with affected sovereigns, craft and implement a strategy to replace to the extent possible the other system services provided by each LSR dam or mitigate the impacts of their loss: commodity transport, water supply, and recreation (see Appendix A for additional details).

[9] For this and all replacement services, it will be important to seek to develop new energy, transportation, and community infrastructure projects in a manner that respects the sovereignty and rights of all parties, including Tribal treaty rights, and seeks to afford economic opportunities to Tribal communities (see additional details under that specific objective).

Objective 2: *Ensure that all native species, regardless of listing status, are considered in the comprehensive strategy in a way that improves ecosystem function in the Columbia River and its tributaries.*

Key Elements and Actions for Objective 2

As noted in the NOAA Rebuilding Report,[10] restoring tributary, mainstem and estuary ecosystem functions necessary to rebuild wild salmon and steelhead will benefit and help restore other native aquatic species in the Columbia Basin.

- Implementing Key Elements and Actions described for Objective 1(a) is critical for the health of other native aquatic species in the Basin.
- Restore and protect instream flows in tributary and mainstem hydrology – the volume and timing of river flows – to increase available habitat, improve habitat and water quality, and better fit river flows to native aquatic species ecology and life cycle needs.
- Rebuild salmon and steelhead runs to improve ecosystem function by restoring vital marine nutrient transport into interior habitats and provide vital prey (e.g., eggs and juvenile salmon) for other native fish (e.g., bull trout) as well as provide vital prey (e.g., adult salmon) for Southern Resident Killer Whales and other marine mammals.
- Implement Pacific Lamprey mitigation actions (Tribal Pacific Lamprey Restoration Plan; Oregon Department of Fish and Wildlife's Conservation Plan for Lampreys) (see Appendix A for additional details).
    - Develop, fund, and implement a regional supplementation/augmentation plan containing translocation and artificial propagation protocols, while concurrently developing aquaculture facilities.
    - Modernize and fund passage structures at artificial barriers and obstructions as necessary for lamprey passage. Much of the passage at mainstem and tributary dams and diversions intended for salmon and steelhead are currently inadequate for Pacific Lamprey.
- Implement sturgeon mitigation actions (see Appendix A for additional details).
    - Fund the NPCC Regional White Sturgeon Framework recommendations.[11] Due to past budget cuts and funding that has not kept pace with inflation, the scope of white sturgeon work, including crucial monitoring, has been dramatically reduced.
    - Consistent with regional sturgeon framework recommendations, support the White Sturgeon Hatchery Master Plan,[12] which describes a sturgeon hatchery program designed to help mitigate impacts of development and operation of the Columbia River System (CRS) on sturgeon population productivity and fishery opportunities in lower mid-Columbia River and

[10] See NOAA Rebuilding Report response to *Question 8: If the actions identified in Question 5 are implemented comprehensively for salmon and steelhead, how would they benefit or degrade conditions for other species?*
[11] Beamesderfer, R., and P. Anders. "Columbia Basin White Sturgeon Planning Framework. Northwest Power and Conservation Council, Portland, OR." (2013).
[12] CRITFC (Columbia River Inter-Tribal Fish Commission). 2015. White Sturgeon hatchery Step I Master Plan for lower Columbia and Snake River impoundments. Portland, Oregon. Prepared for the Northwest Power and Conservation Council. Portland, Oregon.

lower Snake River reservoirs. Ensure funding for the design and construction of a white sturgeon hatchery on the Yakama Reservation.

  - Address water quality issues, such as methyl mercury, that limit consumption of long-lived species like sturgeon.

- Develop, update, and invest in projects and programs to restore native resident fish and shellfish (see Appendix A for additional details).

Objective 3: *Ensure interim fish measures are adequate to minimize additional generational decline of fish populations.*

Key Elements and Actions for Objective 3

(See Appendix A for additional details.)

- The proposed CBRI includes an expedited effort to make the investments necessary to enable breach (i.e., key elements/actions identified and set in motion for implementation to address continuity of services, engineering, permitting, authorizations, appropriations) to move forward with urgency (for example, two fish generations) to address extinction risks and facilitate recovery.

- The "Interim Period" occurs from expiration of the current stay (August 31, 2023) until the four Lower Snake River dams are breached. Interim period operations for the CRS must improve fish survival and productivity beyond the 2023 stay-based operations to "minimize additional generational decline of fish populations" and reduce extinction risk until centerpiece and other fish actions are implemented. Necessary interim and long-term CRS operations are detailed in Table 1 in Appendix A.[13] The following summary highlights key elements of interim CRS operations.

  - Spill: Prioritize surface passage through maximized (125% Total Dissolved Gas) spring-period spill; Moderate (Performance Standard) summer-period spill through end of August; and low (spillway weir) fall and winter-period spill (allowing suspension of fall – winter spill for maintenance, freezing conditions, and defined energy demand/reliability situations).

  - Target Minimum Operating Pool (MOP) elevations during spring and summer juvenile migration periods.

  - Minimize degraded in-river and fish passage conditions resulting from maintenance/outages.

  - Prioritize fish operations relative to other authorized purposes when making in-season adaptive management decisions.

[13] These CRS operations are responsive to the urgent conservation crisis facing priority fish stocks, and the urgent need for an expedited pathway to fully implement centerpiece and other essential fish actions. If this urgency is reflected in an expedited pathway (no more than two fish generations; 8 to 10 years) to secure continuity of services that enables completion of LSR restoration via 4-dam breaching, then some interim CRS operations may be moderated accordingly.

- Advance additional off-site fish conservation measures associated with cross-cut budgeting and infusion of funds associated with Bonneville Power Administration's Fish and Wildlife Program.
- Expedite implementation of non-Columbia River System operations actions identified in earlier objective, particularly those that can provide more immediate benefits for multiple populations across the CR Basin (e.g., additional predator control).
- Develop and fund emergency hatchery programs that may be necessary to reduce extinction risk of highly vulnerable populations if environmental conditions deteriorate (e.g., drought, reduced snowpack, poor ocean conditions) during the interim period before LSR restoration.
- Recognize that additional fish conservation measures (CRS and other) might be necessary and triggered in real-time if interim environmental conditions deteriorate (drought coupled with poor ocean, or LSR restoration is delayed beyond two fish generations).

Objective 4: *Invest in and support communities and economic sectors (e.g., energy, transportation, agriculture, and recreation) in a manner that is consistent with meeting decarbonization goals and mandates and integration of renewables, delivers "affordable and clean power", improves resiliency and adaptability to climate change and supports "the many resilience needs of stakeholders across the region", and "[honors] commitments to Tribal Nations".*[14]

Key Elements and Actions for Objective 4

This approach is needed for a "win-win" comprehensive strategy: a strong and expanding regional economy integrated with salmon restored to healthy and abundant levels and watersheds resilient to climate change. A comprehensive strategy must:

- Ensure actions that benefit fish and climate-resilient watershed health, both essential for economic resilience, are coupled with investments and actions to secure other important elements of economic resilience, such as affordable and reliable decarbonized energy, efficient commodity transport and adequate water supply.
- Include investments complementary to this shifting energy landscape, as well as modernization of other economic sectors, and help reduce associated local and regional economic burdens.
- Address siting considerations to help address long-standing tribal inequities and help minimize ecological harm, investments to help restore ecosystem functions and services, and investments to help modernize economic sectors for resilience and adaptability to climate change.
- Significantly increase investments in regional energy efficiency and demand response to reduce the need for additional generation resources and increase the flexibility of the system as a whole.

Objective 5: *Secure necessary regulatory compliance, authorizations, and appropriations for implementation of the strategy with an urgency reflecting the needs of the fish.*

[14] As noted in objectives section above, the quotations here are from Joint Motion for Stay of Litigation, *Nat'l Wildlife Fed'n et al. v. NMFS et al.,* Case No. 3:0l-cv-00640-SI (D. Or. Aug. 4, 2022) (docketed at ECF 2423, 2423-1, 2423-2).

Key Elements and Actions for Objective 5

- Regulatory Compliance
    - Determine what, if any, changes or additions would be needed to existing regulatory compliance documents (e.g., NEPA, ESA) for coverage of proposed CBRI components.
    - Begin necessary steps for regulatory compliance to ensure coverage is secured prior to decisional requirements for implementation.
- Authorizations and Appropriations
    - The US Army Corps of Engineers (USACE) should update/conduct engineering analyses for four dam breach under its existing authority and with existing funding. Upon adoption of the CBRI by the federal government, any additional funding or authorization needed to implement the CBRI would be identified and secured timely as a first step for implementation the CBRI.
    - Existing appropriations (e.g., IRA, USACE appropriations) should be prioritized, consistent with grant and other procedural requirements, for actions complementary to restoration of the LSR.
    - Determine whether additional authorization and appropriations are necessary to implement the CBRI.
    - Seek and secure those additional necessary authorizations and appropriations.
- Development and implementation of the CBRI timeline
    - Complete development of schedule and timeline by August 2023, including prioritized development of a 10-year budget and additional near-term funding commitments in 2024 and 2025, to be completed as CBRI first-steps shortly after Aug 2023.
    - Secure necessary authorizations and appropriations for implementation by August 2024.
        - Complete any necessary regulatory compliance on a timeline that supports this deadline.
    - Specific to LSR restoration implementation:
        - Complete investments and infrastructure developments necessary to secure continuity of services by January 2030;
        - Consistent with timelines securing continuity of services, expedite engineering deconstruction and stabilization of landscapes and infrastructure associated with LSR restoration by 2031.
    - Specific to UCR blocked area fish reintroductions:
        - Fund and implement Upper Columbia Phase 2 Implementation Plan in coordination with appropriate and interested sovereigns consistent with the P2IP's timeline.
    - For FY25, the Administration should request full funding from Congress for authorized, regionally recommended fisheries needs, consistent with the CBRI.

Objective 6: *Ensure that the strategy and associated federal actions "honor Federal commitments to Tribal Nations" and address past and ongoing inequities related to Columbia Basin development to reflect and uphold federal Treaty and trust responsibilities to Columbia Basin tribes.*

Key Elements and Actions for Objective 6

- Restore "healthy and abundant" native fish populations by implementing Key Elements and Actions described for objectives 1, 2 and 3 as an essential start to addressing Objective 6.
- Carefully consider and address long-standing inequities experienced by Tribes associated with siting, development, and operation of the CRS, both for the past and future (from Six Sovereigns submittal on Economic Resilience).
- Seek to develop new energy, transportation, and community infrastructure in a manner that respects the sovereignty and rights of all parties, protects Tribal treaty rights to fish, hunt, and gather, and seeks to afford economic opportunities to Tribal communities. Doing so will complement and enhance the benefits realized by non-tribal communities and the region as a whole (from Six Sovereigns submittal on Economic Resilience).
- Wherever possible, establish non-competitive Tribal allocations of Columbia Basin restoration-related funds (e.g. funds authorized under Section 40001 of the IRA).[15]
- Remove USG administrative barriers and maximize Tribal co-management opportunities and actions.
- Ensure that Tribes have the resources to rebuild a fishing economy throughout usual and accustomed fishing areas in an environment altered by reservoirs and hatchery locations.
- Develop effective internal federal coordination approaches and funding strategies to support appropriate Nation-to-Nation relationships.

[15] The federal government has a trust responsibility to the Tribes to ensure that treaty-reserved rights and resources are protected and restored. Direct Tribal allocations are consistent with a Nation-to-Nation relationship, and will allow the tribes to protect these resources in the face of climate change and provide needed flexibility. Tribes are often forced to compete for funds despite having only limited capacity to apply for and manage numerous awards. The tribes have identified and designed millions of dollars in on-the-ground projects that can immediately contribute to salmon recovery if the funding is available.

Appendix A: Additional context and details for proposed Comprehensive Columbia Basin Restoration Initiative

Important Context for the CBRI fish actions is provided in the NOAA Rebuilding Report:

> "To make progress towards healthy and harvestable stocks it is essential that the comprehensive suite of management actions includes:
>
> - Significant reductions in direct and indirect mortality from mainstem dams, including restoration of the lower Snake River through dam breaching.
> - Management of predator and competitor numbers and feeding opportunities.
> - Focused tributary and estuarine habitat and water quality restoration and protection.
> - Passage and reintroduction into priority blocked areas, including the upper Columbia River (and, potentially, the Middle Snake River and Yakima River).
> - Focused hatchery and harvest reform.
>
> It will be essential that we implement all these actions, and that we do so at a large scale. While efforts in all these areas have been underway, there is a need in most cases to substantially enhance and focus implementation, and to incorporate new and emerging knowledge about effective implementation. These actions are needed to provide the highest likelihood of reversing near-term productivity declines and rebuilding towards healthy and harvestable runs in the face of climate change."

Additional details for CBRI regarding NOAA centerpiece fish actions:

Snake River stocks: breaching the four LSR dams to restore the LSR

- Secure continuity of key services currently provided by the dams, including provisions to ensure that these services are in place prior to breaching (see additional details under the continuity of services objective) in order to allow lower Snake River dam breaching to move forward with urgency (for example, within 8-10 years, or two generations of chinook salmon) to avoid additional generational decline.
- The NOAA Rebuilding Report concludes that achieving the "highest and only reasonable certainty"[16] of restoring Snake River salmon and steelhead to healthy and abundant levels would require restoration of the Lower Snake River and its migration corridor by breaching the four Lower Snake River dams as part of a comprehensive suite of actions for the Basin. The Rebuilding Report found that breaching is an essential "centerpiece" action for Snake River stocks. Current and projected fish status (as described in the NOAA Rebuilding Report) clarifies that implementation of this centerpiece action is urgent, but implementation can be sequenced appropriately to secure continuity of services provided by the dams if necessary investments are expedited.

[16] "We are also confident that the comprehensive suite of actions identified in Question 5 provides the highest and only reasonable certainty of achieving survival, productivity, and capacity improvements necessary to realize the CBP's long-term mid-range abundance goals." NOAA Rebuilding Report (NOAA 2022).

- Other actions can and must complement breaching, but the NOAA Rebuilding Report concluded that breaching the four dams is a necessary component of any basin-wide plan to restore healthy and abundant salmon and steelhead. Examples of complementary actions for helping restore the LSR include rehabilitation of lower reaches of currently impounded tributaries, stabilization and reseeding of exposed terrain, sediment management, and invasive species management.
- Necessary LSR dams breach planning steps will include the following high-level elements worked on in concert, but not necessarily all completed during development of an implementation strategy for the proposed CBRI. Several of these are next-step implementation components of a comprehensive strategy (recognizing that policy positions can be reserved until details are adequately fleshed out during the remainder of the stay):
    - The USACE should begin advancing an engineering analysis for four dam breach under its existing authority and with existing funding in order to be prepared to move ahead with a plan of action in tandem with USG regulatory compliance.
    - If USACE or other agencies conclude that they need additional authority from Congress to proceed with actions necessary to restore the Lower Snake River corridor, they should specifically identify the need for, scope, and timing for such authority. If additional appropriations are necessary for corridor restoration, the agencies should identify and seek these appropriations.

Upper CR stocks: provide passage and reintroduction into blocked areas

- Reintroduce and provide passage of priority anadromous species in the Upper Columbia above Chief Joseph and Grand Coulee dams through implementation of the Upper Columbia United Tribes' Phase Two Implementation Plan.
- Finalize strategy and fully articulate federal support for the Upper Columbia United Tribes' Phase Two Implementation Plan for reintroduction in the Upper Columbia blocked areas. Details of this commitment are being worked out through the U.S.G.'s ongoing mediation process in close consultation with UCUT Tribes and the State of Washington.

Extant mid- and upper- CR stocks below the blocked area: improve passage and water quality and quantity

- Maximizing functional tributary habitats (primarily instream flows, water quality, and fish passage improvements) and improving passage in the lower mainstem Columbia River is necessary to provide the highest likelihood for achieving mid-range CBP goals. For example, for high-risk Yakima basin stocks, smolt survival through the Yakima River should be significantly increased by increasing spring flows, implementing structural and operations improvements at federal diversion dams, and targeting specific habitat improvements. These actions address habitat threats in tributaries and help reduce direct and indirect effects of the hydrosystem threat in the mainstem (NOAA Rebuilding Report). These same concerns apply to the other tributaries on the Oregon and Washington side of the Columbia River.
- Mid-Columbia Habitat Conservation Plans (HCPs) contain adaptive management language to ensure course corrections, as necessary, during the term of those agreements. Signatories to those agreements should consider whether there is room for improvements in operations at those facilities, or what additional mitigation actions can contribute towards achieving CBP goals within current funding, and with additional federal funding. Implement actions to support key

fish habitat in cold water areas including dredging tributary river mouths and reconfiguring habitat in these areas to support native vegetation, safer resting areas, and improved connectivity between cold water areas and the main river.

Additional details for other fish actions:

Ensure "whole of government" approach by using all funding tools available (e.g., President's budget, Congressional appropriations, cross-cut budget, adjustments to, or more liberal interpretation of, existing 4(h)(10)(c) crediting under the NPA).

Tributary Habitat Protection and Restoration

- Increase mitigation and restoration funding to levels sufficient to address identified needs and obligations and support "healthy and abundant" fisheries recovery goals.
    - Requires approximately 2-3 times the current level of funding;
    - Should be implemented through a federal cross-cut budget.
- Ensure mitigation efforts are directed by State and Tribal fish management entities in coordination with federal fisheries services. Transition implementation of NPCC's Fish and Wildlife Program from BPA to state and tribal fisheries co-managers.
- Funds that are collected to meet fish and wildlife obligations should be fully spent on fish and wildlife actions. In their latest project review process, the Northwest Power and Conservation Council recommended "that Bonneville develop flexibility in its budget management protocols to allow the budget available for fish and wildlife mitigation be fully expended on fish and wildlife mitigation within the biennial rate case and report progress to the Council."
- Federal programs should consider flexibility in funding requirements to support large-scale, multi-year projects to achieve the level of landscape scale change that is required to restore salmon and steelhead in habitat limited watersheds.
- Establish long-term biological performance monitoring and reporting to measure progress over time.
- Continue and expand tributary habitat protection and restoration efforts and funding throughout the basin, including for mid and upper Columbia ESUs, for listed priority species and non-listed species (including but not limited to lamprey, sturgeon and mussels) important to Treaty Tribes.
- Fully fund and implement regional recovery plans on an aggressive timeline and recognize that the recommendations in the recovery plans are consistent with the proposed CBRI.
- As part of this effort, fund and implement deferred operations and maintenance and infrastructure actions identified in the Treaty Tribes' "Billion Dollar Backlog".[17]

[17] Columbia River Inter-Tribal Fish Commission, *Overview of Columbia River USACE Fish Budget Needs* (2022), available at https://critfc.org/wp-content/uploads/2022/09/CRITFC-USACE-Fish-Budget_2022.pdf. Summary of Columbia Basin Federal Hatcheries Infrastructure Needs – Deferred Maintenance and Capital Fixes (2021) (originally prepared by the *US v. Oregon* Production Advisory Committee, and subsequently advanced by the NPCC to various congressional members in 2021 – *see e.g.* July 13, 2021 Letter from NPCC to Sen. Mike Crapo).

Estuary Habitat Protection and Restoration

The following overarching estuary habitat protection and restoration needs have been highlighted in a variety of regional plans and assessments, and can help guide estuary habitat protection and restoration actions:

- Increase funding for Columbia River estuary restoration. Estuary restoration improves salmon prey availability and reduces predation by providing alternative food sources (increased abundance of other prey such as anchovy).
- Identify and implement actions to improve the effectiveness of existing and new estuary habitat protection and restoration efforts, including best methods for identifying restoration locations, potential projects, funding sources, and implementation.
- Determine where specific new or different programs or management approaches would be necessary or beneficial.

The BPA Columbia River Estuary Ecosystem Restoration Program Final Environmental Assessment (July 2016) (EA), stated that, "Under the Proposed Action, the agencies would use this EA to help evaluate the potential environmental impacts and support NEPA responsibilities for their decisions on proposed estuary restoration actions and projects." Table 1 in the EA identifies Actions and Project Categories for Estuary Restoration Projects.

The CRITFC Wy-Kan-Ush-Mi- Wa-Kish-Wit, Spirit of the Salmon Plan (2014) uses a larger, more comprehensive ecosystem approach to salmon recovery with incorporation of new scientific tools and findings and climate change considerations. A few key actions highlighted in this plan are:

- Increase in land acquisition to achieve the goal of habitat restoration.
- Implementation of moratoriums on floodplain development.
- Taking actions that create and support diversity and longer periods of use by salmon.
- Addressing the connectivity and cumulative effects of upriver activities, e.g., hydropower operations and estuary conditions.

The Columbia River Estuary ESA Recovery Plan Module for Salmon and Steelhead (NMFS 2011) identifies in Chapter 5 "23 management actions that, together, address the range of threats salmonids in the estuary face, from altered habitat-forming processes to physical structures in the estuary, changes in the food web, and poor water quality. If implemented, the actions presented in this chapter would reduce the impacts of threats to salmonids during their migration and residency in the estuary and plume."

In addition, partnering with some longstanding estuary-focused organizations could prove beneficial for evaluation of future estuary habitat protection and restoration actions. The Center for Coastal Margin Observation and Prediction (CMOP) is an ocean and estuary research program dedicated to further understanding the linkage between the Columbia River and the Pacific Ocean. CMOP uses remote sensors, models, and open data access in ways that help stakeholders manage ecosystems, facilitate sustainable development, and protect lives and livelihoods in our changing environment. The CMOP observation network consists of buoys and dock-based fixed stations in the estuary and plume. Physical parameters such as salinity, temperature, water levels, and currents have been measured and recorded since 1996 and biogeochemical parameters such as chlorophyll, turbidity, nitrate, and dissolved oxygen since 2008. These measurements provide a record of variability and change in this important ecosystem. CMOP stations can be used for deploying new monitoring equipment and for collecting water samples for lab analysis.

The Lower Columbia River Estuary Partnership has a mission "to restore and care for the waters and ecosystems of the lower Columbia River, for current and future generations of fish, wildlife, and people." The Columbia River Estuary Study Taskforce (CREST) has a mission - to provide locally-based, high quality environmental planning, habitat restoration and research services to the Columbia-Pacific Region. Both of these organizations could prove to be valuable partners.

Water Quality/Quantity

EPA is responsible for determining the Total Maximum Daily Load (TMDL) for temperature in the Columbia and Snake rivers. The most recent TMDL shows that state water quality criteria that protect migration and spawning are frequently exceeded, and the EPA cited climate change and dam impacts as the dominant sources of impairment. Although the EPA stated that tributary restoration could only lead to modest improvements in mainstem, the TMDL identifies 23 tributaries that provide cold water refuge from high mainstem temperatures for migrating adult salmon and steelhead. The TMDL sets temperature, flow, and cold-water volume targets for 13 of these tributaries to maintain and increase cold water refuge in the lower Columbia River.

On September 2021, EPA issued NPDES permits for the four Lower Snake River dams and will issue permits effective July 1, 2023, for the Lower Columbia River dams that are operated by the U.S. Corps of Engineers (USACE). The NPDES permits include a requirement to meet heat load effluent limits as mandated by the Washington and Oregon's 401 certification conditions. Water Quality Attainment Plans will be developed within the next year, which are expected to include detailed temperature control strategies to meet state water quality standards. Actions needed to ensure the TMDL is not exceeded include:

- Support for the states of Oregon and Washington for developing plans for the TMDL, including the tributaries identified as cold-water refuge.
- Support for Tribal leadership in collaboration with the States of OR and WA on implementation of the temperature TMDL.
- Funding the water quality Restoration Plans that land managers have to develop as a result of having water bodies on the 303(d) list and for tributary TMDLs.

Water quality in the Columbia Basin is also significantly impacted by the presence of toxic substances in the Columbia River and its tributaries. Current priorities to address toxics concerns should be supported via funding and collaborative participation, and include:

- Fund and implement a Columbia River Long-Term Monitoring Program to assess toxin levels in fish tissue and water quality in the mainstem Columbia and Snake rivers. Yakama Nation is partnering with CRITFC, USGS, Oregon DEQ, and Washington Department of Ecology on this work. The purpose is to monitor toxic substances, including contaminants behind dams and throughout the pools, in perpetuity to establish trends and guide ecosystem recovery resulting in clean, healthy fish that are safe to eat.
- Fund and implement a Columbia Basin Toxics Reduction Program, which includes clean-up efforts targeted at Superfund Sites.
- Explore hydro system operations that maximize use of Dworshak water for cooling lower Snake River in August.

- Address water quality issues, such as methyl mercury, that render long-lived species like sturgeon unconsumable.
- Finally, EPA should collaborate with the Washington Department of Ecology and Oregon Department of Environmental Quality to ensure that rules on total dissolved gas management associated with spill at the lower Snake and Columbia River dams provide sufficient flexibility to permit spill (both interim and long-term at lower Columbia projects) consistent with preventing further generational declines of salmon and steelhead populations.

Reintroductions and Passage into Blocked Areas (in addition to upper Columbia blocked area discussed above)

- Develop plan, or expedite/improve funding for existing plans, for passage and reintroduction of priority species into other historically important fish production areas of the basin currently blocked by dams lacking ladders and/or juvenile bypass facilities, with priority focus on the Yakima River, North Fork Clearwater River, Walla Walla River and tributaries and middle Snake River.
- Consider timelines and sequencing consistent with binding agreements (e.g., IPC settlement agreement with OR regarding Hells Canyon complex of dams).
- Determine the extent to which the plan can be implemented using existing authorities and where specific new or different authorities would be necessary or beneficial.
- Determine requirements for compliance with State statutes governing reintroduction of listed species and take necessary actions to resolve.

Predator & Invasive Species Reduction and Control

- Develop and implement specific strategies to fund predation control priorities and projects and identify continuing funding sources. Fully fund existing actions in priority areas, such as below Bonneville Dam, Blalock islands, East Sand Island.
- Establish and fund a Predator & Invasive Species Management Task Force comprised of the Columbia Basin tribal and state fisheries comanagers and the federal fisheries agencies, and other appropriate tribal and local entities and organizations as appropriate, to determine where specific new or different authorities, programs, or management approaches are necessary or beneficial, particularly for new and emerging threats.
- Increase USACE funding for predator management and coordinate their predator management programs through a central forum to ensure that funding is targeting the worst offenders and benefits to life-cycle survival are used as the metric of success so that we are not merely switching the consumers rather than reducing the consumption of juvenile migrating fish.
    - Fund the CRITFC identified for predator management and deterrence structures in its USACE Fish Budget Needs report.
    - Ensure strong coordination between the USACE predator management programs and those funded through BPA and the mid-Columbia PUDs.
- For pinniped predation, provide sufficient annual funding to fully implement the program specified under the new permit (i.e., funding to fully implement existing authority of MMPA Section 120(f)). Consider future permit amendments to address emerging needs, as necessary.

- For avian predators, finalize, fund and implement a sustained management effort[18] to reduce impacts to life-cycle survival in areas of high predation with appropriate monitoring of action effectiveness. Address any jurisdictional and permitting issues through enhanced collaboration across jurisdictions from a whole-of-government approach, including funding new research to support policy recommendations to improve management of bird colonies and reduce predation.
- American white pelicans have been increasing in numbers in Columbia River tributaries during the peak of the out-migration of juvenile salmon. While this is surely impacting ESA-listed salmon and steelhead the exact magnitude of that impact is not fully understood and should be further investigated.
- For piscine predation, implement a coordinated, large-scale program to investigate and quantify the overall predatory impact of multiple piscine predators (e.g., Northern Pikeminnow, Smallmouth Bass, Walleye) to juvenile salmonid stocks in the lower and mid-Columbia River Basin.
    - Develop and fund a robust Columbia River Northern Pike and invasive non-native fishes monitoring project that leverages current suppression, monitoring, and research activities with new projects to fill data gaps and ensure enhanced effectiveness.
    - Implement aggressive actions to control non-native fish populations that are preying on juvenile salmon and steelhead.

Hatchery

Hatchery programs are vital for effectuating treaty-reserved rights of tribes, as well as non-treaty recreational and commercial fisheries both within the Columbia River and along the West Coast. Columbia River Hatchery programs also play a critical role economically by contributing to U.S. fisheries in Alaska, Washington, and Oregon that provide 26,700 full time equivalent jobs and $3.4 billion in economic value annually.

The aging federal hatchery facilities in the Columbia River Basin need funding to maintain infrastructure and continue operations. For several decades, agency budgets and congressional appropriations have not provided sufficient funds to maintain and repair critical infrastructure such as pipelines, generators, pumps, filters, chillers, and rearing units that are in danger of failing – or in some cases have already failed – putting both fish, fisheries, and conservation efforts they support at risk. Emergency situations cannot be addressed in real-time, and critical capital projects cannot be pursued.

- Ensure that current hatchery O&M budgets are adequate to maintain mitigation goals and objectives.
- Fund and fully implement deferred repairs and operation and maintenance actions identified in the Treaty Tribes' "Billion Dollar Backlog".[19]

[18] CRITFC maintains a comprehensive list of existing and new actions titled "Avian Management Current Conditions/Future Potential Actions" for avian species of concern. This spreadsheet is readily available.
[19] Columbia River Inter-Tribal Fish Commission, *Overview of Columbia River USACE Fish Budget Needs* (2022), available at https://critfc.org/wp-content/uploads/2022/09/CRITFC-USACE-Fish-Budget_2022.pdf. Summary of Columbia Basin Federal Hatcheries Infrastructure Needs – Deferred Maintenance and Capital Fixes (2021) (originally prepared by the *US v. Oregon* Production Advisory Committee, and subsequently advanced by the NPCC to various congressional members in 2021 – *see e.g.* July 13, 2021 Letter from NPCC to Sen. Mike Crapo).

- Empower and fund the tribal and state fisheries co-managers to work with appropriate federal agencies to finalize and implement a strategy to continually fund hatchery maintenance and operation and modernization needs into the future. One potential concept that utilizes a more transparent process is to create a Capital Assets Replacement Fund (CARF). An annual fixed amount of funds would go into the CARF, providing some funding stability. The amounts could be reviewed on a periodic basis, and the operating agencies would decide how to spend the CARF potentially via the *U.S. v. Oregon* Management Agreement's Production Advisory Committee or an analogous group making recommendations to policy makers. To support long-term climate resilience, develop and fund emergency hatchery programs that may be necessary to reduce extinction risk of highly vulnerable populations if environmental conditions deteriorate (e.g., drought, reduced snowpack, poor ocean conditions).

Harvest

Harvest is at severely depressed levels relative to Treaty rights and healthy and abundant fisheries and reflects significant reductions in tribal and non-tribal fisheries compared to pre-CRS development. Harvest management has embraced responsiveness to the needs of the fish (e.g., through an abundance-based management approach) in contrast to other sources of mortality. As such, harvest is the only impact sector that is inherently responsive to the real-time conservation needs of the fish.

- Support Existing Harvest Forums: The *US v. Oregon* Management Agreement adopted by the Parties to *United States v. Oregon*, Civil No. 68-513-MO (D. Or.) provides an effective framework for managing treaty Indian and non-treaty fisheries, harvest, and hatchery production consistent with federal ESA requirements and the Parties exercising their sovereign powers in a coordinated and systematic manner to protect, rebuild, and enhance interior Columbia River Basin fish runs.
- Sampling Infrastructure Improvements: The Bonneville Dam Adult Fish Facility (AFF) is used for stock monitoring and research. Data collected there is used for several stock forecasts and some data, especially for steelhead are directly used in harvest management. Like much of the Columbia River hydro- and hatchery systems, the AFF is sorely in need of deferred maintenance and modernization without which ensuring robust, random sample rates is becoming increasingly challenging. Modernizing the sampling facility on the Washington shore fish ladder and adding a new facility on the Oregon shore fish ladder would improve sampling and produce better quality data.
- Expand Funding for Technical Collaboration in Co-Management Forums: The tribes and states participate in the technical and production advisory committees established in the *U.S. v Oregon* Management Agreement. These committees are regularly tasked with complex analyses of issues affecting these parties' efforts to co-manage fisheries and hatchery production in ways to support salmon recovery efforts, and to ensure fisheries comply with ESA and other management limits. Completion of these tasks is often hampered by lack of funding for staff time, and additional capacity would help execute the analyses. Increased funding to support these efforts would provide important benefits to all these entities, their co-management agreements, and their commitments in the *U.S. v. Oregon* Management Agreement.

Ocean Conditions and Climate Change

The impacts of ocean conditions and climate change on Columbia Basin fisheries exacerbate, but do not excuse or obviate (and in fact accentuate) federal obligations to address, the historic and continuing impacts of the hydrosystem on salmon, steelhead, and other native fish.

Fisheries restoration, including associated habitat actions, is deeply interconnected with enhanced Columbia Basin climate resilience. Regional clean energy, decarbonization, and climate resilient infrastructure needs can and should be met in ways that support the health of Columbia Basin fisheries and the tribal and non-tribal communities that depend upon them.

- Develop stock specific ocean indicators (red light/green light charts) for forecasting salmon and steelhead returns using a mechanistic ecosystem approach. Use multiple perspectives to identify the most important ecological drivers of salmon survival in climate change scenarios in order to direct actions for the greatest benefit.
- Reduce carryover effects for salmon entering the ocean. Increase tributary and mainstem riparian and floodplain restoration actions to improve smolt body size and run timing which reduces carryover effects going into the ocean. Increased spill at mainstem dams and restoring migration corridors reduce carryover effects and provides higher survival in the ocean environment.
- Increase funding for Columbia River estuary restoration. Estuary restoration improves salmon prey availability and reduces predation by providing alternative food sources (increased abundance of other prey such as anchovy).
- Fund and implement Fishery Management Plans for coastal pelagic species. Increasing forage fish can provide an alternate prey for salmon predators which increases salmon survival.
- Focus management on improving overall food webs.

Other Native Fish Species

The proposed CBRI should fund and implement recovery programs for culturally and ecologically important native species regardless of ESA listing status, including:

Considering the significant and dramatic reduction in adult lamprey numbers in the interior Columbia River Basin watersheds, and the existing passage problems and other threats that may take decades to resolve, natural recolonization and restoration will not be enough to halt the decline of Pacific lamprey in the interior basin. The likely relationship of adult lamprey attraction to larval lamprey pheromones supports the use of multiple management strategies including translocation, propagation, reintroduction, and supplementation/augmentation for short and long-term preservation of this species in the Columbia basin.

White sturgeon occur throughout most of their historical range in the Columbia and Snake Rivers, but current production is far below the historical level in part due to the hydropower system. Low numbers severely limit sturgeon harvest opportunities throughout the basin, particularly for impounded populations upstream from Bonneville Dam. Due to past budget cuts and funding that has not kept pace with inflation, the scope of the work being done and our ability to monitor these populations has been dramatically reduced. For example, translocation mitigation efforts, and research monitoring and evaluation efforts aimed at better understanding maturation rates, spawning periodicity and the sex

composition of the adult population are no longer conducted (nor are any stock assessments or reproduction checks upstream of McNary Dam and in the Snake River downstream of Hells Canyon Dam).

Construction and operation of the hydropower system, dams and diversions in the tributary habitats, and out-of-stream diversions in tributaries has fragmented endangered bull trout habitat, impacting adfluvial life histories (from lakes and/or tributaries to Columbia River mainstem and back), diminishing and isolating populations and preventing genetic exchange and diversity.

For freshwater mussels, the hydropower system, dams and diversions in tributary habitats, out-of-stream diversions in tributaries, decreases in tributary water quality (temperature, contaminants), loss of floodplain/riverine habitats, and reductions in native host fish populations, have resulted in greatly diminished and isolated populations of freshwater mussels and threatens their genetic diversity and viability. The Confederated Tribes of the Umatilla Indian Reservation have developed the "Master Plan: Freshwater Mussel Conservation, Supplementation, Aquaculture, Restoration, and Research (2021)" which contains four phases, related to artificial propagation research, population supplementation and biological research, restoration strategy development, and implementation.

Construction and operation of the hydropower system, dams and diversions in tributary habitats, out-of-stream diversions in tributaries, loss of floodplain and riverine habitats, consequent decreases in tributary water quality, and expansions of non-native, competing fish species, have reduced habitat quality and availability for a wide variety of resident fish species including, rainbow and redband trout, mountain whitefish, and suckers, leading to reduced abundance. Resident fish are an important dietary and cultural component for Tribal communities and provide important value when anadromous fish returns are absent or diminished, as is commonly the case with reduced salmon populations and climate-driven marine conditions that can dramatically reduce anadromous fish productivity.

Adaptive Management

- Develop a science-based decision support structure as the region moves forward with planning and implementation, ensuring climate resiliency, along with the objectives stated earlier, is considered throughout.
- Leverage relationships with PNW Universities and co-managers to develop and answer relevant research questions, advance our understanding of PNW fisheries ecology and responsive restoration actions.
- Leverage relationships with PNW Universities and co-managers to develop the next generation of scientists, managers, and engineers to continue our long-term efforts in the restoration of the fisheries, freshwater habitats, the marine environment, climate adaptation, and energy and transportation modernizations.
- Establish a long-term biological performance monitoring and reporting program based on goals and objectives identified above to measure progress and improvements towards the long-term goals identified in the CRB Task Force Phase II Report.

Additional Details for CRS Operations:

Although CRS operations alone cannot reverse declines nor rebuild imperiled Columbia Basin salmon and steelhead stocks, they are essential elements of a comprehensive strategy to help address the

urgent conservation necessity in the near term and to complement rebuilding efforts in the long term. As such, CRS operations are a key component of the proposed CBRI.

As stated in the USG commitments (*NWF v NMFS*; Dkt. 2423-2), "The Administration commits to examining all current funding opportunities in 2023 and seeking additional funding for new power and transmission resources to offset future changes to the CRS as well as other emerging energy needs. **The Administration understands that 'future changes to the CRS' contemplates a broad set of future changes related to spills and other operational changes in addition to potentially breaching the four lower Snake River dams."** And, **"The Administration further commits to exploring with the Plaintiffs and other sovereigns post 2023 operations as part of a long-term comprehensive solution."** (Emphasis added).

As stated above, CRS operations can help minimize additional generational decline of fish populations and reduce extinction risk, and help complement achievement of healthy and abundant salmon and steelhead returns[20] throughout the Columbia River Basin. Generally, this will require sustained freshwater productivity of at least 100 smolts per female and smolt-to-adult return rates (SARs) of 2-6%, averaging 4%. As the United States' Commitments acknowledge, "In the face of climate change, urgent action is needed to restore salmon and other native fish populations to healthy and abundant levels; achievement of these goals must be timely and done in a way that benefits ecosystem function for all native anadromous and resident fish species." National Oceanic and Atmospheric Administration (NOAA) described[21] a suite of actions, including breaching of the four Lower Snake River dams and reintroduction into blocked areas, that are necessary to achieve these productivity and survival rates. CRS operations can help improve SARs by minimizing both powerhouse encounter rates (PITPH) and fish travel times to help minimize additional generational decline of fish populations and reduce extinction risk in the interim, which will also complement broader rebuilding efforts in the long term, including implementation of NOAA's centerpiece actions.

As such, CRS operations are best identified in the context of pre- and post-LSR restoration via dam breaching. Table 1 provides specific details for CRS operations in that context. Operations consist of four categories of actions: spill, reservoir elevations, system operations requests, and other categories (maintenance and infrastructure). The spill and reservoir operations are identified in the Columbia River Inter-Tribal Fish Commission (CRITFC) Energy Vision for the Columbia Basin;[22] the information below provides details as to the implementation of these operations.[23] System Operations Requests are derived from technical team requests, 2023 operations requests,[24] or lessons learned in the

[20] NMFS (National Marine Fisheries Service). 2020. A vision for salmon and steelhead: goals to restore thriving salmon and steelhead to the Columbia River basin. Phase 2 report of the Columbia River Partnership Task Force of the Marine Fisheries Advisory Committee. Portland, OR. https://s3.amazonaws.com/media.fisheries.noaa.gov/2020-10/MAFAC_CRB_Phase2ReportFinal_508.pdf?null.

[21] NOAA (National Oceanic and Atmospheric Administration). 2022. Rebuilding Interior Columbia Basin Salmon and Steelhead. https://repository.library.noaa.gov/view/noaa/46461/noaa_46461_DS1.pdf.

[22] Columbia River Inter-Tribal Fish Commission. 2022. Energy Vision for the Columbia River Basin, at 142-146. https://critfc.org/wp-content/uploads/2022/09/CRITFC-Energy-Vision-Full-Report.pdf

[23] These operations should not be understood to describe nor limit any relief the PI Plaintiffs or any party may seek through litigation.

[24] PI Plaintiff Recommendations for CRS Operational Adjustments for Spring and Summer 2023 (April 3 – August 31).

hydrosystem forums. Maintenance needs are identified in the CRITFC/Corps Infrastructure Needs document and in the 2023 operations requests.

See Table 1, below, for interim and long-term operational strategies for the four lower Columbia and four lower Snake River dams to help minimize additional generational declines and complement timely achievement of healthy and abundant fish returns.

Table 1 – Interim & Long-Term Operational Strategies

Operation Category	Interim Operations (*italics* indicates change from 2023 stay-based operation)	Long-term Operations (Upon implementation of LSR restoration via 4-dam breach) (italics indicates change from interim operation)
Spill[25]	**Spring Spill:** **LGR:** *125% Gas Cap 24/7 (i.e. No PS flex operation). Adaptive management operation(s) (e.g. 40% flex spill, etc.) if adult delays observed*. **LGO:** *125% Gas Cap 24/7, until adult salmonid abundance criteria are satisfied*, then 125% TDG and 30% Performance Standard flex. *Explore alternatives (with emphasis on reasonable structural modifications over spill reductions) to address adult passage delays*. **LOMO:** *125% Gas Cap 24/7 (i.e. No PS flex operation). Adaptive management operation(s) (e.g. 40% flex spill, etc.) if adult delays observed.* **ICH:** No change (125% Gas Cap 24/7), with potential to revise adaptive management operations. **MCN:** No change (125% Gas Cap 24/7).*Conduct ERDC modeling of alternative spill patterns*[26] *Secure some LSR replacement generation by increasing Minimum Generation volume to 60kcfs (currently at 55kcfs)*[27]. **JDA:** *125% Gas Cap 24/7. No PS flex operation. Secure some LSR replacement by increasing Minimum Generation volume to 65kcfs*	**Spring Spill:** **LGR:** *NA* **LGO:** *NA* **LOMO:** *NA* **ICH:** *NA* **MCN:** No change (125% Gas Cap 24/7).

[25] EPA/Ecology/DEQ will collaborate to clarify TDG and GBT monitoring requirements and responses, particularly with respect to non-salmonids.

[26] April 28, 2023 Joint State, Federal and Tribal Fishery Agencies Technical Memorandum to USCOE regarding McNary Spillway Hoists and Modified Spill Patterns https://www.fpc.org/documents/joint_technical/JTSM_01_2023.pdf .

[27] Provide for increased generation to achieve replacement of LSR min gen (~320MW); adjust the midpoint for minimum generation flow target (2023 FOP).

	(currently at 55kcfs). Highlight/formalize ability for short term/duration spill reductions to maintain reliability. Consider ways to improve INC/DEC coverage to maintain reliability, without impacting fish-based operations. **TDA:** No change (40% with allowance to meet without exceeding 125%). *Secure some LSR replacement by increasing Minimum Generation volume to 75kcfs (currently at 55kcfs). Consider ways to improve INC/DEC coverage to maintain reliability, without impacting fish-based operations*. **BON:** No change (150kcfs spill at BON for stilling basin erosion precaution). *Secure some LSR replacement by increasing Minimum Generation volume to 55kcfs (currently at 35kcfs). Eliminate rock entrainment and associated erosion risk to allow restoration of 125% gas cap spill*. **<u>Summer Spill (June 21/16 – August 14)</u>**: **LGR:** No change (18kcfs spill). **LGO:** No change (30% spill). **LOMO:** No change (17kcfs). **ICH:** No change (30% spill). **MCN:** No change (57% spill). **JDA:** No change (35% spill). **TDA:** No change (40% spill).	**JDA:** No change from Interim (125% Gas Cap 24/7, with Adaptive management operation to keep TDA TDG from exceeding 125%)**.** Highlight/formalize ability for short term/duration spill reductions to maintain reliability. *Consider skeleton bay use*[29]. **TDA:** No change (40% with allowance to meet without exceeding 125%). **BON:** *24/7 125% gas cap spill*. **<u>Summer Spill (June 21/16 – August 14):</u>** **LGR:** *NA* **LGO:** *NA* **LOMO:** *NA* **ICH:** *NA* **MCN:** No change (57% spill). No change from interim. Maintain uniform spill pattern and do not implement rotating spill bay operation after spill bay maintenance is completed.

[29] This is the only LCR dam that left the powerhouse vacant of generator units (4 empty or 'skeleton' bays). Currently the use of spill is countered by tail water eddy formation where no flow is available (transition between powerhouse and spillway). This potentially could be used to emphasize replacement/innovation potential creating a better adaptive turbine design that functions using less water delivered at the surface that can also serve as surface passage in hopes of eliminating fish interaction with the powerhouse route. It could also establish RM&E improvement that will likely be needed when the four Lower Snake River dams are breached.

	BON: No change (95kcfs spill). **<u>Summer Spill (August 15 -31):</u>** **LGR:** *Maintain 18kcfs spill through August 31.* **LGO:** *Maintain 30% spill through August 31*. **LOMO:** *Maintain 17kcfs spill through August 31.* **ICH:** *Maintain 30% spill through August 31.* **MCN:** Maintain 57% spill through August 31. **JDA:** Maintain 35% spill through August 31. **TDA:** No change from previous BiOps and Flex Spill Agreement (40% spill). **BON:** No change from Flex Spill Agreement (95kcfs spill). **<u>Fall-winter spill</u>**: **LGR:** *September 1 - March 30, with accommodation for freezing temperatures and routine maintenance: RSW spill 24/7*. **LGO:** *September 1 - March 30, with accommodation for freezing temperatures and routine maintenance: ASW spill 24/7*. **LOMO:** *September 1 - March 30, with accommodation for freezing temperatures and routine maintenance: TSW spill 24/7*. **ICH:** *September 1 - March 30, with accommodation for freezing temperatures and routine maintenance: TSW spill 24/7*.	**JDA:** No change (35% spill). **TDA:** No change (40% spill). **BON:** No change (95kcfs spill). **<u>Summer Spill (August 15 -31):</u>** **LGR:** *NA* **LGO:** *NA* **LOMO:** *NA* **ICH:** *NA* **MCN:** No change from Flex Spill Agreement (2 RSWs ~20kcfs spill). **JDA:** No change from Flex Spill Agreement (2 RSWs ~20 kcfs spill). **TDA:** No change from Flex Spill Agreement (30% spill). **BON:** No change from Flex Spill Agreement (55kcfs spill, including 5k corner collector). **<u>Fall-winter spill</u>**: **LGR:** *NA* **LGO:** *NA* **LOMO:** *NA* **ICH:** *NA*

	MCN: *September 1 - March 30, with accommodation for freezing temperatures and routine maintenance: 2 TSW ~ 20kcfs spill*[28]. **JDA:** *September 1 - March 30, with accommodation for freezing temperatures and routine maintenance: 2 TSW ~ 20kcfs spill*. Maintain adult ladder attraction spill. **TDA***: Ice and trash sluiceway (~5 kcfs 24/7); full year operation*. Maintain adult ladder attraction spill. **BON:** *Corner collector operation full year, regular operation*. Maintain adult ladder attraction spill.	**MCN:** No Change from Interim, with accommodation for freezing temperatures and routine maintenance: 2 TSW ~ 20kcfs spill.) **JDA:** No Change from Interim, with accommodation for freezing temperatures and routine maintenance: 2 TSW ~ 20kcfs spill, with maintained adult ladder attraction spill). **TDA:** No change from Interim (Ice and trash sluiceway ~5 kcfs 24/7; full year operation, with maintained adult ladder attraction spill). **BON:** No Change from Interim (Corner Collector operation full year, regular operation, with maintained adult ladder attraction spill).
Reservoir Elevations	**Lower Snake Projects:** *Manage for MOP*[30] *operations March through September with 1.0 foot hard operating range and target 0.5 foot soft constraint*. **LGR:** *Maintain LGR MOP operations through end of Dworshak Dam Snake River Basin Adjudication (SRBA) Agreement flow augmentation (mid to late September)*. Dredging: Implement Programmatic Sediment Management Plan. Dredge LSR in 2022/23*, with no additional dredging until at least 2028 (5 years). Preemptively dredge to remove/reduce sediment load subject to erosion when dams are breached*. **Lower Columbia Projects:** *Manage for MOP operations March through September with a 1.5 foot hard, and 1.0 foot soft operating range*[31].	**Lower Snake Projects:** *NA* **Lower Columbia Projects:** No change from 2024 (Manage for MOP operations March through September with a 1.5 foot hard, and 1.0 foot soft operating range).

[28] Establish variable flow table for lower Columbia surface passage routes linked to 0.5 foot pool elevation intervals (see Snake table).
[30] Minimum pool elevation; LWG 733 ft; LGS 633 ft.; LMN 537 ft.; IHR 437 ft.
[31] Secure USFWS authority to actively manage avian nesting in John Day pool.

	JDA: *Prior to initiating MOP at the JDA project, conduct JDA minimum pool study to explore alternatives that minimize water storage and pool elevation requirements when establishing regional power reliability constraints/demands, navigation, and municipal and irrigation water supplies (e.g., eliminate maximum short duration as reliability standard, target, or baseline operation). Ensure continuity of services for water supply and irrigation (e.g.; Extension of irrigation intakes)*.	
System Operations Requests	**Regional Forum**: *Base regional forum deliberations on achievement of CBP mid-range goals by 2050; prioritize fish* operations relative to other authorized purposes when *making in-season adaptive management decisions; and require timely response with memo*. **Dworshak Ramp Rates**: No change from 2021 Stay. **Zero Generation at LSR:** *Prohibit zero flow (generation) operations at LSR projects during January and February (zero generation during other months an alternative when 24/7 spill is occurring that maintains flow)*. **Juvenile transportation program**: Maintain ability to adaptively adjust transportation for best benefits, under extreme environmental conditions, and/or conservation programs (i.e. Tucannon spring Chinook), *embracing general premise of optimizing in-river conditions via spill and other measures and not eroding in-river conditions in order to collect juveniles*.	**Regional Forum**: No change from 2023 (Base regional forum deliberations on achievement of CBP mid-range goals by 2050; prioritize fish operations relative to other authorized purposes when making in-season adaptive management decisions; and require timely response with memo). **Dworshak Ramp Rates:** *Enable short-term increases in generation to maintain reliability and meet LSR replacement, in addition to exploring development of other low-carbon LSR replacement power production*. **Zero Generation at LSR:** *NA*
Other Categories	**Maintenance:** *Fund MCN adult ladder repair and maintenance. Fund MCN juvenile bypass system and brush repair and maintenance*.	

	Establish urgency and timeline, with secured funding, for modifying BON, TDA, JDA, and MCN projects for functional adult lamprey passage. *Fund spillway repair and maintenance at LOMO, ICH, MCN, JDA, TDA.* *Repair spillway cranes and spill gates to full functionality at all projects*. *Evaluate necessity of powerhouse rehab/replacement at lower Snake projects given pending breach action.* *Minimize degraded fish operations resulting from scheduled and unscheduled maintenance/outages.* *Secure full funding for CRITFC infrastructure package. Emphasis on long-term functionality of mainstem projects and interim period functionality at Snake River projects.* **Monitoring Infrastructure Adjustments:** *Design new PIT monitoring infrastructure for operation in breached Lower Snake River and expand PIT monitoring infrastructure (e.g. estuary trawl, BON surface detection, and MCN spillway detector)*. **LOMO, ICH, MCN:** Conduct ERDC modeling of alternative spill patterns to address adult delay under extreme (low or high) flow conditions.	

Additional Details for Securing Continuity of Services Prior to LSR Dam Breaching:

Breaching the four Lower Snake River dams will require replacement for the services of the dams, or mitigation of those that cannot be replaced, before they are breached. Key areas identified in the Lower Snake River Dams (LSRD): Benefit Replacement Report (Replacement Report) prepared for the Inslee-Murray "Joint Federal State Process" that must be addressed include energy, navigation/transportation, irrigation, and recreation. The Replacement Report found that "the services provided by the LSRD could be replaced, or even improved upon, and where they cannot be replaced or improved, mitigation and compensation could be provided." The Replacement Report examined the full literature available on the cost of replacing the services of the LSRD and provides a range for the likely cost of those investments. In its 2023 legislative session, Washington enacted legislation that will expand on past work on replacing the energy, transportation, and irrigation services provided by the LSRD, and the work recommended below should be done in close coordination with Washington and other sovereigns.

- Energy replacement: Investment in a clean energy portfolio that would rely primarily on solar and wind generation, energy storage, energy efficiency, and demand response. Will require developing and refining a plan outlining specific steps necessary to replace the dams' average energy output as well as peaking capacity, protect grid resiliency and transmission services, and protect ratepayers by maintaining affordable rates. Will require identifying a lead agency to determine the replacement energy portfolio in light of advancing technology and conduct the regulatory and funding actions necessary to deploy it.
- Navigation and Transportation: Navigation and transportation actions identified by the Replacement Report include upgrading rail infrastructure, upgrading grain storage and loading facilities, improving state and local roadways, ensuring shipping costs remain competitive, compensating for economic losses, and addressing/minimizing transportation emissions. As with energy replacement, identifying a lead agency or agencies to develop a detailed plan to fund and implement will be necessary.
- Irrigated Agriculture: Approximately 50,000 acres of farmland are irrigated by the reservoir and water table created by Ice Harbor Dam. Actions identified by the Replacement Report include deepening wells, modifications to pumping infrastructure, and surface water withdrawal modification. As with the other replacement services, a lead agency would need to be identified to work with irrigation agriculture entities (including municipal water and wastewater services) to conduct detailed analysis, funding, and implementation of a plan to ensure continuity of access to water supplies.
- Recreation: Breaching the Lower Snake River dams would alter recreation on the Lower Snake River from flat-water reservoir recreation to free-flowing river recreation. To assist with this transition, the Simpson Initiative suggested providing federal funding for recreation management, tourism promotion, a sportfishing contingency fund during the restoration process, relocation and/or compensation for existing marinas, and compensation for owners of motorboats designed for use on lakes and reservoirs. An agency or agencies should also be assigned to lead refinement, funding, and implementation of a recreation-management and mitigation plan.
- Economic Development: The Simpson Initiative suggests investing in Lewiston-Clarkston waterfront restoration as part of the breaching process, as well as general economic development funds for the Lewiston-Clarkston and Tri-Cities areas. This is another area that

would benefit from a lead role by an agency or agencies to consult with local communities and create a plan to be funded and implemented.

ATTACHMENT 2

U.S. Government Commitments in Support of the "Columbia Basin Restoration Initiative" and in Partnership with the Six Sovereigns

Preface

In 2021, the Biden-Harris Administration began a process to work with regional sovereigns[1] and stakeholders to develop and implement plans to comprehensively restore Columbia River Basin salmon and other native fish populations to healthy and abundant levels, honor Federal commitments to Tribal Nations, deliver affordable and reliable clean power, and meet the many resilience needs of stakeholders across the region. The work was made possible by a pause in long-standing litigation, which has been extended since.

This document is the product of intense engagement with several of those parties—the Nez Perce Tribe, Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Confederated Tribes of the Umatilla Indian Reservation, the State of Oregon, and the State of Washington (the "Six Sovereigns")—who are collectively advancing a Columbia Basin Restoration Initiative (CBRI). This document is intended to describe commitments developed in partnership with these sovereigns. The document also is consistent with the goals set forth in a recent Presidential Memorandum.

On September 27, 2023, President Biden issued a Presidential Memorandum declaring that "[i]t is time for a sustained national effort to restore healthy and abundant native fish populations in the [Columbia River] Basin," and that "it is the policy of [the] Administration to work with the Congress and with Tribal Nations, States, local governments, and stakeholders to pursue effective, creative, and durable solutions, informed by Indigenous Knowledge, to restore healthy and abundant salmon, steelhead, and other native fish populations in the Basin; to secure a clean and resilient energy future for the region; to support local agriculture and its role in food security domestically and globally; and to invest in the communities that depend on the services provided by the Basin's Federal dams to enhance resilience to changes to the operation of the CRS, including those necessary to address changing hydrological conditions due to climate change."[2] Some actions are already underway to meet the goals in the Presidential Memorandum and other commitments made by the United States. This includes efforts such as testing the feasibility of reintroducing anadromous salmonids in blocked area habitats in the Upper Columbia River Basin above Chief Joseph Dam under a historic agreement between the United States government and the Confederated Tribes of the Colville Reservation, the Coeur d'Alene Tribe, and the Spokane Tribe of Indians to support and fund Tribally-led efforts to implement the Phase 2

[1] Regional sovereigns may include, as appropriate, the States of Oregon, Washington, Montana, and Idaho, as well as the Confederated Tribes of the Umatilla Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, Nez Perce Tribe, Confederated Tribes and Bands of the Yakama Nation, Spokane Tribe of Indians, Coeur d'Alene Tribe, Confederated Tribes of the Colville Reservation, Kootenai Tribe of Idaho, Confederated Salish and Kootenai Tribe, Confederated Tribes of Siletz Indians, Shoshone-Bannock, Burns Paiute Tribe, Confederated Tribes of the Grand Ronde, Cowlitz Indian Tribe, Fort McDermitt Paiute and Shoshone Tribe, Kalispel Tribe of Indians, Shoshone-Paiute Tribes.

[2] Presidential Memorandum of Restoring Healthy and Abundant Salmon, Steelhead, and Other Native Fish Populations in the Columbia River Basin (Sept. 27, 2023), https://www.whitehouse.gov/briefing-room/presidential-actions/2023/09/27/memorandum-on-restoring-healthy-and-abundant-salmon-steelhead-and-other-native-fish-populations-in-the-columbia-river-basin/.

Implementation Plan.

Sustained national effort requires durable partnership over time with all regional sovereigns and stakeholders. Though this document responds to the work of several regional sovereigns, these are not the only sovereigns in the Basin, and these commitments do not represent the exhaustive suite of actions that will be developed and carried out under the Presidential Memorandum. The effort described in this document is not intended to create a new forum that addresses or replaces existing regional forums and processes. The commitments described here do not undermine commitments the United States Government (USG) has made to other sovereigns in the region under existing agreements. The effort is intended to foster partnership on matters of shared interest among the USG and the Six Sovereigns, with the expectation that these efforts will grow, expand, and include other sovereigns and stakeholders. Accordingly, the USG is committed to continue pursuing partnership on matters of shared interests with other sovereigns in the region, whether those matters are included below or not. Moreover, when implementing the commitments below, the USG and Six Sovereigns are committed to including others and working in partnership.

Introduction

The Columbia River and its tributaries are the lifeblood of the Pacific Northwest, providing the region with an abundance of natural resources, water, power, recreation, and opportunity which have sustained cultures, livelihoods, commerce, and economic growth. An estimated 7.5 to 16 million adult salmon and steelhead once returned to the Columbia River Basin each year. In 1855, the United States entered treaties with the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Nez Perce Tribe, in which these Tribes reserved, among other rights, the right to harvest fish at all usual and accustomed places. Salmon, steelhead, and other native fish are essential to the culture, economy, and ways of life of these Tribes, as they are for other Tribal Nations in the region and First Nations and other Indigenous Peoples in Canada.

Since the late 1800s, the Columbia River Basin ecosystem has changed at the expense of salmon, other native fish, and ecosystem function. Historically, sixteen different stocks of salmon and steelhead spawned above Bonneville Dam, as well as broadly distributed populations of bull trout, lamprey, sturgeon, and other aquatic species. Of the sixteen historic salmon and steelhead stocks, four are now extinct, and seven are listed under the Federal Endangered Species Act—including one reliant on a captive breeding program. Of the remaining five, only one approaches its historical numbers. Bull trout are also listed under the ESA and historic anadromous populations in the Columbia River are no longer present. The Kootenai River population of white sturgeon experienced significant decline with construction of Libby Dam and has been listed as endangered under the ESA since 1994. Pacific lamprey have also experienced a precipitous decline across the basin.

The Biden Administration recognizes the indisputable value and importance of salmon – and other native fish – to Columbia River Basin Tribes, as well as to the economy and overall ecological health of the region, throughout the Basin and from the Oregon coast to the Gulf of Alaska. In the face of climate change, urgent action is needed to restore their populations to healthy and abundant levels.

According to the 2022 report by the National Oceanic and Atmospheric Administration (NOAA), "Rebuilding Interior Columbia Basin Salmon and Steelhead," the hydrosystem is a primary limiting factor in the recovery of ten of the sixteen salmon and steelhead stocks in the interior Columbia River Basin. For three others, the limiting factor is blocked historic habitat due to large dams that lack fish passage.

Tributary habitat is another important limiting factor for salmon and steelhead in much of the Basin, particularly for middle Columbia River stocks. NOAA found the risk of extinction for all NOAA ESA-listed stocks in the interior Basin to be moderate-to-high, and, considering the status of all limiting factors for the species, NOAA does not expect the current risk status of these listed stocks to improve in the short term without immediate attention.

To address the critical status of these fish – especially listed salmon and steelhead in the Snake River Basin – Senator Patty Murray and Governor Jay Inslee released recommendations on Columbia River salmon recovery in August 2022, after a year-long process compiling existing information and soliciting input from communities, Tribes, and stakeholders across the Northwest. With respect to the Lower Snake River (LSR) dams, they recommended that the dams' services would need to be replaced or mitigated before any breach should occur. They further recommended that the Federal and state governments initiate a program to replace the services of the dams and develop additional information on the dams and the services they provide to enable Congress to consider dam breaching in the future. They also recommended immediate action to deploy the scale of clean energy infrastructure necessary to confront the climate crisis regardless of whether Congress authorizes the breaching of the Lower Snake River dams. They recognized, as does the Administration, that significant Federal investment is necessary to support this transition, which will require substantial Federal budget support.

We agree that business as usual – and the consequential disappearance of salmon and other native fish populations in the Columbia River Basin – is unacceptable. And while there is still time to save these fish, there is no time to waste. The NOAA report clarified the urgency of the situation, stating that, given the current status of salmon populations, "[t]he science robustly supports riverscape-scale process-based stream habitat restoration, dam removal (breaching), and ecosystem-based management, [and] overwhelmingly supports acting and acting now."[3]

The science is clear, and now so too must be our path forward.

The USG also recognizes the urgency of recovering other native listed and non-listed aquatic species across the Columbia River Basin. While this Commitment document focuses on the needs of Pacific salmon and steelhead, the USG also plans to work with sovereigns and stakeholders under the direction of the Presidential Memorandum to increase restoration and recovery actions for other native species.

As stated in Exhibit 2 of the August 2022 litigation stay agreement, the Biden Administration is "committed to supporting development of a durable long-term strategy to restore salmon and other native fish populations to healthy and abundant levels, honoring Federal commitments to Tribal Nations, delivering affordable and reliable clean power, and meeting the many resilience needs of stakeholders across the region." In carrying out this commitment, the Administration understands that no single action is a "silver bullet," and progress will necessitate a comprehensive suite of management actions to make progress towards our goal of healthy and abundant fish populations in the Basin.

The NOAA Rebuilding Report, for example, sets out a suite of centerpiece actions "needed to provide the highest likelihood of reversing near-term productivity declines and rebuilding towards healthy and harvestable runs [of Columbia River Basin salmon and steelhead] in the face of climate change."

Although the science is clear and the urgency real, there remain important social and economic factors to consider and address before the full suite of actions laid out by the NOAA report could move forward.

[3] See NOAA, Rebuilding Interior Columbia Basin Salmon and Steelhead Report, p. 24 (2022).

As highlighted throughout the Murray/Inslee recommendations, these social and economic considerations must be expedited and addressed on a timeline that meets this urgency, while also recognizing where congressional authorization is needed. In the meantime, interim actions can help minimize the potential for productivity declines and help achieve some population growth during periods of favorable environmental conditions.

It is apparent from the Columbia Basin Restoration Initiative (CBRI) that the Six Sovereigns share the Administration's understanding that a comprehensive and urgent approach is necessary to achieving our shared objectives, and the Administration thanks them for their work in developing this framework, consistent with the science undergirding the NOAA Rebuilding Report, to drive coordinated action. While this USG response does not constitute a decision by the USG to support legislation to authorize dam breaching, the USG continues to be committed to exploring restoration of the Lower Snake River, including dam breach, and views Governor Inslee and Senator Murray's recommendations as providing important guidance. To that end, the USG is prepared to deliver the commitments below, in partnership with the Six Sovereigns and other stakeholders in the region, to make headway on the objectives in the CBRI. As noted at the outset, the commitments here are not to the exclusion of other efforts needed to meet the President's direction to work to restore salmon and other native fish populations, including bull trout, lamprey, and sturgeon species, to healthy and abundant levels, to secure an affordable and reliable clean energy future for the region; to support local agriculture and its role in food security domestically and globally; and to invest in the communities that depend on the services provided by the Basin's Federal dams to enhance resilience to changes to the operation of the CRS, including those necessary to address changing hydrological conditions due to climate change. The USG is committed to working with all regional sovereigns and with stakeholders to implement the Presidential Memorandum and achieve these important goals.

Lower Snake River Restoration

Responsive to CBRI Objectives 1(a), 1(b), 4, 5, & 6

- **Objective 1(a) and (b): "***Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports; and (b) complete the actions and investments necessary to secure continuity of services associated with Lower Snake River (LSR) restoration prior to LSR dam breaching."*

- **Objective 4:** *Invest in and support communities and economic sectors (e.g., energy, transportation, agriculture, and recreation) in a manner that is consistent with meeting decarbonization goals and mandates and integration of renewables, delivers "affordable and clean power", improves resiliency and adaptability to climate change and supports "the many resilience needs of stakeholders across the region", and "[honors] commitments to Tribal Nations"*

- **Objective 5:** *Secure necessary regulatory compliance, authorizations, and appropriations for implementation of the strategy with an urgency reflecting the needs of the fish.*

- **Objective 6:** *Ensure that the strategy proposed in Objective 1 and associated Federal actions "honor Federal Commitments to Tribal Nations" and address past and ongoing inequities related to the Federal hydrosystem to reflect and uphold Federal Treaty and trust responsibilities to Columbia Basin Tribes.*

USG Commitments

- ***Tribal Energy Sovereignty – Pacific Northwest Tribal Energy Program.*** The Department of Energy (DOE) and U.S. Department of Agriculture (USDA) will provide targeted technical assistance, planning, and funding to the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Nez Perce Tribe (together, the "LRTT's"), to develop and deploy clean, renewable, socially-just energy resources (to include distributed energy resources (including efficiency and demand response, other generation, storage, and transmission resources)) in the region. DOE will work with LRTTs individually and collectively to support quantified goals for energy project development, presumed to be at least 1,000- 3,000 MW of clean energy resources, and to determine the role LRTTs want to take with regard to various projects (e.g., individual or collective ownership, leasing, power procurement, etc.). DOE will work with LRTTs to develop a written agreement documenting and guiding this process. This new, clean Tribally-sponsored energy will be planned as "replacement" power for the lower Snake River dams if Congress authorizes the breach of those dams. This Pacific Northwest (PNW) Tribal Energy Program will run in parallel with ongoing DOE assistance and resources related to tribally supported projects that are under development outside of the PNW Tribal Energy Program and nothing in this USG commitment is intended to be exclusive to PNW Tribal Energy Program projects or limit the allocation of resources to tribally-supported projects that are not identified by a Tribe as part of the PNW Tribal Energy Program. *See Appendix A for more information on this proposal and respective DOE and USDA contributions*.

    - ***Tribal Engagement & Implementation Support.*** The USG is committed to supporting Columbia Basin Tribes in regional energy planning and energy project review processes in the Pacific Northwest, and to advance the development of a renewable, clean, and socially just energy portfolio in the region. By February 1, 2024, DOE, USDA, and the Department of the Interior (DOI) will identify additional Federal resources (e.g., from the DOE LEAP program)[4] that could support the LRTT's and other Columbia Basin Tribes' capacity regarding clean energy resource development, energy project management, and ability to engage in regional energy planning and energy project review processes, including without limitation the capacity of the Tribes' natural and cultural resource staff to engage in such planning.

- ***Accounting for "replacement" power*.** In coordination with the Six Sovereigns, the USG and DOE will develop a means of "accounting" for the region's development of resources available to serve as "replacement" energy services for the lower Snake River dams, based on the particular services needed in the event Congress authorizes dam breach.[5] This accounting mechanism will be developed no later than February 1, 2024. This accounting mechanism will track and count all regional resources that can contribute to replacement of the dams' energy services developed or under development as of the date of these commitments and beyond.[6]

[4] Noting that various programs, including C-LEAP, are subject to competitive funding procedures and nothing in this agreement over-rides those standards and procedures.

[5] In the event that Bonneville considers acquisition of these or any other resources, such acquisition of resources will be governed by applicable statutory requirements. See *e.g.,* 16 U.S.C. § 839d *et seq.*

[6] In the event that Bonneville considers acquisition of these or any other resources, such acquisition of resources will be governed by applicable statutory requirements. See *e.g.,* 16 U.S.C. § 839d *et seq*.

The Regional Energy Needs Planning Process described in Appendix A, specifically its scenarios for regional clean energy development that include replacement power in the event Congress authorizes breach of the LSR dams, will identify portfolios of potential replacement resources (as well as new energy resource options, e.g., storage, efficiency, or transmission, that could enable greater grid management flexibility to manage the hydropower system for greater fish benefit, as well as reliability, affordability, decarbonization and other regional goals during the interim period before breach is authorized). The "accounting" approach would provide the public regular updates on the region's development of clean energy resources, including the type of resources needed to replace the specific energy services of the LSR dams, as compared to the portfolios identified in the energy analysis.

- ***Assistance to Support Tribally-Owned Clean Energy Projects through USDA's energy programs, such as the Powering Affordable Clean Energy (PACE) Program and at Least 10 Tribal Projects through USDA's Rural Energy for America Program (REAP).*** Yakama has applied for USDA's PACE partially forgivable loan program for utility scale clean energy generation, and the USDA Rural Utilities Service (RUS) will continue to work with them through the process. USDA will also work with tribes to access funding for clean energy development through the RUS core program. Additionally, USDA will work to provide technical assistance to tribes to apply to the REAP program and will work with Columbia River Basin tribes to identify, develop and fund at least 10 REAP clean energy projects. REAP offers grants and guaranteed loans to agricultural producers and small businesses, including Tribes and Tribal businesses, in rural areas. REAP funds can be used for Tribally-owned renewable energy systems or energy-efficient infrastructure upgrades and provide grants for up to 50 percent of the total project costs for Tribes. Grants for clean energy and energy efficiency projects can be anywhere from $1,500 to $1 million in size.

- ***Energy Analysis.*** DOE will provide the necessary funding to the Pacific Northwest National Laboratory (PNNL) and potentially other DOE Labs to complete the Regional Energy Needs Planning Process, as outlined in Appendix A. This analysis will identify the best ways to meet the region's resource adequacy needs and decarbonization goals, and support meeting Washington and Oregon's power sector statutory requirements as well as state and LRTT energy strategies, while also accounting for any long-term actions necessary to ensure abundant and healthy salmon populations throughout the Basin, including breach of the Lower Snake River dams.

- ***Transportation Upgrades.*** The Department of Transportation (DOT) will prioritize work with sovereigns in the region to address rail, road, and culvert upgrades necessary for improving transportation infrastructure while also protecting and rebuilding salmon and steelhead populations. DOT Assistant Secretary for Tribal Affairs, Arlando Teller and the White House will hold an initial summit with regional sovereigns (including the Six Sovereigns) in early 2024 to scope, plan, and design projects that would meet DOT program requirements. This will include DOT providing information about opportunities for Federal funding, including grant and loan requirements for transportation and culvert removal projects. DOT will provide ongoing guidance and specific technical assistance to help identify the right grant and loan programs to fund these projects. For example, the new DOT Rural and Tribal Assistance Pilot Program will provide grants – up to $360,000 each – for early project development-phase activities such as hiring staff, feasibility studies, or environmental review; the $3.4 million funding opportunity began to accept applications on a first-come, first-served basis beginning on August 14, 2023.

- ***Transportation Analysis.*** The U.S. Army Corps of Engineers (the Corps), using its authority through the Planning Assistance to States and Tribes Program, will provide up to $750,000 to partner with a non-Federal cost-share sponsor (potentially the State of Washington) to analyze what other transportation infrastructure, including rail, could provide regional benefits and also replace services should Congress authorize dam breach. This funding will further existing work at the State of Washington and will include stakeholder engagement from DOT and other relevant agencies as well as the Six Sovereigns' input.

- ***Recreation and Public Access Analysis.*** The Corps will allocate through its Planning Assistance to States and Tribes authority up to $2 million[5] to develop a blueprint for investments in replacement and enhancement of recreation along the LSR that would offset the loss of recreation opportunities associated with the drawdown of reservoirs if Congress were to authorize LSR dam breach. The Corps will work with the State of Washington and other entities as appropriate as cost-share sponsors. The blueprint will be informed by the DOI Tribal Circumstances analysis, and by consultation with the LRTTs, to ensure protection of cultural resources.

- ***Water Supply Analysis.*** BOR working with USDA will provide $4.2 million to fund a water supply replacement study, in coordination with ongoing analyses by the State of Washington. This study will address the irrigation, municipal, and industrial withdrawals associated with the potential breach of the four LSR dams, if authorized by Congress.

- ***Tribal Circumstances Analysis.*** DOI will, in consultation and cooperation with Columbia River Basin Tribes, review the 1999 Tribal Circumstances Report (as amended in 2019) and the Tribal Perspective Reports submitted in 2019, together with information acquired in consultation with the Columbia River Basin Tribes in March 2022, to compile and complete an analysis of the historic, cumulative, and ongoing impacts the Federal dams on the Columbia River, including the lower Snake River dams, have on Columbia River Basin Tribes. This analysis will also inform any environmental compliance documents discussed below.

- ***Study Timelines and Results.*** The U.S. Government (USG) will complete the aforementioned outreach and analyses by late-2024, in cooperation with the Six Sovereigns and non-Federal sponsors, except that the Tribal Circumstances Analysis will be completed by DOI by June 1, 2024 and both the Transportation Analysis and the Recreation and Public Access Analysis timeline will be coordinated with the cost-share sponsor, with the goal of completing as much of the analysis as possible within 12 months of execution of a cost-share agreement. The USG, in cooperation with the Six Sovereigns, will provide the information obtained from the analyses above, and any recommendations that may result from those analyses, to Congress to inform budget and non-reimbursable appropriations requests. The information obtained from the analyses above will also inform environmental compliance documents and the Corps will use this information where relevant as well as other pre-existing analyses to expedite any Feasibility Study.[7]

[7] The USG commits to reviewing time and cost-efficient opportunities to use information and analysis from prior LSR reports, including but not limited to the 2002 (Corps) Final Lower Snake River Juvenile Salmon Migration Feasibility Report / Environmental Impact Statement.

Reintroduction of Salmon in the Upper Columbia River Basin

Responsive to CBRI Objective 1(a)

- **Objective 1(a):** ***"****Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports.*

USG Commitments

- ***Phase 2 Implementation Plan (P2IP).*** On September 21, the USG entered into an agreement with the proponent sovereigns to support the implementation of the P2IP. This agreement included $200 million from BPA over 20 years and a commitment from the rest of the USG to work with the Upper Basin Tribes as necessary and appropriate to ensure full funding – currently estimated at $300 million – of the P2IP if additional investment is needed.

- ***Enloe Dam Removal.*** NOAA provided $2.3 million in FY 2023 for Enloe Dam removal analysis. NOAA will continue to seek opportunities to align its competitive grant programs with Columbia Basin fish recovery needs providing fish passage into the Upper Columbia River Basin. This project continues to be a priority. The USG will work with the Confederated Tribes of the Colville Reservation as the lead for the removal and other regional sovereigns as appropriate to find resources to ensure the completion of the alternative analysis and the accompanying sediment management plan, both within ongoing non-Federal feasibility analysis.

Mid-Columbia River Salmon and Steelhead Improvements

Responsive to CBRI Objective 1(a)

- **Objective 1(a):** ***"****Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports.*

USG Commitments

- ***Mid-Columbia Restoration Plan.*** The Six Sovereigns and the USG will work together (with other sovereigns as appropriate) to develop recommended actions to rebuild mid-Columbia salmon and steelhead stocks as described in the Rebuilding Interior Columbia Salmon and Steelhead report, including, but not limited to, appropriately managing predation and protecting and restoring instream flows, water quality, and fish passage and habitat improvements in Oregon and Washington in low- to mid-elevation tributary and mainstem habitats.[8] NOAA will coordinate with the appropriate USG agencies/departments and the relevant regional sovereigns (including the Six Sovereigns) to develop, by June 30, 2024, an agreed upon 10-year suite of mid- Columbia actions in Oregon and Washington for implementation beginning FY 2026, understanding that these actions will likely require at least doubling current levels of

[8] This reflects the habitat components of the NOAA Rebuilding Report's Mid-C centerpiece action recommendations, but does encompass the universe of actions necessary for rebuilding.

mitigation and restoration funding.[9] To support this agreed upon suite of actions, the USG will identify available funding across agencies and departments, as well as other sources; and consistent with the September 27, 2023 Presidential Memo will evaluate new appropriations needs, and, as appropriate, potential future Congressional legislation necessary for implementation. BPA's obligation to fund any Fish and Wildlife projects identified in this Mid-Columbia Restoration Plan will be subject to the limitations outlined in the "BPA Fish and Wildlife General Funding" and "Increased Funding in Support of Basin-Wide Restoration" commitment sections, below.

  - ***Mid-C Subset of Near-Term Priority Actions.*** The Six Sovereigns have identified and provided to the USG a short-list of high-priority mid-Columbia habitat actions, implementable in the near term. The USG, using a whole-of-government approach, will identify opportunities to provide funding to implement these projects beginning in FY 2024-2025.

- ***Cold Water Refuge Projects.*** The Environmental Protection Agency (EPA) and the Corps will work with the Six Sovereigns to identify and seek funding, as appropriate, to study and complete 3 to 5 projects to enhance or protect existing cold water refuge or provide additional cold water refuge in the Columbia Basin in Oregon and Washington. At least two of the five projects will be accomplished in Oregon. Special emphasis will be made toward reducing both warm waters and predation in tributary mouths. At least 2 of 5 projects will be focused on Mid-Columbia (Zone 6 and its tributaries) salmon and steelhead populations. Projects will be identified by June 30, 2024 for implementation beginning in FY 2024-2025.

Other Native Fish

Responsive to CBRI Objective 1(a) and 2

- **Objective 2:** *Ensure that all native species, regardless of listing status, are considered in the comprehensive strategy in a way that improves ecosystem function in the Columbia River and its tributaries.*

USG Commitments

- ***Pacific Lamprey Mitigation.*** The Corps has expressed a capability of an additional $5 million in non-reimbursable funding for FY 2025 to support Pacific lamprey, and will continue to work with state and tribal fish managers to identify and seek appropriations, as appropriate, for funding needs moving beyond FY 2025, including needs expressed by the fish managers for a regional supplementation/augmentation plan, and for modernizing and funding passage structures at artificial barriers and obstructions, as associated with Corps facilities. The Corps received $20 million in FY 2020 to make Pacific lamprey passage improvements consistent with commitments described within the 2018 Columbia Basin Fish Accords extension. The Corps has been working closely with the Tribes to ensure funding is allocated to the highest priority Pacific lamprey projects and expect the available funds to be expended by the end of FY 2024.

[9] The Six Sovereigns have provided the USG with documentation that indicates that a 10-year suite of mid- Columbia mitigation actions would likely cost upwards of $200M/year in additional funding over the next ten years.

BPA will continue the current level of funding to support passage for Pacific lamprey FWS will provide $785,000 in FY 2024 to support Pacific lamprey conservation. FWS funding will be used for projects including passage implementation in the Yakima Basin and Upper Columbia Basin, monitoring of translocation efforts, and assessment of Pacific lamprey distribution in the Snake River Basin.

- ***White Sturgeon Mitigation.*** BPA will continue the current level of funding to support white sturgeon recovery efforts through FY 25 to implement NPCC Regional White Sturgeon Framework recommendations and the White Sturgeon Hatchery Master Plan, and provide support for monitoring and evaluation needs.

- ***Bull Trout.*** The FWS commits to providing $700,000 in FY 2024 in support of bull trout recovery in the Columbia River Basin. Funding will be used for projects including population monitoring and assessment, genetic analysis of native salmonids in Idaho and western Montana, and technical assistance to Tribes and other partners on bull trout recovery. The Corps will provide $87 million in funding for a design build contract for the Albeni Falls fish passage project to benefit bull trout and westslope cutthroat trout. The Corps will seek additional funding for implementation through the budget process.

- ***Native Resident Fish & Shellfish.*** The USG recognizes that the key elements of the CBRI, consistent with the Rebuilding Report, are important to restore native fish and the ecosystems supporting them. The FWS commits to working with USGS, regional sovereigns, and other partners to develop monitoring plans and restoration actions that would allow for better understanding of native resident fish (e.g., sculpin) and other native species' distribution and recovery needs, including the Western Ridged Mussel, which is currently petitioned for listing under the ESA. For example, in the Mid-Columbia, FWS is working with sovereigns to fund, design, and implement the Wallula Floodplain Restoration Project for the lower Walla Walla River benefitting both resident and anadromous species. The USG will work with the Six Sovereigns, Idaho and other regional sovereigns and stakeholders as appropriate to update plans, funding needs, and priorities necessary to restore native resident fish and shellfish in concert with the efforts to rebuild salmon runs. Funding will be identified for native resident fish and shellfish in the development of appropriations requests and budgets that support implementing the CBRI.

Improved Ecosystem Function

Responsive to CBRI Objective 1(a)

- **Objective 1(a):** ***"****Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports.*

USG Commitments

- ***Improved Ecosystem Function Commitments.*** The USG commits to rebuild salmon and steelhead runs to improve ecosystem function by restoring marine nutrient transport into interior habitats and providing prey for other native fish and for marine mammals, and by restoring watershed functions that provide essential ecosystem services enhancing resilience to climate change and associated heat, drought, fire, water scarcity and invasive species. River

restoration work in the Basin will help deliver this ecosystem function improvement. Examples include, but are not limited to:

- **Enloe Dam Removal.** See NOAA commitment above for "Enloe Dam Removal."

- **Culvert Design or Replacement on Federal Lands in Oregon and Washington.** The Bureau of Land Management (BLM) provided $1.2 million in FY 2022 and FY 2023 for the design or replacement of 17 culverts and other projects to restore and protect stream habitat in Washington and Oregon.

- **Culvert Removals in WA.** DOT has the ability to offer opportunities for competitive discretionary grants that recognize fish passage as an important component of the grant. These include FHWA's Culvert Aquatic Organism Passage Program, Bridge Investment Program, Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program, and Wildlife Crossings Pilot Program.

- **Fish passage improvements.** For FY 2024, FWS plans to adjust criteria in the Notice of Funding Opportunity (NOFO) to give additional weight to project proposals that leverage other BIL investments and significantly contribute to watershed-scale restoration efforts. In addition, FWS will add selection factors in the NOFO that will facilitate FWS directing funding towards projects in priority geographic areas identified by DOI (e.g., Columbia River Basin; Klamath; Appalachia; Yukon, Kuskokwim, and Norton Sound region).

- **Cold Water Refuge.** EPA's 2021 Cold Water Refuge Plan identifies various actions to protect cool tributaries and reduce temperatures in specific tributaries to enhance their function as a cold-water refuge. For example, a priority action in in many watersheds is to restore stream riparian areas and geomorphology to cool streams and improve salmon habitat, especially on agricultural lands. These stream restoration projects can be implemented through grant funding and Federal, state, Tribal, and local partnerships. Costs could run to as much as $50 million over 10 years. FWS recognized the need for additional cold water refuge assessments within the Columbia and Snake River basins in the 2020 FWS Biological Opinion and will work with sovereigns and other Federal agencies to identify methods and funding mechanisms to develop the assessments and implementation plans. The USG will work with states and Tribes to agree on a timeline and further refine cost estimates for these projects. In addition to funding from the USG, EPA will partner with the states to assist them in understanding how to leverage EPA Clean Water Act (e.g., State Revolving Fund and Section 319) funding for these same projects. EPA will work to identify thermal pollution, both point source and non- point source, and larger sources of warm water will be investigated and remedied to protect cold water sources and cold water habitat in the mainstem and tributaries to the Columbia River in Oregon and Washington.

- **Ecosystem Restoration Projects.** The Corps has expressed a capability of over $20 million in non-reimbursable funding over the next 2 years for several new ecosystem projects throughout the Basin.[10] The Corps will engage and work with regional sovereigns (including

[10] Some of these projects will be in partnership with Tribes, and others are still being scoped. Projects include, but are not limited to: Columbia River Zone 6 Delta Assessment; Owyhee River Restoration;

the Six Sovereigns) to identify and prioritize these projects.

- **Ocean and Estuary Actions.** Columbia River basin salmon and steelhead spend a significant portion of their life-cycle in the ocean, and as such the ocean is a critically important habitat influencing their abundance and productivity. The increasing role of deteriorating ocean or freshwater conditions from climate change on the health of salmon and steelhead stocks does not diminish the importance or necessity of taking meaningful actions in areas society has more direct influence over. In fact, the importance and necessity of meaningful actions is heightened, not diminished because of the impacts of climate change.

  While ongoing ocean research and monitoring is critically important to address the underlying uncertainties and knowledge gaps that currently exist in salmon ocean and estuarine ecology and should continue or be expanded, immediate improvements to the freshwater environment are imperative to avoid further declines, improve climate resilience, and begin salmon and steelhead rebuilding immediately.

  NOAA will continue to prioritize ongoing work to develop decision support tools to track ocean productivity in a stock specific manner and to develop indicators that provide valuation for nearshore, estuary, and tributary habitat that can be used for restoration planning and prioritization.

  NOAA also commits to collaborate with existing sovereign fish managers and regional entities conducting fisheries research in marine environments and by September 30, 2024:

  - Identify specific actions that can be taken in freshwater, estuarine, and marine habitats to improve fish condition and marine survival or otherwise mitigate marine habitat impacts; e.g., controlling predation and enhancing prey availability.

  - Identify mechanisms and tools for life-cycle modeling, monitoring, and adaptive management efforts to better integrate new information on ocean conditions and marine fish survival as it becomes available through ongoing or expanded ocean research efforts to help inform adaptive management of ongoing implementation of these USG Commitments in response to the CBRI.

Ocean monitoring and research to address uncertainties in the marine phase of the salmon life cycle are important and should continue concurrently with urgently needed improvements in the freshwater environment to arrest further declines and commence salmon and steelhead rebuilding immediately.

Interim Fish Operations

Responsive to CBRI Objectives 1(a) & 3

- **Objective 1(a): "***Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin*

Hangman Creek Channel / Floodplain Restoration; Sweetwater Creek Restoration; Meadow Creek, Idaho Restoration Study; Barber Pool, Idaho Restoration Study; Nursery Reach, Washington Study; Hood River Confluence Ecosystem Restoration Study; Deer Gulch, Idaho Restoration Study.

Partnership Task Force (CBP) and Rebuilding reports.

- **Objective 3:** *Ensure interim fish measures are adequate to minimize additional generational decline of fish populations.*

USG Commitments

- ***Commitment to Resolve Fish Operations.*** The USG has engaged collaboratively with the Six Sovereigns regarding the Interim Fish Operations, using the Interim Fish Operations identified in the CBRI as the basis for discussions, to develop agreed-upon interim hydro system operations commitments.

    - The USG and the Six Sovereigns developed an action plan (see Appendix B for details) for implementing interim fish operations beginning in 2024 and beyond.[11]

    - It is intended that these agreed-upon, durable operations will commence upon finalization of a long-term resolution of interim operations and would remain in place for a period of 10 years or until decisions are made and implemented regarding whether to breach the LSR dams in a timeline that meets the needs of the fish. If this decision is deferred beyond a reasonable timeline, then additional CRS operations for the fish will likely be needed.

- ***Implementation of Durable Operations, as well as Monitoring and Adaptive Management.*** The USG is committed to developing and using a Sovereign-driven process to focus on maintaining and adaptively implementing (managing) the durable set of operations agreed to that govern at the lower Snake River and lower Columbia River dams prior to potential breach of the lower Snake River dams. The USG is committed to refine the Regional Forum processes (e.g., Technical Management Team Regional Implementation Oversight Group, etc.) by September 30, 2024 to ensure that the implementation of the agreed-to operations and any adaptive management adjustments:

    - Minimize degraded fish operations resulting from scheduled and unscheduled maintenance/outages;

    - Equally consider fish operations relative to other authorized project purposes when making in- season adaptive management decisions; and

    - Follow a fish and wildlife manager developed framework for mainstem research, monitoring, and evaluation; addressing both reach-specific and life-cycle metrics for anadromous and resident aquatic species.

- ***Backlog in Salmon Projects.*** The Corps will provide at least $50 million in funding to the Columbia River Fish O&M and construction funding in FY 2024 to begin addressing and prioritize the backlog of projects identified by the Columbia River Inter-Tribal Fish Commission (CRITFC) at Columbia and Snake River facilities for fish passage and survival.[12] These funds will be used, in consultation with the Six Sovereigns and Idaho to address backlog projects both at

[11] Changes to operations were only made for the lower Columbia River and lower Snake River projects in this agreement; other CRS project operations are not modified by this agreement.

[12] https://critfc.org/documents/critfc-overview-of-columbia-river-usace-fish-budget-needs

LSR dams and in the mainstem Columbia River. The USG and the Six Sovereigns agree to work collaboratively on identifying high priority needs and potential funding sources for the Corps' O&M and CRFM budgets for FY 2025 and beyond to address the backlog of infrastructure needs that constrain fish operations. Examples of high priority projects that are currently and/or likely to soon be impacting fish passage operations include: McNary adult fish ladder repair and maintenance, McNary spillway crane and hoist replacement, and spillway repair and maintenance at Lower Monumental, John Day, The Dalles, and Bonneville dams.

Modernization of Energy & Other Economic Sectors for Resiliency

Responsive to CBRI Objective 4

- **Objective 4:** *Invest in and support communities and economic sectors (e.g., energy, transportation, agriculture, and recreation) in a manner that is consistent with meeting decarbonization goals and mandates and integration of renewables, delivers "affordable and clean power", improves resiliency and adaptability to climate change and supports "the many resilience needs of stakeholders across the region", and "[honors] commitments to Tribal Nations."*

USG Commitments

- ***Fish and Economic Sector investments.*** The USG will ensure actions that benefit fish and watershed health are coupled with investments to secure affordable and reliable decarbonized energy, efficient commodity transport and adequate water supply. Please see items identified in "*Lower Snake River Restoration"* section for specifics.

- ***Reduce Local and Regional Burdens.*** The USG will include investments complementary to this shifting energy landscape, as well as modernization of other economic sectors, and help reduce associated local and regional economic burdens. Please see items identified in "*Lower Snake River Restoration"* section for specifics.

- ***Siting Consultations with Tribal Nations.*** The USG will address siting considerations to help address long-standing Tribal inequities and help minimize ecological harm.

    - **Siting for Clean Energy Resources**. DOE, DOI, and USDA are committed to meaningfully engaging with Tribes on clean energy planning and siting to support the sustainable build out of transmission and clean energy resources in the region, including the projects that stand to be developed through the PNW Tribal Energy Program Proposal (*see Appendix A*).

- **CWA Permit Implementation.** Federal agencies (e.g., Corps and BOR, as permitees), where possible, will collaborate with the relevant states, Tribes, and EPA to assess/develop required temperature-focused water quality attainment plans per the state and Tribe's Clean Water Act Section 401 certifications reflected in EPA's National Pollutant Discharge Elimination System (NPDES) permits for Federal dams. This will facilitate more effective and efficient review of these water quality attainment plans. For example, a potential near-term action under evaluation to improve conditions for migrating salmon is installing systems to cool the fish ladders at the Federal dams. Other potential actions that the agencies can evaluate include CRS operational changes to reduce warm summer temperatures, especially during times of predicted excessively warm temperatures.

- **CWA Modeling for 401 Certifications.** The Corps will use its modeling, as needed, to simulate certain potential water quality impacts in order to provide that information to the relevant states and Tribes, and to EPA as it complies with its existing 401 water quality certifications.

Authorizations, Studies, & Timelines

Responsive to CBRI Objectives 5 & 6

- **Objective 5:** *Secure necessary regulatory compliance, authorizations, and appropriations for implementation of the strategy with an urgency reflecting the needs of the fish.*

- **Objective 6:** *Ensure that the strategy proposed in Objective 1 and associated Federal actions "honor Federal Commitments to Tribal Nations" and address past and ongoing inequities related to the Federal hydrosystem to reflect and uphold Federal treaty and trust responsibilities to Columbia Basin Tribes.*

USG Commitments

- ***P2IP Regulatory Compliance.*** The USG has begun required environmental compliance work and hired a contractor to support reintroduction of salmon in the Upper Columbia.

- ***Authorizations and Appropriations.*** Information produced through the USG analyses and the recently released Presidential Memorandum will inform budget and appropriations requests, as well as inform any required authorizations.

- ***Feasibility Analysis.*** See p.8, above.

- ***Environmental Analysis Compliance.*** The USG commits to working with the Six Sovereigns on potential changes in response to the CBRI such as interim project operations identified in Appendix B, more aggressive advancement of mid- Columbia River habitat restoration, and fish passage. The USG anticipates that supplemental or additional environmental compliance will be required to evaluate and implement some or all of these changes. If so, review and revisions to the current biological opinion and/or additional ESA consultations will likely be required. These supplemental environmental review processes will inform and be informed by the analyses identified above related to the consideration of LSR dam breach. The Federal Government will review existing environmental compliance documents and any additional information provided by the States, Tribes, and other stakeholders and initiate any additional environmental compliance its review determines to be necessary during the fall of 2024. The USG commits to use the 1999 Tribal Circumstances Report (as amended in 2019) and the other Tribal Perspective reports submitted in 2019 and the NOAA Rebuilding Report to inform the need for and content of any supplemental or additional environmental analysis. To the extent feasible, the Federal Government will complete any environmental compliance documents that it determines are necessary within 18 months of initiating them. Nothing in this paragraph alters the USG's discretion or obligation to engage with other Tribal Nations and regional sovereigns as appropriate.

Additional Basin-Wide Funding Commitments

Responsive to CBRI Objective 1(a)

- **Objective 1(a): "***Develop and advance an urgent, comprehensive strategy to (a) restore salmon and steelhead to "healthy and abundant levels" consistent with NOAA's Columbia Basin Partnership Task Force (CBP) and Rebuilding reports.*

USG Commitments:

- ***Backlog in Salmon Hatchery Infrastructure Projects.*** Treaty and non-treaty, commercial, subsistence and recreational fish harvest for most stocks in the Columbia Basin is fueled primarily by Federal hatcheries - as mitigation for actions in the basin affecting fish, including development of the dams on the Columbia River Hatchery function and maintenance are thus an essential component and responsibility of the USG in operation of the dams. Currently, the CRS has a billion dollar+ backlog in deferred hatchery maintenance (see FN 19 in CBRI). To partially address this backlog, NOAA, as previously announced, will commit $60 million for high priority Mitchell Act facility needs identified by Tribes and states in the Basin. NOAA is currently engaged in tribal consultations to determine how to also allocate an additional $240M in IRA hatchery funding to tribes with Federally reserved or adjudicated fishing rights for Pacific Salmon and steelhead. NOAA will allocate this additional funding keeping in mind the fisheries those hatcheries serve.

- ***Columbia River Basin Restoration Act Program.*** EPA will provide, through 2026, approximately $85 million toward grants for projects to assess and reduce toxics across the Basin. This includes the recent awards of eight multi-year grants with tribes for nearly $17 million. These resources will support science and monitoring as well as longer term state, Tribal, and NGO program development. Though the focus of the project is to reduce toxics, EPA expects and regularly sees co-benefits to healthier and more climate resilient habitat.

- ***BPA Fish and Wildlife General Funding.*** BPA has already planned, through its Fish and Wildlife program, to add at least an additional $20 million in combined Capital and Expense funding in FY 2024 and FY 2025 for fish and wildlife efforts throughout the Basin on top of commitments laid out above. In addition:

    - $200M over 10 years in additional capital funding will be made available by Bonneville to the U.S. Fish and Wildlife Service (FWS) for Lower Snake River Compensation Plan (LSRCP) hatchery modernization, upgrades, and maintenance, as guided by the priorities of other fishery managers including the Six Sovereigns.

    - An additional $100M in funding under the Bonneville Administrator's authority under 16 U.S.C. § 832a(f) over 10 years for projects that contribute to the restoration of salmon and other native fish populations. To implement this commitment, Bonneville will provide an annual $10M payment to the Six Sovereigns in a manner to be agreed upon, to distribute to specific projects, as prioritized by the Six Sovereigns. The Six Sovereigns will coordinate with relevant regional sovereigns as appropriate on projects.

    - Nothing in these USG commitments or any implementing agreement is intended to affect BPA's reimbursement obligations regarding the Columbia River Fish Mitigation and O&M

costs associated with the CRS project funds provided by the Corps or Reclamation. The USG and agencies, however, intend that all other funds committed by the agencies in support of the USG Commitments are non-reimbursable funds by BPA, whether or not expressly stated. The Federal agencies agree to coordinate before incurring any new reimbursable expenditure in support of the USG Commitments.

In the event that Congress appropriates funds that require reimbursement by Bonneville for one of the specific USG Commitments identified in this document, and that type of reimbursement does not arise from BPA's current reimbursement obligations, then that reimbursed amount will count toward Bonneville's total $300M funding commitment.

- For the specific Bonneville funding commitments in this agreement, Bonneville will use the following approach to address inflation:

  - The $100M for fish restoration actions will be indexed for inflation based on the GDP Deflator published by the U.S. Bureau of Economic Analysis and will be further described in the associated funding agreement with Six Sovereigns.

  - Inflationary pressures on the $200M for LSRCP will be addressed on a project specific basis reflecting FWS' annual projected needs and will be further described in the associated funding agreement with FWS.

- ***OMB Crosscut Budget.*** OMB commits to developing a crosscut, all-of-government, budget that illustrates the Federal funding historically targeted toward Columbia River Basin salmon and steelhead protection and restoration efforts. This crosscut budget will be completed and shared with the regional sovereigns and other Regional Stakeholders, including the Six Sovereigns, by January 2024. This crosscut budget analysis will then help inform prospective annual budgeting and appropriations.

- ***Increased Funding in Support of Basin-Wide Restoration.*** In addition to the specific additional USG funding commitments herein, which will support centerpiece actions necessary for this basin-wide effort, and continuing Reclamation, Corps, and BPA funding for fish and wildlife accords, BPA intends to continue current funding for its Fish and Wildlife Program, subject to changed circumstances and/or legal requirements. The USG commits to thoroughly evaluate the potential options for increasing non-rate-payer fish restoration funding[13] in the Basin, taking into account the CBRI's recognition that at least a doubling of basin-wide funding is needed to make meaningful progress towards "healthy and abundant" salmon, steelhead, and other native fish rebuilding goals. This evaluation will include a thorough assessment of all available mechanisms without additional rate impacts, through a whole of government approach, including direct congressional requests; increased requests in future Presidential budgets; and other avenues as they may present themselves. This funding will support those actions that the USG and regional sovereigns (including the Six Sovereigns) agree are important, on top of the commitments already outlined in this document, for advancing the recovery of "healthy and abundant" Columbia Basin fisheries consistent with the Sept. 27, 2023 Presidential Memorandum, the NOAA Rebuilding Report, and the CBRI. The Six Sovereigns and

[13] For clarity, "fish restoration funding" is understood broadly to include funding for any and all actions that would support the restoration of healthy and abundant native fish and shellfish consistent with the Sept. 27, 2023 Presidential Memorandum, the NOAA Rebuilding Report, and the CBRI.

the USG will work together (and with other sovereigns as appropriate) to develop by June 30, 2024 a 10-year basin-wide suite of actions to meet this goal. Project proponents will coordinate actions taken under this commitment with relevant regional sovereigns as appropriate.

- ***Budget Workshop.*** As part of this work together, OMB will provide Federal budget information to the regional sovereigns, including the Six Sovereigns, to ensure that the regional sovereigns and the USG have a common understanding of applicable Federal processes, and are aligned on how the Administration's budgeting process works and on potential mechanisms available for potential future additional funding related to the goals of commitments already outlined in this document, for advancing the recovery of "healthy and abundant" Columbia Basin fisheries consistent with the Sept. 27, 2023 Presidential Memorandum, the NOAA Rebuilding Report, and the CBRI; delivering affordable and reliable clean power; and meeting the many resilience needs of stakeholders across the region.

Fisheries Management & Other Partnership Commitments

- ***Fish & Wildlife Mitigation Management Reforms.*** NOAA and FWS will work with the Six Sovereigns and all other relevant regional sovereigns, and seek collaboration with the NPCC, to consider management reforms to Columbia Basin fish and wildlife mitigation programs. The conversation will identify options for increased tribal and state co-management within the scope of existing legal authorities and coordination with Federal fisheries services, as well as any impediments and opportunities to maximize the beneficial impacts of available fish and wildlife funding. The conversation will be initiated no later than January 2024, and recommendations will be developed no later than September 2024.

- ***Fish & Wildlife Contracting Reforms*:**

    - The USG will work with the Six Sovereigns, and other regional fish and wildlife mitigation project implementers, and regional stakeholders as appropriate, to identify and implement fish and wildlife mitigation contract efficiencies and flexibilities in a manner that respects state and tribal fish and wildlife expertise regarding mitigation and restoration project implementation, subject to applicable Federal law. In support of this objective, Bonneville commits to near-term changes in support of the Six Sovereigns' autonomy over fish and wildlife actions by:

        - Bonneville agrees that the Six Sovereigns shall collectively and autonomously determine their priorities for the $100M over 10 years described above. Annual $10M payments of these funds will be made directly as described above, vs. through the traditional Bonneville procurement process.

        - In addition, Bonneville will initiate a pilot with the Six Sovereigns to expand the use of grant and multi-year agreements within the Six Sovereigns' portfolio of projects in Bonneville's Columbia Basin Fish and Wildlife Program as appropriate, based on the type of planned work. Implementation of the pilot will begin in FY25 and would replace eligible, current agreements as they expire. Bonneville estimates that roughly a third of the current Six Sovereign portfolio could be applicable for the pilot.

    - DOI (and other Federal agencies, as appropriate) will work with the tribal parties to explore opportunities for federal contracting reforms to support more appropriate Federal-Tribal

funding instruments and policies to better reflect the unique relationship that occurs when the Federal government provides funds to tribes working to mitigate historic impacts to their Treaty and trust resources.

- ***Continued Administration Engagement.*** The USG will continue to engage with the Six Sovereigns, and other regional sovereigns and stakeholders as appropriate, regarding the CBRI's recommendations, and will ensure that EOP staff and senior Administration officials are available to coordinate and lead these discussions on behalf of the USG. As the USG advances its commitments in response to the CBRI in partnership with the Six Sovereigns, EOP staff and senior Administration officials will act as the coordinating center for advancing the Administration's comprehensive strategy for the Columbia Basin.

Appendix A

DOE Energy Program Proposal: Advancing Tribal Energy Sovereignty in the Pacific Northwest

The Department of Energy (DOE) is committed to Tribal Energy Sovereignty in the Pacific Northwest (PNW). Policy decisions that assist in meeting regional and national climate change goals[14] are also important to recovery of ESA listed species., as the 2022 report by the National Oceanic and Atmospheric Administration (NOAA), "Rebuilding Interior Columbia Basin Salmon and Steelhead," notes, "The growing frequency and magnitude of climate change related environmental downturns will increasingly imperil many ESA-listed stocks in the Columbia River basin and amplify their extinction risk (Crozier et al. 2019, 2020, 2021).[i]"

To this end, DOE proposes funding and supporting a "PNW Tribal Energy Program" to provide technical assistance, planning, and funding (subject to appropriate DOE funding procedures) to the four Lower Columbia River Tribes[15] (the "LRTT's") to plan and develop clean, renewable, socially-just energy resources (to include distributed energy resources (including efficiency and demand response), other generation, storage, and transmission resources) in the region. DOE will work with LRTTs individually and collectively to support quantified goals for energy project development, presumed to be at least 1,000-3,000 MW of clean energy resources, and to determine the role LRTTs want to take with regard to various projects (e.g., individual or collective ownership, leasing, power procurement, etc.). This Pacific Northwest (PNW) Tribal Energy Program will run in parallel with ongoing DOE assistance and resources related to tribally supported projects that are under development outside of the PNW Tribal Energy Program and nothing in this USG commitment is intended to be exclusive to PNW Tribal Energy Program protects or limit resources to Tribally-supported projects that are not identified by a Tribe as part of the PNW Tribal Energy Program. As conceptualized, this PNW Tribal Energy Program will work in parallel with the regional energy planning process described below, to which DOE will also contribute funding and support, to help achieve the energy goals of the Pacific Northwest and facilitate Tribally-owned clean energy resources in the region.

DOE will draw on its ability to support this proposal and regional clean energy efforts by having a dedicated Project Manager that will coordinate with the LRTT's Tribal managers, DOE labs, and state energy managers. Additionally, DOE is uniquely situated to support Tribal and regional clean energy goals through the expertise and technical assistance programs available in its Grid Deployment (GDO), Energy Efficiency and Renewable Energy (EERE), Indian Energy Policies and Programs (IE), and Loan Programs (LPO) Offices, as well as the Pacific Northwest National Laboratory (PNNL), the National Renewable Energy Laboratory (NREL), and potentially other labs.

The specific scope and nature of the PNW Tribal Energy Program —for example, whether Tribal Nations prefer to work more collectively or individually, or where on the spectrum of long-term

[14] See Fifth National Climate Assessment, available at https://nca2023.globalchange.gov/.

[15] The Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation and the Nez Perce Tribe.

planning to specific project development they want to focus—will determine the best options for how DOE can support and structure it. This will also factor in to the timing of the Program's implementation. DOE will design the program of work in full partnership with the Tribes, which will be memorialized in writing and co-signed by Tribal and Department Leadership by the end of March 2024. After an agreed upon scope, a senior DOE official will be designated by Department Leadership to manage these efforts and work with Tribal energy counterparts to ensure the actualization of projects through the PNW Tribal Energy Program.

One form that this PNW Tribal Energy Program could take is described below, with two discrete but interrelated parts:

1. **Tribal Energy Sovereignty Resource Planning Process**

This process would be designed to meet the Tribes where they are and help them reach where they want to go. It would start with working with the Tribes to develop appropriate goals for the quantity and type of energy resources the Tribes choose to prioritize. This includes supporting long-term energy sovereignty visions that are already in development, as well as helping develop new plans for Tribal Nations that either do not have them or would like technical assistance in updating or advancing existing plans for clean energy, storage, energy efficiency, and transmission or grid reliability projects (e.g., microgrids).

This planning process and the regional energy needs planning process (below) would be funded by GDO and potentially EERE, IE, or the Office of Clean Energy Demonstrations. It would be executed by PNNL and NREL in collaboration with other regional experts.

Transmission, generation, and storage work – for both this Tribal Energy Sovereignty Resource Planning Process and the Supplemental Regional Energy Needs Planning Process (below) could be modeled in part on the PR100 and LA100 studies, in which the DOE leveraged its network of National Laboratories with advanced planning and modeling capabilities to serve as trusted unbiased conveners and coordinators among major energy stakeholders. With these studies, they performed engineering and economic analysis for Puerto Rico and for Los Angeles Department of Water and Power (LADWP) to identify multiple paths to achieve a 100 percent renewable and carbon-free grid. This work was led by NREL and involved PNNL and several other Labs. Another potential model for this approach is the EERE's Clean Energy to Communities program. DOE is committed to customizing a similar process for Tribal energy projects in the region.

The DOE will work with the Tribes to design a mechanism that permits them to create a portfolio of energy projects. This portfolio should be eligible for funding both by the TELGP (Tribal Energy Loan Guarantee Program) and additional funding sources, allowing tribes to route these finances through their established energy funds dedicated to supporting the portfolio.

Any (non-Tribal) projects funded by DOE will be required to develop Community Benefits Plans that include, among other elements, meaningful engagement with communities, including Tribes (and including Tribal consultation, consistent with Presidential Memorandum of November 30, 2022), and documented benefits for energy justice communities, including Tribes.

2. Tribal Energy Sovereignty Project Development

In addition to the collaborative development of a LRTT's goals for energy sovereignty and plans for meeting their goals, DOE proposes to work with the Tribes to advance energy projects (including, but not limited to, those resulting from planning processes). Development of these projects would be "parallel tracked" in that it would not wait for the regional energy planning process (other than perhaps for particular types of projects, e.g., where nature or location of projects is specific to the services provided by the LSR dams).

This would consist of:

Targeted technical assistance by DOE, its National Labs (specifically PNNL and NREL), and third-party experts to help advance project concepts through the development process. DOE would focus on how best the Tribes can take into account new project economics made possible by the tax credits in the IRA. This includes new direct-pay tax provisions, bonus investment and production tax credit incentives, and related policies, such as Federal preference for power from Tribal projects.

Accounting for Tribal energy projects as "replacement" power. In coordination with the Six Sovereigns, the USG and DOE will develop a means of "accounting" for the region's development of resources available to serve as "replacement"[16] energy services for the lower Snake River dams, based on the particular services needed in the event Congress authorizes dam breach. This accounting mechanism will be developed no later than February 1, 2024, to be coordinated with the regional energy needs planning process. This accounting mechanism will track the availability**,** as of the date of these commitments and beyond, of regional resources that can contribute to replacement of the dams' energy services. The Regional Energy Needs Planning Process described below, specifically its scenarios for regional clean energy development that include replacement power in the event Congress authorizes breach of the LSR dams, will identify portfolios of potential replacement resources (as well as energy resource options, e.g., storage, efficiency or transmission, that could enable greater grid management flexibility to manage the hydropower system for greater fish benefit, as well as reliability, affordability, decarbonization and other regional goals during the interim period before breach is authorized). The "accounting" approach would provide regular updates on the region's development of clean energy resources, including the type of resources needed to replace the specific energy services of the LSR dams, as compared to the portfolios identified in the energy analysis. The "accounting" approach will document the totality of clean energy development in the region, presumably including resources in development prior to and/or as of the time of signing of any agreement among the US Government and the Six Sovereigns.

DOE would also work with Tribes, if requested, to identify project structures, contracting, funding and transmission arrangements that could facilitate commercial development of energy services, such as generation, storage, demand response and transmission, that could contribute to replacement of energy services in the event Congress authorizes breach of the LSR dams. Of particular note may be the need for structuring near-term sale of power—to ensure near-term revenues and to improve the credit- worthiness of the projects and other economic benefits to

[16] Note that under BPA statutes, the term "replacement" has a specific statutory meaning (*see,* 16 USC 839a(10)(C); throughout this document, the terms "replacement" and "replacement power" are not intended to reference the statutory term.

LRTTs—while allowing for future sale of power to replace the energy services of the LSR dams. DOE would additionally work with the Tribes to explore options for speeding interconnection of projects to the transmission grid and making such connections cost-competitive, recognizing the interconnection is under the purview of grid operators and BPA's reforms to interconnection processes are addressed below. DOE would additionally work with the Tribes to fully explore legal and regulatory options for speeding interconnection of projects to the transmission grid.[17]

Targeted technical assistance to identify and develop funding strategies for projects. DOE would work with the Tribes to map specific projects on to all the present and future funding opportunities available to them within DOE and other Federal agencies (e.g., USDA and EPA programs), including those made possible by the Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law (BIL). Potential funding opportunities at DOE include but are not limited to—

- Grid resilience grant funding through the GDO provides $2.3 million in grants to modernize the electric grid, thereby reducing the consequences of disruptive events. Through this program, DOE will provide up to $459 million annually over five years to states and Tribes to help fund projects that modernize transmission systems and strengthen them against extreme weather and other hazards such as wildfires.

- Energy Efficiency and Conservation Block Grants from the Office of State and Community Energy Programs provides $5.5 million of formula and competitive grants that can assist Tribes in implementing strategies to reduce energy use and fossil fuel emissions and to improve energy efficiency.

- Electric Appliance Rebates from the Office of State and Community Energy Programs provides $225 million in formula grants to Tribes to administer rebates for installing efficient electric technology into low- and medium-income single- and multi-family homes.

- The Energy Improvement in Rural and Remote Areas program in the Office of Clean Energy Development provides $1 billion to support improving the resilience, reliability, and affordability of energy systems in rural and remote areas.

- The Loan Programs Office has $20 billion to lend to Tribes for energy investments (see below for more information).

Partnering with DOE's Loan Programs Office (LPO) to specifically scope, develop, and fund projects or package of projects that will benefit from the $20 billion available through the Tribal Energy Loan Guarantee Program. This is one of the only non-competitive programs at DOE that can invest in or fund project development, and DOE has recently gotten Congress to make several key changes to the program that make it far more accessible to Tribal Nations than in prior years. This low-cost capital, combined with the direct-pay tax credit option, makes ownership of energy infrastructure easier for a greater number of Tribes. Direct pay functionally reduces the overall cost of the energy project by allowing Tribal governments and other entities exempt from income tax to receive a direct payment from the IRS in lieu of a clean energy tax credit. While not a grant, the combination of a loan with direct pay functions similar to a grant.

[17] BPA must follow its Open Access transmission tariff which imposes non-discriminatory terms and conditions

Tribes are able to use a loan from the Tribal Energy Loan Guarantee Program for a broad range of technologies and uses, including solar and wind generation, energy storage, and hydrogen conversion for community and commercial use. Tribes can apply independently or in co-ownership arrangements to develop projects on and off Tribal lands. LPO, in conjunction with other DOE Offices, would offer support to help plan, scope, and develop larger-scale clean energy, storage, and/or transmission projects that could be jointly owned by multiple tribes for this program, which specifically looks to cultivate projects or packages of projects that are eligible.

Additional Implementation Details for the PNW Tribal Energy Program Proposal

Funding. The Tribal Energy Sovereignty Resource Planning Process and the Regional Energy Needs Planning Process would be funded by GDO and potentially EERE, IE, or the Office of Clean Energy Demonstrations. The exact funding amount would be determined in further discussion and scoping with the Tribes and states.

DOE Program Leads. As stated above, DOE would designate a Project Manager to oversee this proposal. The Tribal Energy Sovereignty Resource Planning Process and the Regional Energy Needs Planning Process would be executed by PNNL and NREL in collaboration with other regional experts. Transmission assessment and planning work would be led by GDO and be based on the National Transmission Needs Study, the National Transmission Planning Study, and the West Coast Offshore Wind Transmission Study.

If the Tribes choose to pursue the Tribal Energy Sovereignty long-term planning process along the lines of the work done under an MOU between the Secretary of Energy and the Navajo and Hopi Nations (see below), the Office of Indian Energy Policies and Programs would likely guide that process.

Memorandum of Understanding. DOE proposes defining and further guiding the direction of this PNW Tribal Energy Program Proposal through the co-development of an MOU. This MOU could be modeled on the MOU signed by Secretary of Energy Jennifer Granholm and Navajo Nation President in December 2022. The Navajo Nation MOU provides a framework for collaboration among the Navajo Nation, DOE, and other Federal agencies to define and energy vision and plan, including scoping specific energy transition and economic diversification projects that can take advantage of the BIL and IRA competitive funding and other opportunities. To date, the work has resulted in over 30 identified projects to pursue and included interagency participation from USDA, DOT, EPA, DOI and others. The program reports that under this project, Tribal government leadership, Tribal staff, Tribal enterprises, Tribal colleges, non- profits and community members have worked together towards goals of Nation and communicated in the same room.

Sub-Appendix: Relevant Programs in Other Federal Agencies

Through the PNW Tribal Energy Program, DOE would work with other Federal agencies to identify prospective funding opportunities that would help fund Tribal projects. Examples of these other Federal programs are below.

U.S. Department of Agriculture (USDA)

As stated in the USG commitments above, the USDA is dedicated to supporting Tribally-owned clean energy projects through the Powering Affordable Clean Energy (PACE) Program and Rural Energy for America Program (REAP).

The Rural Energy for America Program (REAP) offers grants and guaranteed loans to agricultural producers and small businesses, including Tribes and Tribal businesses, in rural areas**.** REAP funds can be used for Tribally-owned renewable energy systems or energy-efficient infrastructure upgrades and provide grants for up to 50 percent of the total project costs for Tribes. Grants for clean energy and energy efficiency projects can be anywhere from $1,500 to $1 million in size. USDA is prepared to provide technical assistance support to the Columbia River Basin Tribes with the goal of identifying and putting together applications for at least 10 REAP projects in the region. This assistance could be provided through the new FY 2023 competitive REAP Technical Assistance Grant (TAG) program. TAG grants can cover 100 percent of the costs of conducting energy assessments and audits and planning, building, and developing those projects. Alternatively, the Tribes could choose an entity to provide them with this technical support, and USDA can enter a cooperative agreement with that organization to complete their REAP projects.

Environmental Protection Agency (EPA)

The Solar for All grant competition makes available $7 billion to expand the number of low-income and disadvantaged communities primed for residential solar investment. It will award up to 60 grants to states, territories, Tribal governments, municipalities, and eligible non-profits to create and expand low- income solar programs. These programs will provide financing and technical assistance to enable low- income and disadvantaged communities to deploy and benefit from residential solar. Tribes and Intertribal Consortia will need to submit a Notice of Intent (NOI) by August 28, 2023 to eligible to apply.

The National Clean Investment Fund has $14 billion to provide grants to 2–3 national non-profit clean financing institutions or green banks capable of partnering with the private sector to provide accessible, affordable financing for tens of thousands of clean technology projects across the country. Grantees will be required to use at least 40 percent of grant funds for the purposes of providing financial assistance in low-income and disadvantaged communities, including geographic areas within Tribal lands. While Tribes will not be direct recipients of these grants, they will be able to access this low-cost financing system to support the buildout of clean energy.

The Clean Communities Investment Accelerator competition will provide grants to 2–7 hub non-profits that will, in turn, deliver funding and technical assistance to build the clean financing capacity of local community lenders working in low-income and disadvantaged communities—so that underinvested communities have the capital they need to deploy clean technology projects. These community lenders could include community development financial institutions (including Certified Native CDFIs), credit unions, green banks, housing finance agencies, minority depository institutions, and other types of lenders. This competition will require each grantee to expend 100

percent of funds for the purposes of providing financial and technical assistance in low-income and disadvantaged communities, including geographic areas within Tribal lands. While Tribes will not be direct recipients of these grants, they will be able to access this low-cost financing system to support the build out of clean energy.

Department of Interior (DOI)

The Tribal Electrification Program received $145 million in the IRA. This is a new program focused on electrifying Tribal homes and may include funding for the deployment of microgrids on Tribal lands.

DOE Energy Program Proposal: Regional Energy Needs Planning Process

DOE will jointly fund with Washington, and co-convene with LRTTs and states, a regional analysis- and stakeholder engagement-based planning process designed to advance the resource development and infrastructure investment (in generation, transmission, storage, efficiency, and demand response resources, including distributed resources) that will be required to meet the region's economy-wide decarbonization and resource adequacy requirements and goals. The process will develop one or more scenarios for potential combinations of specific resources capable of replacing the energy services of the LSR dams in the context of meeting the region's decarbonization goals in the event Congress authorizes power replacement and breach of the dams. This regional planning process is a key component to accelerating the regional infrastructure investment and buildout necessary to both meet regional decarbonization goals and to identify the combination of projects that would meet regional energy needs if Congress authorizes dam breach.

This regional analysis will be a collaboration among the U.S. Government, Tribes, States, and other key regional stakeholders (e.g., significant transmission owners and operators, utilities, clean energy developers, and NGOs). The process will be co-convened by Washington and Oregon, Tribes, and DOE. PNNL and potentially other DOE National Labs will lead the technical analysis and will partner with BPA, the Northwest Power and Conservation Council, States, and Tribes, and engage with key stakeholder.[18] **DOE will seek to support adding Tribal capacity for expert engagement in this process, and will explore pathways to doing so.**

The process would focus in particular on identifying medium- and long-term transmission and grid infrastructure needs and will also develop a more granular assessment of which resources in which locations, including distributed energy resources, can best meet the region's goals, while taking account of, and assessing where appropriate, other regional energy issues such as regional market formation. It would identify candidates for clean, non-emitting firm (flexible, dispatchable) resources (e.g., geothermal, long-duration storage).

Additionally, DOE will develop a detailed plan to provide targeted technical assistance, if requested, for planning and financing options for BPA customer utilities to develop new, clean energy resources and transmission.

Accounting for "replacement" power. In coordination with the Six Sovereigns, the USG and DOE will develop a means of "accounting" for the region's development of resources available to serve as

[18] This may include engagement with utilities, transmission owners and operators, clean energy developers, and/or nongovernmental organizations.

"replacement" energy services for the lower Snake River dams, based on the particular services needed in the event Congress authorizes dam breach. This accounting mechanism will be developed no later than February 1, 2024, to be coordinated with the regional energy needs planning process. This accounting mechanism will track the availability, as of the date of these commitments and beyond, of regional resources that can contribute to replacement of the dams' energy services. The Regional Energy Needs Planning Process, specifically its scenarios for regional clean energy development that include replacement power in the event Congress authorizes breach of the LSR dams, will identify portfolios of potential replacement resources (as well as new energy resource options, e.g., storage, efficiency, or transmission, that could enable greater grid management flexibility to manage the hydropower system for greater fish benefit, as well as reliability, affordability, decarbonization and other regional goals during the interim period before breach is authorized). The "accounting" approach would provide regular updates on the region's development of clean energy resources, including the type of resources needed to replace the specific energy services of the LSR dams, as compared to the portfolios identified in the energy analysis.

1. Bonneville Power Administration Work to Accelerate Clean Energy Build-Out

In accordance with the Presidential Memorandum dated September 27, 2023 entitled Restoring Healthy and Abundant Salmon, Steelhead, and Other Native Fish Populations in the Columbia River Basin, the following commitments describe initial steps the Bonneville Power Administration and the Department of Energy will take to contribute to the goals of this agreement and the Memorandum. DOE would continue to support the Bonneville Power Administration (BPA)'s ongoing efforts to update and modernize policies and practices to enable its customers and the region to access the benefits of affordable, reliable clean energy. BPA's actions, including but not limited to the provider of choice contract policy and contracts and BPA's resource acquisition planning processes and decisions, including decisions around augmenting the amount of power sold at Tier 1 rates, will account for changes in load, new clean energy generation and transmission needs, and changing hydropower system conditions, consistent with the Presidential Memorandum as well as the Northwest Power Act and other law. This would include, but is not limited to:

- Prioritizing the acquisition of cost-effective energy efficiency and considering demand response resources, consistent with the Northwest Power Act and, as appropriate, the Northwest Power and Conservation Council's Power Plan and updates to it, and to explore, along with the Council via the regional energy planning process, ways to better take advantage of demand-side resource potential;

- Continuing BPA's recently announced transmission buildout[19] using its recently increased borrowing authority and continuing to explore additional near-term transmission projects for potential use of its borrowing authority as appropriate, and looking to the regional planning process described above and to the Western Power Pool Process described below to consider and pursue where appropriate additional medium- and long-term transmission development to help the region meet transmission needs, consistent with its legal authority. BPA has led the initiation of a regional process, and will continue to participate in the process led by the Western Power Pool, to build consensus among transmission stakeholders on infrastructure priorities as well as on timelines and responsibilities for development.

[19] Subject to NEPA and other applicable laws.

- Continuing to advance reforms to BPA's interconnection processes to more efficiently enable new clean energy generation to gain access to the transmission system, aiming to significantly speed the interconnection process and identifying tools and means for more efficient use of existing transmission;

- Consistent with its statutory and other legal requirements and authorities: (1) as part of energy needs assessment planning processes (including considering the regional energy needs planning process) and subsequent necessary resource acquisition, BPA will consider acquisition of new clean energy resources in the region as well as new clean energy resources developed by BPA customer utilities; and (2) BPA will seek to support customer utilities meeting load growth and new and emerging needs. DOE will provide technical assistance to help address barriers to development and acquisition of clean energy resources to help meet state policy goals.

- Nothing in BPA's contract for sales of power shall limit the Administrator's authority to acquire power consistent with the NWPA, including "replacement power" as defined in this document, in the event any Federal resources become unavailable.

- When considering resource acquisitions necessary to meet the Administration's obligations, BPA shall consider purchases of power generated by Tribally-owned or -sponsored power resources, as appropriate, consistent with the Tribal Preference Authority, which allows Federal agencies to prioritize purchasing Tribally-owned energy.

Appendix B

COLUMBIA RIVER SYSTEM OPERATIONS: *2024-2033*

SPRING SPILL OPERATIONS

	Operation (2024–2033)	**Implementation Comments**
Season	**4/3 to 6/20**	
Lower Granite (LWG)	125% TDG Gas Cap (or 40% when adult passage delays are detected)[20]	See adult delay protocol below.
Little Goose (LGS)	125% TDG gas cap spill for 24 hours (to adult criteria), no flexible spill;[21] 125% TDG gas cap spill for 16 hours, 30% for 8 hours	Maintain similar implementation language from 2023 FOP with operational flexibility of target timeframes to reduce spill for adult passage during lack of load conditions. LGS operations at 30% for 8 hours during daytime hours will be prioritized if adult delays occur at LWG or LMN and lack of load conditions exist (like 2023 FOP).
Lower Monumental (LMN)	125% TDG Gas Cap (or 40% when adult passage delays are detected)	See adult delay protocol below.
Ice Harbor (IHR)	125% TDG gas cap spill for 24 hours	Like operations implemented in 2023.
Season	**4/10 to 6/15**	
McNary (MCN)	125% TDG gas cap spill for 24 hours Maintain current minimum generation range of 50-60 kcfs for transmission services; powerhouse outflows may increase up to 80 kcfs for reserves (without a spill variance)	Increased powerhouse generation allowances will allow for additional generation to be brought on-line for the purpose of providing real-time operators greater access to reserve capacity prior to requiring variance tracking or declarations of power system emergency. As needed, these ranges will be utilized under low flow conditions (e.g., minimum generation and spill the rest) and when flexibility elsewhere has been maximized.

[20] The agencies will use the current Columbia River DART's Reach Distribution and Delay for PIT Tag Adult Returns tool ("DART tool") to identify adult delays and passage issues.

[21] LGS Adult Criteria: Within 1 business day of when the earliest of the following conditions occurs: (1) a cumulative total of 25 adult spring Chinook salmon (not including jacks) pass Lower Monumental Dam; or (2) a cumulative total of 50 adult spring Chinook salmon (not including jacks) pass Ice Harbor Dam; or (3) April 24, 2024. See 2023 FOP.

John Day (JDA)	Spill during daytime hours 40% and increased spill up to 125% TDG gas cap spill during nighttime hours (following 2023 FPP JDA-5 table where nighttime hours defined and generally between 2200 and 0600)	Increased powerhouse generation allowances will allow for additional generation to be brought on-line for the purpose of providing real-time operators greater access to reserve capacity prior to requiring variance tracking or declarations of power system emergency. As needed, these ranges will be utilized under low flow conditions (e.g., minimum generation and spill the rest) and when flexibility elsewhere has been maximized.

	Daytime hourly spill target of 40% river flows with ±5% variance of river flows for balancing reserves, consistent with current spill variance tolerance calculations The Corps sets JDA spill caps to maximize spill, up to 125% TDG in the tailwater of JDA and TDA and to maintain TDA spill at 40% Maintain current minimum generation range of 50-60 kcfs for transmission services; powerhouse outflows may increase up to 80 kcfs for reserves (without a spill variance)	
The Dalles (TDA)	40% for 24 hours Allocation of reserves may result in spill above 40% of river flows; maintain current minimum generation range of 50-60 kcfs for Transmission services	Like operations implemented in 2023.
Bonneville (BON)	125% TDG gas cap spill for 24 hours (150 kcfs cap) Maintain current minimum generation range of 30-40 kcfs for Transmission services; powerhouse outflows may increase up to 60 kcfs for reserves (without a spill variance)	Increased powerhouse generation allowances will allow for additional generation to be brought on-line for the purpose of providing real-time operators greater access to reserve capacity prior to requiring variance tracking or declarations of power system emergency. As needed, these ranges will be utilized under low flow conditions (e.g., minimum generation and spill the rest) and when flexibility elsewhere has been maximized.

Reserves: Spill reductions to maintain reliability will continue to be implemented as described in the Fish Passage Plan and when powerhouse flows exceed the ranges proposed above by the USG at each of the lower Columbia River projects, spill variances will be reported.

SUMMER SPILL OPERATIONS

	Operation (2024–2033)	Implementation Comments
Season	**6/21 to 7/31** **8/1 to 8/31**	
Lower Granite (LWG)	18 kcfs SW flow (as river flow allows)	Reducing summer spill flows on August 1 from 18 kcfs to SW flow (as river flow allows)
Little Goose (LGS)	30% SW flow or 7 kcfs spill	Reducing summer spill flows on August 1 from 30% to SW flow (or 7 kcfs spill)
Lower Monumental (LMN)	17 kcfs SW flow or 8 kcfs spill	Reducing summer spill flows on August 1 from 17 kcfs to SW flow (or 8 kcfs spill)
Ice Harbor (IHR)	30% SW flow or 9 kcfs spill	Reducing summer spill flows on August 1 from 30% to SW flow (or 9 kcfs spill)
Season	**6/16 to 7/31** **8/1 to 8/31**	
McNary (MCN)	57% 20 kcfs	Reducing summer spill flows on 8/1 57% to 20 kcfs Like spring operations, increased powerhouse generation allowances will allow for additional generation to be brought on-line for the purpose of providing real-time operators greater access to reserve capacity prior to requiring variance tracking or declarations of power system emergency. As needed, these ranges will be utilized under low flow conditions (e.g., minimum generation and spill the rest) and when flexibility elsewhere has been maximized. USG will release 57% of river flows based on previous days average flow to minimize gate changes until spill gate/crane repairs are complete.
John Day (JDA)	Daytime spill hourly target average of 35% river flows with ±5% variance of river flows for balancing reserves, consistent with current spill variance tolerance calculations 20 kcfs	Reducing summer spill flows on 8/1 35% to 20 kcfs. Hourly spill of 35% with range of ±5% for reserves (without spill variance).

The Dalles (TDA)	40% 30%	Reducing summer spill flows on August 1 40% to 30%. Provide a target spill of 40% (or 30% in late summer) with range of ±5% for reserves.
Bonneville (BON)	95 kcfs 50 kcfs	Reducing summer spill flows on August 1 from 95 kcfs to 50 kcfs.

FALL/WINTER SPILL OPERATIONS

	Operation (2024–2033)	**Implementation Comments**
Season	**9/1 to 11/15, 3/1 to 3/20** **3/21 to 4/2**	
Lower Granite (LWG)	Surface weir (SW) spill 7 days per week, for 4 hours (9/1 to 11/15, 3/1 to 3/20) SW spill 24 hours (3/21 to 4/2)	
Little Goose (LGS)	SW spill 7 days per week, for 4 hours (9/1 to 11/15, 3/1 to 3/20) SW spill 24 hours (3/21 to 4/2)	
Lower Monumental (LMN)	SW spill 7 days per week, for 4 hours (9/1 to 11/15, 3/1 to 3/20) SW spill 24 hours (3/21 to 4/2)	
Ice Harbor (IHR)	SW spill 7 days per week, for 4 hours (9/1 to 11/15, 3/1 to 3/20) SW spill 24 hours (3/21 to 4/2)	
Season	**9/1 to 11/15, 3/1 to 3/20** **3/21 to 4/9**	
McNary (MCN)	1 SW spill 7 days per week, for 4 hours (9/1 to 11/15, 3/1 to 3/20) 1 SW spill 24 hours (3/21 to 4/9)	
John Day (JDA)	No surface spill in fall-winter, except for 1 SW spill 24 hours (3/21 to 4/9 *only*)	Overshoot monitoring at JDA should continue to inform potential adaptive management. Not implementable to open and close SW daily.

The Dalles (TDA)	ITS 24/7 spill of ~3-5 kcfs spill from 3/1 to 12/15; continue adult ladder spill	
Bonneville (BON)	B2CC (like 2023 coordinated spring operation); ITS full year for 24 hours	Codify recent changes to BON made through regional processes; addressing surface passage 24/7 for 365, including work with regional sovereigns to address issues and concerns on B2CC.

Additional Information/Explanation — No change to fall-winter operations at JDA, TDA or BON.

RESERVOIR ELEVATIONS

	Operation (2024–2033)	**Implementation Comments**
Season	**4/3 to 8/14 (LGS, LMN, IHR)** **4/3 to 8/31 (LWG)**	**No change to operations at LGS, LMN, and IHR**
Lower Granite (LWG)	733-734.5’	Will operate at MOP with a 1.5 foot forebay operating range and a 1.0 foot range to the extent possible (referred to operationally as a “soft constraint).
Little Goose (LGS)	633-634.5’	See LWG explanation
Lower Monumental (LMN)	537-538.5’	See LWG explanation
Ice Harbor (IHR)	437-438.5’	See LWG explanation
Season	**4/3 to 8/14**	No change to operations at MCN, JDA, TDA and BON.
McNary (MCN)	337-340’	

John Day (JDA)	262-266.5 (3/1-3/14) 262.5-266.5 (3/15-4/9) 264.5-266.5 (4/10-6/1) 262.5-266.5 (6/2-6/14) 262.5-264.5 (6/15-8/31)	
The Dalles (TDA)	157-160'	
Bonneville (BON)	71.5-76.5'	

MISCELLANEOUS

Miscellaneous	**USG Operation (2024–2033)**
Zero Generation.	Continue 2023 Operations

Adult Migration Delay Protocol for Spring Spill Operations at Lower Granite and Lower Monumental projects

Lower Granite and/or Lower Monumental daytime spill levels will be decreased to 40% for 8 hours per day when adult delay or passage issues are observed at both/either of these projects. An adult delay or passage issue occurs when the following three criteria are met: (1) *fewer than* 50% of the daily cohort of PIT tagged adult spring/summer Snake River Chinook detected at the downstream project (i.e., Ice Harbor or Little Goose dams) arrive at the upstream project (i.e., Lower Monumental or Lower Granite dams) within 3 days and this pattern persists for 3 consecutive days,[22] (2) a running 3-day minimum of 7 PIT tagged adult spring/summer Snake River Chinook salmon are detected at the downstream projects,[23] and (3) if the upstream dam's average outflow was below 160 kcfs each day of the delay.

If all three criteria are met, the Corps will implement a 40% daytime spill operation (adult daytime spill operation) and continue for 3 consecutive days. Information on the three criteria

[22] The return to 125% TDG spill 24/7 will be triggered if 50 percent or more of the running 3-day cohort for the most recent day (e.g., day 3 of adult daytime spill) is detected at the upstream dam. The agencies will use Columbia River DART's Reach Distribution and Delay for PIT Tag Adult Returns tool for this purpose.

[23]The agencies will use the current Columbia River DART's Reach Distribution and Delay for PIT Tag Adult Returns tool ("Running 3-day DART tool") to determine if criteria one and two have been met. See top panel, in- season graphics of Cumulative Arrival Percent by Days in Route to Lower Granite or Lower Monumental dams. https://www.cbr.washington.edu/dart/query/pitadult_reachdist

would be available on day 4 and the adult daytime spill operation would begin the following business day (day 5) with a targeted start time between 0400-0800 if feasible.

Assuming *greater than* 50% of the daily cohort of PIT tagged adults arrive at the upstream project by day 3 (information available on day 4),[19] then standard operations (125% TDG spill 24/7) would be reinstated the following business day (day 5). If greater than 50% of the daily cohort does NOT arrive at the upstream project by day 3 and project average flow was below 160 kcfs, adult daytime spill operations would continue an additional day, and would be evaluated again the following day as previously described. This would continue until the adult delay or passage issue has been resolved and the standard operations can be reinstated as described.

The Technical Management Team may consider in-season deviations from these criteria if unforeseen factors are reasonably expected to cause substantial delay (e.g., lack of load conditions, priority turbine unit outages, etc) and the Fish Passage Operations and Maintenance Committee may consider refinements to these triggers following each spring spill season.

Additional Information and Studies—Operations are supplemented with the following studies, which helps inform the risks inherent in modifying operations in ways that have not previously occurred (or been studied):

- Develop, fund, and implement adult active tag study(ies) no later than 2025 to evaluate the causal mechanism and inform adaptive management of adult passage delays under changing spill and flow conditions (e.g., passage delays, depths at fishway entrances, etc.). Study designs will be collaboratively developed in the Studies Review Work Group (SRWG) regional forum.

- Develop, fund, and implement active tag study(ies), no later than 2025, to evaluate juvenile migration through different passage routes under changing spill and flow conditions. Study designs will be collaboratively developed in the Studies Review Work Group (SRWG) regional forum.

- Develop, fund, and implement studies to improve PIT tag detection capabilities to evaluate long-term efficiency of operations at the LSR and LCR projects. These studies and proposals will focus on (1) designing and installing a spillway detector in one of the surface passage route spillbays at McNary Dam; (2) designing and installing a system to detect fish passing via the spillway at Bonneville Dam; and (3) designing and implementing efforts to improve PIT tag detections in the estuary. Study designs will be collaboratively developed in the Studies Review Work Group (SRWG) regional forum.

- Develop, fund, and implement, no later than 2025, collaboratively developed studies to evaluate depth and downstream profile of TDG/GBT impacts, including estimating population-level impacts for non-salmonid resident species (sculpin, lamprey ammocoetes, native mussels).

- Conduct ERDC modeling of alternative/modified McNary spill patterns prior to start of spring spill operations of 2025.

- Washington and Oregon water quality agencies, under their existing delegated authority from EPA and consistent with Clean Water Act monitoring requirements, will continue to regulate total dissolved gas levels in the lower Snake and Columbia rivers. If the USG identifies additional concerns with TDG impacts to native aquatic species, the USG will continue to notify and coordinate with the Six Sovereigns, F&W managers, and the state water quality agencies to identify actions, including monitoring methodologies, sampling locations, and triggers for changes to lower Columbia and LSR dam operations, necessary to protect these aquatic species.