

**2008 Columbia Basin Fish Accords
Memorandum of Agreement between the
Shoshone-Bannock Tribes and FCRPS Action Agencies**

SHOSHONE-BANNOCK TRIBES-ACTION AGENCY AGREEMENT
November 7, 2008

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**MEMORANDUM OF AGREEMENT AMONG THE SHOSHONE-BANNOCK TRIBES,
BONNEVILLE POWER ADMINISTRATION, U.S. ARMY CORPS OF ENGINEERS,
AND U.S. BUREAU OF RECLAMATION**

I. INTRODUCTION

The Bonneville Power Administration (BPA), the U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation) (the “Action Agencies”) and the Shoshone-Bannock Tribes of Fort Hall (“the Tribes”) (collectively “the Parties”) developed this Memorandum of Agreement (“Agreement” or “MOA”) through good faith negotiations. This Agreement addresses direct and indirect effects of construction, inundation, operation and maintenance of the Federal Columbia River Power System¹ and Reclamation’s Upper Snake River Projects,² on the fish and wildlife resources of the Columbia River Basin. The Action Agencies and the Tribes intend that this Agreement provide benefits to all the Parties. Reasons for this Agreement include the following:

- To resolve issues between the Parties regarding the Action Agencies’ compliance with the Endangered Species Act (“ESA”) regarding these FCRPS and Upper Snake Projects;
- To resolve issues between the Parties regarding compliance with the Pacific Northwest Electric Power Planning and Conservation Act (“NWPA”) and the Clean Water Act (“CWA”);
- 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 FCRPS and Upper Snake Projects, affirming and adding to the actions proposed in the draft FCRPS and Upper Snake Biological Opinions; and
- To foster a cooperative and partnership-like relationship in implementation of the mutual commitments in this Agreement.

¹ For purposes of this Agreement, the FCRPS comprises 14 Federal multipurpose hydropower projects. The 12 projects operated and maintained by the Corps are: Bonneville, 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 following FCRPS projects: Hungry Horse Project and Columbia Basin Project, which includes Grand Coulee Dam.

² The Upper Snake River Projects (Upper Snake) are Minidoka, Palisades, Michaud Flats, Ririe, Little Wood River, Boise, Lucky Peak, Mann Creek, Owyhee, Vale, Burnt River and Baker.

II. HYDRO COMMITMENTS

A. Hydro Performance

A.1. Performance Standards, Targets, and Metrics:

The Tribes concur in the use of the hydro performance standards, targets, and metrics as described in the Main Report, Section 2.1.2.2 of the Action Agencies' August 2007 Biological Assessment (pages 2-3 through 2-6) and the FCRPS BiOp at RPA No. 51 (pages 70-74 of 98). Provided that, the Tribes and their representatives may recommend to the Action Agencies actions that may exceed performance standards, which will be considered and may be implemented at the discretion of the Action Agencies.

A.2. Performance and Adaptive Management:

The Parties agree the BiOps will employ an adaptive management approach, including reporting and diagnosis, as described in Section 2.1 of the Biological Assessment. The Parties agree if biological or project performance expectations as described above are not being met over time as anticipated, diagnosis will be done to identify causes, and remedies will be developed to meet the established performance standard. The performance standard for species or the federal projects will not be lowered during the terms of the BiOps (although as provided in the BA, tradeoffs among Snake River and lower river dams are allowed). In addition, the Parties agree the current delay and SPE metrics described in Attachment A will not be lowered unless they impede survival.

The Parties recognize new biological information will be available during the term of the MOA that will inform the methods and assumptions used to analyze the effects of hydro operations on fish species covered by this Agreement. The Parties will work together to seek agreement on methods and assumptions for such analyses, building on analyses performed in development of the FCRPS Biological Opinion as warranted.

As described in the FCRPS BiOp, a comprehensive review will be completed in June, 2013 and June, 2016 that includes a review of the state of implementation of all actions planned or anticipated in the FCRPS and Upper Snake BiOps and a review of the status and performance of each ESU addressed by those BiOps. The Parties agree that they will discuss the development, analyses and recommendations related to these comprehensive evaluations and, in the event performance is not on track, to discuss options for corrective action.

A.3. Research, Monitoring, and Evaluation:

Maintaining and improving research, monitoring, and evaluation programs is critical to informed decision making on population status assessments and improving management action effectiveness. The Action Agencies will implement status and effectiveness research, monitoring and evaluation sufficient to robustly track survival improvements and facilitate rebuilding actions accomplished, through projects and programs identified in the FCRPS BiOp

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and Attachment A. The Parties further agree the Action Agency effort should be coordinated with implementation partners including other fishery managers.

B. Emergency Operations for Unlisted Fish

The Action Agencies agree to take reasonable actions to aid non-listed fish during brief periods of time due to unexpected equipment failures or other conditions and when significant detrimental biological effects are demonstrated. When there is a conflict in such operations, operations for ESA-listed fish will take priority.

III. HABITAT AND HATCHERY COMMITMENTS

A. BPA Funding for Habitat and other Non-Hatchery Actions

A.1 General Principles:

- BPA and the Tribes seek to provide certainty and stability regarding BPA commitments to implement fish and wildlife mitigation activities in partnership with the Tribes, including additional and expanded actions which further address the needs of ESA-listed anadromous fish.
- Projects funded under this Agreement are to be linked to biological benefits based on limiting factors for ESA-listed fish. The Parties agree to identify the benefits attributable to the projects for ESA-listed fish consistent with the methodology identified in the FCRPS BiOp.
- Projects funded under this Agreement are consistent with ESA recovery plans and subbasin plans now included in the Columbia Basin Fish and Wildlife Program. More specific linkages will be documented as a function of the BPA contracting process.
- Projects may be modified by mutual agreement over time based on biological priorities, feasibility, science review comments, or accountability for results.

A.2 Types of Projects:

BPA is committing to funding a suite of projects and activities summarized in Attachment A, for non-hatchery expense projects, plus additional commitments for new hatchery operations and maintenance expenses as summarized in Attachment A and further described in Attachment B. The projects or actions are categorized as follows:

- Ongoing actions (currently or recently implemented through the Columbia Basin Fish and Wildlife Program). The actions include actions addressing ESA-listed salmon and steelhead (“ESA actions”) as well as non-listed fish species and wildlife.
- Expanded actions in support of FCRPS BiOp and Program implementation.
- New actions benefiting ESA-listed and non-listed species.

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A.3. Expense Projects:

- BPA's funding commitment in the form of annual expense planning budgets for each project is identified in Attachment A.
- BPA may provide additional funding for habitat improvements for the Yankee Fork population if BPA determines it is needed for ESA purposes and the Tribes have identified appropriate projects.
- BPA's funding commitment is also subject to the General Provisions for All Projects below.

A.4. Non-Hatchery (Wildlife) Capital Projects:

BPA will commit a minimum of \$16,550,000 over the 10 year period to implement wildlife habitat acquisitions for the Southern Idaho Wildlife Mitigation project as described in Attachment B. Based on reviews to date, BPA finds that the wildlife projects typically meet BPA's capital policy for fish and wildlife. If a project is subsequently found not to meet capital requirements, BPA and the Tribes will work together to find a replacement project or alternative project that can be implemented. In addition, BPA will provide additional capital funding, up to a total of \$5 million (i.e., an additional \$3,345,000 on top of the \$1,655,000 annual commitment) in any single year for additional wildlife acquisitions, provided BPA determines it has (a) remaining Southern Idaho Wildlife habitat unit needs; (b) sufficient available capital, and (c) the Tribes' request is made early enough in the fiscal year to give BPA sufficient time to evaluate and process the additional acquisition(s). All wildlife habitat acquisitions with the Tribes will be implemented in accordance with the terms and conditions of the 1997 Memorandum of Agreement regarding wildlife habitat acquisitions entered into by BPA and the Tribes.

B. Funding for Hatchery Actions

B.1. General Principles:

- The Action Agencies and the Tribes recognize that hatcheries can provide important benefits to ESA-listed species and to the Tribes in support of their treaty fishing interests.
- BPA and the Tribes seek to provide certainty and stability to BPA funding of hatchery actions by supporting specific on-going hatchery actions implemented by the Tribes, and to make funding available for new hatchery actions (including hatchery reform efforts) by the Tribes and others as they complete required review processes.
- BPA's funding will be in addition to and not replace funding for hatcheries provided by other entities, including but not limited to funding provided by Congress pursuant to the Mitchell Act, and funding required from other hydropower operators implementing habitat conservation plans and other related agreements.
- If a hatchery project identified in this Agreement is not able to be implemented, the Action Agencies are not obligated to fund a replacement or alternative project, and the unused hatchery funds will not be required to be shifted to non-hatchery projects.

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B.2. Expense and Capital Hatchery Actions:

- BPA will make available a total not to exceed \$7,750,000 over ten years for the Crystal Springs Hatchery and related facilities as described in the Attachments A and B. BPA will also provide expense funding not to exceed the amounts described in Attachment A to provide for planning expenses or other non-capital activities associated with hatchery design, construction, and implementation, and then used for operation and maintenance funding once hatchery construction is completed. In addition, BPA will provide funding that may be used for the planning and implementation of supplementation projects, as described in Attachments A and B.
- Starting with the FY2011 rate period, BPA will collaborate with the Tribes to develop a capital spending plan in advance of each new rate period that arises during the Agreement, so as to ensure that adequate rate period capital budgets are available for funding the capital actions in this MOA.
- In planning and development of the Crystal Springs Hatchery, and any out-planting or supplementation of fishes into natural habitats, the Tribes will work diligently to obtain required reviews and approvals from others, including the 3-Step Process and ISRP review through the Council's Program, obtaining NOAA and/or United States Fish and Wildlife Service review and approval as needed, coordinating with other co-managers in the State including the Idaho Department of Fish and Game, and obtaining any needed review or concurrence through the *U.S. v. Oregon* process.
- BPA and the Tribes will develop an agreement to address more detailed implementation issues regarding the construction, management, operation and maintenance of the Crystal Springs Hatchery.

B.3. Implementation Sequence:

The Tribes, BPA, (and other federal agencies where applicable) will, as part of developing a capital plan, develop an implementation sequence for these projects. The overall funding commitment reflected in Section III.B.2 above is shown in 2009 dollars, and an annual inflation adjustment of 2.5 percent, applied beginning in FY10, will be utilized in developing the capital plan and implementation sequence for these (i.e., capital projects that are assumed to begin in FY10 will have a 2.5 percent inflation factor applied to the FY10 budget; projects that are assumed to begin five years later will have five years of a 2.5 percent annual inflation factor applied to the project's first-year budget).

- The Tribes will consider, among other things, the following as they develop the sequence of implementation:
 - Degree of readiness for implementation
- Sequencing will not be guided by project-by-project speculation regarding NOAA's willingness to approve or accept the project. Rather, NOAA input on these actions (to the extent they require it) will be sought consistent with this comprehensive Agreement.

C. General Provisions For All Projects

C.1. The Parties Agree all projects funded pursuant to this Agreement are to be consistent with the Council's Program (including sub-basin plans), as amended; applicable draft ESA recovery plans; BPA's In-Lieu Policy; and, the data management protocols incorporated in the project contracts.

C.2. For BPA funded commitments, the Tribes will report results annually (including ongoing agreed upon monitoring and evaluation) via PISCES and/or other appropriate databases.

C.3. For non-hatchery projects identified as providing benefits to listed ESA fish, the Tribes shall:

- Provide estimated habitat quality improvement and survival benefits from the project (or suite of projects) to a population or populations of listed salmon and steelhead based on key limiting factors;
- Refine the estimates during the course of the Agreement if it appears benefits may significantly deviate from the original estimates; and
- Support these estimates of habitat improvement and survival benefits in appropriate forums.

C.4. For hatchery projects, the Tribes will:

- Continue to make available identified biological benefits associated with a hatchery projects included in this Agreement, and will support those biological benefits;
- Obtain a NOAA or USFWS determination as appropriate that the hatchery project will not impede and where possible will contribute to recovery;
- Secure or assist in securing all legally necessary permits for hatchery construction and operation.

C.5. The Parties will coordinate their RM&E projects with each other and with regional RM&E processes (particularly those needed to ensure consistency with the FCRPS BiOp RM&E framework), as appropriate and agreed to among the Parties.

C.6. For actions on federal lands, the Tribes will consult with the federal land managers and obtain necessary permits and approvals.

D. Northwest Power and Conservation Council and ISRP Review

D.1. General principles:

- In developing this Agreement, the Parties recognize the Council's Program is a maturing program, one that through several decades of implementation has established a continuing framework for mitigating the impacts of hydroelectric development in the Columbia River Basin.

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- The Parties agree the BPA funding commitments in this Agreement are ten (10)-year commitments of the Bonneville Fund for implementation of projects. The Parties believe this Agreement and the specific projects are consistent with the Council's Program.
- The Council's expertise and coordination is valuable in addressing science review and accountability on a region-wide scale.
- The Parties recognize the current regional process for reviewing and funding projects to meet Action Agency obligations under the NWPA and/or ESA have been designed in large part to prioritize actions for a particular implementation period. As such, the process has reviewed "proposals" that essentially are competing with one another for a funding within a set overall budget. This Agreement, however, along with the BiOps, reflects specific and binding funding commitments to the projects in the attached spreadsheets, subject to the other terms and conditions in this Agreement.

D.2. ISRP review of projects implemented pursuant to this Agreement:

- Subject to the commitments in Section III.E.2, the Parties will actively participate in ISRP review of the projects funded under this Agreement. The Parties will work with the Council to streamline and consolidate ISRP project reviews by recommending that the ISRP: (1) review projects collectively on a subbasin scale, (2) focus reviews for ongoing or longer term projects on future improvements/priorities, and (3) unless there is a significant project scope change since last ISRP review, minimize or abbreviate re-review of ongoing projects.
- Subject to the commitments in Section III.E.2 the Parties may agree to expedited ISRP review of new projects that are not substantially similar to projects or activities previously reviewed by the ISRP.
- The Parties will consider reasonable adjustments to non-hatchery projects based on ISRP and Council recommendations. The decision on whether or not to make such reasonable adjustments will require agreement of the Tribes and BPA. If the reasonable adjustment results in a reduction of a project budget, the Tribes and BPA will select another project to use the funds equal to the amount of the reduction. If the Tribes and BPA cannot agree on whether a recommended adjustment should be made, a replacement project that meets the requirements of this Agreement will be identified. In any event, BPA's financial commitment to non-hatchery projects will not be reduced to an aggregate level below amounts specified in this Agreement for the Tribes so long as a replacement project meets the requirements of this Agreement could be identified (see replacement project discussion, below).
- The proponent for any new hatchery project will participate in then-applicable streamlined ISRP and Council 3-step review processes recognizing that the ultimate decision to implement the projects is for BPA subject to the terms of this Agreement. Capital funding for any new hatchery project is subject to these review processes. The Parties will consider reasonable adjustments to hatchery projects based on ISRP and Council recommendations. The decision on whether or not to make such reasonable adjustments will require agreement of the Tribes and BPA.

E. Replacement Projects and Adaptive Management

E.1. General Principles:

- This section applies to non-hatchery projects
- The Parties agree a non-hatchery project identified in this Agreement may not ultimately be implemented or completed due to a variety of possible factors, including but not limited to:
 - Problems arising during regulatory compliance (e.g., ESA consultation, NEPA, NHPA review, CWA permit compliance, etc);
 - New information regarding the biological benefits of the project (e.g., new information indicating a different implementation action is of higher priority, or monitoring or evaluation indicates the project is not producing its anticipated benefits);
 - Changed circumstances (e.g., completion of the original project or inability to implement the project due to environmental conditions); or
 - Substantive non-compliance with the implementing contract.
- Should a non-hatchery project not be implemented due to one or more of the above factors, the Action Agencies and the Tribes will promptly negotiate a replacement project.

E.2. Replacement Projects:

- A replacement project should be the same or similar to the one it replaces in terms of target species, limiting factor, mitigation approach, geographic area and/or subbasin and biological benefits.
- A replacement project may not require additional Council or ISRP review if the original project had been reviewed.
- A replacement project would have the same or similar planning budget as the one it replaces (less any expenditures made for the original project) and will take into account carry-forward funding as agreed to by the Parties.

E.3. Adaptive Management:

In addition to project-specific adaptation described above, the Parties may mutually agree to adaptively manage this shared implementation portfolio on a more programmatic scale based on new information or changed circumstances.

F. Inflation, Ramp Up, Planning v. Actuals, Carry-over

F.1. Inflation:

Beginning in fiscal year 2010, BPA will provide an annual inflation adjustment of 2.5 percent.

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F.2. Treatment of Ramp-up of new/expanded work:

In recognition of the need to “ramp up” work (timing of Agreement execution, contracting, permitting, etc), the Parties agree that average BPA spending for the new/expanded projects in fiscal year 2009 is expected to be approximately one-third of the average planning level shown in the attached project-specific spreadsheets; and for fiscal year 2010, it is expected to be up to 75 percent of the average planning level, with full planning levels expected for most new/expanded projects starting in fiscal year 2011.

F.3. Assumptions regarding Planning versus Actuals:

Historically, the long-term average difference between BPA’s planned expenditures for implementing the expense component of the Power Council’s Fish and Wildlife Program, and actual spending (what BPA is invoiced and pays under the individual contracts), has been about 7%, with the actual spending averaging 93% of planned spending. While BPA will plan for spending up to 100 percent of the funding commitments described in this Agreement, nevertheless, due to a variety of factors, BPA’s actual expenditures may be less. As a result, the Parties agree, provided BPA’s actual spending for the totality of projects commitments in this Agreement averages 93% of the planning amount annually, BPA is in compliance with its funding commitments. If BPA is not meeting the 93% average annually due to circumstances beyond the Parties control, BPA will not be in violation of this Agreement, but the Parties will meet to discuss possible actions to remove the impediments to achieving 93%. The Parties also agree, for the reasons regarding ramp up in Section III.F.2, new projects and projects expansions during their FY09 and FY10 ramp up phase will be excluded from this calculation.

F.4. Unspent funds, and pre-scheduling/rescheduling:

Annual project budgets may fluctuate plus or minus 20% in relation to the planning budgets for each project, to allow for shifts in work between years (within the scope of the project overall), if work will take longer to perform for reasons beyond the sponsors’ control (reschedule) or can potentially be moved to an earlier time (preschedule). Fluctuations within an overall project’s scope of work, but outside of the 20 percent band, can also occur if mutually agreeable for reasons such as, but not limited to, floods, fires, or other emergency or *force majeure* events.

Unspent project funds (excluding new/expanded projects subject to ramp-up assumptions covered in Section F.2 above) carried over per the reschedule/preschedule provisions above (i.e., within +/- 20% of the annual project budget and within the project’s scope of work) may be carried forward from one contract year (e.g., Year 1), to as far as two contract years (e.g., Year 3) into the future before such funds are no longer available. The one exception to this reschedule/preschedule criteria is that for the project expansions and new projects, if actual total FY09 and FY10 spending is less than the sum of 33% of the FY09 budget and up to 75% of the FY10 budgets reflected in the spreadsheet attachments due to circumstances within the Tribes’ control, then the increment between what is actually spent in FY09/10 and the sum of 33% of the FY09 budget and up to 75% of the FY10 budgets reflected in the spreadsheet cannot be carried over into FY11.

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To the extent that the projects proposed for funding in this Agreement involve the acquisition of interests in land from willing sellers, BPA and the Tribes may, by mutual agreement, adjust the 20 percent fluctuation band for the budgets for such projects to accommodate the uncertainties of negotiations with sellers. In addition, BPA may extend the two year carry-forward limit for such projects, provided that the Tribes provide at least six months notice of the potential need for such an extension, and provided further that BPA may decline to extend the carry-forward limit to avoid a “bow wave” of spending in any given year, or towards the end of this Agreement’s term, or on any other reasonable ground.

IV. FORBEARANCE, WITHDRAWAL, AND DISPUTE RESOLUTION

A. Forbearance

A.1. The Tribes will not initiate, join in (whether by intervention or amicus), or otherwise participate in any manner in the current litigation against the FCRPS and Upper Snake BiOps (*NWF v. NMFS*).

A.2. The Tribes covenant during the term of this Agreement:

- a. The Tribes will not initiate, join in, or support in any manner ESA, Northwest Power Act, Clean Water Act or APA suits against the Action Agencies or NOAA regarding the legal sufficiency of the FCRPS PA, FCRPS BiOp, Upper Snake BiOp, the 2008 Columbia Basin Fish Accords, this Agreement and/or conforming implementing RODs.
- b. So long as the Agreement is being implemented by the Action Agencies, the Tribes will not initiate, join in, or support in any manner ESA, Northwest Power Act, Clean Water Act or APA suits against the Action Agencies or NOAA regarding the effects on fish resources and water quality (water quality issues addressed in the FCRPS BA and the BiOps or otherwise related to the operation or existence of the 14 FCRPS projects regarding temperature and total dissolved gas³) resulting from the operations of the FCRPS and Reclamation dams that are specifically addressed in the FCRPS PA, FCRPS BiOp, Upper Snake BiOp, the 2008 Columbia Basin Fish Accords, this Agreement and/or conforming implementing RODs.
- c. The Tribes' participation in ongoing and future BPA rate making/approval/review proceedings will be consistent with the terms of this Agreement. This means, for example, the Tribes agree not to request additional fish or wildlife funding from BPA in on-going and future BPA rate making/approval/review proceedings during the term of this Agreement, and the Tribes will not make such requests in ongoing or future rate making/approval/review proceedings based on alleged infirmities in prior rate

³ Water quality here is not intended to include matters not specifically addressed in the FCRPS BA and BiOps such as the Corps' 404 regulatory program, toxics clean-up issues.

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making/approval/review proceedings, including but not limited to the 2002-2006 rate period.

- d. The Tribes agree breaching will not occur within the term of the Agreement. In addition, the Tribes will not advocate for breaching dams covered by the FCRPS and Upper Snake Biological Opinions during the term of this Agreement. This commitment is made subject to the following mutual understandings and a single exception specified below:
- It is understood by all Parties nothing in this Agreement may be interpreted or represented as any tribe rescinding or altering their long-standing policy, scientific, and legal positions regarding breach of federal dams.
 - As required by the NOAA Fisheries FCRPS Biological Opinion, a comprehensive review will be completed in June, 2013 and June, 2016 that includes a review of the state of implementation of all actions planned or anticipated in the FCRPS and Upper Snake BiOps and a review of the status and performance of each ESU addressed by those BiOps. As described in Section II.A.2 of this Agreement, the Parties agree to meet to discuss the results of the 2013 comprehensive evaluation and, in the event performance is not on track, to discuss options for corrective action. If, after the June, 2016 comprehensive review, the status of Snake River ESUs is not improving and the Tribes review of Diagnostic Performance Framework indicates contingent actions are needed, the Tribes may advocate actions to implement Snake River dam breaching after 2017 should be initiated.

A.4. Nothing in this Agreement shall be construed by the Parties in any forum to limit or restrict the Parties or their agents or employees from advocating for actions they believe are required to implement this Agreement. Disputes among the Parties regarding implementation will be handled under the Good Faith and dispute resolutions sections.

B. Affirmation of Adequacy

B.1. This Agreement builds upon and expands the commitments of the Action Agencies called for in the FCRPS and Upper Snake Biological Opinions (the BiOps). This Agreement also takes into account and supports the 2008 - 2017 *United States v. Oregon* Management Plan and its pending BiOp. The Parties support this package of federal and tribal actions as an adequate combined response of these Parties for the ten year duration of the Agreement and BiOps to address the government's duties for:

- conserving listed salmon and steelhead, including avoiding jeopardy and adverse modification of critical habitat under the Endangered Species Act;
- protection, mitigation, enhancement and equitable treatment of fish and wildlife under the Northwest Power Act; and
- Clean Water Act provisions related to the FCRPS dams.

B.2. The Tribes further agree:

- the Action Agencies' commitments under this Agreement and the BiOps as to hatchery projects are adequate for 30 years from the effective date of this Agreement except if after year 15 of the 30 year forbearance for hatcheries there is a change in the status of an

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ESU (e.g., a new listing), or if after year 15 there is new information or changed circumstances that indicate additional hatchery actions are needed to assist in mitigating impacts of the FCRPS consistent with current science and applicable law, the Tribes are not precluded from seeking additional funding from the Action Agencies for hatcheries. If within the year prior to the expiration of this Agreement, due to no fault of the Parties, any capital funded hatchery actions identified in this Agreement have not begun construction, BPA will continue to make the identified capital funding in this Agreement available for the identified project (or projects) for an additional five years at which point the Parties will meet and discuss the disposition of any hatcheries that have not completed construction and the related capital funding.

- the Action Agencies' commitments under the 2008 Columbia Basin Fish Accords for lamprey actions are adequate for the duration of this Agreement such that the Tribes will not petition to list lamprey or support third party efforts to list lamprey as threatened or endangered pursuant to the ESA.

B.3. The Tribes' determination of adequacy under applicable law is premised on several important assumptions and understandings with which the federal parties to this Agreement concur:

- The specific actions identified in this Agreement and/or funding for such actions is provided by the federal parties in full and timely manner;
- Other actions not specifically identified in this Agreement, but committed to in the FCRPS BiOp, are carried out in a timely manner;
- The biological performance and status of the species affected by the development and operation of the FCRPS and Upper Snake hydroprojects are diligently and comprehensively monitored, analyzed, and reported to the Tribes and others as provided in the BiOps; and
- Adaptive management will be used as described in the Section II.A.2 to ensure achievement of performance objectives for the FCRPS. If during the 2013 or 2016 comprehensive review called for in the BiOps it is found that the status of ESA covered species are not improving as anticipated in the Adaptive Management section of the BA, the Tribes will have the opportunity to advocate that actions over and above those in the Agreement and/or BiOps should be implemented in the future, consistent with the terms of this Agreement.

B.4. The Tribes agree to affirmatively support the adequacy of the package of federal and tribal actions contained in the BiOps and this Agreement in appropriate forums, including NOAA's administrative record. This commitment includes, but is not limited to, the Tribes' withdrawing their comments to NOAA regarding the draft FCRPS BiOp and withdrawing their comments to BPA regarding the Columbia Basin Fish Accords.

C. Council Program Amendment Process

C.1. During the term of the Agreement, the Action Agencies and Tribes will submit recommendations or comments or both in relation to Council Program amendments consistent with, and are intended to, effectuate this Agreement. The Tribes and the Action Agencies have agreed to submit the following to the Council in any recommendations or comments each may

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make for Program amendments solicited in 2008 to describe this Agreement and its role in such Program amendments:

Description and Rationale: The Action Agencies and the Tribes have agreed to a 10 year commitment of actions in support of the Action Agencies' obligations both generally under the Northwest Power Act, as well as specifically for anadromous species listed under the Endangered Species Act. The commitments include support for the actions in the 2008 Biological Opinions for the FCRPS and the Upper Snake. The commitments also include actions already reviewed and recommended by the Council to BPA, as well as expanded and new actions. The Action Agencies and the Tribes found these commitments consistent with the Program and the Council's intent to integrate Power Act and ESA responsibilities. The expanded and new actions are, moreover, subject to reasonable modifications determined by the Parties to the Agreement based on Council and ISRP review.

The Tribes and the Action Agencies will recommend that the Council amend the Fish and Wildlife Program to incorporate the BiOps and Agreement, consistent with the following approach:

- The actions in the 2008 Biological Opinions for the FCRPS and Upper Snake should be implemented, in conjunction with the FCRPS Action Agencies' Biological Assessment, as measures to protect, mitigate, and enhance listed salmon and steelhead affected by the federal hydro system.
- The actions in the 2008 Memoranda of Agreement between the FCRPS Action Agencies and the Tribes should be implemented per its terms as additional measures to protect, mitigate and enhance both listed and non-listed fish, as well as wildlife.

C.2. Neither the Tribes, nor the Action Agencies, waive the right to assert, if adopted by the Council based on its own recommendations, or recommendations of third parties, an amendment contrary to this Agreement is either lawful or unlawful under the Northwest Power Act, or any other law, provided they act consistent with the terms of this Agreement.

D. Good Faith Implementation and Support

This Agreement is based on bargained-for consideration. The Parties agree to work together to implement the mutual commitments in this Agreement. Although neither the Action Agencies nor the Tribes are relinquishing their respective authorities through this Agreement, they commit to make best effort to sit down with each other prior to making decisions in implementation of this Agreement.

The Parties enter into this Agreement cognizant of its scope, duration, and complexity, and commit to its implementation and support at all levels and in all areas, e.g. policy, legal, and technical. Further, the Parties understand matters explicitly addressed within and/or related to this Agreement are routinely dealt with in a wide variety of contexts and fora, often on short notice and in time-sensitive situations. Even with those understandings, the Parties will vigorously endeavor to implement and support this Agreement in good-faith. Best effort good-

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faith implementation and support of this Agreement is the general duty to which all Parties agree to be bound. Nonetheless, the Parties understand from time to time questions or concerns may arise regarding a Party's compliance with the terms of this Agreement. In furtherance of the continuing duty of good faith, each Party agrees the following specific actions or efforts will be carried out:

D.1 On a continuing basis, it will take steps to ensure all levels of their government/institution is made aware of the existence of this Agreement and specific commitments and obligations herein, and emphasize the importance of meeting them;

D.2 Each Party will designate a person to be initially and chiefly responsible for coordinating internal questions regarding compliance with the Agreement;

D.3 Each Party will make best efforts to consult with other Parties prior to taking any action that could reasonably be interpreted as inconsistent with any part of this Agreement. To assist in this, the Parties will designate an initial contact point; the Tribes will designate their legal representative as their initial contact points, the contacts for the Action Agencies are to be determined. The formality and nature of the consultation will likely vary depending on circumstances. The initial contact points are initially charged with attempting to agree on what form of consultation is required. In some instances, contacts between representatives may suffice for consultation, while in others, they may need to recommend additional steps. The Parties agree consultations 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 the Agreement.

D.4 If a Party believes another has taken action contrary to the terms of the Agreement, or may take such action, it has the option of a raising a point of concern with other Parties asking for a consultation to clarify or redress the matter. The Parties will endeavor to agree upon any actions required to redress the point of concern. If after raising a point of concern and, having a consultation, the Parties are unable to agree that the matter has been satisfactorily resolved, any Party may take remedial actions as it deems appropriate, so long as those remedial actions do not violate the terms of the Agreement.

E. Changed Circumstances, Renegotiation/Modification, Withdrawal

E.1 The Parties enter into this Agreement acknowledging NOAA issued final biological opinions for the FCRPS, Upper Snake, and 2008 – 2017 *United States v. Oregon* Management Plan. These BiOps have concluded based on a combined comprehensive analysis that the respective proposed actions, with reasonable and prudent alternatives if any, are not likely to jeopardize the continued existence of any ESA-listed salmon and steelhead or result in the destruction or adverse modification of critical habitat of such species.

E.2 If any court, regardless of appeal, finds the FCRPS or Upper Snake BiOp or agency action is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, and subsequently remands the BiOp to NOAA Fisheries, this Agreement shall remain in force. If any court, regardless of appeal, finds the BiOp or agency action is arbitrary, capricious, an abuse

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of discretion, or otherwise not in accordance with law, the Parties will seek to preserve this Agreement and will meet promptly to determine the appropriate response as described below:

- In the event a portion(s) of this Agreement is in direct conflict with a court order or resulting amended BiOp, the Parties shall meet and agree on an appropriate amendment to that section, or, if such amendment is not possible under the terms of the court order or resulting amended BiOp, then a substitute provision shall be negotiated by the Parties.
- If court-ordered FCRPS operations or resulting amended BiOp require additional actions that are either financially material to an Action Agency or that materially constrain the Corps or Reclamation from meeting FCRPS purposes, Section IV.E.4 below shall apply. The Parties intend that determinations of materiality will only be made in cases of great consequence.
- The Parties will participate in any court-ordered process or remand consultation in concert with IV.D and IV.E of this Agreement.
- Without limiting the other provisions of this Section IV.E.2, in the case of a court order or resulting amended BiOp that constrains actions in the 2008 – 2017 *United States v. Oregon* Management Plan, the Parties agree this Agreement shall remain in effect unless a court order or resulting amended BiOp materially constrains the actions in the 2008 – 2017 *United States v. Oregon* Management Plan. The Parties intend that determinations of materiality will only be made in cases of great consequence.

E.3. Regardless of any legal challenge, BPA will take steps to:

- Ensure the commitments in this Agreement are not modified or reduced based on agency-wide streamlining or other cost-cutting efforts;
- Imbed the estimated cost of implementing this Agreement in the agency's revenue requirement to be recovered through base wholesale power rates;
- Propose and, if established after a Northwest Power Act section 7(i) hearing, exercise rate risk mitigation mechanisms as needed to maintain the funding commitments in this Agreement (e.g., cost recovery adjustment clauses); and
- Consider agency cost reductions, or other measures to maintain the funding commitments in this Agreement.

E.4. In the event of the occurrence of any of the material effects in E.2, or in the event of material non-compliance with the Agreement not resolved by dispute resolution, the affected Party or Parties shall notify the other Parties immediately, identifying why the event is considered material. The Parties shall utilize dispute resolution if there is a disagreement as to whether the event is material. In addition, prior to any withdrawal, the Parties shall first make a good faith effort to renegotiate mutually agreeable modifications to the Agreement. If renegotiation is not successful, the affected Party may notify the other Parties in writing of its intent to withdraw by a date certain. A Party may not withdraw from the Agreement on the basis of its own non-compliance. If renegotiation is not successful, at the time the withdrawal is effective, all funding commitments and/or other covenants made by the withdrawing Party cease, and the withdrawing Party shall have no further rights or obligations pursuant to the Agreement,

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and reserves any existing legal rights under applicable statutes, including all arguments and defenses, and this Agreement cannot be used as an admission or evidence.

If the affected Party does not withdraw, that Party may challenge in any appropriate forum the asserted non-compliance with the terms of this Agreement, provided that judicial review of disputes arising under this Agreement is limited to BPA.

The Parties may, by mutual agreement, consider negotiations or withdrawal for changed circumstances other than those enumerated above.

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

The provisions of this Agreement authorizing renegotiation, dispute resolution, withdrawal, or challenge in appropriate forums provide the sole remedies available to the Parties for remedying changed circumstances or disputes arising out of or relating to implementation of this Agreement.

E.5. Savings. In the event of withdrawal, BPA will continue providing funding for projects necessary for support of BiOp commitments (as determined by the Action Agencies), and will provide funding for other on-going projects or programs that the Parties mutually agree are important to continue.

F. Dispute Resolution

F.1. Negotiation

I.a. The Parties shall attempt in good faith to resolve any dispute arising out of or relating to implementation of this Agreement in accordance with this section and without resort to administrative, judicial or other formal dispute resolution procedures. The purposes of this section is to provide the Parties an opportunity to fully and candidly discuss and resolve disputes without the expense, risk and delay of a formal dispute resolution.

I.b. If the Parties are unable to resolve the dispute through informal dispute resolution, then the dispute shall be elevated to negotiating between executives and/or officials who have authority to settle the controversy and who are at a higher level of management than the person with direct responsibility for administration of this Agreement. All reasonable requests for information made by one Party to the other will be honored, with the Action Agencies treating “reasonable” within the context of what would be released under the Freedom of Information Act.

I.c. In the event a dispute over material non-compliance with the Agreement has not been resolved by negotiation, the affected Party may seek to withdraw or seek review in appropriate forums in accordance with Section IV.E, above.

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F.2. Mediation

In the event the dispute has not been resolved by negotiation as provided herein, the disputing Parties may agree to participate in mediation, using a mutually agreed upon mediator. To the extent that the disputing Parties seeking mediation do not already include all Parties to this Agreement, the disputing Parties shall notify the other Parties to this Agreement of the mediation. The mediator will not render a decision, but will assist the disputing Parties in reaching a mutually satisfactory agreement. The disputing Parties agree to share equally the costs of the mediation.

G. Modification

The Parties by mutual agreement may modify the terms of this Agreement. Any such modification shall be in writing signed by all Parties.

V. MISCELLANEOUS PROVISIONS

A. Term of Agreement

Except as otherwise provided regarding hatcheries, see Section IV.B.2, the term of this Agreement will extend from its effective date through the end of fiscal year 2018 which is midnight on September 30, 2018.

B. Applicable Law

All activities undertaken pursuant to this Agreement must be in compliance with all applicable laws and regulations. No provision of this Agreement will be interpreted or constitute a commitment or requirement that the Action Agencies take action in contravention of law, including the Administrative Procedure Act, the National Environmental Policy Act, the Endangered Species Act, Federal Advisory Committee Act, Information Quality Act, or any other procedural or substantive law or regulation. Federal law shall govern the implementation of this Agreement and any action, whether mediated or litigated, brought or enforced.

C. Authority

Each Party to this Agreement represents and acknowledges that it has full legal authority to execute this Agreement.

D. Consistency with Trust and Treaty Rights

Nothing in this Agreement is intended to nor shall in any way abridge, abrogate, or resolve any rights reserved to the Tribes by treaty. The Parties agree that this Agreement is consistent with the treaty rights of the signatory Tribes and the United States' trust obligation to tribes, but does not create an independent trust obligation. The Tribes specifically represent and warrant that no approval of this Agreement by the Secretary of the Interior or the Bureau of Indian Affairs or any

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other federal agency or official is required in order for the Tribes to execute this Agreement or for this Agreement to be effective and binding upon the Tribes.

E. Effective Date & Counterparts

The effective date of this Agreement shall be the date of execution by the last Party to provide an authorized signature to this Agreement. This Agreement may be executed in counterparts, each of which is deemed to be an executed original even if all signatures do not appear on the same counterpart. Facsimile and photo copies of this Agreement will have the same force and effect as an original.

F. Binding Effect

This Agreement shall be binding on the Parties and their assigns and successors. Each Party may seek dispute resolution in accordance with Sections IV.F, or to withdraw in accordance with Sections IV.E, if the dispute is not resolved. The commitments made by the Parties in this Agreement apply to the Parties, their staff, any persons hired or volunteering for a Party, any representative or organization under a Party's guidance or control, and any person or entity acting as an agent for a Party, and to participation in all forums (e.g., Tribal participation in the Columbia Basin Fish and Wildlife Authority, Action Agency participation in the Pacific Northwest Coordination Agreement processes). The commitments made by the Parties in this Agreement also includes a commitment not to directly or indirectly support third-party efforts to challenge the adequacy of the BiOps, this Agreement, or the Parties efforts to implement them.

G. No third party beneficiaries or third party beneficiary rights are intended or created by this Agreement.

H. All previous communications between the Parties, either verbal or written, with reference to the subject matter of this Agreement are superseded, and this Agreement duly accepted and approved constitutes the entire Agreement between the Parties.

I. Waiver, Force Majuere, Availability of Funds

I.1. The failure of any Party to require strict performance of any provision of this Agreement or a Party's waiver of performance shall not be a waiver of any future performance of or a Party's right to require strict performance in the future.

I.2. No Party shall be required to perform due to any cause beyond its control. This may include, but is not limited to fire, flood, terrorism, strike or other labor disruption, act of God or riot. The Party whose performance is affected by a force majuere will notify the other Parties as soon as practicable of its inability to perform, and will make all reasonable efforts to promptly resume performance once the force majuere is eliminated. If the force majuere cannot be eliminated or addressed, the Party may consider withdrawal pursuant to Sections IV.E and IV.F.

SHOSHONE-BANNOCK TRIBES-ACTION AGENCY AGREEMENT

November 7, 2008

I.3 The actions of the Corps and Reclamation set forth in this Agreement are subject to the availability of appropriated funds. Nothing in this Agreement shall be construed to require the obligation or disbursement of funds in violation of the Anti-Deficiency Act.

J. Notice.

1. Any notice permitted or required by the Good Faith provisions of this Agreement, Section IV.D, may be transmitted by e-mail or telephone to a Party's initial contact points, as that person is defined pursuant to the Good Faith provisions.
2. All other notices permitted or required by this Agreement shall be in writing, delivered personally to the persons listed below, or shall be deemed given five (5) days after deposit in the United States mail, addressed as follows, or at such other address as any Party may from time to time specify to the other Parties in writing. Notices may be delivered by facsimile or other electronic means, provided that they are also delivered personally or by mail. The addresses listed below can be modified at any time through written notification to the other Parties.

Notices to BPA should be sent to:

Vice President, Environment Fish & Wildlife
Mail Stop KE-4
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208-3621

Notices to the U.S. Army Corps of Engineers should be sent to:

U.S. Army Corps of Engineers, Northwestern Division
Chief, Planning, Environmental Resources and Fish Policy Support Division
1125 NW Couch Street
Suite 500
P.O. Box 2870
Portland, OR 97208-2870

Notices to the U.S. Bureau of Reclamation should be sent to:

Deputy Regional Director
Bureau of Reclamation
Pacific Northwest Region
1150 N. Curtis Rd., Suite 100
Boise, ID 83706

SHOSHONE-BANNOCK TRIBES-ACTION AGENCY AGREEMENT
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Notices to the Shoshone-Bannock Tribes should be sent to:

Chairman, Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, ID 83203

and to:

Director, Tribal Fisheries Program
Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, ID 83203

K. List of Attachments

Attachment A: Project spreadsheet

Attachment B: Project narratives and benefits

SHOSHONE-BANNOCK TRIBES-ACTION AGENCY AGREEMENT
November 7, 2008

SIGNATURES

/s/ Stephen J. Wright

November 7, 2008

Stephen J. Wright
Administrator and Chief Executive Officer
Bonneville Power Administration

Date

/s/ G. Witt Anderson (for Gen. Rapp)

November 7, 2008

William E. Rapp, P.E.
Brigadier General, U.S. Army Corps of Engineers
Division Commander

Date

/s/ J. William MacDonald

November 7, 2008

J. William MacDonald
Regional Director
U.S. Bureau of Reclamation
Pacific Northwest Region

Date

/s/ Alonzo A. Coby

November 7, 2008

Alonzo A. Coby
Chairman
Fort Hall Business Council
Shoshone-Bannock Tribes of the Fort Hall Reservation

Date

General Note: All projects (expense and capital) will receive a 2.5% adjustment for inflation beginning in fiscal year 2010, which is not reflected in the amounts described below.

#	PROJECT NAME	STATUS	BPA PROJECT No.*	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
	Expense													
1	Habitat Imprvmnt/Enhmnt - Fort Hall, Idaho	Existing	199201000	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 283,718	\$ 2,837,180
2	Salmon River Habitat Enhancement	Existing	199405000	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 231,380	\$ 2,313,800
3	Southern Idaho Wildlife Mitigation	Existing	199505702	\$ 380,000	\$ 380,000	\$ 430,000	\$ 430,000	\$ 480,000	\$ 480,000	\$ 530,000	\$ 530,000	\$ 580,000	\$ 580,000	\$ 4,800,000
4	Idaho Supplementation Studies (SBT Contract)	Existing	under 198909800	\$ 235,883	\$ 235,883	\$ 235,883	\$ 235,883	\$ 235,883	\$ 235,883	\$ 235,883	\$ 235,883	\$ -	\$ -	\$ 1,887,064
5	Snake River Sockeye Salmon Habitat and Limnological Monitoring (see Note 1)	Existing	199107100 under 200740200	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 425,000	\$ 4,250,000
YEARLY Totals:				\$ 1,555,981	\$ 1,555,981	\$ 1,605,981	\$ 1,605,981	\$ 1,655,981	\$ 1,655,981	\$ 1,705,981	\$ 1,705,981	\$ 1,520,098	\$ 1,520,098	\$ 16,088,044

* Note: BPA Project numbers may change over time

#	PROJECT NAME	STATUS	BPA PROJECT No.	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
	Capital Projects													
6	Southern Idaho Wildlife Mitigation (see Note 2)	Existing	199505702	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 16,550,000
7	Crystal Springs Hatchery Construction	New	TBD		\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 1,750,000						\$ 7,750,000
YEARLY Totals:				\$ 1,655,000	\$ 3,655,000	\$ 3,655,000	\$ 3,655,000	\$ 3,405,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 1,655,000	\$ 24,300,000

#	PROJECT NAME	STATUS	BPA PROJECT No.	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
	NEW PROPOSALS													
8	Umbrella planning project (see Note 3)	New	TBD	\$ 150,000	\$ 150,000								\$ -	\$ 300,000
9	ESA Habitat Restoration (see Notes 4,5)	New	TBD	\$ 300,000	\$ 300,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 3,800,000
10	Yankee Fork (see Note 6)	Expanded	200205900	\$ 350,000	\$ 350,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 4,700,000
11	Nutrient Supplementation for ESA	New	TBD	\$ 100,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 2,350,000
12	Supplementation projects (see Note 7)	New	TBD	\$ 150,000	\$ 150,000	\$ 200,000	\$ 200,000	\$ 400,000	\$ 400,000	\$ 400,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 3,400,000
13	Crystal Springs Planning and O&M	New	TBD	\$ 500,000	\$ 250,000	\$ 250,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 750,000	\$ 6,250,000
YEARLY Totals:				\$ 1,550,000	\$ 1,450,000	\$ 1,600,000	\$ 2,100,000	\$ 2,300,000	\$ 2,300,000	\$ 2,300,000	\$ 2,400,000	\$ 2,400,000	\$ 2,400,000	\$ 20,800,000

- Note 1: Restores 60k reduction from FY07-09
- Note 2: Per the MOA, BPA may fund up to \$5M in any given year on a case-by-base basis.
- Note 3: Provides funding to develop/plan both habitat and supplementation projects.
- Note 4: Includes \$100k/yr line item for office space in closer proximity to on-the-ground work under this agreement.
- Note 5: First priority would be to augment Yankee Fork project if needed for priority sites; otherwise may select from Warm Springs culvert replacement, Beaver Crk. Riparian restoration, and Upper Salmon reconnect/restoration or develop replacement projects
- Note 6: BPA funding contingent on ISRP review, 3-step process, and very significant cost share. Per the MOA, funding for habitat improvements for Yankee Fork population may be increased.
- Note 7: May include steelhead streamside incubator, Panther Creek, Yankee Fork, and Yellow Belly Lake

Appendix B
Shoshone-Bannock Tribes Project Narratives
September 15, 2008

#1 - Habitat Improvement/Enhancement –Fort Hall, Idaho Project # 199201000 (Ongoing)

The primary goal of the Shoshone-Bannock Tribe’s (Tribes) habitat improvement/enhancement project is to restore, enhance, and protect Fort Hall Indian Reservation (Reservation) streams and riparian areas so they can support native fish populations at historic levels. The objective of this project is to provide conditions to recover weak populations of focal species (native Yellowstone cutthroat) to self-sustaining levels on the Reservation by improving/enhancing habitat. Streams on the Reservation have been negatively affected (i.e. loss of riparian vegetation, down-cutting, and lateral scouring of stream banks) by a variety of sources; Bureau of Reclamation’s construction and operation of the Palisade Reservoirs.

Negative impacts from stream bank failures include: widened stream channels; reduction in riparian vegetation and in-stream cover; increased summer water temperatures; and deposition of fines on critical spawning and rearing substrates resulting in a loss of stream complexity necessary for native fish populations.

This project continues to advance the principles of the Northwest Power and Conservation Council’s (NPCC) 1994 Fish and Wildlife Program (Program) as outlined in Section 10.1A, to protect, mitigate, and enhance resident fish populations affected by construction and operation of dams, including Palisades Reservoir, and protection of focal species as outlined in the Upper Snake Subbasin Plan adopted into the NPCC Program in 2005. Fish populations and riparian areas are enhanced by cost sharing partnerships with the Tribes and the Bureau of Indian Affairs, which provide for riparian restoration, including bank stabilization, re-vegetation projects and in-stream structures to protect and enhance habitat diversity. This project would benefit fish and wildlife resources on the Reservation and provides opportunities for subsistence harvest by Tribal members.

Target Population: Resident salmonoids (Yellowstone cutthroat Trout, federal sensitive species), Ute’s Ladies Tress (ESA-listed botanical species)

Projected Benefits: Improve habitat by stabilizing eroding banks, deepening and narrowing stream channels, improve water quality and restoring diversity to the spring-stream biota with in-stream structures and bank protection measures.

#2 - Salmon River Habitat Enhancement Project # 199405000 (Ongoing)

The Salmon River Habitat Enhancement (SRHE) project’s goal is to monitor Chinook salmon and steelhead populations and evaluate their response to habitat actions in the

Salmon River Basin. Under the 1994 and 2000 Fish and Wildlife Program objectives, the SRHE project restored habitat and biological systems to promote healthy, naturally producing fish populations. The SRHE provides appropriate habitat management on the ecosystem through detailed monitoring of past project enhancement efforts and evaluation of affected systems.

The SRHE project objectives follow the 2000 FWP, under HABITAT and Appendix D involving Provisional Statement of Biological Objectives for Environmental Characteristics at the Basin Level. The Tribes evaluation includes both physical and biological parameters on the East Fork and Yankee Fork. Information is collected on the physical characteristics of the stream, stream substrate, stream bank, riparian community, fish, invertebrates and vegetation. The project continues to pursue new enhancement opportunities and research, where appropriate, throughout the Salmon River basin to protect and restore anadromous fish habitat.

Target Populations: Snake River Spring/Summer Chinook Salmon (East Fork and Yankee Fork), Snake River Steelhead (East Fork, Upper Salmon River), and bull trout (East Fork and Yankee Fork).

Projected Benefits: SRHE monitors physical and biological characteristics of the Salmon River and its tributaries and evaluates the effectiveness of habitat actions to address limiting factors affecting anadromous and resident fish populations and habitat.

#3 - Southern Idaho Wildlife Mitigation Project # 199505702 (Expanded)

The Shoshone Bannock Tribes- Southern Idaho Wildlife Mitigation (SIWM) program is an ongoing program of the Fish and Wildlife Program. The SIWM was created to mitigate for habitat losses associated with FCRPS hydropower development in southern Idaho. The Tribes signed a Memorandum of Agreement with BPA in 1997 (BPA and SBT 1997) to mitigate for wildlife habitat losses in the mid and upper Snake River provinces. The Upper Snake Province habitat losses were identified at 37,070 HU for the Palisades Dam (Sather-Blair and Preston 1985) and 10,503 HU for the Minidoka Dam and 5,129 HU gains through its construction (Martin and Meuleman 1989). To date, SBT-SIWM has protected 8,441 acres and mitigated for 14,916 HU.

Expense funds allocated from BPA provide for administrative, operations and maintenance contracts to identify potential properties for habitat protection, determine appraised value, approach potential sellers, work with BPA staff to acquire property, and maintain and enhance project lands according to CBFWA guidelines (1998) and BPA requirements. The SIWM works collaboratively with other fish and wildlife management agencies, sub-basin work groups, and federal land managers in the region.

The SIWM was created to meet the objectives for wildlife mitigation outlined in the Fish and Wildlife Program (NPCC 2000):

- Quantify wildlife losses caused by the construction, inundation, and operation of the hydropower projects.
- Develop and implement habitat acquisition and enhancement projects to fully mitigate for identified losses.
- Coordinate mitigation activities throughout the basin and with fish mitigation and restoration efforts, specifically by coordinating habitat restoration and acquisition with aquatic habitats to promote connectivity of terrestrial and aquatic areas.
- Maintain existing and create habitat values.
- Monitor and evaluate habitat and species responses to mitigation actions.

The budget for this project accommodates existing operation and maintenance (O&M), as well as periodic increases over time to account for additional acquisitions and the necessary O&M and associated monitoring for adaptive management and habitat enhancement resulting in additional habitat credits.

Target Population: Mid and upper Snake River fish and wildlife populations and habitat impacted by the construction, operation and inundation of the mid and upper Snake River hydroelectric facilities.

Projected Benefits: Protection and enhancement of lands for the benefit of fish and wildlife to meet the BPA obligations to mitigate for habitat losses on the Mid and Upper Snake River identified through habitat unit loss assessments.

#4 – Idaho Supplementation Studies # 198909800 (Ongoing)

The Idaho Salmon Supplementation (ISS) Studies is an ongoing project, which addresses critical uncertainties associated with hatchery supplementation of Chinook salmon *Oncorhynchus tshawytscha* populations (i.e. effects on productivity, persistence, establishment, advantages of localized broodstocks) in Idaho (Bowles and Leitzinger 1991). The ISS program also addresses questions identified in the Supplementation Technical Work Group Five Year Work Plan (STWG 1988), defines the potential role of supplementation in managing Idaho's anadromous fisheries, and evaluates its usefulness as a recovery tool for salmon populations in the Snake River basin (Bowles and Leitzinger 1991).

The ISS initially identified two goals: 1) assess the use of hatchery Chinook salmon to increase natural populations in the Salmon River and Clearwater River subbasins, and 2) evaluate the genetic and ecological impacts of hatchery Chinook salmon on naturally reproducing Chinook salmon populations.

In response to these goals, ISS addresses four objectives: 1) monitor and evaluate the effects of supplementation on presmolt and smolt numbers and spawning escapement of naturally produced Chinook salmon; 2) monitor and evaluate changes in the productivity and genetic composition of naturally spawning target and adjacent populations following

supplementation activities; 3) determine which supplementation strategies (broodstock and release stage) provide the most rapid and successful response in natural production without adverse effects on productivity; and 4) develop supplementation recommendations (Bowles and Leitzinger 1991).

The ISS program is a cooperative research project involving the Idaho Department of Fish and Game (IDFG), the Nez Perce Tribe (NPT), the Shoshone-Bannock Tribes (SBT), and the United States Fish and Wildlife Service (USFWS). The Bonneville Power Administration (BPA) provides funding for the project. Each agency is responsible for data collection on a subset of the study streams across the Clearwater River and Salmon River subbasins as developed in the original study design (Bowles and Leitzinger 1991). Data collected include estimates of escapement for natural and supplementation origin adults, biological data from salmon carcasses, juvenile production in treatment and control streams, and juvenile passive integrated transponder (PIT) tag interrogations at detection facilities throughout the Columbia River basin, supplementation treatments, and stray rates of general production hatchery adults into study streams.

ISS PIT tagging efforts, hatchery and habitat evaluations contribute to a broad number of strategies and associated RPA's of the 2008 FCRPS Biological Opinion. Results derived from the Idaho Supplementation Studies will address key uncertainties associated with supplementation of natural populations of listed Chinook salmon and help address RM&E Strategies 1-3, 6 - RPA # 50, 51, 52, and 63 identified in the 2008 FCRPS Biological Opinion.

Target Population: Snake River Spring/Summer Chinook salmon

Projected Benefits: Identifying limiting factors for all life stages of Chinook salmon will increase understanding of the systemic impacts for the species. This will inform and improve adaptive management strategies at project levels and improve coordination on species enhancement efforts.

#5 - Snake River Sockeye Salmon Habitat/Limnological Research Project # 199107100 (Expanded)

In March 1990, the Tribes petitioned the National Marine Fisheries Service (NMFS) to list Snake River sockeye salmon (*Oncorhynchus nerka*) as endangered. Snake River sockeye salmon were officially listed as endangered in November 1991 under the Endangered Species Act (56 FR 58619). In 1991, the Snake River Sockeye Salmon Habitat and Limnological Research Project was implemented. This ongoing project is part of an interagency effort to prevent the extinction of the Redfish Lake stock of Snake River sockeye salmon. The Tribal goal for this project is two tiered: increase the population of Snake River sockeye salmon while preserving the unique genetic characteristics of the Evolutionarily Significant Unit (ESU) and maintain a viable population that warrants de-listing; providing for Tribal harvest opportunities.

Collaborators in the recovery effort include the National Oceanic and Atmospheric Administration, the Idaho Department of Fish and Game, the University of Idaho, Oregon Dept. of Fish and Wildlife, and the Shoshone-Bannock Tribes. On-going project tasks, and additional tasks mentioned herein, will directly address specific goals and objectives outlined in the FCRPS Biological Opinion and the Endangered Species Act.

Project tasks include: 1) monitor limnological parameters of the Sawtooth Valley lakes to assess lake productivity; 2) conduct lake fertilization in Redfish, Pettit, and Alturas lakes; 3) reduce the number of mature kokanee spawning in Fishhook and Alturas Lake creeks; 4) monitor, evaluate, and enumerate sockeye salmon smolt migration from Pettit and Alturas lakes; 5) monitor spawning kokanee escapement and estimate fry recruitment in Fishhook and Alturas lakes; 6) conduct sockeye and kokanee salmon population surveys; 7) evaluate potential competition and predation between stocked juvenile sockeye salmon and a variety of fish species in Redfish, Pettit, and Alturas lakes; and 8) assist IDFG with captive broodstock production activities.

In addition to on-going tasks, the Tribes would: 1) modify the Pettit Lake Creek weir to accommodate flow conditions during the entire Snake River sockeye salmon smolt migration period; 2) design, purchase, and implement kokanee salmon weirs to manage spawning escapement and recruitment of non-native intraspecific competitors in Alturas Lake Creek and Fishhook Creek; 3) utilize existing Snake River sockeye salmon critical habitat through potential re-introductions (12(d)); 4) evaluate natural (unmarked) origin *O. nerka* smolt migrants from Redfish, Pettit, and Alturas lakes- using readily available genetic tools- to assess release strategy performance and natural production and productivity and 5) support an Salmon Basin Sockeye Technical Oversight Committee trap and haul program proposal that would, under certain environmental conditions, trap and haul adult Snake River sockeye salmon migrants from Lower Granite Dam to the Sawtooth Valley.

Target Population: Snake River Sockeye salmon

Projected Benefits: Project will identify limiting factors for the species and identify solutions to improve adaptive management strategies on a system-wide level. The project would increase the population of Snake River sockeye salmon while preserving the unique genetic characteristics of the Evolutionarily Significant Unit (ESU) and strive to achieve a viable population that warrants de-listing; providing for Tribal harvest opportunities.

#6 – Southern Idaho Wildlife Mitigation # 199505702 (Capital) (Ongoing)

Southern Idaho Wildlife Mitigation (SIWM) is an ongoing protection and enhancement project that provides the capital funding to acquire habitat units for the benefit wildlife in perpetuity, with direct and indirect benefits provided to resident fish. SIWM targets habitat units identified in loss assessments for the inundation, construction and operations

of Mid and Upper Snake FCRPS hydroelectric facilities for fee-title acquisitions, conservation easements, and other protection and enhancement methods. The Tribes signed a Memorandum of Agreement with BPA in 1997 (BPA and SBT 1997) to provide capital and expenses to mitigate for wildlife habitat losses in the mid and upper Snake River provinces.

Target Population: Resident fish and wildlife, botanical species

Project Benefit: Protection and enhancement of lands for the benefit of fish and wildlife to meet the BPA obligations to mitigate for habitat losses on the Mid and Upper Snake River identified through habitat unit loss assessments.

#7(a) - Crystal Springs Hatchery Facility (New)

The Crystal Springs Hatchery is an existing BPA property in Southern Idaho on the Snake River. The hatchery facility will be owned and operated by the Tribes, funded by BPA, to meet identified supplementation goals over the course of the agreement. The Tribes seek to develop the Crystal Springs Hatchery facility to rear Yellowstone Cutthroat trout, Snake River Spring/Summer chinook salmon, Snake River Steelhead and endangered Snake River sockeye salmon. The goal will be the production of Snake River sockeye smolt equivalents, Chinook and steelhead smolts and smolt equivalents, and 8,000 catchable Yellowstone Cutthroat trout.

In planning and development of the Crystal Springs Hatchery, and any out-planting or supplementation of fishes into natural habitats, the Tribes will work diligently to obtain required reviews and approvals from others, including the 3-Step Process and ISRP review through the NPCC's Program, obtaining NOAA and/or U.S. Fish and Wildlife Service review and approval as needed, coordinating with other co-managers in the State including the Idaho Department of Fish and Game, and obtaining any needed review or concurrence through the *U.S. v. Oregon* process. Priorities for, and magnitude of, production objectives will be established during master planning and feasibility assessments under the 3-Step process and regulatory processes with NOAA Fisheries, U.S. Fish and Wildlife Service, and Idaho Department of Fish and Game.

This is a capital project to construct the hatchery with the fish subsequently produced used in supplementation project #12. The project will specifically address supplementation RPA's outlined in the FCRPS and Upper Snake River Basin Biological Opinions.

The objectives for this hatchery are: to increase the population of Snake River sockeye salmon, while preserving the unique genetic characteristics of the Evolutionarily Significant Unit (ESU); develop a locally adapted chinook brood for Upper Salmon River, Panther Creek and the East Fork Salmon River; develop a locally adapted brood for Snake River Steelhead; and, rear genetically pure strains of Yellowstone Cutthroat Trout.

Target Populations: Snake River Sockeye Salmon, Chinook Salmon, Steelhead, Resident Salmonids

Projected Benefits: Crystal Springs will produce Snake River Sockeye Salmon smolt equivalents for release in critical habitat; Snake River Spring/Summer Chinook for the Tribes' supplementation program; Snake River Steelhead smolt and smolt equivalents for the Tribes' supplementation program; Yellowstone Cutthroat Trout for reservation populations. This will help meet the viable threshold populations for recovery goals across the Salmon River Basin.

#7(b) – Adult Holding Facility, Crystal Springs Hatchery Program (New)

The Tribes propose to construct an adult holding/spawning facility in the Yankee Fork Salmon River, to utilize the locally adapted Chinook and steelhead stocks to be used in the Crystal Springs Hatchery programs. An adult holding facility on Yankee Fork will provide a central location to collect locally adapted stocks for the Tribes' Supplementation program. Adult Chinook and steelhead will be trapped, ponded, and spawned on-site at a satellite facility located adjacent to the Yankee Fork Salmon River. The eggs will then be transported to the Crystal Springs Hatchery to rear smolts and smolt equivalents adapted to the Salmon River Basin.

Target Population: Yankee Fork Spring/Summer Chinook salmon, Upper Salmon Steelhead

Projected Benefit: Collect and develop locally adapted broodstock to produce smolts or smolt equivalents at the Crystal Springs Hatchery. This will enable a supplementation effort to implement plans to meet TRT goals and biological objectives from the 2008 BiOp.

#8 – Umbrella Planning Project (New)

The umbrella planning project will accomplish tasks associated with planning and developing new work under both expanded ongoing and new projects. The Tribes propose to utilize umbrella planning project funds to complete the following capacity building objectives: 1) write the initial proposals for the ten year MOA program and submit to ISRP for review; 2) reply to ISRP questions/concerns regarding the ten year program or any of its component parts; 3) create draft Statement of Work (SOW) and negotiate with BPA regarding the implementation or planning of any project in the ten

year program; 4) create draft Line Item Budget and negotiate with BPA to ensure that the ten year program sets achievable expenditure goals and maintains year-to-year flexibility as proposed by the MOA; 5) create a data tracking system to manage contract deliverables, expenditures, perform budget forecasting/auditing, as well as enhance coordination for each project in the ten year program to ensure comprehensive efforts to actively recover anadromous fish utilizing multiple components; 6) perform strategic planning and drafting of a plan for the Tribes' ten year program; including, researching and forecasting possible permit requirements, investigating NEPA compliance issues, coordination with other MOA Parties to maximize benefits to ESA listed species and habitat.

Upon completion of planning, development and execution of a new contract or expansion of an ongoing project, billing will transition from the umbrella project/contract to the new or expanded project's contract.

Projected Benefits: Allowing for capacity building in the first two years will provide ample opportunity to plan a ten year program for the Shoshone-Bannock Tribes.

#9 – ESA Habitat Restoration/Rehabilitation Project (New)

The goal of the ESA Habitat Restoration Project will be to inventory, assess, plan and implement necessary actions to improve connectivity to critical habitat, to provide adequate water quantity and quality, and restore native vegetation to riparian areas for all life stages of anadromous and resident fish in the Salmon River Basin.

ESA Habitat Restoration Project would accomplish this goal through a series of tasks involving culvert or bridge replacement, diversion consolidation, and riparian restoration. Culvert and bridge replacement improves connectivity to critical habitat for migrating and returning anadromous fish. Diversion consolidation can increase the quantity of water available at critical life stages for anadromous and resident fish. Riparian restoration, through native species replanting, bank stabilization, in-stream structures or grazing deferment, can decrease water temperature and improve availability of spawning/rearing habitat.

The Tribes' first priority would be to augment the Yankee Fork Salmon River habitat project; otherwise an alternate project focusing on upper Salmon River populations will be selected, such as the Warm Springs culvert replacement, Beaver Creek riparian restoration, and/or Upper Salmon reconnect/restoration. These habitat projects have been identified as potential project locations for habitat actions that meet the needs identified in the BiOp and contribute to species recovery throughout the basin.

Target Populations: Spring/Summer Chinook salmon Yankee Fork population, East Fork Population, Panther Creek Population, Snake River Steelhead Salmon River upper mainstem population, bull trout

Project Benefits: These habitat improvement projects would provide inventory, assessment, planning and implementation for necessary actions to improve connectivity to critical habitat, to provide adequate water quantity and quality, and restore native vegetation to riparian areas for all life stages of anadromous and resident fish in the Salmon River Basin. See attached Estimated Benefits to Primary Limiting Factors from Habitat Actions by Population and Watershed, for estimated species benefits from proposed actions.

#10 – Yankee Fork Floodplain Restoration Project # 200205900 (Expanded)

Dredge mining in the early-mid 1900s severely impacted 10 kilometers of the stream, eliminating the natural meander pattern and associated in stream habitat as well as riparian vegetation and the values it provided. The existing stream-floodplain complex consists of unconsolidated and un-vegetated dredge tailings that offer little habitat for aquatic and terrestrial species.

The goal of the Yankee Fork Floodplain Restoration Project is to restore natural river channel characteristics, floodplain function, hydraulic and sediment regimes, and aquatic habitat within the dredged reach, so the system would be self-sustaining. Restoring the river to less disturbed conditions would create a healthier, functioning riparian community that would benefit fish and wildlife and help restore cultural significance.

The Tribes and BPA would work cooperatively to identify appropriate cost-sharing partners and seek permanent protections for the restored sections of Yankee Fork. The focus is to address the impacts to the Yankee Fork population of spring/summer Chinook with projects and activities that will provide cost-effective mitigation. BPA is not responsible for addressing all of the impacts from mining activities.

Target Populations: Spring/Summer Chinook salmon Yankee Fork population, Snake River Steelhead Salmon River upper mainstem population, bull trout

Project Benefits: The Yankee Fork Floodplain Restoration Project will address limiting factors associated with the dredged section of the Yankee Fork Salmon River that impair anadromous fish productivity.

The primary limiting factors for the dredged section of the Yankee Fork are: lack of tributary and floodplain connectivity, lack of stream channel complexity, lack of riparian vegetation, water quality and loss of spawning and rearing habitat. Habitat actions to improve system function will include: reconnecting tributaries to the Yankee Fork, placement of in-stream structures to increase stream channel complexity, increase access to historic floodplain, riparian vegetation planting. If the project design is fully implemented, the Tribes estimate, using the Hillman methodology, a 4% improvement within ten-year period and 63% improvement within a twenty-five year period in the assessment unit for steelhead and a 8% ten-year and 73% twenty-five year improvement for Chinook salmon. See attached Estimated Benefits to Primary Limiting Factors from

Habitat Actions by Population and Watershed, for estimated species benefits from proposed actions.

This project will enable BPA to meet the long-term ESA habitat goal for the Yankee Fork Salmon River from the 2008 FCRPS Biological Opinion.

#11 - Salmon River Nutrient Enhancement Project (New)

Pacific salmon and steelhead once contributed large amounts of marine-derived carbon, nitrogen, and phosphorus to freshwater ecosystems in the Pacific Northwest (PNW) of the United States of America (California, Oregon, Washington, and Idaho). Declines in historically abundant anadromous salmonid populations represent a significant loss of returning nutrients across a large spatial scale. Decreased freshwater productivity, and correspondingly diminished carrying capacities, may represent important limiting factors in what often appears to be otherwise pristine habitat. In the absence of abundant anadromous salmon and steelhead populations, nutrient enhancement may help to restore freshwater productivity affected by a severe lack of marine-derived nutrients and help promote restoration efforts aimed at increasing naturally spawning populations of salmon and steelhead.

The Tribes propose a large scale nutrient enhancement program that aims to increase freshwater productivity and corresponding growth rates and survival of salmon and steelhead in the Salmon River basin using salmon carcass analogs, or, if not available, inorganic nutrients. Salmon carcass analog(s) (SCA) developed by Pearsons et al. (2007) contain similar complements of nutrients and carbon-based compounds (rare earth elements) as naturally returning salmon; therefore, their effect on stream food webs is hypothesized to mimic natural enrichment pathways. Salmon carcass analogs are pasteurized to create a pathogen free product that slowly releases nutrients and particulates similar to naturally decomposing salmon and are easy to store, transport, and distribute.

The Tribes conducted studies evaluating the stream food web response to a salmon carcass analog treatment in two central Idaho streams. Results have been published in *Freshwater Biology* (Kohler et al., 2007). Our study illustrated that periphyton chlorophyll *a* and AFDM and macro-invertebrate biomass were significantly higher in stream reaches treated with salmon carcass analogs. Enriched stable isotope ($\delta^{15}\text{N}$) signatures were observed in periphyton and macro-invertebrate samples collected from treatment reaches in both treatment streams, indicating trophic transfer from salmon carcass analogs to consumers. Densities of ephemereleididae, elmidae, and brachycentridae were significantly higher in treatment reaches. Our results suggest that salmon carcass analog addition successfully increased periphyton and macro-invertebrate biomass with no detectable response in stream water nutrient concentrations. Correspondingly, no change in nutrient limitation status was detected based on dissolved inorganic nitrogen to soluble reactive phosphorus ratios (DIN/SRP) and nutrient diffusing substrata

experiments. Salmon carcass analogs appear to effectively increase freshwater productivity.

Target Population: Snake River Sockeye, bull trout, Spring/Summer Chinook and Snake River Steelhead

Projected Benefits: The Salmon River Nutrient Enhancement Program mitigates marine-derived nutrient loss by supplementing target streams with nutrients and carbon based compounds. Nutrient enhancement will supplement the natural nutrient cycle provided by returning anadromous adults. While the importance of marine derived nutrients to freshwater and associated riparian and terrestrial productivity has been documented, the direct response to aquatic habitat productivity from nutrient supplementation is far more difficult to quantify. In a previous study using salmon carcass analogue treatment in central Idaho streams we documented a statistically significant response in primary and secondary production following nutrient enrichment (Kohler et al. 2008).

To quantify potential habitat quality improvements expected from nutrient enhancement measures a detailed project design is needed. Based on previously published data, projected benefits include: increased freshwater productivity with corresponding increases in juvenile salmonid growth rates and survival. An important objective of the Salmon River Nutrient Enhancement Project will be to quantify the response to large-scale nutrient supplementation at multiple trophic levels, with specific focus on the growth and survival of listed anadromous and resident salmonid species. The Tribes will develop a detailed experimental design and project proposal, coordinating with co-managers to obtain the necessary permits.

#12 - Shoshone-Bannock Tribes Supplementation Program (New)

Steelhead trout, Sockeye Salmon and Chinook salmon are culturally and socially significant to the Tribes. A decline in natural production of steelhead and salmon in the Salmon River sub-basin resulted in these species being listed under the ESA. The Tribes initiated hatchery supplementation activities designed to improve runs, re-distribute fish, and improve natural production.

Success of supplementation activities can be based on improving viability at the distinct population level; changes in abundance, productivity, diversity and distribution of steelhead and Chinook salmon can be measured.

#12 (a) – Snake River spring/summer Chinook Salmon

The Tribes Supplementation projects are designed to increase abundance, distribution, and diversity of naturally spawning populations of Snake River spring/summer Chinook salmon and reintroduce extirpated spring/summer Chinook salmon to historical habitats in the Salmon River sub-basin. The projects may initially rear and release listed hatchery

salmon from local hatcheries in target populations and/or develop locally adapted broodstock with hatchery or natural populations.

Recent and historical data on spawning populations of Chinook salmon in the targeted populations indicates one population (Panther Creek) is extirpated, with insufficient information on the other three populations to assess recovery. The Tribes propose to supplement target populations and collect life history, genetic, abundance, and survival data to evaluate progress toward recovery.

Discussions with the Lower Snake River Compensation Plan office identifies a possible partnership to utilize the East Fork Salmon River satellite facility for adult trapping, holding, and spawning. Panther Creek is proposed for reintroduction under the Blackbird Mine settlement agreement when the fish managers agree on a proposal, affording a potential cost-share partnership for the reintroduction effort. The Tribes are currently initiating a supplementation program in the Yankee Fork Salmon River and have included a goal to develop a supplementation program for the Lemhi River population in the US v. Oregon management plan.

Target ESU/Population (s):

Snake River spring/summer Chinook salmon

<u>Population</u>	<u>Life History</u>
Yankee Fork Salmon River	spring
East Fork Salmon River	spring/summer
Panther Creek	extirpated
Lemhi River	spring/summer

Project Benefits: Release of smolts and smolt equivalents utilizing locally adapted and endemic stocks within the target populations will increase Chinook abundance by 75-100%. The program will increase abundance of target populations and assist in achieving Interior Columbia Basin Technical Recovery Team Viable Population Thresholds.

#12 (b) - Snake River Steelhead

The Tribes supplementation program is designed to increase abundance, productivity, distribution, and diversity of naturally spawning populations of Snake River Steelhead and to reintroduce extirpated steelhead to historical habitats in the Salmon River Sub-basin. The projects will initially rear and release steelhead from local hatcheries, including Sawtooth and Pahsimeroi and collect in target populations while investigating and potentially developing locally adapted broodstocks. Developing a locally adapted broodstock to reintroduce or supplement steelhead can increase reproductive success of returning adults.

Data on the spawning populations of steelhead in streams within the Salmon sub-basin are very limited. To address the need for additional information on recovery objectives (abundance, spatial structure, productivity, and diversity) listed in the FCRPS BiOp,

these projects will collect life history, genetic, and abundance data to assess the recovery of the target populations, coordinated through the ongoing collaboration process to develop a regional strategy for RME.

Target Populations:

Upper Salmon
East Fork Salmon River
Panther Creek

Project Benefits: Release of smolts and smolt equivalents and the development of locally adapted stock in the target populations can be expected to increase steelhead productivity by 75% or more.

#12 (c) - Snake River Sockeye

The designated critical habitat for Snake River sockeye salmon includes five nursery rearing lakes in the Sawtooth Valley, ID: Redfish, Pettit, Alturas, Stanley, and Yellowbelly lakes (Federal Register/Vol. 58, No. 247, 1993). Currently, only Redfish, Pettit, and Alturas lakes are being utilized for Snake River sockeye salmon recovery efforts. Yellowbelly Lake is the only critical lake rearing habitat that does not have a non-native kokanee salmon population. Kokanee salmon are intra-specific competitors for a common zooplankton food resource and serve to diminish the carrying capacity of the majority of Sawtooth Valley lakes for Snake River sockeye salmon rearing. The Tribes propose to introduce Snake River Sockeye salmon parr and/or eyed-egg equivalents, annually into non-utilized, Sawtooth Valley ESA critical habitat to increase the spatial distribution, productivity, abundance and genetic diversity of the ESU. Yellowbelly Lake exhibits the highest total zooplankton biomass relative to the other Sawtooth Valley lakes, presenting a unique opportunity for rearing endangered Snake River Sockeye salmon. Monitoring and evaluation will include smolt survival estimates using PIT tags, pelagic fish population monitoring using a combination of passive net surveys techniques, limnological sampling and zooplankton monitoring, and spawning ground surveys to evaluate residual populations that will likely occur following re-introduction.

Target Population: Snake River Sockeye Salmon

Project Benefits: The project would increase the spatial distribution, productivity, abundance and genetic diversity of the ESU in designated critical habitat not currently utilized in the Sawtooth Valley.

#13 – Crystal Springs Planning and Operation and Maintenance (New)

In 1992, a feasibility study was completed (CH2M Hill) outlining options for production potential of the Crystal Springs Hatchery on the Fort Hall Reservation. In 1996, a master

plan (Montgomery-Watson) was written which outlined program requirements and three possible sites for construction of a new hatchery. The most suitable site was selected based on these findings, and in 1998, an Environmental Assessment was completed for Phase I and II of the project and included a cultural resources review (Emerson and Boreson 1997). Water quality and quantity were monitored at the proposed hatchery site (Houghland Farms) and the property was purchased by BPA in 1998.

This is an expense project that supports planning and design of hatchery prior to when costs can be capitalized under Project #7 and that supports operations and maintenance once a hatchery is constructed. The Tribes would begin master planning for the Crystal Springs Hatchery based on reports and recommendations gathered during the planning phase. The Tribes would also initiate development of a master plan for an adult holding facility on the Yankee Fork Salmon River. Capital expenditures will be utilized (Project #7) to construct these facilities once the permitting and consultation process is complete.

Target Populations: Snake River Sockeye Salmon, Chinook Salmon, Steelhead, Resident Salmonids

Projected Benefits: Effective planning will allow the facility to be constructed utilizing the best available practices for hatchery design, disease management and water quality. Expenses for operations and maintenance will support ongoing hatchery operations and provide a mechanism for the Tribes to continue supplementation efforts in the Snake River Basin.

Estimate Benefits to Primary Limiting Factors (PLFs) from Habitat Actions by Population and Watershed

Future improvements to limiting factors are estimates from the best professional judgement of tribal biologists, assuming the implementation of all tribal habitat actions in the MOA. Limiting factors are weighted as to their relative importance in order to calculate watershed improvements.

Chinook Salmon				
Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Actions	Survival benefit associated with BPA funds (multiplier)	
			10 Years	25 Years
Elk Creek	Sediment from roads, cattle grazing, - effects on rearing and spawning success, interstitial space and pool volume, diversion, discharge	Increase space and pool volume, rearing and spawning habitat, decrease uptake of water at diversion	1.03	1.59
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian Rehabilitation & Large Woody Debris		
	Lack of passage - Lack of access to diversity of habitats,	Removal of diversion		
Yankee Fork	Sediment from roads and historic mining - effects on rearing and spawning success, interstitial space and pool volume.	Road drainage improvements, maximizing rearing and spawning habitat, minimizing sediment	1.00	1.51
	Loss of riparian vegetation and complexity -	Riparian Rehabilitation & Large Woody Debris		

	Lack of passage - Lack of access to diversity of habitats	Bridge		
Panther Creek	Sediment from roads, timber harvest,- effects on rearing and spawning success, interstitial space and pool volume.	Road drainage improvements, maximizing rearing and spawning habitat, minimizing sediment, monitor chemicals	1.00	1.29
	Loss of riparian vegetation and complexity	Riparian Rehabilitation & Large Woody Debris		
	Lack of passage - Lack of access to diversity of habitats.	Culvert Replacement		
Warm Springs	Sediment from roads, timber harvest, cattle grazing,- effects on rearing and spawning success, interstitial space and pool volume	Reduce sediment load	1.01	1.44
	Loss of riparian vegetation and complexity	Riparian planting		
	Lack of passage - Lack of access to diversity of habitats.	Culvert Replacement		
Beaver Creek	High summer water temperature	Riparian fencing, planting,	1.00	1.30
	Loss of riparian function from grazing	Riparian fencing, planting, streambank bioengineering		
	Lack of passage - Lack of access to diversity of habitats,	Culvert Replacement		

Upper Salmon Main	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian fencing, planting,	1.00	1.23
	Loss of riparian function from grazing and floodplain development, sediment load	Riparian fencing, planting, streambank bioengineering		
	Lack of passage - Lack of access to diversity of habitats,	Fish screen, passage, diversion		
East Fork	Sediment from upstream sources	Road drainage improvements, upland rehabilitation	1.05	1.44
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian fencing, planting,		
	Loss of riparian function from grazing and floodplain development	Riparian fencing, planting, streambank bioengineering		
Basin Creek	Sediment from upstream sources and road	road drainage improvements and upland vegetation	1.15	1.73
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	vegetation, instream spawning and rearing habitat		
	Loss of riparian function from grazing	planting, streambank bioengineering		

Slate Creek	Sediment from upstream sources and road	1 mile upper end road decommissioning and road drainage improvements	1.00	1.50
	High summer water temperature	Riparian fencing		
	Loss of riparian function from grazing and floodplain development, seasonal blow-outs	Riparian fencing, planting, streambank bioengineering, instream spawning and rearing habitat		
	Water Chemistry	Create barrier from tailings		
Smiley Creek	Sediment from upstream sources	.5 mile upper end road decommissioning and road drainage improvements, upland vegetation	1.00	1.59
	High summer water temperature	Riparian fencing, planting, remove diversion and pump at lower end and replace with wells		
	Loss of riparian function from grazing and floodplain development	Riparian fencing, planting, streambank bioengineering		
	Lack of passage - Lack of access to diversity of habitats,	Culvert Replacement		
Yankee Fork Restoration (Dredge)	Lack of spawning and rearing habitat, water quality	Improve channel complexity	1.08	1.73
	Loss of floodplain connectivity	Floodplain reconnect, instream structures and vegetation		
	Fish passage barrier	Tributary Reconnect		
	Lack of passage - Lack of access to diversity of habitats,	Culvert & Bridge Replacement		

Estimate Benefits to Primary Limiting Factors (PLFs) from Habitat Actions by Population and Watershed

Future improvements to limiting factors are estimates from the best professional judgement of tribal biologists, assuming the implementation of all tribal habitat actions in the MOA. Limiting factors are weighted as to their relative importance in order to calculate watershed improvements.

Steelhead				
Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Actions	Survival benefit associated with BPA funds (multiplier)	
			10 Years	25 Years
Elk Creek	Sediment from roads, cattle grazing, mining - effects on rearing and spawning success, interstitial space and pool volume, diversion, discharge	Increase space and pool volume, rearing and spawning habitat, decrease uptake of water at diversion	1.19	1.85
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian Rehabilitation & Large Woody Debris		
	Lack of passage - Lack of access to diversity of habitats,	Removal of diversion		

Yankee Fork	Sediment from roads and historic mining - effects on rearing and spawning success, interstitial space and pool volume.	Road drainage improvements, maximizing rearing and spawning habitat, minimizing sediment	1.04	1.28
	Loss of riparian vegetation and complexity -	Riparian Rehabilitation & Large Woody Debris		
	Lack of passage - Lack of access to diversity of habitats	Bridge		
Panther Creek	Sediment from upland fires- effects on rearing and spawning success, interstitial space and pool volume and temperature.	Road drainage improvements, maximizing rearing and spawning habitat, minimizing sediment, monitor chemicals	1.26	1.76
	Water quality toxic	Water quality control, supplement with nutrients		
	Lack of instream complexity	Engineer pool, riffle complex & Large Woody Debris		
	Lack of passage - Lack of access to diversity of habitats.	Culvert Replacement		
Warm Springs	Sediment from upland fire, cattle grazing,- effects on rearing and spawning success, interstitial space and pool volume	Reduce sediment load	1.08	1.24
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian planting		

	Lack of passage - Lack of access to diversity of habitats.	Culvert Replacement		
Beaver Creek	Diversions	Fish screen, passage, remove diversion	1.03	1.28
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian fencing, vegetation		
	Loss of riparian function from grazing	Riparian fencing, planting, streambank bioengineering		
	Sediment from upland fire, cattle grazing,- effects on rearing and spawning success, interstitial space and pool volume	Reduce sediment load		
	Lack of passage - Lack of access to diversity of habitats,	Culvert Replacement		
Upper Main Salmon River	Sediment from upland fire, cattle grazing, Development- effects on rearing and spawning success, interstitial space and pool volume	Reduce sediment load	1.04	1.25
	Loss of riparian vegetation and complexity - lack of stream shading resulting in elevated temperatures	Riparian fencing, planting,		

	Loss of riparian function from grazing and floodplain development, sediment load	Riparian fencing, planting, streambank bioengineering		
	Diversions	Fish screen, passage, remove diversion		
	Lack of passage - Lack of access to diversity of habitats,	Fish screen, passage, diversion		
East Fork	Sediment from upland fire, cattle grazing, Development and Mining- effects on rearing and spawning success, interstitial space and pool volume	Reduce sediment load	1.00	1.35
	Loss of riparian function from grazing and floodplain development	Riparian fencing, planting, streambank bioengineering		
	Diversions	Fish screen, passage, remove diversions		
Basin Creek	Sediment from upland fire and seasonal blowouts	reduce sediment load	1.00	1.26
	Loss of riparian function from grazing	planting, streambank bioengineering		
Slate Creek	Sediment from upstream sources and road	1 mile upper end road decommissioning and road drainage improvements	1.02	1.31
	High summer water temperature	Riparian fencing		
	Loss of riparian function from grazing and floodplain development, seasonal blow-outs	Riparian fencing, planting, streambank bioengineering, instream spawning and rearing habitat		

	Water quality toxic	Create barrier from tailings		
Smiley Creek	Sediment from upstream sources	.5 mile upper end road decommissioning and road drainage improvements, upland vegetation	1.05	1.37
	High summer water temperature	Riparian fencing, planting, remove diversion and pump at lower end and replace with wells		
	Loss of riparian function from grazing and floodplain development	Riparian fencing, planting, streambank bioengineering		
	Lack of passage - Lack of access to diversity of habitats,	Culvert Replacement		
Yankee Fork Restoration (Dredge)	Lack of spawning and rearing habitat, water quality	Improve channel complexity	1.04	1.63
	Loss of floodplain connectivity	Floodplain reconnect, instream structures and vegetation		
	Fish passage barrier	Tributary Reconnect		
	Lack of passage - Lack of access to diversity of habitats,	Culvert & Bridge Replacement		