

Anadromous Fish Agreement and Habitat Conservation Plan

Rocky Reach Hydroelectric Project

FERC License No. 2145

Offered for Signing
March 26, 2002

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- Supporting Document A Tributary Plan, Project Selection, Implementation and Evaluation (1998).
- Supporting Document B Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Rivers (1998).
- Supporting Document C Biological Assessment and Management Plan (BAMP: Mid-Columbia Hatchery Programs (1998).
- Supporting Document D Briefing Paper Estimating Survival of Anadromous Fish through the Mid-Columbia PUD Hydropower Projects (2002).
- Supporting Document E Rocky Reach Background Biology (1998).

**Anadromous Fish Agreement and Habitat Conservation Plan
Rocky Reach Hydroelectric Project, FERC No. 2145**

THIS AGREEMENT for the Rocky Reach Hydroelectric Project (Project) is entered into between the Public Utility District No. 1 of Chelan County, Washington, (District) a Washington municipal corporation; and the United States Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), the Washington Department of Fish and Wildlife (WDFW), the Confederated Tribes of the Colville Reservation (Colville), the Confederated Tribes and Bands of the Yakama Indian Nation (Yakama), the Confederated Tribes of the Umatilla Indian Reservation (Umatilla) (collectively, the Joint Fisheries Parties or the JFP); and American Rivers, Inc., a Washington D.C., nonprofit corporation, (the JFP and American Rivers, are the fisheries parties (FP)). All entities are collectively referred to as the Parties.

INTRODUCTION

A. The site of the Project is habitat for Plan Species. Prior to this Agreement the needs of the Plan Species have been addressed through litigation and agreement. This Agreement is intended to constitute a comprehensive and long-term adaptive management plan for Plan Species and their habitat as affected by the Project.

B. The objective of this Agreement is to achieve No Net Impact (NNI) for each Plan Species affected by the Project on the schedule set out herein and to maintain the same for the duration of the Agreement. NNI consists of two components: (1) 91% Combined Adult and Juvenile Project Survival achieved by project improvement measures implemented within the geographic area of the Project, (2) 9% compensation for Unavoidable Project Mortality provided through hatchery and tributary programs, with 7% compensation provided through hatchery programs and 2% compensation provided through tributary programs. The Parties intend these actions to contribute to the rebuilding of tributary habitat production capacity and basic productivity and numerical abundance of Plan Species.

C. The District will receive a Permit for Permit Species upon this Agreement becoming effective. If the District carries out its responsibilities for fish protection and mitigation Measures set out in this Agreement, and provides the necessary monitoring and evaluation all according to the time frames set out for each Measure, the Permit shall continue for the full term of this Agreement subject to Section 2 “Withdrawal From Agreement” and Section 10 “Endangered Species Act”. The Parties shall take the actions set out in this Agreement in support of the District before the Federal Energy Regulatory Commission (FERC) and in other forums.

D. Capitalized terms used in this Agreement are defined in Section 13 “Definitions”.

NOW, THEREFORE, IN CONSIDERATION of the mutual promises and conditions set forth herein, the Parties agree as follows:

SECTION 1 DURATION OF AGREEMENT

1.1 Term. This Agreement shall commence on the date the last Party signs this Agreement as more fully described in Section 1.2 “Staggered Effective Date” and shall continue for a period of fifty- (50) years, unless the Agreement terminates early. In addition, entities listed above that do not sign this Agreement are not a Party to this Agreement.

1.2 Staggered Effective Date.

1.2.1 Upon Signing. The portions of Section 5.4 “Phase 1 Plan to Achieve Survival Standard” related to 2002 operations, Section 4 “Coordinating Committee”, and Section 11 “Dispute Resolution” shall become effective immediately upon at least NMFS, USFWS, WDFW and the District signing this Agreement, to the extent that it does not require substantial construction or structural modification of the Dam.

The Parties agree to join with the District’s filing with FERC requesting that FERC issue appropriate orders: (1) to amend the Project’s existing license to include this Agreement as a condition thereof, and (2) to terminate the Mid-Columbia Proceeding as it relates to the Project.

The District shall revise its incidental take permit application for Permit Species based upon this Agreement, and submit a direct take application for the Hatchery Compensation Program. This Agreement and its figures, tables and appendices shall constitute the District’s habitat conservation plan in support of the District’s incidental take permit application. The Supporting Documents are to be used as supporting documents to the Agreement and as such, do not by themselves, create contractual obligations under this Agreement or through the Permit issued by NMFS.

The Parties shall provide reasonable efforts to expedite any NEPA, SEPA, and other regulatory processes required for this Agreement to become fully effective. The Parties (except the lead agency) may file comments with the lead agency. Such comments will not advocate additional Measures or processes for Plan Species. The Parties shall provide reasonable efforts to expedite the approval process of the District’s incidental take permit application.

1.2.2 Upon Completion of Regulatory Reviews. The remainder of this Agreement shall become effective on the later of the follow dates (the latter date is the “Effective Date”) that: (1) the FERC issues a final order approving this Agreement and incorporating it into the Project’s license, (2) the NMFS issues the District a Permit for the Project based upon this Agreement, and (3) the USFWS completes necessary consultations under the ESA.

However, any Party may withdraw from this Agreement within sixty- (60) days of the Effective Date in the event that: (1) the NMFS issues the District a Permit with terms and conditions in addition to or different from those set forth in this Agreement, (2) the FERC fails to include this Agreement, in its entirety, or adds terms or conditions

inconsistent with this Agreement as a license condition of the current Project license or a new long term Project license approved within the term of this Agreement, or (3) a Party as a result of compliance with NEPA or SEPA requires a material change to the terms or conditions of this Agreement. In order to withdraw from this Agreement, a Party shall provide all other Parties with notice of withdrawal and state in the notice the reason for withdrawal. The ability of a Party to withdraw from this Agreement pursuant to this paragraph terminates if not exercised within said period. The notices required by this section shall be in writing and either served in person or provided by U.S. Mail, return receipt requested.

1.3 Early Termination Events. This Agreement shall terminate automatically before the end of its term: (1) in the event the FERC issues the District a non-power license for the Project, (2) in the event the FERC orders removal of the Project, (3) in the event the FERC orders drawdown of the Project, or (4) the District withdraws from this Agreement based on Section 2 “Withdrawal From Agreement”.

1.4 Termination or Transfer of License. The District’s obligations under this Agreement shall terminate in the event its FERC license is terminated or transferred to another entity. The Parties agree that the terms of this Agreement shall be binding on their respective successors and assigns.

1.5 Continuation of Measures Upon Termination. Except as set forth in Section 7.4.5 “Account Status Upon Termination”, Sections 9.1.1 and 9.1.3, Section 10.4 “Permit Suspension, Revocation and Re-Instatement” and Section 10.5 “Early Termination Mitigation”, upon expiration of this Agreement, or in the event this Agreement is terminated, voided or determined for any reason to be unenforceable before the end of its term, then: (1) the District shall continue to implement the last agreed to Measures until the FERC orders otherwise, and (2) the Parties are not restrained in any manner from advocating to the FERC measures to replace the Agreement.

SECTION 2 WITHDRAWAL FROM AGREEMENT

2.1 Enough Already.

2.1.1 A Party may withdraw from this Agreement when at least fifteen- (15) years have elapsed from March 1, 1998, subject to the following conditions: (1) No Net Impact (NNI) has not been achieved or has been achieved but has not been maintained, or (2) the Project has achieved and maintained NNI but the Plan Species are not rebuilding and the Project is a significant factor in the failure to rebuild.

2.1.2 If NMFS and the District are in agreement as to specific Measures to remedy the failure to achieve or maintain NNI and the District promptly implements agreed measures that are applicable to the District, NMFS will refrain from suspending or revoking the Permit. In the event that NNI has not been achieved or has been achieved but has not been maintained by March 1, 2013, but the District is otherwise performing all obligations assigned to it in the Permit, and is otherwise in full compliance with all

terms and conditions of this Agreement and the Permit, NMFS and USFWS will not exercise their right to withdraw from this Agreement or revoke the Permit unless such withdrawal is to seek drawdown, dam removal, non-power operations, or actions for achievement of NNI. Should the District, NMFS, and USFWS agree under these circumstances, such actions may be pursued without withdrawal from the Agreement or suspension or revocation of the Permit.

2.2 Non-Compliance. A Party may elect at any time to withdraw from the Agreement based on non-compliance of another Party with the provisions of the Agreement, but only subject to the following procedures: (1) a Party asserts that another Party is not complying with the terms of the Agreement, (2) the Party documents and presents evidence supporting assertion of non-compliance in writing, (3) the issue of non-compliance is taken to dispute resolution, Section 11 “Dispute Resolution”, unless waived. Following dispute resolution, a Party choosing to withdraw shall provide all other Parties with notice of withdrawal. The notice shall be in writing and either served in person or provided by U.S. Mail return receipt requested. The right to withdraw shall be waived if not exercised within sixty- (60) days of dispute resolution being completed. Section 2.6 “Withdrawal of Another Party” applies upon a Party’s receipt of the notice provided in this section.

2.3 Governmental Action. A Party may elect to withdraw from this Agreement in the event that an entity with regulatory authority takes action that (1) is detrimental to the achievement of the obligations set forth in this Agreement and (2) that materially alters or is contrary to one or more terms set forth in this Agreement.

2.4 Impossibility. A Party may elect to withdraw from the Agreement in the event the Parties agree in writing that the obligations imposed by this Agreement are impossible to achieve.

2.5 Revocation of Permit. A Party may elect to withdraw from the Agreement if the NMFS revokes the Permit.

2.6 Withdrawal of Another Party. Upon receipt of such notice any other Party shall have 120 days from the date of a Party’s notice of intent to withdraw, to provide notice to all Parties of its intention to withdraw from this Agreement, or this right to withdraw shall be waived.

2.7 Conditions Precedent to Withdrawal. Two conditions must be satisfied before a Party can withdraw from the Agreement pursuant to Sections 2.3 “Governmental Action”, 2.4 “Impossibility”, 2.5 “Revocation of Permit” or 2.6 “Withdrawal of Another Party”. First, the Party desiring to withdraw from the Agreement shall provide notice to all other Parties of its intent to withdraw. The notice shall be in writing and either served in person or provided by U.S. Mail return receipt requested. The notice shall state the date upon which the Party’s withdrawal shall become effective. The date upon which the Party’s withdrawal becomes effective shall be no less than sixty- (60) days from the date the notice was provided to all other Parties. Second, prior to the date upon which the

Party's withdrawal becomes effective the withdrawing Party (Parties) must make itself (themselves) available for at least one policy meeting to allow remaining Parties to attempt to persuade the withdrawing Party (Parties) not to withdraw. The policy meeting must take place within the sixty- (60) day period or it is waived.

2.8 Effect of Withdrawal. Except as set forth in Section 1.5 "Continuation of Measures Upon Termination", Sections 9.1.1 and 9.1.3, Section 10.4 "Permit Suspension, Revocation and Re-Instatement" and Section 10.5 "Early Termination Mitigation", in the event a Party withdraws from this Agreement, this Agreement places no constraints on the withdrawing Party, shall not thereafter be binding on the withdrawing Party, and the withdrawing Party may exercise all rights and remedies that the Party would otherwise have.

SECTION 3 SURVIVAL STANDARDS AND ALLOCATION OF RESPONSIBILITY FOR NO NET IMPACT

3.1 No Net Impact ("NNI") shall be achieved on the schedule set out herein and maintained for the duration of the Agreement for each Plan Species affected by the Project. NNI consists of two components: (1) 91% Combined Adult and Juvenile Project Survival achieved by project improvement Measures implemented within the geographic area of the Project, (2) 9% compensation for Unavoidable Project Mortality provided through hatchery and tributary programs, with 7% compensation provided through hatchery programs and 2% compensation provided through tributary programs. Measures and survival standards, as provided in Section 5 "Passage Survival Plan", Section 7 "Tributary Conservation Plan" and Section 8 "Hatchery Compensation Plan", shall be evaluated, as provided in Section 4.7 "Progress Reports", and achieved no later than March 2013. The inability to measure a standard due to limitations of technology shall not be construed as a success or a failure to achieve NNI as further explained in Section 5.2.1 91% Combined Adult and Juvenile Survival and Section 5.2.2 "93% Juvenile Project Survival and 95% Juvenile Dam Passage Survival".

3.2 The District shall be responsible for achieving 91% Combined Adult and Juvenile Project Survival, or 93% Juvenile Project Survival or 95% Juvenile Dam Passage Survival as provided in Sections 3 and 5 for each Plan Species affected by the Project. The District shall implement measurement and evaluation programs once approved by the Coordinating Committee. The District shall also be responsible for (1) funding the Tributary Conservation Plan as provided in Section 7; (2) providing the capacity and funding for the 7% Hatchery Compensation Plan as provided in Section 8; and (3) making capacity and funding adjustments to the Hatchery Compensation Plan to reflect and fully compensate for future increases in the run size of each Plan Species as provided in Section 8.3 "Hatchery Production Commitments". If the District is unable to achieve 91% Combined Adult and Juvenile Project Survival or 93% Juvenile Project Survival or 95% Juvenile Dam Passage Survival then the District shall consult with the Parties through the Coordinating Committee to jointly seek a solution. If a solution cannot be

identified to achieve the survival standards identified herein any Party may take action under Section 2.4 “Impossibility” or other provisions of this Agreement.

3.3 The Tributary Committee and Hatchery Committee shall develop plans and programs, which must include evaluation procedures, necessary to implement the Tributary Conservation Plan and the Hatchery Compensation Plan, respectively to compensate for Unavoidable Project Mortality. If Unavoidable Project Mortality is not compensated for through the Hatchery Compensation Plan and the Tributary Conservation Plan, the Hatchery Committee and the Tributary Committee, respectively may examine additional hatchery and tributary improvements to meet the obligation. If the Hatchery Committee and the Tributary Committee are unable to develop plans and programs to fully implement the Hatchery Compensation Plan and Tributary Conservation Plans, respectively, to meet compensation levels necessary to compensate for Unavoidable Project Mortality, then the respective committees may consult with the Coordinating Committee to jointly seek a solution.

3.4 Implementation of Measures to meet NNI shall follow the time frames set out in the Agreement. Where a deadline is not specified, implementation of Measures shall occur as soon as is reasonably possible.

SECTION 4 COORDINATING COMMITTEE

4.1 Establishment of Committee. There shall be a Coordinating Committee composed of one (1) representative of each Party, provided, that the Power Purchasers may participate as a non-voting observer through a single representative, whom they will designate from time to time. Each representative shall have one vote. Each Party shall provide all other Parties with written notice of its designated representative to the Coordinating Committee.

4.2 Meetings. The Coordinating Committee shall meet whenever requested by any two-(2) members following notice.

4.3 Meeting Notice. The Chair of the Coordinating Committee shall provide all committee members with a minimum of ten- (10) day’s advance written notice of all meetings unless a member waives notice in writing or reflects the waiver in the approved meeting minutes. The notice shall contain an agenda of all matters to be addressed and voted on during the meeting.

4.4 Voting. The Coordinating Committee shall act by unanimous vote of those members present in person or by phone for the vote and shall develop its own rules of process, provided, that the chair shall ensure that all members are sent notice of all Coordinating Committee meetings. Abstention does not prevent a unanimous vote. If a Party or its designated alternate cannot be present for an agenda item to be voted upon it must notify the Chair of the Coordinating Committee who shall delay a vote on the agenda item for up to five- (5) business days on specified issues to be addressed in a

meeting or conference call scheduled with all interested parties, or as otherwise agreed to by the Coordinating Committee. A Party may invoke this right only once per delayed item. If the Coordinating Committee cannot reach agreement, then upon request by any Party that issue shall be referred to Dispute Resolution.

4.5 Chair of Coordinating Committee. The Parties shall choose and the District shall fund a neutral third party to act as the Chair of the Coordinating Committee. The Chair is expected to prepare an annual list of understandings based on the results of studies, prepare progress reports, prepare meeting minutes, facilitate and mediate the meetings, and assist the members of the Coordinating Committee in making decisions. At least every three years, the Coordinating Committee shall evaluate the performance of the Chair of the Coordinating Committee.

4.6 Use of Coordinating Committee. The Coordinating Committee will be used as the primary means of consultation and coordination between the District and the FP in connection with the conduct of studies and implementation of the Measures set forth in this Agreement and for dispute resolution. Any entity not executing this Agreement shall not be a Party to this Agreement and shall not be entitled to vote on any committee established by this Agreement. However, any committee established by this Agreement may agree to allow participation of any governmental entities not a Party to this Agreement.

4.7 Authority. The Coordinating Committee shall oversee all aspects of standards, methodologies, and implementation (see Section 4.9 “Methodologies”). The Coordinating Committee shall: (1) establish the protocol(s) and methodologies to determine whether or not the survival standards contained in Section 5 “Passage Survival Plan” are being achieved for each Plan Species; (2) determine whether the Parties are carrying out their responsibilities under this Agreement; (3) determine whether NNI is achieved (see definition “NNI Achieved”); (4) determine the most appropriate standard in Section 5 “Passage Survival Plan” to be measured for each Plan Species; (5) approve all studies prior to implementation; (6) review study results, determine their applicability, and develop an annual list of common understandings based on the studies; (7) provide input on the District’s choice of Measures during Phase I; (8) periodically adjust the Measures (after Phase I) to address survival and Unavoidable Project Mortality as provided herein; provided that no more than 9% Unavoidable Project Mortality shall be made up through hatchery and tributary compensation without concurrence of the Coordinating Committee, and hatchery compensation shall not exceed 7% and tributary funding shall not exceed 2% unless agreed to by the Coordinating Committee; (9) resolve disputes brought by the Hatchery and Tributary Committees, and (10) adjust schedules and dates for performance. If the Coordinating Committee cannot reach agreement, then these decisions shall be referred to dispute resolution as set forth in Section 11 “Dispute Resolution”.

4.8 Progress Reports. Each year, with the assistance of the Chair of the Coordinating Committee, the Hatchery Committee and the Tributary Committee shall prepare an annual report to the Coordinating Committee describing their progress. Each year, the Coordinating Committee shall prepare an annual report to the Parties describing the progress toward achieving the survival standards contained in Section 5 “Passage Survival Plan”, and common understandings based upon the studies. Annual progress reports shall include information learned from all studies, even those that were not considered to be valid tests. By March 2013, a comprehensive progress report shall be prepared by the District, at the direction of the Coordinating Committee assessing overall status in achieving NNI, and shall include the status of each Plan Species. Comprehensive progress reporting shall continue to occur at successive ten-year intervals.

4.9 Studies and Reports. All studies and reports prepared under this Agreement will be available to all members of the Coordinating Committee as soon as reasonably possible. Draft reports will be circulated through the Coordinating Committee representatives for comment, which shall be due within sixty- (60) days unless the Coordinating Committee decides otherwise, and comments will either be addressed or made an appendix to the final report. All reports will be finalized by March 31 of the year following the year the studies were performed, unless otherwise agreed to by the Coordinating Committee. The reports will be kept on file at the District. All studies will be conducted following techniques and methodologies accepted by the Coordinating Committee. All studies will be based on sound biological and statistical design and analysis. The Coordinating Committee shall have the ability to select an independent, third party for the purpose of providing an independent scientific review of any disputed survival studies results and/or reports.

4.10 Methodologies/Test Fish. The Coordinating Committee shall approve and the District shall implement the measurement of the survival standards contained in Section 5 “Passage Survival Plan” using best available technology and study designs. The Coordinating Committee shall attempt whenever possible to coordinate studies with other studies being performed within the Columbia River basin. The Coordinating Committee shall facilitate the availability of test fish for studies, which may include the rearing of additional fish.

SECTION 5 PASSAGE SURVIVAL PLAN

5.1 Survival Standard Decision Matrix. The decision making process for implementation of the survival standards explained in Sections 5.2 “Implementation of the Survival Standards” and 5.3 “Phased Implementation of Measures to Achieve the Survival Standards” is graphically depicted in Figure 1 “Survival Standard Decision Matrix”.

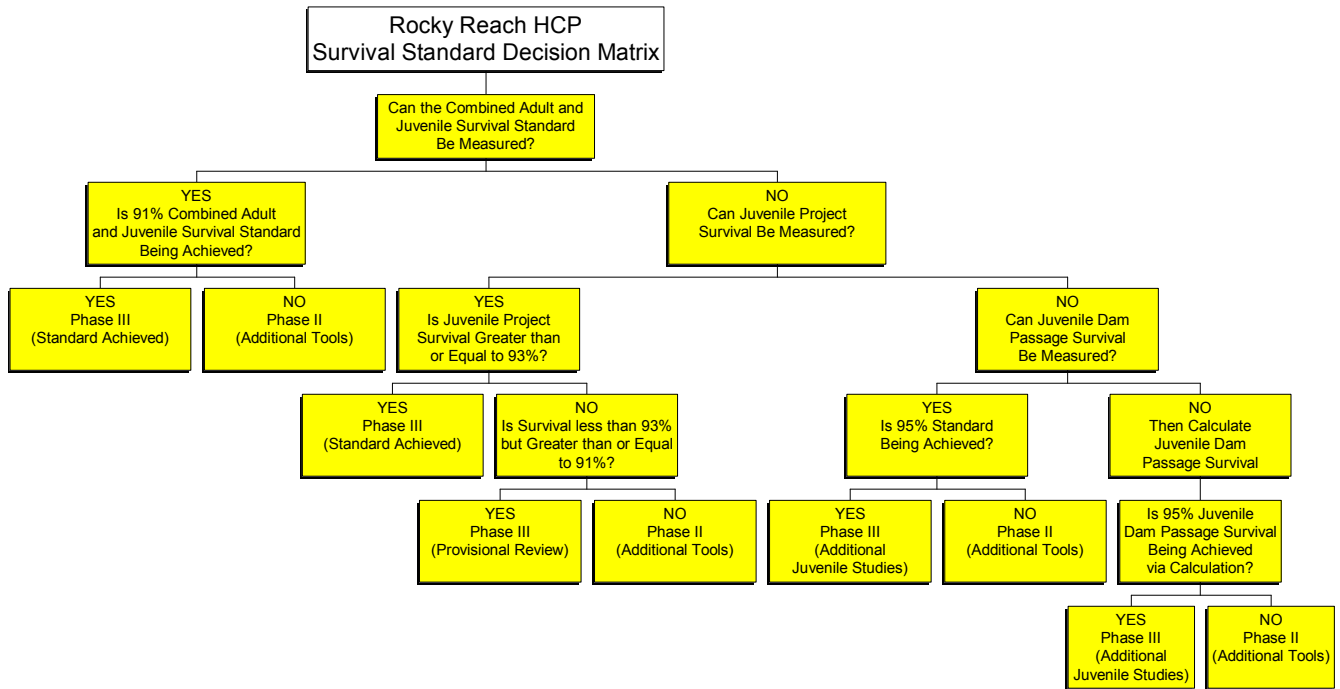


Figure 1, Survival Standard Decision Matrix.

5.2 Implementation of the Survival Standards

5.2.1 91% Combined Adult and Juvenile Survival. The District shall achieve and maintain Combined Adult and Juvenile Project Survival. The Combined Adult and Juvenile Survival standard is 91%. As of 2002, the Parties agree that adult fish survival cannot be conclusively measured for each Plan Species. Based on regional information, the Parties agree that adult survival is estimated to be 98-100%. Until technology is available to differentiate hydro-related mortality from natural adult losses, the District will implement the adult passage plan identified below. Given the present inability to differentiate between the sources of adult mortality, initial compliance with the Combined Adult and Juvenile Survival standard will be based upon the measurement of juvenile survival as provided below, Section “93% Juvenile Project Survival and 95% Juvenile Dam Passage Survival”. The District shall implement the measurement of adult survival at some time in the future if methodologies and study plans are agreed to by the Coordinating Committee. Mitigation measures will be adjusted at that time, if necessary, to address the new information.

5.2.2 93% Juvenile Project Survival and 95% Juvenile Dam Passage Survival. Limitations associated with the best available technology have required the development of the following metrics for assessing juvenile fish survival standards at the Project. In order of priority they are (1) measured Juvenile Project Survival; (2) measured Juvenile Dam Passage Survival; and (3) calculated Juvenile Dam Passage Survival. The survival of each Plan Species shall be determined by the Coordinating Committee using one of these metrics, with subsequent evaluations implemented as appropriate, per the following guidelines. If the Combined Adult and Juvenile Project Survival cannot be measured, then Juvenile Project Survival shall be measured as the next best alternative until adult survival measurement is possible.

If Juvenile Project Survival for each Plan Species is measured to be greater than or equal to 93%, then the District will proceed to Phase III (Standard Achieved). The Juvenile Project Survival Standard is 93%. If Juvenile Project Survival is measured at less than 93% but greater than or equal to 91%, then the District will proceed to Phase III (Provisional Review). If Juvenile Project Survival is measured at less than 91%, then the District will proceed to Phase II (Additional Tools).

If Juvenile Project Survival cannot be measured, then Juvenile Dam Passage Survival shall be measured as the next best alternative until project measurement is possible. The Juvenile Dam Passage Survival standard is 95%.

For some Plan Species such as sockeye and sub-yearling chinook where measurement of Juvenile Dam Passage Survival and Juvenile Project Survival is not yet possible, the Juvenile Dam Passage Survival Standard will be calculated based on the best available information (including the proportion of fish utilizing specific passage routes and the use of off-site information), as determined by the Coordinating Committee. This calculation will consider the same elements as measured Juvenile Dam Passage Survival, except that off-site information may be used where site-specific information is lacking.

5.2.3 Methodologies. The survival standards set forth in Section 5 “Passage Survival Plan” shall be measured using the best available technology and study designs approved by the Coordinating Committee. Current methodologies are summarized in Supporting Document D “Briefing Paper Estimating Survival of Anadromous Fish through the Mid-Columbia PUD Hydropower Projects”. These methodologies are not exclusive, and may be updated based on new information or techniques.

A valid study is one in which the study design, implementation, and criteria are determined to have been met by the Coordinating Committee, and one in which the study took place during Representative Flow Conditions and normal project operating conditions consistent with the approved study design. The Coordinating Committee will evaluate each study after it is completed to see if previously agreed-to criteria are met. All studies will be evaluated for quality control. If the Committee agrees that critical criteria were violated, then the study will not be included in the overall average over the

three years of testing, and an additional year of testing will take place. In the event that the additional year's test is invalid, the Coordinating Committee will decide how to address the requirement for three years of testing.

Survival studies shall be measured at a ninety-five percent (95%) confidence level, with a standard error of the estimate that shall be not more than plus or minus 2.5% (i.e. 5% error). A study result meeting this precision level will automatically be included in the three-year average, unless the study is determined to be invalid by the Coordinating Committee for other reasons. If, however, a study is considered to have met all other testing protocols, and the Coordinating Committee agrees, it may be included in the calculation of the three-year average so long as the standard error around the point estimate does not exceed plus or minus 3.5%. This decision is not subject to Dispute Resolution.

Point estimates of survival measurements from the three years of studies shall be averaged (arithmetic mean). The point estimate of the average will be used to compare against the pertinent survival standard. If the averaged point estimates equals or exceeds the survival standard, then the standard has been achieved. If the average of the 3 years of survival measurements is no more than 0.5 percent below the survival standard, the Coordinating Committee may decide whether an additional year of study is appropriate. If an additional year of study is undertaken, the study result (if valid) will be included in the calculation of the arithmetic mean.

5.3 Phased Implementation of Measures to Achieve the Survival Standards. The survival standards contained in this Section 5 "Passage Survival Plan" will be achieved in three phases. Under Phase I, the District shall implement the "Phase I Plan to Achieve the Survival Standards" set forth in Section 5.3.1. Studies will be conducted to determine the survival rates beginning in 2004 and lasting for three years, unless additional years of studies are agreed to by the Coordinating Committee. Following the completion of the three-year studies, the Coordinating Committee will determine whether the pertinent survival standards have been achieved. Depending on the results of this determination, the District will either proceed to Phase II (if the applicable survival standard has not been achieved) or Phase III (if the applicable survival standard has been achieved). Phase III also includes steps designed to address gaps in the available information. Juvenile survival studies conducted during Phase I may result in different phase designations for each of the plan species. For example, the District may move to: Phase II (Additional Tools); Phase III (Standard Achieved); Phase III (Provisional Review); or to Phase III (Additional Juvenile Studies) as described in Figure 1, depending on the survival results for individual plan species. If the Coordinating Committee cannot agree on Phase designation, the Coordinating Committee may agree to require an additional year of study to resolve the disagreement, or a Party may institute Section 11 "Dispute Resolution" to determine the Phase designation or address the need for Additional Tools during the period of measurement and evaluation.

5.3.1 Phase I Testing. Assuming that the final bypass construction is completed by the 2003 juvenile migration, the District will use the first year of the operation (2003) of the juvenile bypass system to identify operational and maintenance modifications that may be needed. The District will conduct a pilot study, estimating the parameters that will be used in future survival studies. The District will begin testing the applicable survival standard in 2004.

Beginning in 2004, the District proposes to use acoustic tag technology to measure Juvenile Dam Passage Survival or Juvenile Project Survival. Current coordination between the District, consultants, NMFS Science Center, and the USGS Biological Research Division is ongoing to design and develop the acoustic tag survival methodology. The results of this effort will then be presented to the Coordinating Committee before study implementation for approval. Between 2004 and 2006, chinook yearlings will be tested. Steelhead tests will begin between 2004 and 2006 as determined by the Coordinating Committee. Sockeye and sub-yearling chinook will be tested if technology exists, or will be calculated as discussed above if not measured by the end of Phase I testing.

5.3.2 Phase II (Additional Tools). If the Coordinating Committee has determined, based on Phase I monitoring and evaluation or Phase III periodic monitoring, that Juvenile Project Survival is less than 91% or Juvenile Dam Passage Survival (measured or calculated) is less than 95%, the District shall move to Phase II for that Plan Species.

(Phase II Additional Tools). If measurement and evaluation concludes that the survival standard(s) being evaluated are not achieved, the Coordinating Committee shall decide on additional Tools for the District to implement in order to achieve the survival standard(s) being evaluated using the following criteria: Likelihood of biological success; Time required to implement; and Cost-effectiveness of solutions, but only where two or more alternatives are comparable in their biological effectiveness. Until the survival standard(s) being evaluated are achieved, the Parties shall continue to implement Phase II (Additional Tools) for the standard and for each Plan Species that is not meeting the pertinent survival standard, except as set forth in Section 2.4 "Impossibility". The Coordinating Committee will determine the number of valid studies (not to exceed three years) necessary to make a phase determination following the implementation of Additional Tools.

5.3.3 Phase III (Standard Achieved or Provisional Review or Additional Juvenile Studies). The District proceeds to Phase III upon a determination by the Coordinating Committee that the District has (1) verified compliance with the Combined Adult and Juvenile Survival or measured Juvenile Project Survival (Standard Achieved), (2) has evaluated Juvenile Project Survival at less than 93% but greater than or equal to 91% (Provisional Review), or (3) has measured or calculated 95% Juvenile Dam Passage Survival (Additional Juvenile Studies). In short, Phase III indicates that the appropriate standard has either been achieved or is likely to have been achieved and provides additional or periodic monitoring to ensure that survival of the Plan Species remains in

compliance with the survival standards in this Section 5 “Passage Survival Plan” for the term of the Agreement.

(Phase III Standard Achieved). The District shall proceed to Phase III (Standard Achieved) following measurement and evaluation that indicate that either the 91% Combined Adult and Juvenile Survival Standard or 93% Juvenile Project Survival is being achieved. In this case, the District shall re-evaluate survival under the applicable standard every 10 years. Representative species shall be picked by the Coordinating Committee. This re-evaluation will occur over one year and be included in the pertinent average for that particular species. If the survival standard is met, then Phase III (Standard Achieved) status will remain. If the survival standard is not met, then an additional year of testing will occur. If the survival standard remains unmet over three years of re-evaluation, then Phase II designation will take affect for the representative species, and the Coordinating Committee shall re-evaluate the survival of other Plan Species, as appropriate. If the survival standard has been exceeded, the Coordinating Committee shall reduce spill for the next juvenile migration so that the survival standard is achieved, but not exceeded; provided that, if multiple species are migrating at the same time, the Coordinating Committee cannot reduce spill during a time at which a reduction would prevent another species from achieving the survival standard (see Example 1 below).

Example 1. Steelhead and sockeye migrate during the spring but at different times. Steelhead and sockeye will likely require different levels of spill. It could be possible to reduce spill during the portion of the steelhead migration that does not overlap with sockeye so that the survival standard for steelhead is achieved during this portion of its migration. But, during the period where the sockeye migration overlaps with the steelhead migration, the spill needs of sockeye control the amount of spill provided at the Project. It is accepted by the District that this greater level of spill will result in steelhead exceeding the survival standard during the period of the steelhead migration where steelhead and sockeye are migrating together. The increase in steelhead survival during this period of combined migration will not result in a reduction of spill during the portions of the steelhead migration where steelhead are migrating alone so that the average survival of steelhead throughout their migration achieves the survival standard.

If spill is reduced, the Coordinating Committee shall oversee additional one to three years of testing to confirm achievement of the survival standard under the new operations.

(Phase III Provisional Review.) The District shall proceed to Phase III (Provisional Review) when Juvenile Project Survival studies indicate that Plan Species survival is less than 93% but greater than or equal to 91%. Provisional Review allows the District a one time (plan species specific) five-year period to implement additional measures or conduct additional juvenile or additional adult survival studies to more accurately determine whether the pertinent survival standard is being achieved. If at the end of this period Juvenile Project Survival is still less than 93% but greater than or equal to 91% and the Combined Adult and Juvenile Survival Studies are inconclusive, then the District will move to Phase II (Additional Tools). When the Provisional Review Studies indicate that the Combined Adult and Juvenile Survival estimates are greater than or equal to 91% or when the Juvenile Project Survival Studies indicate that survival is greater than or equal to 93% then the District shall proceed to Phase III (Standard

Achieved). If the Provisional Review Studies indicate that the 95% Juvenile Dam Passage Survival Standard has been achieved through direct measurement or calculation, then the District shall proceed to Phase III (Additional Juvenile Studies).

(Phase III Additional Juvenile Studies). The District shall proceed to Phase III (Additional Juvenile Studies) when Juvenile Dam Passage Survival studies or Juvenile Dam Passage calculations indicate that Juvenile Dam Passage Survival is greater than or equal to 95%. Because measurement or calculation of Juvenile Dam Passage Survival does not address juvenile mortality in the pool or the indirect effects of juvenile project passage, the District will evaluate either the 91% Combined Adult and Juvenile Project Survival or the 93% Juvenile Project Survival as determined appropriate by the Coordinating Committee. If at any time during Phase III (Additional Juvenile Studies), the Coordinating Committee approves the use of new survival methodologies, the District will have five years to conduct the appropriate evaluations. The Parties will then proceed based upon the results of these new studies. This re-evaluation will occur over one year. If the survival standard is met, then Phase III (Standard Achieved) status will remain. The Coordinating Committee will determine the number of valid studies (not to exceed three years) necessary to make a phase determination following the implementation of Additional Tools.

5.4 Phase 1 Plan to Achieve Survival Standards. The District shall implement the following activities starting in 2002 and continuing until at least the conclusion of Phase I studies.

5.4.1 Juvenile Measures

a. Adjustment Period. During the 2002 juvenile migration, the District shall operate its prototype bypass system as set forth in Section 5.4.1(b) below, provide the spill as set forth in Section 5.4.1 (c) below, and provide the predator control as set forth in Section 5.4.1 (d) below.

In December of 2001, the District has pending before FERC an application to amend its license for the Project to install a permanent bypass system. Upon construction of the final bypass for the 2003 juvenile migration as scheduled, the District will operate the bypass, provide spill, and provide predator control as it did in 2002. In order to obtain information about the newly constructed bypass, in 2003 the District shall also conduct a fish passage efficiency study of the bypass system for each Plan Species. The Coordinating Committee shall approve the study plan.

Upon completion of the 2003 fish passage efficiency study and before March 1, 2004, operation of the bypass and spill for the 2004, 2005 and 2006 juvenile migrations will be decided by the District as follows, unless the Coordinating Committee approves a more accurate method for adjusting the operation of the bypass and spill, if a species' 2003 bypass FPE is less than or greater than the historic total FPE for chinook yearlings (see Table 1 "Historic Total FPE for Chinook Yearlings"), then spill for that species will be adjusted to cover 95% of the migration as follows:

$$\frac{(\text{historic total FPE for chinook yearling}) - (\text{bypass FPE}_{\text{species}})}{\text{spill efficiency}_{\text{species}}}$$

b. Bypass. The District will continue to operate the juvenile salmonid bypass system at Rocky Reach Dam to meet the criteria set out below. The District shall operate the bypass system continuously between April 1 and August 31. Operation of the bypass system outside the specified dates above (either before April 1 or after August 31) will occur when it can be demonstrated it is necessary to encompass 95% of the juvenile migration of a Plan Species. The basis for making this determination shall be based on periodic fish capture information from the bypass system in addition to video counts from 1995-2001, or other empirical information agreed to by the Coordinating Committee. Additional run timing information and species composition monitoring shall be conducted once every 10 years in order to verify that a significant component (greater than 5%) of the juvenile emigration is not present outside the normal bypass operating period (April 1 through August 31) and to verify that the operations established by the Coordinating Committee are adequately protecting 95% of the spring and summer migrations of juvenile Plan Species. Turbine units 1 and 2 will be given high operating preference for project operations during the juvenile salmon migration (note - “split-station” service needs dictate at least one turbine unit from units 5-11 must operate to maintain plant safety when flows allow only two units to run).

c. Spill. For the 2002 and 2003 juvenile migrations, spill will supplement the bypass system as set forth below. For the 2004, 2005, and 2006 juvenile migrations, spill will supplement the bypass system, as necessary to achieve the fish passage efficiency required by Section 5.4.1 (a) above. For the 2007 juvenile migration and beyond, spill will supplement the bypass system as necessary to achieve the survival standards as set forth in Section 5.3 “Phased Implementation of Measures to Achieve the Survival Standards”(see also Figure 1 “Survival Standard Decision Matrix”).

In the spring 2002 and 2003, the District will spill fifteen percent of the Daily Estimated Flow during a period coinciding with the 95% passage of each spring migrating Plan Species’ juvenile migration. However, spring spill shall be increased to twenty-five percent of the Daily Estimated Flow during the period coinciding with the passage of the juvenile sockeye salmon migration, provided that, twenty-five percent spill not exceed twenty-one (21) days in duration. The Coordinating Committee shall decide when sockeye spill starts and ends. Spring spill shall begin no later than April 20th of each year, but the date may be adjusted by the Coordinating Committee based upon in-season migration information. Spring spill shall generally end no later than June 15th of each year, but the date may be adjusted by the Coordinating Committee based upon in-season migration information.

In the summer 2002 and 2003, the District will spill fifteen percent of the Daily Estimated Flow during a period coinciding with the 95% passage of the sub-yearling chinook juvenile migration. Summer spill shall begin no later than July 1st of each year, but the date may be adjusted by the Coordinating Committee based upon in-season migration information. Summer spill shall generally end no later than August 15th of each

year, but the date may be adjusted by the Coordinating Committee based upon in-season migration information. The Coordinating Committee shall investigate the need for a spill efficiency study in the summer of 2003. The Coordinating Committee shall also investigate the potential for changing spill operations to utilize the agreed to spill levels more efficiently.

d. Predator Control. The District will conduct control efforts for both northern pikeminnow and piscivorous bird populations for the protection of juvenile Plan Species. Northern pikeminnow will be primarily controlled by utilizing anglers at the dam. Northern pikeminnow tend to congregate in the Tailrace and anglers will exploit this population during the spring and summer months. The pikeminnow removal program may also be expanded to include not only the dam itself, but also the whole reservoir. This may be accomplished by implementing a bounty reward program and using sport anglers to assist in our control efforts. Long lines and trapping may also be utilized to supplement the dam angling and further exploit the pikeminnow population. Piscivorous bird populations, which include, Caspian terns, double-crested cormorants, and various gull species will be hazed. Hazing techniques may include elaborate wire arrays in the tailrace to deter foraging, propane cannons, various pyrotechnics, and lethal control when necessary. This program will continue to run during the juvenile outmigration.

5.4.2 Adult Measures. The District shall emphasize adult project passage Measures in order to give high priority to adult survival in the achievement of 91% Combined Adult and Juvenile Project Survival for each Plan Species. To accomplish this, the District shall implement at least the following Tools:

a. The District shall use best efforts to maintain and operate adult passage systems at the Project according to criteria developed through the Coordinating Committee and as provided in the DFOP.

b. Areas within the adult fish passage systems which are identified by the Coordinating Committee as either continuously out of criteria or where significant delay occurs (as it relates the biological fitness of the adult Plan Species) shall be addressed as soon as feasible.

c. The District shall use best efforts to eliminate identified sources of adult injury and mortality during adult migration through the Dam.

d. By the end of Phase I, the District shall identify adult fallback rates at the Dam. This evaluation will include the magnitude of voluntary and involuntary fallback, will assess how ladder trapping, project operations, the influence of the Turtle Rock Fish Hatchery, and the Wenatchee River have upon observed rates of fallback. This assessment will also determine the biological significance of these fallback events on the overall fitness of adult Plan Species. If the observed rates of adult fallback and steelhead kelt loss are determined to make a significant difference in meeting the relevant survival standard, then the Coordinating Committee shall determine the most cost effective

methods to protect adult fallbacks and steelhead kelts at the Dam, and the District shall immediately implement the agreed to Measures. Reduction in fallback rates, mortalities and protection of kelts shall be factored into juvenile bypass and adult passage development and implementation and into Project operation decisions. Before the District is asked to implement additional operation of the bypass system or other measures for kelts or fallbacks, there will need to be a high level of certainty that these Measures will make a significant difference in meeting the relevant survival standard.

e. The Parties to this Agreement recognize that current technology does not allow for a precise estimate of hydroelectric project induced mortality to adult salmonids. Until adult survival studies can accurately differentiate between natural and hydro-project induced mortality, the District shall use the best available technology to conduct, on a periodic basis, adult passage verification studies toward the diagnosis of adult loss, injury and delay at Rocky Reach Dam. Prior to the completion of adult survival studies, compensation for adult mortality shall be assumed completely fulfilled by the District's contribution to the Tributary Fund. Following the completion of adult survival studies, should adult survival rates fall below 98% but the Combined Adult and Juvenile survival rate be maintained above 91%, additional hatchery compensation for that portion of adult losses that exceeds 2%, toward a maximum contribution of 7% hatchery funding and 2% tributary funding, would be utilized to satisfy NNI compensation requirements for each Plan Species.

f. Pursuant to the 2000 Biological Opinion for the Federal Columbia River Power System (the "Bi-Op"), federal action agencies are required to conduct a comprehensive evaluation to assess adult survival at federal dams. The Bi-Op sets forth a series of evaluation methods to be employed. The Coordinating Committee should review the information and techniques utilized in those studies and evaluate their potential for accurately measuring Combined Adult and Juvenile Project Survival. The Coordinating Committee should also evaluate technologies found at the federal dams to increase adult survival for possible implementation at the Project. Based upon those evaluations, the District shall implement as necessary technologies appropriate for the Project.

SECTION 6 RESERVOIR HABITAT AND WATER QUALITY

6.1 When making land use or related permit decisions on Project owned lands that affect reservoir habitat, the District shall consider the cumulative impact effects in order to meet the conservation objectives of the Agreement, requirements of the FERC license, and other applicable laws and regulations. The District further agrees to notify and consider comments from the Parties to the Agreement regarding any land use permit application on Project owned lands.

6.2 The District shall notify all applicants for District permits to use or occupy Project lands or water that such use or occupancy may result in incidental take of species listed as endangered or threatened under the ESA, requiring advance authorization from NMFS or USFWS.

6.3 The Parties recognize that there are potential water quality issues (temperature and dissolved gas) related to cumulative hydropower operations in the Columbia River. The Parties will work together to address water quality issues.

SECTION 7 TRIBUTARY CONSERVATION PLAN

7.1 Tributary Plan. The Tributary Conservation Plan (“Tributary Plan”) consists of this Agreement and is supported by Supporting Document A “Tributary Plan, Project Selection, Implementation, and Evaluation”, and Supporting Document B “Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Rivers”. The Parties recognize that Supporting Documents A and B do not by themselves create contractual obligations.

7.2 Purpose. Under the Tributary Plan, the District shall provide a Plan Species Account to fund projects for the protection and restoration of Plan Species’ habitat within the Columbia River watershed (from the Chief Joseph tailrace to the Rock Island tailrace), and the Okanogan, Methow, Entiat and Wenatchee River watersheds, in order to compensate for two percent of Unavoidable Project Mortality; provided that the Parties shall not be required to actually measure whether the Tributary Plan compensates for two percent Unavoidable Project Mortality. The Tributary Committee shall make sure that an appropriate amount of projects are chosen above the Rocky Reach Tailrace.

7.3 Tributary Committee

7.3.1 Establishment of Committee. There shall be a Tributary Committee composed of one (1) representative of each Party, provided that an entity eligible to appoint a representative to the Tributary Committee is not required to appoint a representative, and further provided that, representatives from USFWS shall participate in a non-voting, ex-officio capacity unless they otherwise state in writing, and further provided that, the Power Purchasers may participate as a non-voting observer through a single representative, whom they will designate from time to time. The Tributary Committee may select other expert entities, such as land and water trusts/conservancy groups to serve as additional, non-voting members of the Tributary Committee. Each entity eligible to appoint a representative to the Tributary Committee shall provide all other eligible entities with written notice of its designated representative. The Tributary Committee is charged with the task of selecting projects and approving project budgets from the Plan Species Account for purposes of implementing the Tributary Plan.

7.3.2 Meetings. The Tributary Committee shall meet not less than twice per year at times determined by the Tributary Committee. Additionally, the Tributary Committee may meet whenever requested by any two-(2) members following notice.

7.3.3 Meeting Notice. The Chair of the Tributary Committee shall provide all committee members with a minimum of ten- (10) day's advance written notice of all meetings unless a member waives notice in writing or reflects the waiver in the approved meeting minutes. The notice shall contain an agenda of all matters to be addressed and voted on during the meeting.

7.3.4 Voting. Except as set forth in Section 7.4.2 "Prohibited Use of Account", the Tributary Committee shall act by unanimous vote of those members present in person or by phone for the vote and shall develop its own rules of process, provided, that the chair shall ensure that all members are sent notice of all Tributary Committee meetings. Abstention does not prevent a unanimous vote. If a Party or its designated alternate cannot be present for an agenda item to be voted upon it must notify the Chair of the Tributary Committee who shall delay a vote on the agenda item for up to five- (5) business days on specified issues to be addressed in a meeting or conference call scheduled with all interested parties, or as otherwise agreed to by the Tributary Committee. A Party may invoke this right only once per delayed item. If the Tributary Committee cannot reach agreement, then upon request of any Party, that issue shall be referred to the Coordinating Committee.

7.3.5 Chair of Tributary Committee. The Parties shall choose and the District shall fund a neutral third party to act as the Chair of the Tributary Committee. The Chair of the Tributary Committee shall have the same responsibilities and authorities with regard to the Tributary Committee as the Chair of the Coordinating Committee has with regard to the Coordinating Committee. At least every three years, the Tributary Committee shall evaluate the performance of the Chair of the Tributary Committee.

7.4 Plan Species Account.

7.4.1 Establishment of Account. The District shall establish a Plan Species Account in accordance with applicable provisions of Washington State law and this Agreement. Interest earned on the funds in the Plan Species Account shall remain in the Plan Species Account. The Parties to this Agreement may audit the District's records relating to the Account during normal business hours following reasonable notice. The Tributary Committee shall select projects and approve project budgets from the Plan Species Account by joint written request of all members of the Tributary Committee. The Tributary Committee shall act in strict accordance with Section 7.4.2 "Prohibited Use of Account".

7.4.2 Prohibited Uses of Account. No money from the Plan Species Account shall be used to enforce compliance with this Agreement. Members of the Tributary Committee and their expenses shall not be compensated through the Plan Species Account. Administrative costs, staffing and consultants, reports and brochures, landowner assistance and public education costs collectively shall not exceed \$80,000 in 1998 dollars in any given year without the unanimous vote of the Tributary Committee.

7.4.3 Reports. At least annually, the District shall provide financial reports of Plan Species Account activity to the Tributary Committee.

7.4.4 Ownership of Assets. Determinations regarding ownership of real and personal property purchased with funds from the Plan Species Account shall be made by the Tributary Committee. Title may be held by the District, by a resource agency or tribe or by a land or water conservancy group, as determined by the Tributary Committee. Unless the Tributary Committee determines that there is a compelling reason for ownership by another entity, the District shall have the right to hold title. All real property purchased shall include permanent deed restrictions to assure protection and conservation of habitat.

7.4.5 Account Status Upon Termination. Upon the Agreement's termination, (1) the District's unspent advance contributions to the Plan Species Account shall be promptly released to the District, (2) if funds remain in the Plan Species Account after the return of the District's advance contributions, then the Tributary Committee shall remain in existence and continue to operate according to the terms of this Agreement until the funds in the Plan Species Account are exhausted, and (3) all real and personal property which the District holds title shall remain its property.

7.5 Plan Species Account Funding

7.5.1 While this Agreement remains in effect, the District shall contribute \$229,800, in 1998 dollars, annually to the Plan Species Account. By joint written request, the JFP and American Rivers, Inc.'s representatives to the Tributary Committee may elect for the District to contribute, in advance, any of the annual payments to be made during the first fifteen years of the Agreement, provided that, (1) each annual payment shall be adjusted by the District for inflation based upon a nationally recognized index, (2) the total adjusted amount shall be reduced to present value by the actual discount rate applicable to the District, and reduced by the District's actual cost of financing, and (3) each election shall be for a minimum of three annual payments.

7.5.2 The first installment is due within ninety- (90) days of the Effective Date of the Agreement. The rest of the installments are due by the 31st day of January each year thereafter. The dollar figures shall be adjusted for inflation on the 1st day of January each year based upon the "Consumer Price Index for all Urban Consumers" for the Seattle/Tacoma area, published by the U.S. Department of Labor, Bureau of Labor Statistics. If said index is discontinued or becomes unavailable, a comparable index suitable to the Tributary Committee shall be substituted.

7.6 Tributary Assessment Program. The District shall provide support for a tributary assessment program separate from the Plan Species Account. The tributary assessment program will be utilized to monitor and evaluate the relative performance of projects approved by the Tributary Committee and directly funded by the initial contribution to the Plan Species Account. It is not the intent of the tributary assessment program to measure whether the Plan Species Account has provided a 2% increase in survival for Plan Species. Instead, the program has been established to ensure that the dollars allocated to the Plan species Account are utilized in an effective and efficient manner. The District shall develop, in coordination with and subject to an approval by the

Tributary Committee, the measurement protocols for the tributary assessment program. The Tributary Committee may choose to either evaluate the relative merits of each project or it may choose to evaluate an aggregation of projects provided that the total cost associated with the tributary assessment program does not exceed \$200,000 (not subject to inflation adjustment).

7.7 Project Selection.

7.7.1 Geographic Area and Types of Projects. The Tributary Committee shall select projects and approve budgets for expenditure from the Plan Species Account for the following: (1) Any action, structure, facility, program or measure (referred to herein generally as "projects") intended to further the purpose of the Tributary Plan for Plan Species. Projects shall be chosen based upon the guidelines set forth in Supporting Document A "Tributary Plan Project Selection, Implementation, and Evaluation" and Supporting Document B "Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Rivers". Projects shall not be implemented outside the area specified in Section 7.2 "Purpose". High priority shall be given to the acquisition of land or interests in land such as conservation easements or water rights or interests in water such as dry year lease options; (2) Studies, implementation, monitoring, evaluation, and legal expenses associated with any project financed from the Plan Species Account; and (3) Prior approved administrative expenses associated with the Plan Species Account.

7.7.2 Coordination With Other Conservation Plans. Whenever feasible, projects selected by the Tributary Committee shall take into consideration and be coordinated with other conservation plans or programs. Whenever feasible, the Tributary Committee shall cost-share with other programs, seek matching funds, and "piggy-back" programs onto other habitat efforts.

7.7.3 Conflict of Interest. After full written disclosure of any potential conflict of interest, which shall appear in the minutes of the Tributary Committee and prior to project approval, the Tributary Committee may approve a project that may benefit a person or entity related to a committee member, or an entity which appointed the committee member.

SECTION 8 HATCHERY COMPENSATION PLAN

8.1 Hatchery Objectives

8.1.1 The District shall provide hatchery compensation for Plan Species (spring chinook salmon, summer chinook salmon, fall chinook salmon, sockeye salmon, coho salmon upstream of Rock Island Dam origin, and summer steelhead). This compensation may include Measures to increase the off-site survival of naturally spawning fish or their progeny.

8.1.2 The District shall implement the specific elements of the hatchery program consistent with overall objectives of rebuilding natural populations and achieving NNI. Species specific hatchery programs objectives developed by the JFP may include

contributing to the rebuilding and recovery of naturally reproducing populations in their native habitats, while maintaining genetic and ecologic integrity, and supporting harvest.

8.2 Hatchery Committee.

8.2.1 Establishment of the Committee. There shall be a Hatchery Committee composed of one (1) representative of each Party, provided that a Party is not required to appoint a representative and further provided that the Power Purchasers may participate as a non-voting observer through a single representative whom they will designate from time to time. A Party shall provide all other Parties with written notice of its designated representative.

8.2.2 Responsibilities. The Hatchery Committee shall oversee development of recommendations for implementation of the hatchery elements of the Agreement that the District is responsible for funding. This includes overseeing the implementation of improvements, monitoring and evaluation relevant to the District's hatchery programs, as identified in the Hatchery Compensation Plan, the Permit and this Agreement. Hatchery Committee decisions shall be based upon: Likelihood of biological success; Time required to implement; and Cost-effectiveness of solutions. The Hatchery Committee shall also coordinate in-season information sharing and shall discuss unresolved issues.

8.2.3 Meetings. The Hatchery Committee shall meet twice per year or whenever requested by any two-(2) members following notice.

8.2.4 Meeting Notice. The Chair of the Hatchery Committee shall provide all committee members with a minimum of ten- (10) day's advance written notice of all meetings unless a member waives notice in writing or reflects the waiver in the approved meeting minutes. The notice shall contain an agenda of all matters to be addressed and voted on during the meeting.

8.2.5 Voting. The Hatchery Committee shall act by unanimous vote of those members present in person or by phone for the vote and shall develop its own rules of process, provided, that the chair shall ensure that all members are sent notice of all Hatchery Committee meetings. Abstention does not prevent a unanimous vote. If a Party or its designated alternate cannot be present for an agenda item to be voted upon it must notify the Chair of the Hatchery Committee who shall delay a vote on the agenda item for up to five- (5) business days on specified issues to be addressed in a meeting or conference call scheduled with all interested parties, or as otherwise agreed to by the Hatchery Committee. A Party may invoke this right only once per delayed item. If the Hatchery Committee cannot reach agreement, then upon request of any Party, that issue shall be referred to the Coordinating Committee.

8.2.6 Chair of Hatchery Committee. The Parties shall choose and the District shall fund a neutral third party to act as the Chair of the Hatchery Committee. The Chair of the Hatchery Committee shall have the same responsibilities and authorities with regard to the Hatchery Committee as the Chair of the Coordinating Committee has with

regard to the Coordinating Committee. At least every three years, the Hatchery Committee shall evaluate the performance of the Chair of the Hatchery Committee.

8.3 Hatchery Operations. The District or its designated agents shall operate the hatchery facilities according to the terms of this Section 8 “Hatchery Compensation Plan”, the ESA Section 10 permit(s), and in consultation with the Hatchery Committee.

8.4 Hatchery Production Commitments.

8.4.1 Hatchery Agreements. The District may enter into agreements with other entities for the rearing, release, monitoring and evaluation and research of hatchery obligations. The Hatchery Committee must approve any proposed agreements or trades of production. However, it is the District’s responsibility to ensure that their obligations under Section 8 (Hatchery Compensation Plan) are satisfied.

8.4.2 Calculation of Hatchery Levels. The District shall provide the funding and capacity required of the District to meet the 7% hatchery compensation level necessary to achieve NNI for all Plan Species. As set forth below, the initial estimated hatchery production capacities for Plan Species needed to compensate for Unavoidable Project Mortality are based on average adult returns of Plan Species for a baseline period, a 7% compensation requirement, and baseline adult to smolt survival rates for existing mid-Columbia River hatcheries. Juvenile Project Survival estimates, when available, will be used to adjust hatchery based compensation programs. However, should adult survival rates fall below 98% but the Combined Adult and Juvenile survival rates is maintained above 91%, additional hatchery compensation for adult losses, toward a maximum contribution of 7% hatchery compensation, would be utilized to provide compensation for Unavoidable Project Mortality. The rationale for determining the initial capacity requirement is supported by Supporting Document C, “Biological Assessment and Management Plan (BAMP): Mid-Columbia Hatchery Program”. The Parties recognize that Supporting Document C is a supporting document and does not by itself, create contractual obligations.

8.4.3 Periodic Adjustment of District Hatchery Levels. Hatchery production levels, except for original inundation mitigation, shall be adjusted in 2013 and every 10 years thereafter as is required to adjust for changes in the average adult returns of Plan Species and for changes in the adult-to-smolt survival rate, and for changes to smolt-to-adult survival rate from the hatchery production facilities, considering methodologies described in the BAMP. The Hatchery Committee will be responsible for determining program adjustments considering the methodology described in BAMP and providing recommended implementation plans to the District. The District will be responsible for funding the implementation plan.

a. Coho. Hatchery compensation for Methow River coho will be assessed in 2006 following the development of a continuing coho hatchery program and/or the establishment of a Threshold Population of naturally reproducing coho in the Methow Basin (by an entity other than the District and occurring outside this Agreement). The Hatchery Committee shall determine whether a hatchery program and/or, naturally

reproducing population of coho is present in the Methow Basin. Should the Hatchery Committee determine that such a program or population exists, then (1) the Hatchery Committee shall determine the most appropriate means to satisfy the 7% hatchery compensation requirement for Methow Basin coho, and (2) the District shall have the next juvenile migration to adjust juvenile protection Measures to accommodate Methow Basin coho. Thereafter, Coordinating Committee shall determine the number of valid studies (not to exceed three years) necessary to make a juvenile phase determination. Programs to meet NNI for Methow Basin coho may include but are not limited to: (1) provide operation and maintenance funding in the amount equivalent to 7% project passage loss, or (2) provide funding for acclimation or adult collection facilities both in the amount equivalent to 7% juvenile passage loss at the Project. The programs selected to achieve NNI for Methow Basin coho will utilize an interim value of project survival, based upon a Juvenile Project Survival estimate of 93%, until juvenile project survival studies can be conducted on Methow Basin coho.

b. Okanogan Basin Spring Chinook. Hatchery compensation for Okanogan Basin spring chinook will be assessed in 2007 following the development of a continuing spring chinook hatchery program and/or the establishment of a Threshold Population of naturally reproducing spring chinook in the Okanogan watershed (by an entity other than the District and occurring outside this Agreement). The Hatchery Committee shall determine whether a hatchery program and/or naturally reproducing population of spring chinook is present in the Okanogan Basin. Should the Hatchery Committee determine that such a program or population exists, then the Hatchery Committee shall determine the most appropriate means to satisfy the 7% hatchery compensation requirement for Okanogan Basin spring chinook. Programs to meet the 7% hatchery requirement for Okanogan Basin spring chinook may include but not be limited to: (1) operation and maintenance funding in the amount equivalent to 7% project passage loss or (2) replace project passage losses of hatchery spring chinook with annual releases of equivalent numbers of yearling summer chinook into the Okanogan River Basin or (3) provide funding for acclimation or provide funding for adult collection facilities in the amount equivalent to 7% juvenile passage loss at the Rocky Reach Project. The programs selected to achieve NNI for Okanogan Basin spring chinook will utilize an interim value of project survival, based upon a Juvenile Project Survival estimate of 93%, until project survival studies can be conducted on Okanogan Basin yearling chinook.

8.4.4 Initial Hatchery Program Levels. The District will continue to fund the operation and maintenance of the Rocky Reach Fish Hatchery and a portion of Chelan Fish Hatchery, a portion of the production in excess of 7% currently provided by the Rock Island Hatchery Complex, and other facilities necessary to meet production levels. The Parties agree that the initial production commitments to be provided by the District to satisfy 7% Unavoidable Project Mortality and compensation for original inundation are satisfied with production as follows below (See Table 2 for initial production levels, and production levels necessary to achieve 7% Unavoidable Project Mortality). The initial production levels will be maintained until 2013 unless otherwise agreed to by the Hatchery Committee.

a. Spring chinook: 7,500 pounds at about 12 fish per pound (90,000 fish); (the Hatchery Committee will determine if this commitment can be met through either the Okanogan Spring chinook program (see above), or another program (such as utilizing extra space in the Methow Hatchery) and, until 2013, 9,600 pounds at about 15 fish per pound (144,000 fish) at the Methow Hatchery (50% of proportion raised for Rock Island hatchery program). (The intent of the initial production program is to maintain current production levels of fish reared for the District at the Public Utility District No. 1 of Douglas County, Washington (“Douglas PUD”) owned Methow Hatchery through a contractual agreement between Douglas PUD and the District).

b. Steelhead: 5,800 pounds at about 6 fish per pound (35,000 fish, plus 27,500 pounds (165,000 fish) for original inundation losses;

c. Summer/Fall chinook: 20,000 pounds of yearling summer/fall chinook at about 10 fish per pound (200,000 fish); plus 40,500 pounds of sub-yearling summer/fall chinook at about 40 fish per pound (1,620,000) for inundation and, until 2013, 20,000 pounds at about 10 fish per pound (200,000 fish, a portion of which can be used for studies) at the Carlton Pond (50% of proportion raised for Rock Island hatchery program). (The intent of the initial production program is to maintain current production levels of fish reared for Douglas PUD at the District owned Carlton Pond through a contractual agreement between Douglas PUD and the District).

d. Sockeye: 15,000 pounds at about 20 fish per pound (300,000 fish). Options for long term production of sockeye will be explored by the Hatchery Committee and will be implemented by the District as soon as reasonably practical.

8.5 Monitoring and Evaluation.

8.5.1 The Hatchery Committee shall develop a five-year monitoring and evaluation plan for the hatchery program that is updated every five years (see also Section 8.6 “Program Review”). The first monitoring and evaluation plan shall be completed by the Hatchery Committee within one year of the Effective Date of this Agreement. Existing monitoring and evaluation programs shall continue until replaced by the Hatchery Committee.

8.5.2 The Parties agree that over the duration of this Agreement new information and technologies that are developed will be considered and utilized in the monitoring and evaluation of the hatchery program. The District shall fund hatchery program monitoring and evaluation consistent with this Agreement, the general objectives and guidelines listed for each Plan Species in the BAMP and as determined by the Hatchery Committee.

8.5.3 The Hatchery Committee shall plan and the District implement a study (related to the District’s production program) to investigate the natural spawning success of hatchery reared steelhead relative to wild steelhead. The Hatchery Committee shall coordinate the study with the Wells and Rock Island hatchery committees.

8.6 Program Modification.

8.6.1 Hatchery program modifications shall make efficient use of existing facilities owned by the District or cooperating entities including adult collection, acclimation, and hatchery facilities, provided that the existing facility or the existing facility as modified is compatible with and does not compromise ongoing programs. The District in consultation with the Hatchery Committee shall make reasonable efforts to implement program modifications when needed to achieve overall and specific program objectives. Program modifications may include changes to facilities, release methods, and rearing strategies necessary to achieve NNI as determined by the monitoring and evaluation program.

8.6.2 In December 2001, it is recognized that current monitoring and evaluation programs have identified alternative rearing strategies to be addressed as soon as reasonably possible. These alternative strategies include: the ability to hold steelhead adults on river water prior to spawning; and ability to rear and acclimate steelhead juveniles on Columbia or tributary waters. The District will make every reasonable effort to complete program modifications as soon as reasonably possible following agreement with the Hatchery Committee.

8.6.3 NMFS shall have the opportunity to seek hatchery program modifications (that do not change 7% program levels) but are otherwise necessary to address emergency effects of a hatchery program on listed Permit Species. Such program modifications shall be supported by a minimum of two years of field data from the river or stream in question. Other information documenting a significant and adverse effect on the productivity of listed Permit Species from other rivers can be considered, but only if applicable to the listed Permit Species and stream in question. Any proposal to modify a program will be documented in a memorandum from the Regional Administrator to the Hatchery Committee summarizing the problem, and then followed by up to six months of Hatchery Committee evaluation. The Parties recognize that initially a portion of the production contemplated in this Agreement will be for purposes of supplementation of Plan Species or re-establishing runs in areas from which they have been extirpated. In the event the concerns raised in this Section 8.6.3 involve the use of such a program, NMFS agrees to take the program design and intent into account in reaching any conclusions regarding the need for emergency modifications.

8.7 Program Review. As part of the five year review set forth in Section 8.4 “Monitoring and Evaluation” the Hatchery Committee shall look back comprehensively at the previous five year plan to help prepare the next five year plan. In 2013 as part of the comprehensive review and every ten years thereafter, the hatchery program will undergo a program review incorporating new information from the monitoring and evaluation program. This program review will determine if adult-to-smolt and smolt-to-adult survival standard, and hatchery program goals, and objectives as defined in this document and the Section 10 of the ESA permits have been met or sufficient progress is being made towards their achievement. This review shall include a determination of whether hatchery production objectives are being achieved and a review to identify adjustments to the monitoring and evaluation programs. The Hatchery Committee shall

be responsible for conducting the hatchery program review, and developing a summary report. The Hatchery Committee shall be responsible for recommending alternative plans to the District in the event that program objectives as defined above are not being met or needed modifications to the monitoring and evaluation have been identified. The Hatchery Committee shall be responsible for developing and the District funding implementation plans.

8.8 Changed Hatchery Policies under ESA.

8.8.1 Except in 2013 and every ten years thereafter, NMFS will refrain from applying hatchery policy decisions that would preclude the 7% hatchery levels (as adjusted) from being achieved. During 2013 and every 10 years thereafter (at the time of the program review), if NMFS proposes hatchery policy decisions that would preclude the 7% hatchery levels (as adjusted) from being achieved, NMFS will (a) propose application of the policies to the Hatchery Committee and seek agreement, (b) propose a revised hatchery program consistent with the principles of NNI and an expeditious transition plan from the existing hatchery program to the revised hatchery program, (c) if agreement is not possible discuss the application of the policies with the Coordinating Committee and then with the Policy Committee, if necessary, and (d) if agreement is still not possible then allow elevation to the Administrator of NMFS. The Parties recognize that initially a portion of the production contemplated in this Agreement will be for purposes of supplementation of Plan Species or re-establishing runs in areas from which they have been extirpated. NMFS agrees to take the program design and intent into account in reaching any conclusions.

8.8.2 Through 2013, facility modifications are based on monitoring and evaluation and may not reflect changes in NMFS hatchery policy. During 2013 and every 10 years thereafter (at the time of the program review), facility modifications can also reflect changes in ESA policy with the understanding that a reasonable period of time will be provided to complete the modifications. The 2013 date for achievement of NNI in Section 3.1 will be adjusted if necessary to reflect the time needed to complete such modifications (as determined by the Hatchery Committee).

8.9 New Hatchery Facilities. Before being required to construct new hatchery facilities, the Hatchery Committee shall make efficient use of existing or modified facilities owned by the District or entities consenting to the use of their facilities, including adult collection, acclimation and hatchery facilities, provided that existing or as modified facility use is compatible with and does not compromise ongoing programs.

SECTION 9 ASSURANCES

9.1 Release, Satisfaction and Covenant Not to Sue.

9.1.1 The Parties, within the limits of their authority, shall from the date of construction of the Project to the Effective Date of this Agreement, release, waive, discharge the District and the District's predecessors, commissioners, agents, representatives, employees, and signatory power purchasers from any and all claims,

demands, obligations, promises, liabilities, actions, damages and causes of action of any kind concerning impact of the Project on Plan Species except for the obligation to provide compensation for original construction impacts of the Project implemented through the hatchery component of this Agreement. This release, waiver, and discharge shall not transfer any of the above listed District liabilities or obligations to any other entity.

9.1.2 Provided that the District is in full compliance with its Permit, this Agreement, and its FERC project license provisions relating to Plan Species, each Party agrees not to institute any action under ESA, the Federal Power Act, the Fish and Wildlife Coordination Act, the Pacific Northwest Electric Power Planning and Conservation Act and the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act against the District and its signatory power purchasers related to impacts of the Project on Plan Species from the date this Agreement becomes effective through the date this Agreement terminates.

9.1.3 Termination of this Agreement or withdrawal of a Party shall have no effect upon the release provided for in Section 9.1.1.

9.1.4 This Agreement does not affect, limit or address the imposition of annual charges under the Federal Power Act, or the right of any party in any proceeding or forum to request annual charges.

9.2 Re-Licensing.

9.2.1 With respect to Plan Species, the Parties agree to be supportive of the District's long-term license application(s) to the FERC filed during the term of this Agreement for the time period addressed in this Agreement, provided that the District has adhered to the terms and conditions of this Agreement, the Permit, and the FERC license provisions relating to Plan Species, as well as any future terms, conditions, and obligations agreed upon by the Parties hereto or imposed upon the District by the FERC. To the extent that the District has met such terms and conditions, the Parties agree that the District is a competent license holder with respect to its obligations to Plan Species. If the fifty (50)-year term of this Agreement will expire during a long-term license, any Party may advocate for license conditions that take effect after this Agreement expires.

9.2.2 This Agreement shall constitute the Parties' terms, conditions and recommendations for Plan Species under Sections 10(a), 10(j) and 18 of the Federal Power Act, and the Fish and Wildlife Coordination Act, provided that, NMFS and USFWS maintain the right to reserve their authorities under Section 18 of the Federal Power Act on the condition that such reserved authority may be exercised only in the event that this Agreement terminates, provided further that, the Parties as part of their terms, conditions and recommendations under Section 10(a) of the Federal Power Act may request that Plan Species protection or mitigation measures contained in a competing license application be included as a condition of the District's new long term license.

9.2.3 Notwithstanding Sections 9.2.2 and 9.7 “Drawdowns/Dam Removal/Non-Power Operations”, this Agreement does not limit the participation of any Party in any FERC proceeding to assert: (1) any condition for resources and other aspects of the District’s license other than for Plan Species, and (2) to assert conditions for Plan Species to implement this Agreement.

9.3 Limitation of Reopening. During the term of this Agreement the Parties shall not invoke or rely on any re-opener clause set forth in any FERC license applicable to the Project for the purpose of obtaining additional measures or changes in project structures or operations for Plan Species, except as set forth in Sections 9.2.2 and 9.2.3.

9.4 Additional Measures. This Agreement sets out certain actions, responsibilities, and duties with regard to Plan Species to be carried out by the District and by the JFP to satisfy the legal requirements imposed under the ESA, the Federal Power Act, the Fish and Wildlife Coordination Act, the Pacific Northwest Electric Power Planning and Conservation Act and the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act. This Agreement is not intended to prohibit the Parties from opposing or recommending actions in reference to (1) Project modifications such as pool raises and additional power houses, and (2) activities not related to Project operations that could adversely affect Plan Species. The Parties recognize that various of the JFP have governmental rights, duties, and responsibilities as well as possible rights of action under statutes, regulations, and treaties that are not covered by this Agreement. This Agreement does not limit or affect the ability or right of a Party to take any action under any such law, regulation, or treaties. However, the Party shall use reasonable efforts to exercise their rights and authority under such statutes, regulations or treaties (consistent with their duties and responsibilities under those statutes, regulations and treaties) in a manner that allows this Agreement to be fulfilled.

9.5 Title 77 RCW. Provided the District is in compliance with the Agreement, the Permit, and the FERC license provisions relating to Plan Species, WDFW shall not request additional protection or mitigation for Plan Species under Title 77 RCW as now exists or as may be amended, unless WDFW is required to take such action by statute.

9.6 Cooperation in Studies/Approval/Permits. The Parties shall cooperate with the District in conducting studies and in obtaining any approvals or permits which may be required for implementation of this Agreement.

9.7 Drawdowns/Dam Removal/Non-Power Operations. With respect to Plan Species under the ESA, the Federal Power Act, the Fish and Wildlife Coordination Act, the Pacific Northwest Electric Power Planning and Conservation Act and the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act, each Party during the term of this Agreement will not advocate for or support additional or different fish protection measures or changes in Project structures or operations other than those set forth in this Agreement. For example, the Parties will not advocate or support partial or complete drawdowns, partial or complete dam removal, and partial or complete non-power operations. However, this Agreement does not preclude: spillway or

Tailrace modifications; spill; structural modifications and concrete removal (holes in Dam) to accommodate bypass; structural modifications to accommodate adult passage facility improvements; and future consideration of additional measures that may include reservoir elevation changes if all Parties agree. The Parties agree to work within this Agreement to address any issues that may arise in the future concerning Plan Species.

9.8 Stipulation of Plan Species. Each Party stipulates that the performance of the District's obligations under this Agreement, its Permit, and its FERC license will adequately and equitably conserve, protect, and mitigate Plan Species pursuant to the ESA, the Federal Power Act, the Fish and Wildlife Coordination Act, the Pacific Northwest Electric Power Planning and Conservation Act and the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act as those Plan Species are affected by the Project through the term of the Agreement.

9.9 Vernita Bar. Nothing in this Agreement is intended to affect the protection of Plan Species in the Hanford Reach or the Vernita Bar Agreement, as it exists now or may be modified in the future.

9.10 Non-Plan Species. Non-Plan Species are not addressed in this Agreement.

SECTION 10 ENDANGERED SPECIES ACT

10.1 Permit Issuance.

10.1.1 NMFS issuance of a Permit to the District assures the District that based upon the best scientific and commercial data available and after careful consideration of all comments received, NMFS has found that with respect to all Permit Species that: (i) any take of a Permit Species by the District under this Agreement will be incidental to the carrying out of otherwise lawful activities; (ii) under this Agreement the District will, to the maximum extent practicable, minimize and mitigate any incidental take of Permit Species; (iii) the District has sufficient financial resources to adequately fund its affirmative obligations under this Agreement; (iv) as long as the actions required by this Agreement to minimize/mitigate incidental take are implemented, any incidental take of a Permit Species will not appreciably reduce the likelihood of the survival and recovery of such species in the wild; and (v) other measures and assurances required by NMFS as being necessary or appropriate are included in this Agreement. The hatchery permits are addressed in Section 10.1.4.

10.1.2 After opportunity for public comment, compliance with NEPA and concurrent with the Effective Date of this Agreement, NMFS will issue a Permit to the District pursuant to Section 10(a)(1)(B) of the ESA to authorize any incidental take of listed Permit Species which may result from the District's otherwise lawful operation of the Project, conducted in accordance with this Agreement and the Permit, and NMFS will issue necessary hatchery Permits (incidental and direct). In addition, the Permit shall authorize any incidental take of listed Permit Species which may result from the District's otherwise lawful operation of the hatchery facilities required by this

Agreement, conducted in accordance with this Agreement and the Permit. The Permit and this Agreement shall remain in full force and effect for a period of fifty-(50) years from the Effective Date, or until revocation of the Permit under Section 10.4 “Permit Suspension, Revocation and Re-Instatement”, or the District or NMFS’ withdraws under Section 2.1 “Enough Already”, whichever occurs sooner. Amendments to the Permit or this Agreement shall remain in effect for the then-remaining term of this Agreement or until revocation under Section 10.4 “Permit Suspension, Revocation and Re-Instatement”, whichever occurs sooner. Withdrawal from this Agreement pursuant to Section 2 “Withdrawal From Agreement” and revocation of the Permit is not limited by the no surprises regulation. The Permit shall incorporate by reference the no surprises rule set forth in 50 CFR 222.307(g) (2001). This Agreement provides for changed circumstances and the mitigation measures to respond to changed circumstances. Any circumstance relating to Permit Species not addressed by this Agreement is an Unforeseen Circumstance.

10.1.3 The Permit shall authorize the District to incidentally take Permit Species that are listed under the ESA, to the extent that such incidental take of such species would otherwise be prohibited under Section 9 of the ESA, and its implementing regulations, or pursuant to a rule promulgated under Section 4(d) of the ESA, and to the extent that the take is incidental to the District’s lawful operation of the Project, subject to the condition that the District must fully comply with all requirements of this Agreement and the Permit. The Permit will be immediately effective upon issuance for Permit Species currently listed under the ESA. The Permit will become effective for currently unlisted Permit Species upon any future listing of such species under the ESA.

10.1.4 In the event that an additional or amended Section 10 permit is required for the implementation of any aspect of the Tributary Conservation Plan or Hatchery Compensation Plan, the NMFS shall expedite the processing of such permits or amendments. The hatchery Permits (direct and incidental) will initially be issued to authorized take through 2013. Beginning in 2013 and every ten (10)-years thereafter, the District or its agent shall submit to NMFS hatchery Permit applications incorporating changes to the Hatchery Program identified in the ten (10)-year program reviews (see Section 8.7 “Program Review”).

10.2 Permit Monitoring. Upon issuance of the Permit, the implementation thereof, including each of the terms of this Agreement shall be monitored and evaluated as provided for in Section 5 “Passage Survival Plan”. Any reports the FERC should require regarding this Agreement shall be provided to the NMFS at the time such reports are provided to the FERC.

10.3 Permit Modification.

10.3.1 The Permit issued to the District, shall be amended in conformance with the provisions 50 CFR 222. 306(a) (2001) through 222. 306(c) (2001), provided, that if said regulations are modified the modified regulations will apply only to the extent the modifications were required by subsequent action of Congress or court order, unless the Parties otherwise agree.

10.3.2 This Agreement provides for on-going, active and adaptive management activities. Adaptive management provides for on going modification of management practices to respond to new information and scientific development. Adaptive management will yield prescriptions that may vary over time. Such changes are provided for in this Agreement and do not require modification of the Agreement or amendment of the Permit, provided, that such changes will not result in a level of incidental take in excess of that otherwise allowed by this Agreement and the Permit.

10.4 Permit Suspension, Revocation and Re-Instatement. Except as set forth in Section 2.1 “Enough Already”, the Permit shall be suspended, revoked and re-instated in conformance with the provisions of 50 CFR 220. 306(d) (2001) and 50 CFR 222. 306(e) (2001), provided, that if said regulations are modified the modified regulations will apply only to the extent the modifications were required by subsequent action of Congress or court order, unless the Parties otherwise agree.

10.5 Early Termination Mitigation. If the Permit is terminated early and de-listing has not occurred, NMFS may require the District to mitigate for any past incidental take of Permit Species that has not been sufficiently mitigated prior to the date of termination. Such mitigation may require the District to continue relevant mitigation measures of the Agreement for some or all of the period, which would have been covered by the Permit. NMFS agrees that the District may invoke the dispute resolution procedures of this Agreement to pursue resolution of any disagreement concerning the necessity or amount of such additional mitigation, NMFS reserves any authority it may have under the ESA or its regulations regarding additional mitigation. So long as the District meets and continues to meet the survival standard, its Tributary Plan funding obligations, and its Hatchery Plan funding and capacity obligations early termination mitigation shall not apply to the District.

10.6 Funding. In its current financial position, the District has sufficient assets to secure funding for its affirmative obligations under the Agreement. To ensure notification of any material change in the financial position of the District during the term of the Permit, the District will provide the NMFS with a copy of its annual report each year of the Permit.

10.7 USFWS. USFWS does not exercise ESA authority over Permit Species.

SECTION 11 DISPUTE RESOLUTION

11.1 Stages of Dispute Resolution.

11.1.1 Stage 1: Coordinating Committee. Any dispute regarding this Agreement shall first be referred to the respective committee dealing with that issue (the Coordinating Committee is the committee of default). That committee shall have twenty-(20) days within which to resolve the dispute. If at the end of twenty-(20) days there is no resolution any Party may request that the dispute proceed to Section 11.1.2 “Stage 2:

Policy Committee.” However, Tributary Committee and Hatchery Committee disputes must first proceed to the Coordinating Committee, before the Policy Committee is triggered.

11.1.2 Stage 2: Policy Committee. Following the completion of Stage 1, the Chair of the Coordinating Committee or any Party may refer the dispute to the Policy Committee. The Chair of the Coordinating Committee shall chair all meetings of the Policy Committee. The Policy Committee shall have thirty- (30) days, following the referral, to convene and consider the dispute. The Chair of the Coordinating Committee shall provide advance written notice of all meetings. The notice shall contain an agenda of all matters to be addressed and voted on during the meeting.

Each Party shall designate a policy representative who shall be available to participate on the Policy Committee. Any Party that fails to name a Policy Committee representative or to have its Policy Committee representative participate in the Policy Committee shall waive that Party's right to object to the resolution of the dispute by the Policy Committee.

The Policy Committee shall act by unanimous vote of those members present in person or by phone for the vote and shall develop its own rules of process, provided, that the Policy Committee shall ensure that all Parties are sent notice of all Policy Committee meetings. Abstention does not prevent a unanimous vote. If a Party or its designated alternate cannot be present for an agenda item to be voted upon it must notify the Chair of the Coordinating Committee who may delay a vote on the agenda item for up to five- (5) business days on specified issues to be addressed in a meeting or conference call scheduled with all interested parties. A Party may invoke this right only once per delayed item.

11.1.3 Options following Stage 2. If there is no resolution of a matter following completion of Stage 1 and 2 of this Procedure, then any Party may pursue any other right they might otherwise have. The inability of the Coordinating Committee and Policy Committee to make a decision shall be considered a dispute. The Parties are encouraged to resolve disputes through alternative dispute resolution.

11.2 Implementation of Settlement Dispute. If the Procedure results in a settlement of the dispute then: (1) the Parties shall implement, consistent with the terms of the settlement, all aspects of the settlement that can lawfully be implemented without FERC approval, or the approval of another federal agency; and (2) where FERC or other federal agency approval is needed before some or all of the settlement can be implemented, all settling Parties shall jointly present the resolution of the dispute to FERC or the appropriate federal agency for approval.

11.3 No Intent to Create Jurisdiction. The Parties agree that this Agreement is not intended to create jurisdiction in any court.

SECTION 12 MISCELLANEOUS

12.1 Conflict Between Agreement and Appendix. In the event of a conflict between this Agreement and an appendix to this Agreement, this Agreement shall control and the Parties shall cause the appendix in conflict to be revised accordingly.

12.2 Amendment of Agreement. This Agreement may be amended or modified only with the written consent of the Parties, provided that, Parties who withdraw from the Agreement do not need to, and have no right to, approve any amendments or modifications, provided further, that this Agreement provides for on-going, active and adaptive management activities. Adaptive management provides for ongoing modification of management practices to respond to new information and scientific developments. Adaptive management will yield prescriptions that may vary over time. Such changes are provided for in this Agreement and do not require modification of the Agreement or amendment of the Permit, provided that such changes will not result in a level of incidental take in excess of that otherwise allowed by this Agreement or modify the provisions set out in Section 3 “Survival Standards and Allocation of Responsibility for No Net Impact”, further provided, that unless otherwise agreed to by the Parties NNI applies only to the identified Plan Species on the date this Agreement became effective originally.

12.3 Notices. Except as set forth in Sections 1.2.2 “Upon Completion of Regulatory Reviews,” 2.6 “Withdrawal of Another Party” and 2.7 “Conditions Precedent to Withdrawal” all written notices to be given pursuant to this Agreement shall be mailed by first-class mail, postage prepaid to each Party. Parties shall inform all Parties by written notice in the event of a change of address. Notices shall be deemed to be given three- (3) days after the date of mailing.

12.4 Waiver of Default. Any waiver at any time by any Party hereto of any right with respect to any other Party with respect to any matter arising in connection with this Agreement shall not be considered a waiver with respect to any subsequent default or matter.

12.5 Integrated Agreement. All previous communications between the Parties, either verbal or written, with reference to the subject matter of this Agreement are superseded by the terms and provisions of this Agreement, and once executed, this Agreement and its examples, figures, tables and appendices shall constitute the entire agreement between the Parties, provided, that titles to sections and sub-sections thereof are for the assistance of the reader and are not part of the Agreement.

12.6 Benefit and Assignment. This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their successors and assigns provided, no interest, right, or obligation under this Agreement shall be transferred or assigned by any Party hereto to any other Party or to any third party without the written consent of all other Parties, except by a Party: (1) to any person or entity into which or with which the Party making the assignment or transfer is merged or consolidated or to which such Party transfers

substantially all of its assets, (2) to any person or entity that wholly owns, is wholly owned by, or is wholly owned in common with, the Party making the assignment or transfer, provided that, the assignee is bound by the terms of this Agreement and applies for and receives an incidental take permit for listed Plan Species.

12.7 Force Majeure. For purposes of this Agreement, a “*force majeure*” is defined as causes beyond the reasonable control of, and without the fault or negligence of, the District or any entity controlled by the District, including its contractors and subcontractors. Economic hardship shall not constitute *force majeure* under this Agreement.

In the event that the District is wholly or partially prevented from performing obligations under this Agreement because of a *force majeure* event, the District shall be excused from whatever performance is affected by such *force majeure* event to the extent so affected, and such failure to perform shall not be considered a material breach. Nothing in this Section shall be deemed to authorize the District to violate the ESA or render the standards and objectives of this Agreement unobtainable. The suspension of performance shall be no greater in scope and no longer in duration than is required by the *force majeure*.

The District shall notify the other Parties to this Agreement in writing within seven- (7) calendar days after a *force majeure* event. Such notice shall: identify the event causing the delay or anticipated delay; estimate the anticipated length of delay; state the measures taken or to be taken to minimize the delay; and estimate the timetable for implementation of the measures. The District shall have the burden of demonstrating by a preponderance of evidence that delay is warranted by a *force majeure*.

The District shall use a good faith effort to avoid and mitigate the effects of the delay and remedy its inability to perform. A *force majeure* event may require use of the adaptive management provisions of this Agreement in remedying the effects of the *force majeure* event. When there is a delay in performance of a requirement under this Agreement that is attributable to a *force majeure*, the time period for performance of that requirement shall be reasonably extended as determined by the Coordinating Committee. When the District is able to resume performance of its obligation, the District shall give the other Parties written notice to that effect.

12.8 Appropriations. Implementation of this Agreement by the JFP is subject to the availability of appropriated funds. Nothing in this Agreement will be construed by the Parties to require the obligation, appropriation, or expenditure of any money from federal, state or tribal governments. The Parties acknowledge that the JFP will not be required under this Agreement to expend any of its appropriated funds unless and until an authorized official of that agency or government affirmatively acts to commit to such expenditures as evidenced in writing.

12.9 Legal Authority. Each Party to this Agreement hereby represents and acknowledges that it has legal authority to execute this Agreement and is fully bound by the terms hereof. NMFS is authorized to enter into this Agreement pursuant to the ESA, the Federal Power Act, the Fish and Wildlife Coordination Act, the Pacific Northwest Electric Power Planning and Conservation Act, and the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

12.10 Execution. This Agreement may be executed in counterparts. A copy with all original executed signature pages affixed shall constitute the original Agreement. The date of execution shall be the date of the final Party's signature. Upon execution of this Agreement by the Parties, this Agreement shall be submitted to the Secretary of Interior or her designee for any approval, to the extent required by 25 U.S.C. § 81.

12.11 Indian Tribal or Treaty Reserved Rights. Nothing in this Agreement is intended to nor shall it in any way abridge, limit, diminish, abrogate, adjudicate, or resolve any Indian right reserved or protected in any treaty, executive order, statute or court decree. This Section shall be deemed to modify each and every Section of this Agreement as if it is set out separately in each Section.

12.12 No Precedent/Compromise of Disputed Claims. The conditions described and measures proposed to rectify them set forth in this Agreement are fact specific and uniquely tied to the circumstances currently existing at the Project. The Parties agree that the conditions existing here and the proposed actions to deal with them are not intended to in any way establish a precedent or be interpreted as the position of any party in any proceeding not dealing specifically with the terms of this Agreement. Further, the Parties acknowledge that this Agreement is a compromise of disputed claims for which each Party provided consideration to the other as contemplated under Federal Rule of Evidence 408, and will not be used by any Party in a manner inconsistent with the provisions of Federal Rule of Evidence 408.

12.13 U.S. v. Oregon. Nothing in this Agreement is intended by the signatories who are parties to the continuing jurisdiction case of U.S. v. Oregon, 302 F.Supp. 899 (D. OR 1969), to change the jurisdiction of that court or the parties positions therein.

SECTION 13 DEFINITIONS

Capitalized terms are defined as follows:

13.1 "Agreement" means this document, examples, figures, Tables 1 and 2, and Appendices A through C. This Agreement is supported by Supporting Documents A through E but does not incorporate these documents.

13.2 "BAMP" means Document C "Biological Assessment and Management Plan (BAMP): Mid-Columbia Hatchery Program".

13.3 “Combined Adult and Juvenile Project Survival” means that 91% of each Plan Species (juvenile and adult combined) survive Project effects when migrating through the Project’s reservoir, Forebay, Dam and Tailrace including direct, indirect, and delayed mortality whenever it may occur and can be measured (as it relates to the Project) given the available mark-recapture technology.

13.4 “DFOP” means the Detailed Fishway Operating Plan. DFOP is attached hereto as Appendix A “Detailed Fishway Operating Plan” and incorporated herein by this reference.

13.5 “Daily Estimated Flow” means the Bonneville Power Administration’s estimate of the next day’s flow. However, actual flows will be tracked by the District and compared to the estimated flows. Spill will be adjusted based upon the comparison of the actual flows with the estimated flows in order to provide the required amount of spill. Spill will be shaped in steps as agreed to by the Coordinating Committee.

13.6 “Dam” means the concrete structure impounding the Columbia River.

13.7 “ESA” means the Endangered Species Act, 16 U.S.C. ss 1531 through 1543, as amended, and its implementing regulations.

13.8 “Essential Fish Habitat Provisions of the Magnuson-Stevens Fishery Conservation and Management Act” means the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801 et seq., as amended by the Sustainable Fisheries Act and as may be amended, and its implementing regulations.

13.9 “Federal Power Act” means the Federal Power Act, 16 U.S.C. §§ 791a - 828c, as amended, and its implementing regulations.

13.10 “FERC” means the Federal Energy Regulatory Commission or its successor.

13.11 “Fish and Wildlife Coordination Act” means the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-668c, as amended, and its implementing regulations.

13.12 “Forebay” means the body of water represented in the drawing (which is approximately 500 feet upstream of the Dam), which is attached hereto as Appendix B “Forebay and Tailrace Diagram” and incorporated herein by this reference.

13.13 “Juvenile Dam Passage Survival” means that 95% of each juvenile Plan Species over 95% of each species migration survive Projects effects when migrating through the Project’s Forebay, Dam and Tailrace including direct, indirect and delayed mortality where ever it may occur and can be measured (as it relates to the Project), given the available mark-recapture technology.

13.14 “Juvenile Project Survival” refers to the measurement of survival for juvenile Plan Species over 95% of each species migrating from tributary mouths and through the

Project's reservoir, Forebay, Dam and Tailrace including direct, indirect and delayed mortality, where ever it may occur and can be measured (as it relates to the Project) given the available mark-recapture technology.

13.15 "Juvenile Project Survival Standard" refers to a surrogate measurement of the Combined Adult and Juvenile Survival Standard. If Juvenile Project Survival for each Plan Species is measured to be greater than or equal to 93%, then the District will be assigned to Phase III (Standard Achieved). If Juvenile Project Survival is measured at less than 93% but greater than or equal to 91%, then the District will be assigned to Phase III (Provisional Review). If Juvenile Project Survival is measured at less than 91%, then the District will be assigned to Phase II (Interim Tools).

13.16 "Measures" means any action, structure, facility, or program (on-site or off-site) intended to improve the survival of Plan Species, except those prohibited in Section 9.7 "Drawdowns/Dam Removal/Non-Power Operation". Measures do not include fish transportation unless otherwise agreed by the Coordinating Committee.

13.17 "Pacific Northwest Electric Power Planning and Conservation Act" means the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. §§ 839 - 839h, 16 U.S.C. §§ 839 - 839h, as amended, and its implementing regulations.

13.18 "Permit" shall mean permit(s) issued to the District by NMFS pursuant to Section 10 of the ESA to authorize take of Permit Species which may result from the District's or its agent's implementation of this Agreement.

13.19 "Permit Species" means all Plan Species except coho salmon (*Oncorhynchus kisutch*). Permit Species do not include coho salmon (*O. kisutch*) since wild coho salmon are extirpated from the Mid-Columbia Region and therefore not protected by the ESA.

13.20 "Plan Species" means spring, summer and fall chinook salmon (*Oncorhynchus tshawytscha*), sockeye salmon (*O. nerka*), coho salmon (*O. kisutch*), and steelhead (*O. mykiss*).

13.21 "Power Purchasers" means Puget Sound Energy, Inc. Portland General Electric, Avista Corp., Colockum Transmission Company, Inc., and PacifiCorp for the term of their existing long-term power sales contracts with the District.

13.22 "Project" means the Rocky Reach Hydroelectric Project owned and operated by the Public Utility District No. 1 of Chelan County, Washington pursuant to FERC Project Number 2145. The geographic boundaries of the Project (reservoir, Forebay, Dam and Tailrace) are defined in exhibit "K" of the Project's FERC license.

13.23 "RCW" means Revised Code of Washington.

13.24 “Representative Flow Conditions” means that the flow of the Columbia River measured at Grand Coulee Dam during the study is between 205,381 (spring)/164,905 (summer) cubic feet per second and 100,523 (spring)/76,318 (summer) cubic feet per second. These flows bound the ten percent to ninety percent range on the flow duration curve attached as Appendix C “Flow Duration Curve”. Studies conducted when flow is within this ten percent to ninety percent range (values above) are automatically included in the three-year average as long as the study is otherwise valid. However, when studies are conducted when river flow is between 220,597 (spring)/180,607 (summer) cubic feet per second and 90,152 (spring)/63,291 (summer) cubic feet per second, the Coordinating Committee shall decide whether the study is included in the three year average. This decision is not subject to dispute resolution. These flows bound the five percent to 10 percent range and the ninety to ninety-five percent range on the flow duration curve attached as Appendix C “Flow Duration Curve”. The flow duration curve was created by compiling the flows coming out of Grand Coulee Dam. Starting as part of the 2013 comprehensive review, and every ten years thereafter, the Coordinating Committee shall update the flow duration curve and the river flow amounts contained in this definition.

13.25 “Spill” means the passage of water through spill gates.

13.26 “TDG” means total dissolved gas.

13.27 “Tailrace” means the body of water represented in the drawing (which is approximately 1000 feet downstream of the Dam), which is attached hereto as Appendix B “Forebay and Tailrace Diagram” and incorporated herein by this reference.

13.28 “Threshold Population” refers to a naturally reproducing population that contains a five-year average of greater than 500 adults as assessed at Wells Dam and is composed of a population that is reproductively isolated from other populations of the same species”.

13.29 “Tools” means any action, structure, facility or program (on-site only) at the Project, except those prohibited in Section 9.7 “Drawdowns/Dam Removal/Non-Power Operation” that are intended to improve the survival of Plan Species migrating through the Project. Tools do not include fish transportation unless otherwise agreed by the Coordinating Committee. This term is a sub-set of Measures.

13.30 “Unavoidable Project Mortality” refers to the assumed 9% mortality caused by the Project to Plan Species that is compensated through the tributary and hatchery programs

13.31 “Unforeseen Circumstance” is defined by 50 CFR 222.102 (2001), and implemented according to 50 CFR 222.307(g) (2001). If these regulations are modified, the modified regulations will apply only to the extent the modifications were required by subsequent action of Congress or court order, unless the Parties otherwise agree.

IN WITNESS WHEREOF, the Parties hereto execute this Agreement as of the date last signed below.

Dated April 1, 2002

PUBLIC UTILITY DISTRICT NO. 1 OF
CHELAN COUNTY, WASHINGTON

By Charles J. Hosken
(signature)

Charles J. Hosken
(print name)

GENERAL MANAGER
(Title)

Address for Notice:

Public Utility District No. 1 of
Chelan County, Washington
327 N. Wenatchee Avenue
P.O. Box 1231
Wenatchee, WA 98801

Attn: General Manager

Dated 4/5/02

NATIONAL MARINE FISHERIES SERVICE

By 
(signature)

D. Robert Lohn
(print name)

Regional Administrator
(Title)

Address for Notice:

National Marine Fisheries Service, Regional Office
7600 Sand Point Way NE, Bin C15700, Bldg 1
Seattle WA 98115-0070

Dated 4/10/2002

UNITED STATES FISH AND WILDLIFE SERVICE

By *Rowan W Gould*
(signature)

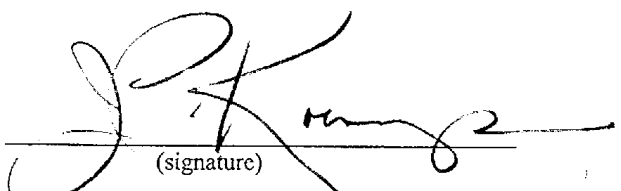
Rowan W Gould
(print name)

Deputy Regional Director
(Title)

Address for Notice:
Project leader
US Fish and Wildlife Service
Eastern Washington Ecological
Services Office
32 C Street NW
P.O. Box 848
Ephrata, WA 98823

Dated 4/2/2002

WASHINGTON DEPARTMENT OF
FISH AND WILDLIFE

By 

(signature)

Dr. Jeffrey P. Koenings

(print name)

Director

(Title)

Address for Notice:
Washington Department of Fish & Wildlife
600 Capitol Way North
Olympia, WA 98501-1091

Dated April 4, 2002

CONFEDERATED TRIBES OF
THE COLVILLE RESERVATION

By Colleen F. Cawston
(signature)

Colleen F. Cawston
(print name)

Chair, Colville Business Council
(Title)

Address for Notice:

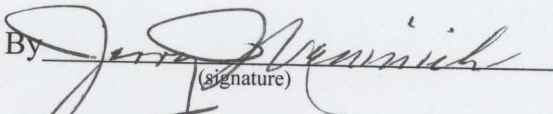
P.O. Box 150
Nespelem, WA 99155

Anadromous Fish Agreement and Habitat Conservation Plan,
Rocky Reach Hydroelectric Project, FERC License No. 2145

Originally signed by Public Utility District No. 1 of Chelan County, United States Fish and Wildlife Service, NOAA Fisheries Service, Washington Department of Fish and Wildlife, and Confederated Tribes of the Colville Reservation in April 2002, and approved by the Federal Energy Regulatory Commission on June 21, 2004.

Dated April 24 , 2005

CONFEDERATED TRIBES AND BANDS
OF THE YAKAMA NATION

By 
(signature)

Jerry Meninick
(print name)

Chairman-Yakama Tribal Council
(Title)

Address for Notice:

Dated _____

AMERICAN RIVERS, INC., a Washington
D.C., nonprofit corporation

By _____
(signature)

(print name)

(Title)

Address for Notice:

Table 1

Summary of Route Specific Passage Studies at Rocky Reach (RRE) Dam Acoustic Tag and Radio Telemetry Information

Tool	Project	Species (rearing)	Year	Spill %	PH	Spillway	Bypass	Total	Proj. FPE	Spill Eff.	Report
Radio telemetry	RRE	Sum/Fall Chin 1 (ROR)	1998	0.156	0.533	0.075	0.392	1.000	0.467	0.481	English et al. (1998) ¹
Radio telemetry	RRE	Sum/Fall Chin 1 (ROR)	1999	0.153	0.579	0.157	0.263	0.999	0.420	1.026	English et al. (1999) ²
Radio telemetry	RRE	Sum/Fall Chin 1 (ROR)	2000	0.193	0.537	0.179	0.284	1.000	0.463	0.927	English et al. (2000) ³
Acoustic tags	RRE	Sum/Fall Chin 1 (ROR)	2000	0.193	0.476	0.140	0.384	1.000	0.524	0.725	Steig et al. (2001) ⁴

Average Project Fish Passage Efficiency for Sum/Fall Chin 1 at RRE = 0.469

Note:

¹Petersen Index Estimates / 5.5% of fish guided through units 1&2 included in bypass estimate.

²Petersen Index Estimates / 2.9% of fish guided through units 1&2 included in bypass estimate.

³Petersen Index Estimates / 5.3% of fish guided through units 1&2 included in bypass estimate.

⁴HTI monitored Units 1-11, spillway and surface collectors 1 and 2; fish tagged with acoustic tags.

Table 2

HCP Production Commitments for Rocky Reach Project

Species	Initial Production Levels			Calculated 7% Production Levels ³	Rearing Facility
	Original Inundation ¹	Passage Losses ²	Total		
Spring chinook		144,000	144,000	90,000	New program Methow
Steelhead	165,000	35,000	200,000	30,000	EB, TR, CF
Summer/fall chinook ⁴ yearlings		400,000	400,000	200,000	EB, RRA, TR
sub-yearlings	1,620,000		1,620,000		EB, RRA, TR
Sockeye				300,000	New program

EB=Eastbank
 TR=Turtle Rock
 CF=Chelan Falls
 RRA=Rocky Reach Annex

¹ Compensates for original inundation by the Project. These amounts are not subject to recalculation, and are provided in addition to the levels necessary to compensate for Unavoidable Project Mortality.

² Agreed to production levels to compensate for Unavoidable Project Mortality. These hatchery levels are greater than that required to compensate for 7% Unavoidable Project Mortality. These hatchery levels will be produced from the Effective Date of the Agreement through 2013. These amounts are subject to recalculation every 10 years beginning in 2013.

³ These are the hatchery levels that are required to compensate for 7% Unavoidable Project Mortality. Original inundation levels must be produced in addition to the hatchery levels in this column.

⁴ There is potential for program shifts from sub-yearling production to more yearling production.

APPENDIX A
Detailed Fishway Operation Plan (DFOP)

ADULT FISH PASSAGE INFORMATION

The location of adult fish passage facilities is shown on Figure 2 “Rocky Reach Dam General Site Plan”. This information may be out of date and will be reviewed and updated as appropriate by the Coordinating Committee.

ADULT PASSAGE FACILITIES

The adult passage facilities at Rocky Reach Dam consist of a fishway on the powerhouse side with right and left powerhouse entrances, a powerhouse collection channel, a spillway transportation channel and a main spillway entrance. The left powerhouse entrance is located at mid-dam between the powerhouse and spillway. The fishway includes a counting station on the right bank. The system includes pumped and gravity auxiliary water supplies.

Construction activities and associated modification in operations have potential for impact on adult passage at Rocky Reach Dam. Construction schedules and activities will be reviewed in advance to limit this potential. Activities which have a high probability of affecting passage will be scheduled during nighttime hours.

ADULT MIGRATION TIMING

For operation and maintenance purposes, the primary fish passage season is considered to be April through November. Primary passage periods by species are:

Spring Chinook	April 18 - June 23
Summer Chinook	June 24 - September 1
Fall Chinook	September 2 - November
Steelhead	April - March
Coho	August - November
Sockeye	Late June - August 15

OPERATING CRITERIA FOR ADULT PASSAGE

SPILL MANAGEMENT FOR ADULT PASSAGE

1. Spill not provided for juvenile passage will be shaped to avoid delay of upstream migrants according to agencies, tribes, and PUD agreement.
2. Spill shaping requests are based on the tribes and agencies objective of achieving 100% passage efficiency without delay.

Spilling Schedule for Rocky Reach Dam, Est. 1984. (Openings in feet)

Gate Number											Total	
1	2	3	4	5	6	7	8	9	10	11	12	
						(2)		2				
					(2)		2					
	(2)		2		2		2					
	(2)		2		2		2					
	2		2	(2)	2	2	2					12
	2	(2)	2	2	2	2	2					
	2	(2)	2	2	2	2	2					
	2	2	2	3	(3)	2	2					
	2	2	3	3	3	(3)	2					
	2	2	3	(4)	3	3	3					20
	2	(3)	3	4	4	3	3					
	2	3	4	(5)	4	3	3					
	2	3	4	5	4	4	(4)					
	2	3	5	5	(5)	4	4					
	2	3	5	(6)	5	5	4					30
	2	3	5	6	(6)	5	5					
	2	4	5	6	(7)	5	5					
	2	4	6	6	7	(6)	5					
	2	4	6	6	(8)	6	6					
	2	4	6	7	8	(7)	6					40
	2	5	(7)	7	8	7	6					
	2	5	7	7	9	(8)	6					
	2	5	(8)	8	9	8	6					
	(3)	5	8	9	9	8	6					
	3	6	8	9	(10)	8	6					50
	3	6	8	10	10	(9)	6					
	3	6	9	10	(11)	9	6					
	3	(7)	9	11	11	9	6					
	3	7	10	11	11	(10)	6					
	3	7	11	(12)	11	10	6					60

Circled values indicate opening one foot less than value. For example:

(2) means 0 or 2 foot opening

(3) means 2 or 3 foot opening

OPERATING STANDARDS FOR ADULT PASSAGE FACILITIES
Reviewed February 1990

Adult Fishway

Water depth over weirs: 1.0 to 1.2 ft.

Transportation Channel (Between Entrances and Ladder)

Transportation velocity: A transportation velocity of 1.5 to 4.0 feet per second (prefer 2.0 fps) shall be maintained in all channels and the lower ends of the fish ladders which are below the tailwater.

Entrances

General: Head 1.0 ft. minimum

Right Powerhouse Entrance: Rotary gate openings at RPE1 and RPE2 shall be fully open.

Left Powerhouse Entrance: LPE1 and LPE3 shall be continuously open.

Submerged weir crest elevation for the following tailwater elevations shall be at or below:

<u>Tailwater El.</u>	<u>Submerged Weir Crest El.</u>
615.0	603.5
620.0	606.5

Orifice Entrances: The following 6 orifice entrances shall be open: CC1, CC2, CC3, CC16, CC18, CC20

Main Spillway Entrance (MSE): Open May 1 - October 31. One gate permanently closed. One gate permanently open.

Submerged weir crest elevations for the following tailwater elevations shall be at or below:

<u>Tailwater El.</u>	<u>Submerged Weir Crest El.</u>
Below 621.5	604.5
625.0	605.3

Turbine No. 11 Operation

Turbine No. 11 loading will be reduced or discontinued completely during daylight hours from May 1 through October 31 of each year, during periods when the powerhouse is not fully loaded. This will improve adult passage at the left powerhouse entrances.

Trashracks

Visible buildups of debris shall be removed immediately from ladder exit and attraction water intake trashracks.

Visible buildups of debris shall be cleaned immediately from picketed leads at the counting window.

Staff Gauges and Water Level Indicators

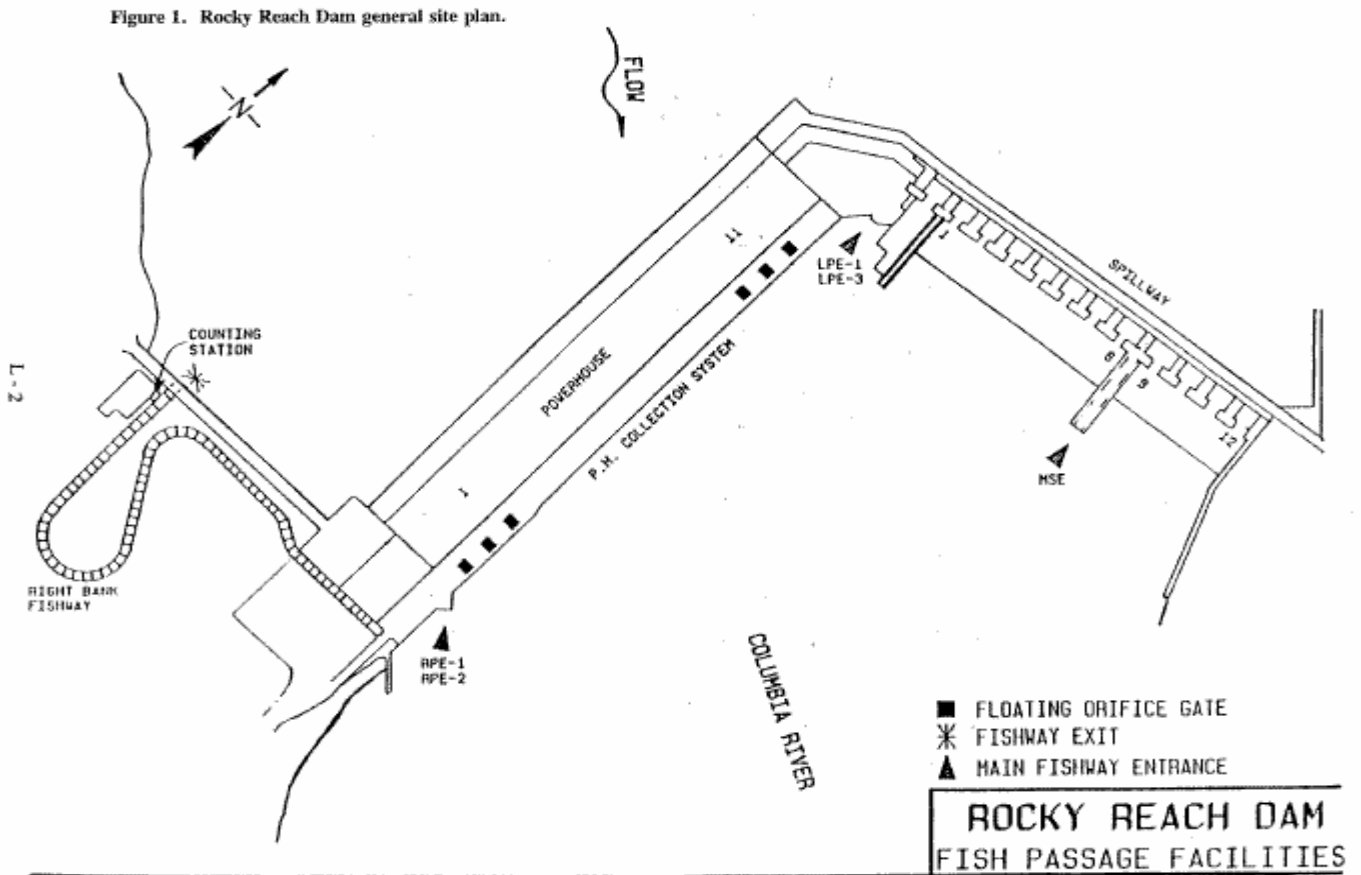
Shall be readable at all water levels encountered during passage periods.

Staff gauges or water level indicators shall be located upstream and downstream from entrances, and at a convenient location for viewing along the ladder.

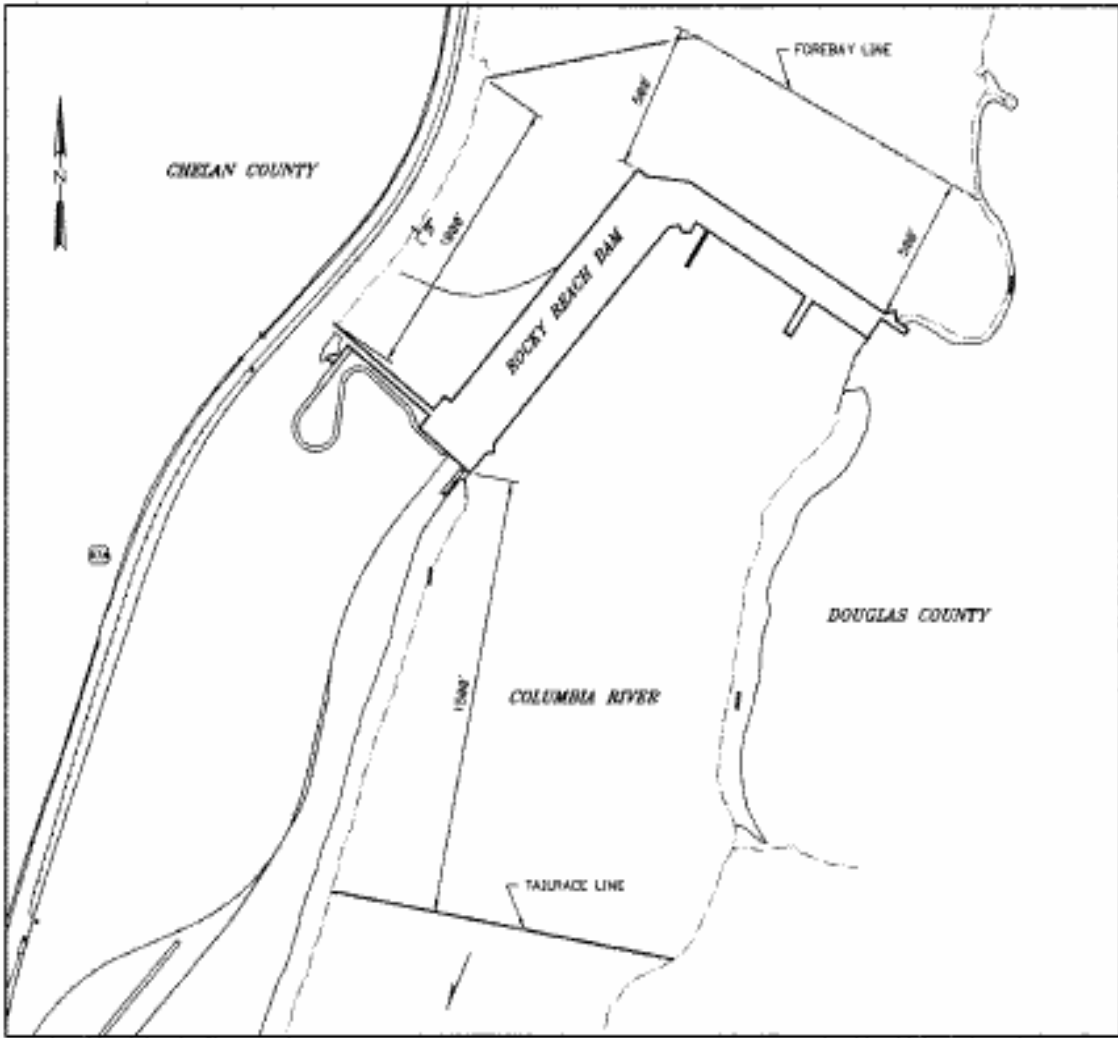
Staff gauges or water level indicators shall be consistent with panel board water surface readings in the fishway room.

Water level indicators shall be maintained such that they are in continuous operation.

Figure 2 "Rocky Reach General Site Plan"



APPENDIX B
Forebay and Tailrace Diagram

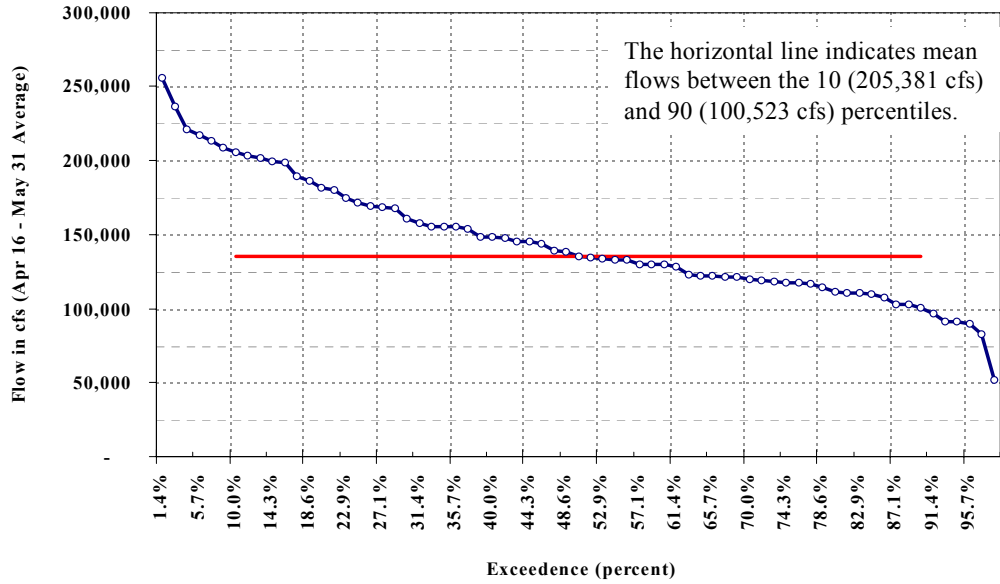


ROCKY REACH TAILRACE AND FOREBAY

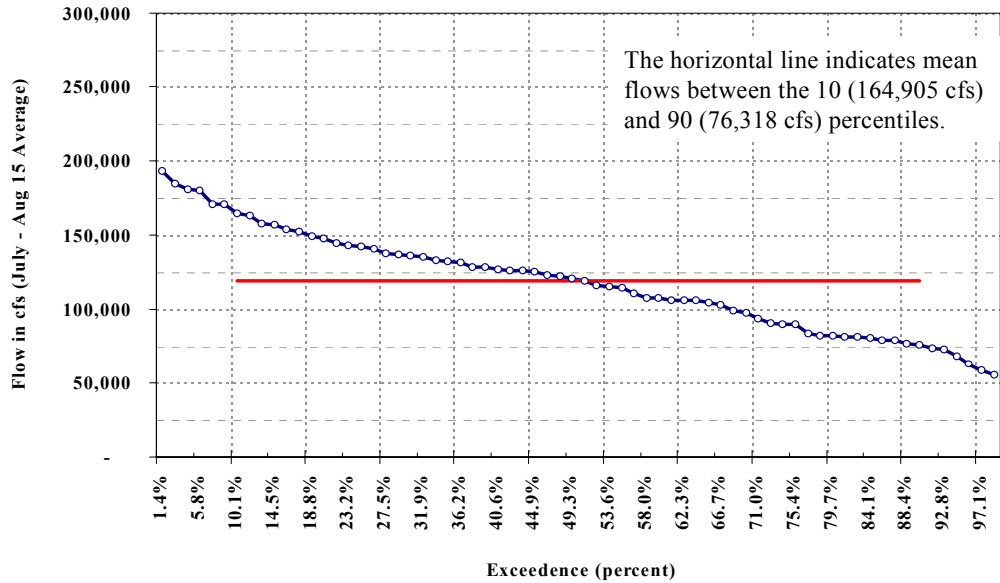
APPENDIX C

Flow Duration Curve

Flow Duration Curve for Average Apr 16 - May 31 Outflows at Grand Coulee Dam (cfs) from 1929-1978 & 1983-2001



Flow Duration Curve for Average July 1 - Aug 15 Outflows at Grand Coulee Dam (cfs) from 1929-1977 & 1983-2001



LIST OF SUPPORTING DOCUMENTS

- Supporting Document A Tributary Plan, Project Selection, Implementation, and Evaluation (1998)
- Supporting Document B Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Rivers (1998)
- Supporting Document C Biological Assessment and Management Plan (BAMP): Mid-Columbia Hatchery Programs (1998)
- Supporting Document D Briefing Paper Estimating Survival of Anadromous Fish through the Mid-Columbia PUD Hydropower Projects (2002)
- Supporting Document E Rocky Reach Background Biology (1998)

Supporting Documents can be obtained by contacting Public Utility District No. 1 of Chelan County, Washington at 509-663-8121 or the National Marine Fisheries Service web site at <<http://www.nwr.noaa.gov/1hydrop/hydroweb/ferchcps.html>>