

**2018 EXTENSION OF THE 2008 COLUMBIA RIVER FISH  
ACCORDS MEMORANDUM OF AGREEMENT AMONG THE  
CONFEDERATED TRIBES OF THE COLVILLE  
RESERVATION, BONNEVILLE POWER ADMINISTRATION,  
U.S. ARMY CORPS OF ENGINEERS, AND U.S. BUREAU OF  
RECLAMATION**

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**2018 EXTENSION OF THE 2008 COLUMBIA RIVER FISH ACCORDS MEMORANDUM OF AGREEMENT AMONG THE CONFEDERATED TRIBES OF THE COLVILLE RESERVATION, BONNEVILLE POWER ADMINISTRATION, U.S. ARMY CORPS OF ENGINEERS, AND U.S. BUREAU OF RECLAMATION**

**I. INTRODUCTION**

This 2018 Extension and Restatement of the 2008 Memorandum of Agreement (“**Extension**”) updates and extends the 2008 Columbia Basin Fish Accords Memorandum of Agreement (“**2008 Agreement**”) developed through good faith negotiations by the Bonneville Power Administration (“**Bonneville**”), the U.S. Army Corps of Engineers (“**Corps**”) and the U.S. Bureau of Reclamation (“**Reclamation**”) (together the “**Action Agencies**”) and the Confederated Tribes of the Colville Reservation (“**Colville Tribes**”).<sup>1</sup> Collectively the Colville Tribes and the Action Agencies are “**the Parties**” to this Extension.

This Extension continues to address direct and indirect effects of construction, inundation, operation, and maintenance of the fourteen federal multiple purpose dam and reservoir projects in the Federal Columbia River Power System that are operated by the Action Agencies as a coordinated water management system for multiple congressionally authorized public purposes and referred to as the **Columbia River System**,<sup>2</sup> as well as Reclamation’s Upper Snake River Projects on fish and some wildlife resources of the Columbia River Basin. The Action Agencies and the Colville Tribes intend that this Extension, as with the 2008 Agreement, will provide benefits to all the Parties.

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<sup>1</sup> The Colville Tribes are comprised of 12 constituent tribes with aboriginal territory, rights, and interests which extend throughout much of north-central and southeastern Washington and south-central British Columbia. Although the Colville Tribes’ current land base, including the Colville Reservation, is located in the upper Columbia and Okanogan River basins, the Tribes’ rights and interests extend to all of their traditional territories and the natural resources found in those areas.

<sup>2</sup> For purposes of this Accord extension, the Columbia River System is comprised of 14 Federal multipurpose dam and reservoir projects operated as a coordinated water management system, and the Upper Snake River Projects. The 12 projects operated and maintained by the Corps are: Bonneville Dam, The Dalles, John Day, McNary, Chief Joseph, Albeni Falls, Libby, Ice Harbor, Lower Monumental, Little Goose, Lower Granite, and Dworshak dams. Reclamation operates and maintains the Hungry Horse Project; the Columbia Basin Project, which includes Grand Coulee Dam; and the Upper Snake River Projects which are Minidoka, Palisades, Michaud Flats, Ririe, Little Wood River, Boise, Lucky Peak, Mann Creek, Owyhee, Vale, Burnt River and Baker.

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The Parties’ purposes for this Extension, like the 2008 Agreement, include, among others,

- To address the Parties’ mutual concerns for certainty and stability in the funding and implementation of projects for the benefit of fish and wildlife affected by the Columbia River System;
- To foster a cooperative relationship and partnership in implementation of the mutual commitments in the 2008 Agreement and this Extension; and
- To resolve issues between the Parties regarding the Action Agencies’ compliance with certain laws applicable to the Columbia River System for the duration of this Extension.

As in the 2008 Agreement, with this Extension the Action Agencies provide long-term commitments for funding and implementation activities to support the protection and recovery of salmon and steelhead listed under the Endangered Species Act (“**ESA**”), in a manner that recognizes the Colville Tribes as a governmental partner in the pursuit of protection and recovery of Upper Columbia listed evolutionarily significant units.

Accomplishments realized from the Parties’ pursuit of these purposes during the initial term of the 2008 Agreement are summarized in Section II, below. Based on those accomplishments and the purposes stated above, the Parties want to extend the 2008 Agreement to continue the commitments they made to each other in 2008. This Extension updates and modernizes certain provisions to reflect the evolution of the environmental, legal, and economic context of the Columbia River System’s operations and impacts, and also the status and focus of the Colville Tribes’ resource restoration, protection and enhancement projects, including the Colville Tribes’ artificial production projects.

This Extension is intended to further the purposes of the Pacific Northwest Electric Power Planning and Conservation Act (“**Northwest Power Act**”),<sup>3</sup> including its assurance to the Pacific Northwest of an adequate, efficient, economical, and reliable power supply as well as its commitments to protect, mitigate and enhance the fish and wildlife, including related spawning grounds and habitat, of the Columbia River and its tributaries that have been affected by the Columbia River System development and operations. This Extension helps provide a means to achieve the overall balance between fish and wildlife, power, and other project purposes for which the Northwest Power Act makes the Action Agencies responsible.

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<sup>3</sup> See 16 U.S.C. § 839b(h)(6)(E) (mandating “improved survival” at the Columbia River System dams and “flows of sufficient quality and quantity . . . to improve production, migration, and survival of such fish as necessary to meet sound biological objectives”).

This Extension builds on the foundation of the partnership and mutual commitments developed by the Parties during the term of the 2008 Agreement. This Extension reflects the Parties' intention to continue the productive and proven approach to alignment and project implementation for fish and wildlife mitigation while reasonably accounting for ongoing legal, financial, and operational uncertainties confronting the Action Agencies.

Due to developments in the energy market and increased spring operations such as those following the 2018 order of the U.S. District Court of Oregon, Bonneville expects reductions in its near-term revenue. For Bonneville, this Extension is part of its approach to improved cost management of the Bonneville Fish and Wildlife Program.

The provisions in the 2008 Agreement that are unchanged and remain effective under this Extension are listed in **Attachment B: Provisions from the 2008 Agreement that Remain in Effect**.

## **II. ACCOMPLISHMENTS UNDER THE 2008 AGREEMENT**

The 2008 Agreement contains commitments related to Columbia River System operations and funding of certain tribally sponsored fish and wildlife habitat protection and enhancement projects and fish production facility construction and operation. The 2008 Agreement promotes meaningful tribal participation and alignment among the Parties in decision-making about system operations, performance, adaptive management, spill and transport operations, and flow management in a manner consistent with tribal sovereign interests in fisheries management and general federal trust obligations.

On the strength of 2008 Agreement commitments, the Colville Tribes have implemented projects that protect, restore, and improve tributary fish habitat essential to the survival and recovery of ESA-listed salmonids and benefit other species throughout the Columbia Basin. Furthermore, both the habitat projects and the tribal fish production facilities supported by the 2008 Agreement are addressing federal responsibilities and developing management strategies for mitigation of Columbia River System impacts to non-listed species, including lamprey, sturgeon, and wildlife.

### ***A. RESULTS OF THE OVERHAUL OF THE COLUMBIA RIVER SYSTEM***

The Action Agencies have overhauled the Columbia River System to protect, mitigate, and enhance fish and wildlife, to ensure system operations are not likely to jeopardize ESA-listed species or destroy or adversely modify their designated critical habitat, and to contribute to the

conservation of listed species. System improvements also successfully addressed the broad anadromous fish mandates in the Northwest Power Act. Together with changes to fisheries management, the following improvements have contributed to a contemporary record return of 2.4 million adult salmon and steelhead past Bonneville Dam in 2014.<sup>4</sup>

- **Juvenile fish passage survival** at the eight lower Columbia and Snake river Columbia River System dams for spring and summer migrants now meets or exceeds juvenile dam passage survival performance standards of 96% and 93% respectively.<sup>5</sup>
- **Travel time improved** for yearling Chinook and juvenile steelhead through the hydrosystem through the combination of spill and spillway weirs and other surface passage routes, even in low flow years such as 2015.<sup>6</sup>
- **Total In-River survival** has improved for migrating juvenile salmon and steelhead. Comparing two time periods reported in National Oceanic and Atmospheric Administration (“NOAA”) Fisheries’ reach study<sup>7</sup>, (1997-2007 and 2008 – 2016 for Snake River species and 1999-2007 and 2008-2017 for Upper Columbia River (“UCR”) species), for Snake River species there has been a 10% survival increase for hatchery and wild sockeye salmon, a 2% increase in hatchery and wild Chinook (4% for wild), and a 25% survival increase for hatchery and wild steelhead (13% for wild) and for UCR species there has been an increase in the geometric mean survival of hatchery origin yearling Chinook (7.5%) and steelhead (2.7%).
- **For Pacific lamprey, the Corps accomplished the following during the last 10 years:**
  - Implemented fish ladder improvements at all eight lower Columbia and Snake River dams, including two ladder entrance modifications and two prototype bypass flumes that are still being evaluated;

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<sup>4</sup>The 2014 returns were five times higher than the 471,119 salmonids that passed Bonneville Dam in 1938 when it was completed. Data for 1938 adult salmonid returns is available from the Fish Passage Center’s website [http://www.fpc.org/environment/fcounts.asp?fr\\_cdy=1938&fr\\_cdm=1&fr\\_cdd=1&to\\_cdm=12&to\\_cdd=31&prj=BON&subbtn=salmon&op=runsum](http://www.fpc.org/environment/fcounts.asp?fr_cdy=1938&fr_cdm=1&fr_cdd=1&to_cdm=12&to_cdd=31&prj=BON&subbtn=salmon&op=runsum)

Contemporary salmonid return numbers reported in *Endangered Species Act Federal Columbia River Power System 2016 Comprehensive Evaluation*—Section 1 at page 5 (Jan. 2017) (hereinafter 2016 Comprehensive Evaluation).

<sup>5</sup> 2016 Comprehensive Evaluation at page 4. When Congress passed the Northwest Power Act the estimated average juvenile mortality at each dam was 15-20% with losses recorded as high as 30%. See *NW Res. Info. Center v. NW Power Planning Council*, 35 F.3 1371, 1374 (9<sup>th</sup>. Cir. 1994) (citing the U.S. General Accounting Office, *Impacts and Implications of the Pacific Northwest Power Bill* at page 22 (Sept. 4, 1979)).

<sup>6</sup> 2016 Comprehensive Evaluation at page 20.

<sup>7</sup> James R. Faulkner, Daniel L. Widener, Steven G. Smith, Tiffani M. Marsh, and Richard W. Zabel. 2017. Survival Estimates for the Passage of Spring-Migrating Juvenile Salmonids through Snake and Columbia River Dams and Reservoirs, 2016. Report of research for Bonneville Power Administration, Contract 40735, Project 199302900.

- Modified juvenile bypass screen operations at McNary Dam and redesigned bypass collection raceway screens at transportation projects;
- Developed juvenile lamprey tag criteria, tagging protocol, and a prototype acoustic tag that will be field tested in 2017.
- Identified potential future priorities to improve lamprey passage at Corps dams.
- **For Pacific lamprey, Reclamation accomplished the following during the last 10 years:**
  - Completed the "Assessment of U.S. Bureau of Reclamation Projects in the Columbia River Basin: Effects on Pacific Lamprey (*Lampetra tridentata*)" in 2011 documenting potential effects.
  - Worked with other partners to implement actions to address effects where appropriate, including installation of adult passage structures in the Umatilla (Three Mile Falls, Maxwell, and Feed Diversion Dams) and Yakima (Prosser Diversion).

## ***B. ACTION AGENCY OFF-SITE MITIGATION ACCOMPLISHMENTS***

- Bonneville and the Corps have worked with mitigation partners to protect and **restore tidal functions** to over 8,800 acres in the estuary as of 2016.
- Since 2007, Action Agency partnerships have made over 3,445 miles of **tributary habitat accessible to anadromous fish** and protected over 397,636 acre-feet of water for instream fish flows.
- **For wildlife** affected by dams and reservoirs that covered 378,000 acres, Bonneville has funded partners to protect, mitigate, and enhance over 1,000,000 acres.
- **Safety net and conservation hatcheries** increased abundance and reduced the extinction risk for Snake River spring/summer Chinook and Snake River sockeye<sup>8</sup> and facilitated reintroduction under the ESA of an experimental population of UCR spring Chinook salmon into the Okanogan River Basin.

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<sup>8</sup> 2016 Comprehensive Evaluation at page 34.



### ***C. COLVILLE TRIBES' ACCOMPLISHMENTS UNDER THE 2008 AGREEMENT***

Approaching fish and wildlife mitigation efforts fairly in the UCR Basin was an important goal of the 2008 Agreement, and the partnership between the Colville Tribes and the Action Agencies in the past decade achieved meaningful progress toward that objective. The accomplishments described below also strengthened the Colville Tribes' goal of advancing its connection with vital and sacred resources and perpetuation of its culture as a salmon people.

1. **Tributary Habitat.** The Colville Tribes contributed to ESA-listed UCR steelhead and UCR spring Chinook abundance, spatial distribution and survival by addressing passage impediments, improving instream flow and flow-shaping, acquiring land and water for habitat protection/enhancement, and improving and protecting instream habitat in the Okanogan and Methow rivers and their tributaries. Conservatively, these efforts led to summer steelhead and summer Chinook salmon utilizing an additional 18 and 2 miles of newly-accessible spawning and rearing habitat within the Okanogan River subbasin, respectively.
2. **Hatcheries.** The Colville Tribes constructed and began operation of Chief Joseph Hatchery (“**CJH**”) on the Colville Reservation below Chief Joseph Dam. The CJH Program released 8.6 million smolts for Brood Years 2013-2017, increased the abundance of adult summer/fall and spring Chinook to the Okanogan River and Columbia River mainstem above the Okanogan River confluence for conservation and harvest purposes, and assisted in re-establishing a fourth population of UCR spring Chinook in the Okanogan River Basin through reintroduction of an experimental population under the ESA.
3. **Selective Fishing Gear Deployment.** The Colville Tribes operated a purse seine to collect 2,868 natural-origin and 2,162 hatchery-origin summer/fall Chinook broodstock (BY13-17) for the CJH Program and harvest 4,748 hatchery-origin Chinook to meet CJH Program percentage hatchery origin spawner (“**pHOS**”) (<30%) and proportionate natural influence (“**PNI**”) (>67%) targets for the Okanogan summer/fall Chinook population. The Tribes released 11,440 natural-origin Chinook adults back into the river to meet Okanogan River spawn escapement goals. In addition, the Colville Tribes tested and implemented tangle-net, hoop and dip net and purse seine fish methodologies and educated Tribal members regarding making and using selective fishing gear to successfully release natural-origin salmon and steelhead.
4. **Monitoring and Evaluation.** The Colville Tribes developed and implemented two scientifically-based and repeatable monitoring and evaluation programs under the 2008

Agreement. The Okanogan Basin Monitoring and Evaluation Program (“**OBMEP**”) utilizes EDT methodologies to monitor habitat and species/stock status and trends to inform management decisions regarding restoration priorities, effects of past/future habitat project implementation, and population management metrics. The CJH Program includes the Chief Joseph Hatchery Monitoring and Evaluation Project (“**CJHMEP**”), which provides hatchery and natural environment assessments to document successes, inform management decisions, and adaptively manage the CJH Program to achieve Chinook population goals, objectives and biological targets.

5. **Resident Fish.** The Colville Tribes operated, maintained and upgraded facilities at the Colville Tribal Resident Fish Hatchery including a transition to producing 100% triploid and feminized Rainbow trout. The Tribes developed a fisheries management plan covering waterbodies receiving 98% of hatchery stock, and evaluated the movement, entrainment, diet and survival of Hatchery trout. The Tribes assessed, protected and maintained rainbow trout tributary habitat, enhanced oxygenation in the Twin Lakes and improved resident fish monitoring through extensive dataset, PIT tag, radio telemetry, and pathogen analysis work. The Tribes coordinated white sturgeon stock assessments in Lake Roosevelt and developed high resolution bathymetric, sediment facies maps, and one and two dimensional hydrodynamic models, evaluated FWIN as a stock assessment tool for burbot while also evaluating ageing precision and maturation, and implemented a non-native predator removal program for pike, walleye, and smallmouth bass.
6. **Wildlife.** The Colville Tribes’ wildlife mitigation habitat efforts focused on projects in the Hellsgate Game Reserve on the Colville Reservation. Under the 2008 Agreement, the Tribes acquired almost 4,000 acres, completed over 54,000 acres of invasive/noxious weed control measures, engaged in extensive boundary fence monitoring (over 270 miles), including 82.5 miles of major fence repair, over 2,000 miles of minor fence repair, 67 miles of new fence construction and installation of 18 cattle guards, and modified fencing for reintroduced pronghorn antelope.

### **III. EXTENSION OF THE 2008 AGREEMENT**

This section sets forth the updates of the 2008 Agreement based on the key considerations that have emerged since its development. The Parties continue to take a comprehensive mitigation approach that includes the following components: Columbia River System configuration and operations; habitat protection and enhancement; hatchery management; and research, monitoring, and evaluation. Bonneville manages the costs of these separate components under a unified fish and wildlife mitigation budget. The Action Agencies coordinate their funding and

efforts to implement this comprehensive mitigation approach. The comprehensive mitigation commitments adopted in this Extension reflect the current financial conditions facing Bonneville’s unified budget, and the Action Agencies’ efforts to address those conditions, while serving the Parties’ desire to provide equitable treatment to all purposes for which the Action Agencies operate the Columbia River System. The commitments in this Extension allow the Tribes and Bonneville flexibility of greater budget and rate certainty by reducing transaction costs and providing a mechanism to find savings if necessary.

**A. HIGH PRIORITY ACTIONS**

During the term of this Extension, the Parties will work together and support the following time-sensitive and critical goals and milestones:

1. Issuance of NOAA Fisheries and U.S. Fish and Wildlife Service (“USFWS”) Biological Opinions covering the coordinated water management of the Columbia River System beginning in 2019, including operations and maintenance and of the dam and reservoir projects.
2. Agreeing on spring and summer spill and other fish operations for the 2019 through 2021 period.
3. Collaborating to seek alignment of regional sovereigns in support of the Columbia River System Biological Opinions, including system operations, in appropriate forums.
4. Coordinating and submitting complementary recommendations for amendments to the Columbia Basin Fish and Wildlife Program.
5. Finding further efficiencies in project implementation that streamline requirements for project contracting and reporting, and environmental compliance, where appropriate.
6. Planning and construction of the Chief Joseph Hatchery relief tunnel, according to the terms of the 2010 Chief Joseph Hatchery Complex Memorandum of Agreement, or alternative actions that will facilitate Chief Joseph Hatchery achieving production targets; implementation of actions at the Leavenworth National Fish Hatchery by the USFWS to ensure it fulfills its necessary functions, including but not limited to actions described in the Leavenworth Fisheries Complex Project Implementation Plan: 2017 – 2027; and planning and implementation of a captive fishery as described in Section III.H.4.c below.

The Parties will meet annually during the term of this Extension to consider the results of their efforts to meet the milestones above. At each annual meeting, each Party will report on its efforts, including specific actions taken and planned or revised strategies, for meeting these milestones.

## ***B. FISH OPERATIONS IMPLEMENTATION ACTIONS***

1. This 2018 Extension commits the Parties to collaborative engagement on the development of Columbia River System operations and to seek regional alignment on fish operations. **Attachment C: Columbia River System Operations** describes considerations for updating spill, transportation, avian predation, adult passage, and other key fish operations for the Columbia River System that reflect the current status of the Action Agencies' ESA consultation process with NOAA Fisheries.
  - a. The Parties acknowledge that new biological information will be available during the term of this Extension, which will inform the methods and assumptions used to analyze the impacts of Columbia River System operations on fish and wildlife species affected by this Extension. The Parties commit to make best efforts to collaboratively seek alignment on methods and assumptions for such analyses, building on analyses performed during the future Columbia River System ESA consultations as warranted during the term of this Extension. Under this Extension, the Parties retain their ability under the 2008 Agreement to respond and adapt to relevant new information regarding survival, flow, spill, and other relevant indicators of fish and wildlife impacts; provided, all such new information is reviewed and discussed collaboratively amongst the Parties in advance of any response in an effort to support alignment.
2. The Action Agencies remain committed to continue coordinating and collaborating on Pacific lamprey issues in the Columbia River System through participation in the Pacific Lamprey Conservation Agreement activities and participation in interagency meetings and Pacific lamprey technical workgroup meetings. The Corps will continue counting adult lamprey that pass lower Columbia and Snake River dams and operate and maintain existing lamprey passage facilities. In addition, the Corps will integrate lamprey design considerations into future Columbia Basin plans for adult and juvenile passage facilities and participate in the Lamprey Technical Workgroup and USFWS Pacific Lamprey Conservation teams. The Corps is committed to coordinating and collaborating with the Colville Tribes on Pacific lamprey issues upon the Colville Tribes engaging in the Pacific Lamprey Conservation Agreement and the other regional processes described above. Subject to existing and future authorities, the Parties will exercise best efforts to implement the actions noted above. In the event that these actions are not undertaken, any

Party may support listing Pacific lamprey under the ESA to overcome administrative barriers that forestall survival improvements.

3. The Tribes continue to rely heavily on the services of the Fish Passage Center (“**FPC**”) for the analysis and evaluation of the effects of Columbia River System operations and configuration, including on salmonid survival, productivity, and abundance. Bonneville agrees to continue to provide funding through the Pacific States Marine Fisheries Commission to ensure that the FPC continues to provide evaluation resources required by the Tribes. The commitments in Section II.D of the 2008 Agreement remain as stated, with the added commitment from the Tribes that they will help ensure that any final or review draft FPC analyses based on the request of the Tribes (individually or collectively) or other sovereign entities, as well as underlying data and assumptions are available upon request to the Action Agencies. In furtherance of the Parties’ commitments under this Section III.B, the Tribes shall coordinate with the Action Agencies, and other fisheries co-managers as appropriate, on any request from the Tribes to the FPC to perform studies or analyses.

### ***C. BONNEVILLE’S BUDGET AND BUDGET MANAGEMENT***

1. Bonneville’s funding commitments beginning in FY 2019 are set out in **Attachment A: Colville Tribes Project Portfolio**, to this Extension. The funding commitments reflect joint discussions between the Colville Tribes and Bonneville on the Tribes’ project portfolio as it has evolved through implementation of the 2008 Agreement, including consideration of (a) actions for improving the effectiveness of certain entity projects, (b) promoting mitigation that directly protects and mitigates fish and wildlife and deemphasizing redundant or unnecessary research, monitoring and evaluation as appropriate, and (c) the Tribes’ agreement to certain reductions in budgets during the term of the Extension.
2. The annual budgets shown in Attachment A reflect agreed upon reductions that apply during the term of this Extension. Attachment A budgets are not binding on the Parties beyond the term of this Extension.
3. For expense funding commitments by Bonneville in the 2008 Agreement, funds that remain unspent at the time of closeout of the FY 2017 intergovernmental contracts implementing the 2008 Agreement are carried forward to future years, with no further inflation adjustments and subject to the Budget Rules in Section III.C.4, below.
4. The amount of funds that can be spent in a single fiscal year—including any unspent carried forward funds from any prior fiscal years—shall not exceed 120% of the

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budgeted amount for that year set forth in Attachment A unless Bonneville and the Tribes agree otherwise. Bonneville agrees to make best efforts to fulfill timely requests from the Colville Tribes to shift unspent funds from habitat acquisition and enhancement projects to other projects listed in Attachment A, on a case-by-case basis, as funds allow. This cap governs requests for changes in the timing of implementation and distribution of Accord dollars, through preschedules, reschedules, or budget transfers, as defined below.

- a. **Out-year Pre/Reschedules** – Preschedule and reschedule are defined as the transfer of funds for a project to an earlier or future period, respectively. Preschedules and reschedules of a project’s working budget (e.g., changes to budget timing) will be allowed so long as the funds are not currently obligated in a contract and adjustment is consistent with the Colville Tribes’ annual budget cap.
  - b. **Budget-transfers** – Budget transfer means the transfer of funding from one project to another in the same or different years. Budget transfer may be allowed through mutual agreement so long as the funds are not currently obligated in a contract and the adjustment is consistent with the Colville Tribes’ budget cap.
  - c. **Obligated Funds** – Funds included in a currently open contract are considered obligated funds and may not be rescheduled or transferred until they are de-obligated. Upon completion of contract deliverables (including status and annual reports) and payment of final invoice, any savings (i.e., remaining contract balance) will be de-obligated from the contract and returned to the project budget and may at that point be moved to another contract or fiscal year. Project managers should expect a delay between the end of a contract and the return of excess funds to the project budget. Uncompleted work element deliverables and funds associated with them may be rescheduled from one year to the next via modification to the current contract and inclusion in the subsequent contract.
5. The Parties acknowledge that Bonneville’s financial situation can vary from year to year. Consistent with past practice under the 2008 Agreements, in the case of deteriorating Bonneville financial circumstances due to events such as poor water conditions, depressed power marketing conditions, court orders, or similar conditions beyond Bonneville’s control, Bonneville may call on the Tribes to voluntarily reduce expenditures under this Extension on an annual basis. Any additional savings would be selected by mutual agreement so as to not compromise and to preserve the Action Agencies’ ability to comply with the ESA and other applicable laws, preserve the Tribes’ staff and capacity, and reasonably reflect each affected entity’s expertise, responsibilities and commitments. Funds called upon for savings in one year would be available in the following years consistent with existing budget rules above. The Parties will seek

efficiencies in project management as noted in Section III.D below. Conversely, in the case of strengthening Bonneville financial circumstances and in recognition of budget reductions agreed to by the Tribes in this Extension, the Tribes may call on Bonneville to voluntarily increase funding or expenditures under this Extension on an annual basis, including providing relief from the Budget Rules in Section III.C.4, above.

6. The Parties accept that failure to agree on a party's requested increase or decrease in funding, under the circumstances described above, may under some circumstances meet the conditions of one or more off-ramps in Section IV.D, below.

#### ***D. ATTACHMENT A PROJECT ADMINISTRATION AND EFFICIENCIES***

The Parties intend to implement projects in a manner that finds efficiencies in project administration where such efficiencies:

- Are consistent with the legal rights of the Colville Tribes,
- Complement their current and future management actions,
- Fulfills or helps to fulfill Bonneville's legal compliance responsibilities, and
- Are consistent with Bonneville's obligations to conduct its affairs, including its legal compliance responsibilities, in a sound and businesslike manner.

The Parties recognize they each possess substantial expertise regarding implementation of projects under the 2008 Agreement and this Extension. Relying on their collective expertise in project implementation, together the Parties will seek efficiencies in project administration that will:

- Reduce delay in project implementation
- Increase certainty in accomplishing project goals
- Support coordination with project cosponsors
- Comply with applicable federal acquisition regulations
- Fulfill Action Agencies' environmental compliance responsibilities

To the extent that differences of opinion arise in project implementation, the Parties will promptly seek resolution of those differences by elevating the matter to higher levels within their respective organizations. In so doing, the Parties will collaborate to pursue a mutually agreeable solution.

#### ***E. HATCHERY IMPLEMENTATION ACTIONS***



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1. The Parties acknowledge that hatcheries can provide important benefits to ESA-listed species, the region, and, in particular, to the Colville Tribes in support of their federally protected fishing rights. Bonneville and the Colville Tribes seek to continue fulfilling their commitments under the 2008 Agreement. The Action Agencies intend to provide ongoing stability for hatchery operations and maintenance and monitoring and evaluation required to fulfill federal mitigation obligations and ESA compliance requirements.
2. Bonneville’s funding will continue to be in addition to and not replace funding for hatcheries that are the legal responsibility of other entities, including but not limited to NOAA Fisheries’ hatchery-related responsibilities for facilities established under the Mitchell Act or other appropriated programs, the mid-Columbia public utility districts’ Habitat Conservation Plans and other related agreements—excepting current cost-sharing agreements regarding Chief Joseph Hatchery funding. The Colville Tribes will not seek any new or expanded hatchery actions from the Action Agencies other than those identified in Attachment A until after September 30, 2038, with the following exceptions:
  - a. The Colville Tribes may continue to advocate for congressionally appropriated funding to implement actions needed to ensure that the Leavenworth National Fish Hatchery fulfills its necessary functions, including but not limited to actions described in the Leavenworth Fisheries Complex Project Implementation Plan: 2017 – 2027;
  - b. The Colville Tribes may continue to fully participate in regional processes, task forces, and programs in which the possibility of future new or expanded hatchery actions is discussed, provided such participation is consistent with this Extension, including Section III.E.2.c below; and
  - c. If after September 30, 2022 there is new information or changed circumstances that indicate new or expanded hatchery actions not identified in Attachment A are needed to assist in mitigating impacts of the CRS consistent with current science and applicable law, the Colville Tribes are not precluded from seeking additional funding from the Action Agencies for hatcheries.
3. Bonneville will modify the existing contracts for the Chief Joseph Hatchery and the Colville Tribal Hatchery to include expanded work elements for:
  - a. Chief Joseph Hatchery relief tunnel, alternative water system infrastructure, or other changes that will further facilitate the Chief Joseph Hatchery achieving production targets.
  - b. Colville Tribal Hatchery holding ponds



4. For any new or expanded hatchery projects identified in Attachment A, the Parties will collaboratively seek to identify a method to document the biological benefits associated with hatchery projects included in this Extension. The Parties will coordinate to ensure awareness of and incorporate each other’s input before sharing draft or final ESA compliance documents with any regulatory agency when consulting on a biological assessment, genetic and management plan, or tribal management plan for new or existing hatchery programs funded or proposed for funding by Bonneville. For such projects, the Colville Tribes will:
  - a. To avoid unanticipated mitigation obligations, ensure that the hatchery project will not impede and, where possible, will contribute to recovery; and
  - b. Secure or assist in securing all permits required by law for hatchery construction or operation for hatchery projects identified in Attachment A.

***F. HABITAT PROJECT IDENTIFICATION AND IMPLEMENTATION ACTIONS***

1. The Parties have developed updated Tribal portfolios of habitat projects for this Extension as identified in Attachment A. These projects are supported by the Parties because they reflect and address the following criteria:
  - a. Preserving and building on past accomplishments and lessons learned;
  - b. Protecting fish and wildlife with a recognition of the importance of habitat as a means for the Action Agencies to both (1) carry out their responsibilities to protect, mitigate, and enhance ESA-listed and non-listed salmon and steelhead and aid in their conservation, and (2) protect and enhance natural resources in keeping with the federal government’s trust obligations to the Colville Tribes;
  - c. Addressing water temperature issues in a manner that is expected to promote resiliency in the face of climate change;
  - d. Fulfilling legal objectives;
  - e. Complying with other applicable legal mandates, such as the prohibition against augmentation of appropriations, or the in lieu funding prohibition of the Northwest Power Act; and

## ACCORD EXTENSION MOA – COLVILLE TRIBES / ACTION AGENCIES

- f. Recognizing the Action Agencies’ general trust responsibility to the Colville Tribes and the Colville Tribes’ federally protected fishing rights.

In addition, Reclamation will continue to provide technical assistance on tributary habitat projects in existing subbasins covered by its Tributary Habitat program.

2. The habitat projects in Attachment A are based on the best available science and have been reviewed and recommended for funding by the Northwest Power and Conservation Council (“**Council**”). Any new or expanded habitat projects beyond what is included in Attachment A will provide or facilitate on-the-ground benefits through mitigation, enhancement, or protection, with a particular emphasis on projects that help the Action Agencies fulfill commitments under applicable biological opinions, and will address one or more of the following priorities:
  - a. Water transactions, leases, etc. to augment in-stream flows and related fish benefits;
  - b. In-stream, riparian, and floodplain restoration;
  - c. Culvert or other fish passage improvements;
  - d. Protection and enhancement of habitat through land acquisitions and easements; and
  - e. Other habitat enhancement actions important for the survival and enhancement of listed species.
3. The Colville Tribes, as long-term cultural stewards of tribal resources, have developed extensive and unique resource management expertise. The Colville Tribes have also developed significant capacity to protect and enhance fish and wildlife resources and are well positioned to design, recommend, and implement habitat project activities to achieve project purposes. Similarly, the Action Agencies have substantial expertise in evaluating, contracting for, and overseeing habitat improvement actions and assuring all such actions comply with federal law and policy. The Colville Tribes will implement habitat project activities or actions within their portfolio pursuant to an intergovernmental contract with Bonneville, as further described in Section III.G of this Extension, below.
4. Bonneville will consult with the Colville Tribes when developing any policies that it believes should apply to the selection or implementation of Tribal habitat project activities or actions under this Extension.

5. Bonneville and the Tribes will work together, and with other regional partners, to establish a regional understanding of the needs, priorities, and respective responsibilities in addressing research, monitoring and evaluation for the habitat actions set forth in this Agreement. For specific and cumulative habitat actions, the Colville Tribes will continue to summarize and report implementation metrics and observed biological responses to assist the Action Agencies' decision making and legal compliance processes.

### ***G. INTERGOVERNMENTAL CONTRACT ADMINISTRATION***

All of the 2008 Agreement projects currently rely on separate and discrete intergovernmental agreements for goods or services, and the Parties intend to handle all of the Colville Tribes' Extension projects in the same manner. Bonneville shall issue intergovernmental agreements for projects listed in Attachment A following the procedures in Bonneville Purchasing Instructions. Once Bonneville and the Colville Tribes execute an intergovernmental agreement for a project, that agreement governs all activities under that project. In recognition of the bilateral nature of the commitments in such agreements, any decision to change project implementation, including termination, must follow the terms of the applicable intergovernmental agreement. Bonneville cannot and will not terminate project funding under an intergovernmental agreement without first complying with the procedures identified in the Bonneville Purchasing Instructions.

### ***H. COLUMBIA BASIN FISH AND WILDLIFE PROGRAM***

1. In developing this Extension, the Parties recognize that the Council's Columbia Basin Fish and Wildlife Program ("**Program**") is over 35-years old and has an established framework for mitigating the impacts of hydroelectric development in the Columbia River Basin. Bonneville has relied on guidance in past Council Programs in making extensive funding commitments for long-term fish and wildlife mitigation projects. This Extension builds on those commitments. The Parties intend to ensure the benefits to fish and wildlife continue to accrue while striving to maintain cost stability.
2. The Parties agree that the Bonneville funding commitments in this Extension are commitments of the Bonneville Fund<sup>9</sup> for implementation of projects that carry out its obligations to protect, mitigate and enhance fish and wildlife. The Parties believe that this Extension and the specific projects in Attachment A are consistent with the Action Agencies' obligations under the Northwest Power Act and the Council's Program.<sup>10</sup> The

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<sup>9</sup> 16 U.S.C. § 838i(a).

<sup>10</sup> Attachment A does not, by necessity, include all actions that could be consistent with Federal agency obligations under the Northwest Power Act. The Parties take no position as to the consistency of actions not included in Attachment A.

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Parties will recommend that the Council amend its Program to incorporate this Extension as it reflects the Parties' fish and wildlife mitigation plans and future activities.

3. During the term of the Extension, any comments or recommendations for Council's Program Amendments that the Colville Tribes or Action Agencies submit to the Council shall be consistent with this Extension and the 2008 Agreement. The Colville Tribes and Action Agencies will coordinate in advance on any such recommendations, which will not include comments or recommendations that seek to require any of the Action Agencies to fund specific projects or funding amounts as a Program requirement.
  - Each Party shall share with the other Parties all drafts of any recommendations for amendments, comments on recommendations, and comments on the draft amendments in a timely manner that upholds the commitments under the 2008 Agreement and this Extension to coordinate and avoid surprises.
4. Translocation of Anadromous Fish above Chief Joseph and Grand Coulee Dams.
  - a. The Council's 2014 Program included a three-phase approach for investigating and, if warranted, implementing, passage and reintroduction of anadromous fish above Chief Joseph and Grand Coulee dams. Passage and reintroduction of anadromous fish above Chief Joseph and Grand Coulee are important to the Tribes. Since 2014 the Colville Tribes have undertaken, in conjunction with other entities, studies under Phase 1 of the three-phase approach and intend to continue full participation in the Council's process regarding passage and reintroduction. The Action Agencies, however, have legal, economic, and policy concerns with the three-phase approach and any other specific proposals for passage and reintroduction above Chief Joseph and Grand Coulee dams. Consequently, the Parties agree that all aspects and stages of this issue require the greatest sensitivity and adherence to the no surprises protocol under the Extension and the 2008 Agreement.
  - b. The Action Agencies understand that the Colville Tribes intend to pursue cultural and educational fisheries activities involving anadromous fish above Chief Joseph and Grand Coulee dams using the Tribes' own authorities and funding unrelated to this Extension or Northwest Power Act mitigation mandates. As an accommodation to legal and policy concerns raised by the Action Agencies, during this Extension, the Colville Tribes agree not to use fish produced at or originating from Chief Joseph Hatchery for any purpose above Chief Joseph Dam, except that carcasses from such fish may be used for any biological purpose consistent with applicable regulatory requirements. In addition, the Colville Tribes in their sole discretion may use data

and research from these cultural and educational fisheries activities in any forum for any purpose.

- c. The Colville Tribes and the Action Agencies intend to discuss and seek alignment on planning and implementation of a captive fishery involving anadromous fish above Chief Joseph and/or Grand Coulee dams, including potential funding by Bonneville, during this Extension. The Parties agree that such discussions will be conducted in good faith and with the sensitivity described above and remain within the overall portfolio budget shown in Attachment A consistent with the budget rules in Section III.C.4.
5. The Action Agencies will share with the Colville Tribes in a timely manner their plans to fund either another tribe to implement habitat protection and enhancement projects upriver of Wells Dam or any action in which anadromous fish imprinted to return to the Colville Reservation are translocated past the Reservation to Canadian waters.

## ***I. COLUMBIA RIVER TREATY***

The Parties agree to continue coordinating and conducting government-to-government consultation on matters regarding the Columbia River Treaty as described in **Attachment D: Consultation Regarding the Columbia River Treaty**.

## **IV. GOOD FAITH, AFFIRMATIVE SUPPORT, AFFIRMATION OF ADEQUACY, AND TERM**

### ***A. EXTENDED GOOD FAITH IMPLEMENTATION***

1. The Parties enter into this Extension with the assumption that NOAA Fisheries will issue a new Biological Opinion for the operation of the Columbia River System beginning in 2019 that, combined with this Extension, will when implemented, meet the Action Agencies obligations under the ESA, Northwest Power Act, and the National Environmental Policy Act (“NEPA”) for the term of this Extension. Should this Biological Opinion fail to meet any Party’s expectations, the Party may exercise one of the off-ramps of this Extension.
2. This 2018 Extension is based on the further assumption that the Action Agencies will implement the forthcoming NOAA Fisheries Biological Opinion for Columbia River

System operations beginning in 2019; continue to meet their obligations to act consistently with the Northwest Power Act and Columbia River Basin Fish and Wildlife Program; and fully and timely fund the actions listed in Attachment A.

***B. AFFIRMATION of ADEQUACY and AFFIRMATIVE SUPPORT***

1. The Colville Tribes agree that the Action Agencies, by fulfilling their commitments for the duration of this Extension, have adequately responded to and will fulfill the federal government's duties for:
  - a. Conserving listed salmon and steelhead, including avoiding jeopardy and adverse modification of critical habitat under the ESA;
  - b. Operating, configuring and maintaining the Columbia River System dams consistent with the Action Agencies' Resources, Legal and Institutional purposes identified in the Columbia River System Operations Environmental Impact Statement (“**CRSO EIS**”), including providing for the conservation of fish and wildlife resources affected by system operations;
  - c. Protection, mitigation, enhancement, and equitable treatment of fish under the Northwest Power Act;<sup>11</sup> and
  - d. Clean Water Act (“**CWA**”) and NEPA provisions related to the Columbia River System dams.<sup>12</sup>
2. The Parties reaffirm their mutual support and alignment in all Columbia River System litigation where such alignment is consistent with the legal commitments of this Extension or furthers the implementation of this Extension. The Colville Tribes will affirmatively support in all appropriate forums, including legal, policy, and technical, during the term of this Extension the combined federal and tribal actions agreed to herein as an adequate response for compliance with the ESA, the Northwest Power Act, and the

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<sup>11</sup> Bonneville takes the position that the three-phase approach to considering passage and reintroduction as outlined in the Columbia River Basin Fish & Wildlife Program is not a “measure” as defined by the Northwest Power Act because it has not satisfied the statutory requirements that a proposal must meet to become a program measure. 16 U.S.C. §§ 839(b)(h)(5)-(7). The Ninth Circuit considers the criteria in section 839(b)(h)(6) substantive and has said program measures must adhere to each of the criterion. *NRIC v. NW Power and Conservation Council*, 35 F.3d 1371, 1389 (9th Cir. 1994). The Colville Tribes acknowledge Bonneville’s position but do not agree with it.

<sup>12</sup> Neither the 2008 Agreement nor this Extension addresses the effects and consequences of releases of oil or toxic materials from Columbia River System projects or operations.

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CWA<sup>13</sup>, and the NEPA, with respect to the Columbia River System. The Colville Tribes may determine, in consultation with the Action Agencies, the most appropriate form of communicating such support on a forum-by-forum basis, and shall not be required to become an *amicus* or party in any litigation in order to meet its obligations under this section.

3. The Parties will collaborate in seeking to attract other regional sovereigns to support Columbia River System operations that preserve and enhance Bonneville’s ability to sustain its statutory obligations to continue providing competitive cost-based electric power and transmission services and fulfilling other valuable public services, including protection, mitigation and enhancement of fish and wildlife affected by the development and operation of the Columbia River System.
4. With respect to the CRSO EIS, the relationship of the Parties is described in the Colville Tribes’ Cooperating Agency MOU, with the “May 2008 Columbia Basin Fish Accords Memorandum of Agreement” in Section I of that MOU being modified to include this Extension. In accordance with the Cooperating Agency MOU, the Action Agencies agree to provide the Colville Tribes with advance notice and copies of the draft and final EIS, including the identified preferred alternative. The Tribes’ commitments in this Extension relating to affirming adequacy under the NEPA shall not apply after the Action Agencies issue Records of Decision on the CRSO EIS.
5. The Tribes support the Action Agencies efforts to address their CWA responsibilities for the Columbia River System. The Parties’ understanding, as well as the nature, of these obligations has changed since 2008. The Action Agencies and Tribes will coordinate their efforts in addressing:
  - Hazardous waste clean-up at Columbia River System dams
  - Actions to address water temperatures that are lethal to salmon
  - Total dissolved gas requirements, including state and tribal water quality standards
  - Harmful plant growth in Columbia River System reservoirs
6. Each Party will make best efforts to consult with the other Parties prior to taking any action that could reasonably be interpreted as inconsistent with any part of this Extension or the 2008 Agreement, to assure its consistency with them. The Parties agree that such discussions should be as informal and with the least amount of process necessary to ensure that the Parties are fulfilling the good faith obligation to implement and support

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<sup>13</sup> Excepting the effects and consequences of unpermitted releases of oil or toxic materials from Columbia River System projects or operations.



the Extension. Through these discussions, the Parties intend to continue collaborating and seeking each other’s input on strategic considerations regarding the Action Agencies’ ongoing compliance with the ESA, NEPA, the Northwest Power Act, the CWA, and other regional compliance processes.

***C. TERM of EXTENSION***

1. The Parties will meet to review further extensions during September 2021. Amendments, including further modification of the 2008 Agreement and this Extension, will be considered at least one-year prior to the expiration of this Extension.
2. Unless otherwise decided by a Party pursuant to this Section IV, this Extension will be in force until the earlier of when the Action Agencies issue their final decisions on the CRSO EIS and any associated consultation under the ESA for the Columbia River System, or September 30, 2022.<sup>14</sup>
3. This Extension binds the Parties and their assigns and successors.
4. This Extension is not intended to, and does not, create any trust responsibility, substantive or procedural, enforceable at law or equity, by any person or entity, including a Party, against any Party, its agencies, officers, or assigns that is not already authorized under existing law, nor is it intended to deny the existence of, or diminish, any such responsibility that is already authorized under existing law.

***D. OFF-RAMPS***

1. Any Party may seek to withdraw or renegotiate this Extension or the operative provisions of the 2008 Agreement in the following circumstances:
  - a. If as part of a biological opinion for Columbia River System operations NOAA Fisheries or USFWS recommends a Reasonable and Prudent Alternative (“**RPA**”), or includes Terms and Conditions in an Incidental Take Statement, where the RPA or Terms and Conditions specify additional or different actions from those proposed by the Action Agencies during the consultation process that are financially material to a Party or Parties. .

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<sup>14</sup> This Extension may expire before the expirations of some individual project contracts between Bonneville and the Colville Tribes. Bonneville and the Tribes intend that such individual project contracts continue through their terms subject to all provisions of this Extension.



## ACCORD EXTENSION MOA – COLVILLE TRIBES / ACTION AGENCIES

- b. If any court finds a Columbia River System biological opinion arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law, and the court orders additional or different actions that are either financially material to a Party or Parties or materially constrain the Action Agencies from fulfilling Columbia River System purposes authorized by Congress.
    - c. In the event of material noncompliance with this Extension, or the initiation of litigation by one or more of the Parties challenging the sufficiency of the measures or actions included within the scope of the 2008 Agreement, as modified by this Extension, to meet Federal obligations under the ESA, NEPA, Northwest Power Act, or the CWA.
    - d. In the event of a material change, positive or negative, in Bonneville’s financial conditions due to energy market, river flows, litigation, or other conditions outside of Bonneville’s reasonable control, from those conditions assumed by Bonneville as a matter of prudent business judgement in rate setting, and which materially affect Bonneville’s financial health and its associated ability to sustain the fulfillment of any of its multiple statutory responsibilities.
    - e. In the event of unforeseen and material environmental conditions or events that negatively impact the Colville Tribes’ reasonable expectations regarding near-term biological conditions or performance of key fish populations.
  2. In such circumstances, the Parties will first seek to preserve this Extension and the operative provisions of the underlying 2008 Agreement and will meet promptly to determine the appropriate response. The affected Party or Parties will notify the other Parties immediately in writing, identifying why the event is considered material and potential options for resolution, including financial rebalancing through prioritization of fish and wildlife spending. Prior to withdrawing from this Extension, the Parties shall first make a 90-day good faith effort to renegotiate mutually agreeable modifications to this Extension, with a priority placed on establishing the funding levels for the projects listed in Attachment A. A Party may not withdraw from this Extension on the basis of its own noncompliance.
  3. If renegotiation is not successful, the affected Party may notify the other Parties in writing of its intent to withdraw by a date certain. At the time the withdrawal is effective, all funding commitments and covenants made by the withdrawing Party cease; however, the withdrawing Party’s liabilities and obligations under intergovernmental contracts effective on the date of withdrawal remain in effect until addressed as provided in the intergovernmental contract.

4. The withdrawing Party reserves any existing legal rights under applicable law, including all arguments and defenses. Other Parties also reserve all existing legal rights under applicable law, including all arguments and defenses. This includes the ability to advocate in all forums (e.g. judicial, administrative, in proceedings before the Council, and in rate-related proceedings) on any issue relating to the Action Agencies' legal obligations in Section IV. A for additional, fewer or different fish and wildlife mitigation actions, greater or lesser fish and wildlife funding, or other mitigation actions.
5. In the event that material non-compliance with the Extension is alleged to have arisen and is not resolved as provided in this section, and the affected Party does not withdraw, that Party may challenge the asserted non-compliance with the terms of this Agreement in any appropriate forum, provided that judicial review of disputes arising under this Extension is limited to Bonneville.

The Parties may, by mutual agreement, consider negotiations or withdrawal for changed circumstances other than those enumerated in this section. The provisions of this Extension provide the sole remedies available to the Parties for remedying changed circumstances or disputes arising out of or relating to implementation of this Extension.

If one Party withdraws from the Extension, any other Party has the option to withdraw as well, with prior notice.

### ***E. EFFECTIVE DATE***

This Extension will be in effect upon the signature of the last Party.

## V. SIGNATURES

*/s/ Elliot E. Mainzer*

*October 3, 2018*

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Elliot E. Mainzer  
Administrator and Chief Executive Officer  
Bonneville Power Administration

Date

*/s/ D. Peter Helmlinger*

*September 28, 2018*

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D. Peter Helmlinger  
Brigadier General, USA  
Division Commander

Date

*/s/ Lorri J. Gray*

*September 28, 2018*

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Lorri J. Gray  
Regional Director  
U.S. Bureau of Reclamation  
Pacific Northwest Region

Date

*/s/ Rodney Cawston*

*September 28, 2018*

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Rodney Cawston  
Chairperson  
Colville Business Council  
Confederated Tribes of the Colville Reservation

Date

ACCORD EXTENSION MOA – COLVILLE TRIBES / ACTION AGENCIES  
**ATTACHMENT A: Colville Tribes Project Portfolios**  
**ATTACHMENT A**  
**COLVILLE TRIBE -- FISH WILDLIFE PROJECTS**

PROJECT No.¹	PROJECT NAME	Base Value	2019	2020	2021	2022	TOTAL 2019-2022 (Base)	Comments
<b>Expense</b>								
1	198503800 Colville Hatchery Operation and Maintenance (O&M/M&E)	\$ 2,132,205	\$ 1,761,453	\$ 1,761,453	\$ 1,783,471	\$ 1,805,765	\$ 7,112,142	
2	199001800 Lake Roosevelt Rainbow Trout Habitat and Passage Improvement	\$ 913,802	\$ 792,055	\$ 792,055	\$ 801,956	\$ 811,980	\$ 3,198,046	
3	199204800 Hellogate Big Game Winter Range	\$ 1,794,707	\$ 1,555,597	\$ 1,555,597	\$ 1,575,042	\$ 1,594,730	\$ 6,280,966	
4	199404300 Lake Roosevelt Dada / Pike Program	\$ -	\$ 91,565	\$ 91,565	\$ 92,710	\$ 93,868	\$ 369,708	
5	199501100 Chief Joseph Kokanee Enhancement	\$ 670,122	\$ 580,841	\$ 580,841	\$ 588,102	\$ 595,453	\$ 2,345,236	
6	199604200 Restore Salmon Creek Anadromous Fish	\$ 426,441	\$ 282,949	\$ 282,949	\$ 286,486	\$ 290,067	\$ 1,142,451	
7	200000100 Omak Creek Anadromous Fish Habitat and Passage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8	200302200 Okanogan Basin Monitoring & Evaluation Program (OBMEP)	\$ 1,516,912	\$ 1,228,136	\$ 1,228,136	\$ 1,243,488	\$ 1,259,031	\$ 4,958,791	
9	200302300 Chief Joseph Hatchery Program	\$ 2,987,524	\$ 2,589,494	\$ 2,589,494	\$ 2,621,863	\$ 2,654,636	\$ 10,455,487	
10	200702700 Wildlife Habitat Pre-Acquisition-Colville Tribe	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
11	200721200 Okanogan Basin Locally Adapted Steelhead Broodstock Step 1 and 2 (Casimer Bar)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
12	200722400 Okanogan Subbasin Habitat Implementation Program (OSHIP)	\$ 2,397,817	\$ 2,078,354	\$ 2,078,354	\$ 2,104,333	\$ 2,130,638	\$ 8,391,679	
13	200724900 Evaluation of Live Capture Gear	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
14	200740500 Rufus Woods Habitat/Passage Improvement, Creel and Triploid Supplementation	\$ 304,601	\$ 264,019	\$ 264,019	\$ 267,319	\$ 270,661	\$ 1,066,018	
15	200810200 Okanogan Habitat Acquisition and Restoration	\$ 483,468	\$ 419,055	\$ 419,055	\$ 424,293	\$ 429,597	\$ 1,692,000	
16	200810400 Land Acquisition	\$ 1,827,605	\$ 1,627,605	\$ 1,627,605	\$ 1,647,950	\$ 1,668,549	\$ 6,571,710	
17	200810500 Selective Gear Deployment	\$ 422,786	\$ 366,458	\$ 366,458	\$ 371,039	\$ 375,677	\$ 1,479,631	
18	200810600 Tribal Conservation Enforcement-Colville Tribe	\$ 160,829	\$ 160,829	\$ 160,829	\$ 162,839	\$ 164,875	\$ 649,372	
19	200810900 Resident Fish Research, Monitoring and Evaluation (RM&E)	\$ 304,601	\$ 264,019	\$ 264,019	\$ 267,319	\$ 270,661	\$ 1,066,018	
20	200811100 Twin Lakes Enhancement	\$ 121,840	\$ 14,042	\$ 14,042	\$ 14,218	\$ 14,395	\$ 56,697	
21	200811500 Lake Roosevelt Burbot Population Assessment	\$ 450,809	\$ 390,747	\$ 390,747	\$ 395,631	\$ 400,577	\$ 1,577,702	
22	200811600 White Sturgeon Enhancement	\$ 633,570	\$ 549,159	\$ 549,159	\$ 556,023	\$ 562,974	\$ 2,217,315	
23	200890800 FCRPS Water Studies & Passage of Adult Salmon & Steelhead	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
24	200900700 CCT Accord Administration Coordination	\$ -	\$ 2,033,263	\$ 2,033,263	\$ 2,058,679	\$ 2,084,412	\$ 8,209,617	
25	200901300 Lake Roosevelt Habitat Structures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

**YEARLY EXPENSE TOTAL:**

**\$ 17,549,639**    **\$ 17,049,640**    **\$ 17,049,640**    **\$ 17,262,761**    **\$ 17,478,545**    **\$ 68,840,586**

PROJECT No.¹	PROJECT NAME	2019	2020	2021	2022	TOTAL 2019-2022 (Base)	Comments
<b>Capital</b>							
1							

**YEARLY CAPITAL TOTAL:**

¹ Note: BPA Project numbers may change over time

## **ATTACHMENT B: Provisions from the 2008 Agreement that Remain in Effect**

The following provisions in the 2008 Agreement remain unchanged and in effect during the term of this Extension.

- I.A—Purpose of this Agreement I.C—Federal Agencies
- I.D—Agreement Principles
- II.A.1.b—Performance and Adaptive Management (§4 retains the following: “the Parties, in consultation with NOAA and other appropriate entities, may consider the establishment of [a target for adult performance] for Upper Columbia steelhead and spring Chinook should adequate information become available)
- II.A.1.c—Research, Monitoring, and Evaluation (§1 is retained but modified by deleting the second sentence and replacing in the third sentence “Agreement” with “Extension”)
- II.A.1.f—Emergency Operations for Unlisted Fish
- II.A.3.b—Hatchery & Harvest – COE Commitments (§2 re Chief Joseph Hatchery)
- II.B.2—COE, in lieu fishing sites
- II.D—Northwest Power Act Coordination
- II.E—Replacement Projects and Adaptive Management
- III.B.3—Operational losses to wildlife not addressed
- III.C.2—No waiver of right to contest or defend Program amendments
- III.E—Consistency with Trust and Reserved Rights
- III.H—Good Faith Implementation and Support
- III.I—Modification
- IV.B—Applicable Law
- IV.C—Authority
- IV.D—Effective Dates & Counterparts
- IV.F—No Third-Party Beneficiaries
- IV.G—Entire Agreement
- IV.H—Waiver, Force Majeure, Availability of Funds
- IV.I—Reservation of Rights
- IV.J—Notice

## **ATTACHMENT C: Columbia River System Operations**

This 2018 Extension commits the Parties to collaborative engagement on the development of Columbia River System operations and to seek regional alignment on fish operations. Attachment C describes considerations for updating spill, transportation, avian predation, adult passage, and other key fish operations for the Columbia River System that reflect the current status of the Action Agencies' ESA consultation process with NOAA. Attachment C serves as a working foundation for key components of fish operations beginning in 2019. The Parties' overarching commitments regarding fish operations are those described in sections III.A-B and IV.B of this Extension. In the event that the Columbia River System operations resulting from these the Action Agencies' ESA consultation processes fail to meet any Party's expectations, the Party may exercise its rights under one of the extension off-ramps (Section IV.D.1.a). This 2018 Extension thus provides a roadmap and vehicle for the development of future system operations that have the Parties' support.

### ***A. THE PARTIES ARE COLLABORATING ON SUPPORT OF THE FOLLOWING PROPOSED ACTIONS<sup>15</sup> FOR OPERATION OF THE COLUMBIA RIVER SYSTEM***

During the spring and summer juvenile fish migration, the Action Agencies will continue to provide spill to facilitate juvenile fish passage for ESA-listed salmon and steelhead species, while seeking to minimize any adverse effects on adult migrants. Juvenile dam passage survival performance standard test results from studies conducted under the 2008 BiOp will serve as the baseline for Columbia River System operations covered by this Extension Attachment C. See Table 1. The summarized results shown in Table 1 will also serve as a reference in future latent mortality studies.

### ***B. SPRING SPILL***

Spring spill operations are planned as follows:

- For the four lower Snake River dams, spill will begin on April 3 and continue through June 20.

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<sup>15</sup> This Attachment describes key fish operations the Parties are aligned around. A broader description of all Columbia River System operations, including further detail on fish operations, will be in the consultation package that the Action Agencies will submit to NOAA Fisheries.

- For the four lower Columbia River dams, spill will begin on April 10 and continue through June 15.

There are differing views among regional technical experts regarding the biological value of further increases in spring spill levels relative to those spill levels informed by the results of performance standard testing conducted under the 2008 BiOp. These divergent viewpoints are linked to differing interpretations of existing data regarding delayed mortality, the effects of exposure to high total dissolved gas (“**TDG**”) levels, and the use of smolt-to-adult return ratios (“**SARs**”) as a performance metric for evaluating Columbia River System operations. To address this uncertainty, beginning in 2019 the Action Agencies will conduct research to test the hypothesis that further increasing system-wide spill levels (up to the current applicable state water quality standards of 115/120% TDG) will have the effect of substantially increasing adult salmonid return rates (i.e., increased SARs due to decreased latent mortality). The most recent CSS 2017 Annual Report hypothesizes increases of 23 percent or more. The Action Agencies are planning to conduct research by alternating spill levels between the Base Operation (informed by performance standard test results 2008-2018) and the Test Operation (spill to meet but not exceed the 115 /120% TDG). Additional details on the study design for a spill operation will be developed with NOAA Fisheries based on the Independent Scientific Advisory Board (“**ISAB**”) review of the Columbia River latent mortality test power analysis that was completed in the spring of 2018. The Parties will discuss and seek alignment on any modifications to the study design.

### ***C. SPRING JUVENILE TRANSPORTATION***

Spring transportation will be initiated at Lower Granite, Little Goose, and Lower Monumental Dams no later than May 1; however, consistent with program implementation in 2018, the start of transport may begin as early as April 24 to provide data on earlier transported fish. These transport operations will continue to be coordinated with the Regional Implementation Oversight Group (“**RIOG**”) and Technical Management Team (“**TMT**”). Coordination and adaptive management between Parties and other regional sovereigns through the Regional Forum, as appropriate, during the migration season may result in modified transportation protocols, such as during atypical low flow years. Transportation protocols will be reviewed annually, taking into account new information concerning adult returns, in-river and transportation SARs, and model results. If new information indicates a modified transportation protocol is warranted, the Parties will use existing adaptive management procedures to make the appropriate adjustments in timing and criteria for spring spill and transportation.

In the adaptive management process, the Parties may consider the exposure of fish to TDG during transport (or lack of) versus in-river conditions experienced by control fish throughout the Columbia River System during increased spill operations.

#### ***D. SUMMER SPILL***

Spill operations developed to facilitate safe passage of subyearling Chinook salmon will occur at the lower Snake River dams beginning on June 21 and at lower Columbia River dams on June 16, as shown in Tables 2 and 3 below. The Action Agencies will adjust summer spill timing at the lower Snake River projects according to when this species is actively migrating past those projects, as follows:

- Spill will continue at each project until the criteria below are met for that dam, or until August 31, whichever comes first.
- The Action Agencies will provide juvenile fish passage spill in August at Lower Granite Dam until subyearling fall Chinook collection counts at that dam fall below 300 fish per day for 4 consecutive days (with counting beginning on July 28).
- The Action Agencies will provide juvenile fish passage spill in August at Little Goose Dam until subyearling fall Chinook collection counts at that dam fall below 300 fish per day for 4 consecutive days (with counting beginning on July 28).
- The Action Agencies will provide spill in August at Lower Monumental and Ice Harbor Dams<sup>16</sup> until subyearling fall Chinook collection counts at Lower Monumental Dam fall below 300 fish per day for 4 consecutive days (with counting beginning on July 28).
- In the event that fish collection counts increase above 500 fish for 2 consecutive days at a project where spill has ended prior to August 31, the Parties agree to work together to develop an adaptive strategy to assess options and determine if an alternative spill operation is warranted until the criteria above are met again.

The Parties will meet annually before March 1 to determine whether to increase the quantity of PIT-tagged natural production (or hatchery reared surrogates for) subyearling fall Chinook salmon required to examine run timing. Special emphasis may be applied to the Clearwater fall Chinook salmon subgroup, which present a split life history strategy and variability in run-timing.

The Parties will continue to discuss and explore other potential changes to summer spill focusing on spill during the month of August for each of the lower Columbia River dams. In particular,

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<sup>16</sup> Daily collection does not occur at Ice Harbor Dam, so spill at that project will follow criteria for Lower Monumental Dam and continue until the same day.



the decrease in PIT-tagged fall Chinook passing the lower Columbia River dams will be investigated with regards to run-timing and reductions in August spill. Proposals under consideration include:

- Subyearling fall Chinook salmon count criteria (e.g., less than 1,200-1,500 fish) for a minimum of three consecutive sampling dates (current sampling rate varies at each site by date and water temperature, but without water temperature restrictions, sample in August occurs every other day at McNary and Bonneville dams and every three to four days at John Day Dam, yielding a minimum of 6-12 consecutive days);
- Continue to spill during the first half of August (August 1-15) at a reduced rate of spill and then provide only day spill (also a reduced level of spill) between August 16-31; and,
- Combined fish count criteria with reduced levels of spill during August.

### ***E. SUMMER TRANSPORTATION***

Transport operations targeting fall Chinook will continue until approximately September 30 at Lower Monumental Dam and through October 31 at Lower Granite and Little Goose Dams, in accordance with all relevant Fish Passage Plan operating criteria. The Parties and other regional sovereigns, through the Regional Forum, will review the transportation protocols annually, taking into account new information concerning adult returns, in-river and transportation SARs, and model results. If new information indicates a modified transportation protocol is warranted, adaptive management will be used to make the appropriate adjustments in timing and criteria for summer transportation.

Test results of in-river versus transported subyearling fall Chinook salmon on the lower Snake River suggest the primary benefit of transportation, as it relates to increases in SARs, occurs in the months of August-October. One proposed consideration by the Action Agencies is to transport subyearling fall Chinook by trucks beginning August 1 and continue through the fall (with actual dates and criteria to be defined).

### ***F. AVIAN PREDATION***

The objective of avian predator deterrence is to reduce avian predation on juvenile salmonids. The Corps will continue to implement and improve, as needed, avian predator deterrent programs at lower Snake and Columbia River dams. This program will be coordinated through the Fish Passage Operations and Maintenance (“**FPOM**”) Team and included in the annual Fish Passage Plan (“**FPP**”). Avian monitoring and deterrence action plans are implemented annually at lower Snake and Columbia River dams and are included in the FPP (see Appendix L in the

2018 FPP for an example). At each dam, bird numbers are monitored, feeding birds are hazed, and passive predation deterrents, such as irrigation sprinklers and bird wires are deployed. Hazing typically involves launching long-range pyrotechnics at concentrations of feeding birds and occurs primarily near the spillway and powerhouse discharge areas, and juvenile bypass outfall areas.

### ***G. ADULT PASSAGE***

The increase in proposed spring spill during the Spring Test Spill Operation may delay upstream migrating adult salmon and steelhead, specifically adult spring and summer Chinook salmon. If adult delay at any project is observed, existing adaptive management processes will be used to address the issue.

During low flow conditions, similar to the flows observed in 2015, with or without warm water temperatures, the Parties and other regional sovereigns, through the Regional Forum, will evaluate the appropriate balance between providing spill for juvenile passage, while not delaying upstream adult passage.

### ***H. HYDRO OPERATIONS FLEXIBILITY***

Increased flexibility in hydro operations is being discussed regionally, and several adjustments to operations are being considered, including:

1. The Action Agencies have proposed to increase the useable forebay range at lower Snake River projects by 6 inches (Minimum Operating Pool [“MOP”] +1.5-foot) to allow a full usable foot. Currently, project operators limit actual operations to the middle two-thirds of the MOP +1.0-foot range to avoid unintentionally going above or below the prescribed elevation. Beginning April 3, all lower Snake River projects (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite projects) will be operated within the MOP +1.5-foot reservoir operations with very limited instances in which the pool would be within 0.25 feet of the bottom or top of the MOP range. The Lower Granite Reservoir may be raised as needed after September 1, in order to operate the adult fish holding facilities to support brood stock collection.
  - As with the 6-inch expansion of operating range described for the lower Snake River projects, the Action Agencies plan to operate John Day Dam forebay within 2 feet of MIP—the lowest elevation range. This action will allow full utilization of 1.5-foot operating range (262.5 to 264.5 feet) that will continue to allow irrigation withdrawals from April 10 through September 30. Slight deviations from these levels, based on navigation needs, flood risk management, load following, and operation

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sensitivity, may be required on occasion. These reservoir operations may also have ancillary biological benefits that complement the avian predation reduction actions noted above.

2. The parties will work together to evaluate other emerging issues on an as needed, site-specific basis. Examples of emerging issues that may warrant additional site specific monitoring include new turbine testing at Ice Harbor and/or alternate methods of implementing spill programs (e.g. 24 hour spill averaging) while allowing for integration of intermittent power sources such as solar or wind which could also potentially be tested at a single project like Ice Harbor. Any of these types of RM&E efforts would need to be further developed and defined so that they could be integrated into and be complementary with the BiOp spill program.

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**Table 1.** Juvenile dam passage survival estimates, passage times, and spill passage efficiency for yearling Chinook salmon and juvenile steelhead are derived from performance standard tests from 2010-2014. Spill passage efficiency is the percent of all downstream migrating juvenile salmon or steelhead that passed a dam through the spillway and other surface passage routes.

Dam	Year	Species	Dam Passage Survival (percent with Standard Error)	Median Forebay Passage Time (hours)	Spill Passage Efficiency (percent)	Spill Operation (Target / Actual)
<b>Lower Columbia River</b>						
Bonneville	2010	Yearling Chinook Salmon	95.69 (0.42)	n/a	n/a	100 kcfs / 100 kcfs (30 Apr – 13 May)
Bonneville	2011	Yearling Chinook Salmon	95.97 (1.76)	0.55	59.59	100 kcfs / 181 kcfs (season-wide)
Bonneville	2010	Steelhead	97.55 (1.80)	n/a	n/a	100 kcfs / 100 kcfs (30 Apr – 13 May)
Bonneville	2011	Steelhead	96.47 (2.12)	0.85	64.06	100 kcfs / 181 kcfs (season-wide)
Bonneville	2012	Subyearling Chinook Salmon	97.39 (0.69)	0.48	57.06	85 kcfs day 121 kcfs night / 149 kcfs 95 kcfs 24 hrs / 149 kcfs
The Dalles	2010	Yearling Chinook Salmon	96.41 (0.96)	1.28	94.66	40% / 39.9%
The Dalles	2010	Steelhead	95.34 (0.97)	1.28	95.36	40% / 39.9%
The Dalles	2010	Subyearling Chinook Salmon	94.04 (0.91)	1.20	82.98	40% / 39.8%
The Dalles	2011	Yearling Chinook Salmon	96.00 (0.72)	0.97	83.10	40% / 43.1%
The Dalles	2011	Steelhead	99.52 (0.83)	0.81	89.10	40% / 43.1%
The Dalles	2012	Subyearling Chinook Salmon	94.69 (0.59)	1.08	78.39	40% / 40.4%
John Day	2011	Yearling Chinook Salmon	96.66 (1.03) 97.84 (1.07) 96.76 (0.71)	2.00 1.50 1.42	61.20 66.40 63.68	30% / 30% 40% / 40% Season-wide
John Day	2011	Steelhead	98.36 (0.90) 98.97 (0.96) 98.67 (0.61)	4.30 3.20 2.91	61.20 66.40 62.78	30% / 30% 40% / 40% Season-wide

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**Table 1.** (continued) Juvenile dam passage survival estimates, passage times, and spill passage efficiency for yearling Chinook salmon and juvenile steelhead are derived from performance standard tests from 2010-2014. Spill passage efficiency is the percent of all downstream migrating juvenile salmon or steelhead that passed a dam through the spillway and other surface passage routes.

Dam	Year	Species	Dam Passage Survival (percent with Standard Error)	Median Forebay Passage Time (hours)	Spill Passage Efficiency (percent)	Spill Operation (Target / Actual)
John Day	2012	Yearling Chinook Salmon	96.73 (0.65)	1.15	74.56	30% / 37.1% 40% / 37.1%
John Day	2012	Steelhead	97.44 (0.28)	2.39	74.52	30% / 37.1% 40% / 37.1%
John Day	2014	Subyearling Chinook Salmon	91.96 (0.74) 91.31 (0.77)	2.28 1.91	55.52 71.26	30% / 30% 40% / 40%
McNary	2012	Yearling Chinook Salmon	96.16 (1.40)	1.76	72.46	40% / 50.9%
McNary	2012	Steelhead	99.08 (1.83)	1.78	83.15	40% / 50.9%
McNary	2012	Subyearling Chinook Salmon	97.47 (1.14)	1.77	78.32	50% / 61.6%
McNary	2014	Yearling Chinook Salmon	96.10 (1.27)	1.73	71.40	40% / 52.6%
McNary	2014	Steelhead	96.98 (1.36)	2.57	84.33	40% / 52.6%
<b>Lower Snake River</b>						
Lower Monumental	2012	Yearling Chinook Salmon	98.68 (0.90)	2.35	78.89	Gas Cap (26 kcfs) / 29.7 kcfs
Lower Monumental	2012	Steelhead	98.26 (0.21)	2.17	65.85	Gas Cap (26 kcfs) / 29.7 kcfs
Lower Monumental	2012	Subyearling Chinook Salmon	97.89 (0.79)	2.60	83.56	17 kcfs / 25.2 kcfs
Lower Monumental	2013	Subyearling Chinook Salmon	92.97 (1.05)	2.99	89.10	17 kcfs / 19.8 kcfs
Little Goose	2012	Yearling Chinook Salmon	98.22 (0.76)	2.58	65.28	30% / 31.8%
Little Goose	2012	Steelhead	99.48 (0.81)	2.67	56.09	30% / 31.8%
Little Goose	2012	Subyearling Chinook Salmon	95.08 (0.97)	2.80	72.49	30% / 38.5%
Little Goose	2013	Subyearling Chinook Salmon	90.76 (1.39)	3.66	76.83	30% / 30%

**Table 2. Initial juvenile fish passage spill operations at lower Snake River dams.**

Project	Spring base spill operation <sup>4</sup>	Spring test spill operation <sup>17,18,19</sup>	Spring dates	Summer operation	Summer dates <sup>20</sup>
Lower Granite	20 kcfs	TDG Spill Cap	April 3 – June 20	18 kcfs	June 21 – Aug 31
Little Goose	30%	TDG Spill Cap	April 3 – June 20	30%	June 21 – Aug 31
Lower Monumental	TDG Spill Cap	TDG Spill Cap	April 3 – June 20	17 kcfs	June 21 – Aug 31
Ice Harbor	30%	TDG Spill Cap	April 3 – June 20	30%	June 21 – Aug 31

<sup>17</sup> Spring spill levels will be systematically alternated between “base spill” and “test spill” as part of a latent mortality study.

<sup>18</sup> If adult delay at any project is observed, existing adaptive management processes will be used to address the issue.

<sup>19</sup> The 120%/115% TDG spill cap refers to spill to the maximum level that meets, but does not exceed, the current TDG criteria allowed under state law (120% TDG in the project’s tailwater and 115% TDG in the next downstream forebay. Manage juvenile fish spill on an hourly basis to meet but not exceed the state water quality standards for WA and OR. Implementation of the daily spill averaging would include ± hourly variation in spill amounts within a day to facilitate integration of renewable power including solar and wind.

<sup>20</sup> The Action Agencies will adjust the timing of August spill based on the timing of the juvenile fall Chinook migration according to the following criteria. Beginning August 1, the Action Agencies will adjust summer spill operations to juvenile outmigration at Lower Granite, Little Goose, or Lower Monumental, or Ice Harbor Dams if subyearling Chinook collection counts fall below 300 fish per day for four consecutive days (beginning July 28, 29, 30, and 31 for August 1 summer spill completion). Spill will continue at Ice Harbor until the same day as at Lower Monumental, since daily collection does not occur at that project. Additionally, in any year where natural-origin adult returns of Snake River fall Chinook salmon are equal to or less than 400 fish, summer spill in the following year would continue at Snake River projects through August 31, even in years where subyearling Chinook counts fall below the 300 fish per day for four consecutive days as stated above. In the event that fish collection counts increase above 500 fish for 2 consecutive days at a project where spill has ended prior to August 31, the Parties agree to work together to develop an adaptive strategy to assess options and determine if an alternative spill operation is warranted until the criteria above are met again.

**Table 3. Initial juvenile fish passage spill operations at Columbia River dams.**

<b>Project</b>	<b>Spring base spill operation</b>	<b>Spring test spill operation<sup>21,22,23</sup></b>	<b>Spring dates</b>	<b>Summer spill operation</b>	<b>Summer dates</b>
McNary	48%	TDG Spill Cap	April 10 – June 15	57%	June 16 – Aug 31
John Day	32%	TDG Spill Cap	April 10 – June 15	35%	June 16 – Aug 31
The Dalles	40%	TDG Spill Cap	April 10 – June 15	40%	June 16 – Aug 31
Bonneville	100 kcfs	TDG Spill Cap <sup>24</sup>	April 10 – June 15	95 kcfs	June 16 – Aug 31

<sup>21</sup> Spring spill levels will be systematically alternated between “base spill” and “test spill” as part of the Action Agencies’ latent mortality research plan.

<sup>22</sup> If adult delay at any project is observed, existing adaptive management processes will be used to address the issue.

<sup>23</sup> The 120%/115% TDG spill cap refers to spill to the maximum level that meets, but does not exceed, the current TDG criteria allowed under state law (120% TDG in the project’s tailwater and 115% TDG in the next downstream forebay. Manage juvenile fish spill on an hourly basis to meet but not exceed the state water quality standards for WA and OR. Implementation of the daily spill averaging would include ± hourly variation in spill amounts within a day to facilitate integration of renewable power including solar and wind.

<sup>24</sup> Spill to the TDG Spill Cap, not to exceed 150 kcfs.

## **ATTACHMENT D: CONSULTATION REGARDING THE COLUMBIA RIVER TREATY**

Consistent with Bonneville and Corps Tribal Policies, Bonneville and the Corps will coordinate with the Tribes concerning annual operations under the Columbia River Treaty of 1964 (“Treaty”), as well as the 2012 Non-Treaty Storage Agreement, and Bonneville and Corps actions related to U.S.-Canada discussions of modernization of the Treaty regime post-2024, as follows.

### **Annual Treaty/Non-Treaty Operations and Treaty Operating Plans**

Each operating year during the period of this extension agreement, Bonneville and the Corps will coordinate with the Tribes to discuss Treaty and non-Treaty operations and Treaty operating plans. This coordination will include meeting in the fall to discuss Treaty and non-Treaty operations that occurred during the preceding fish passage season, and to seek tribal input, ideas, and information on planned operations for the next fish passage season. Bonneville and the Corps also will inform the Tribes of the final operating plan once finalized. Typical agenda items for the fall meeting would include a review of Treaty and non-Treaty operations for the preceding year (including supplemental operating agreements), a review of the current year Detailed Operating Plan and possible supplemental operating agreements, and a summary of the applicable Assured Operating Plan and upcoming Detailed Operating Plan. One additional meeting will be held during the fish passage season to provide an update on Treaty and non-Treaty operations.

### **Matters Related to Post-2024 Columbia River Treaty Negotiation**

Bonneville and the Corps agree to conduct government-to-government consultation with the Tribes under this subsection as appropriate and consistent with applicable policies, procedures, laws and regulations. Such consultation or other coordination with the Tribes related to the U.S. and Canadian discussions regarding modernizing the Treaty regime post-2024, will be coordinated with the U.S. Department of State.