

May 23, 2002

Mr. Robert D. Lohn
Regional Administrator
National Marine Fisheries Service
Northwest Region
7600 Sand Point Way NE
Seattle, Washington 98115-0070

Re: Amended, Application for Individual Incidental Take Permit
Wells Hydroelectric Project (FERC No. 2149)

Dear Mr. Lohn:

On July 31, 1998, the Public Utility District No. 1 of Douglas County, Washington (Douglas), pursuant to 16 USC § 1539(1)(B) and 50 CFR § 222.22(b) (2001), submitted to the National Marine Fisheries Service (NMFS) an application for issuance of an incidental take permit for the Wells Hydroelectric Project. The permit application was based upon the 1998 version of the Wells Anadromous Fish Agreement and Habitat Conservation Plan (1998 Wells HCP).

Upon receiving the permit application and pursuant to 42 USC § 4322(2)(c), NMFS initiated a National Environmental Policy Act (NEPA) review of the proposed 1998 Wells HCP. The NEPA review process required the development of a Draft Environmental Impact Statement (DEIS). On December 29, 2000, notice of the DEIS was published in the *Federal Register* for the proposed Wells, Rocky Reach and Rock Island HCPs. Comments were accepted through March 2001.

Comments on the DEIS were compiled and reviewed by NMFS staff. Based upon the comments received, the parties involved in the negotiation of the 1998 Wells HCP decided that additional discussions were required to resolve issues raised by the commentators prior to the issuance of a Final Environmental Impact Statement.

These discussions were initiated in April 2001 and have only recently concluded to the satisfaction of all interested parties. As a result, we are pleased to submit to NMFS a signed version of the Wells HCP (2002 Wells HCP). The 2002 Wells HCP does not change the fundamentals of the 1998 Wells HCP, but merely clarifies concepts. The provisions related to this Agreement shall become effective only after NMFS issues the requested permit, and the Federal Energy Regulatory Commission issues the orders contemplated by the 2002 Wells HCP.

Based upon the clarifications described above, Douglas hereby amends its incidental take permit application to:

- (1) replace Exhibit 1, the proposed "1998 Wells HCP", with the "2002 Wells HCP";
- (2) remove Exhibit 1 -A, 1 - B, and 1 - C and;¹
- (3) rename Exhibit 1 - D as Exhibit 2.

The application, including the above-described changes, should now read:

Exhibit 1. Anadromous Fish Agreement and Habitat Conservation Plan,
The Wells Hydroelectric Project, FERC License No. 2149, March
26, 2002.

Exhibit 2. Wells Hydroelectric Project Habitat Conservation Plan.

Should a conflict arise between Exhibit 1 and any of the remaining Exhibits, Supporting Documents or Appendices to this amended Permit Application, the language contained within Exhibit 1 shall control.

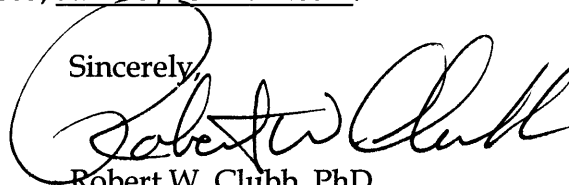
Copies of this letter and its enclosures are being sent to (1) the Assistant Administrator for Fisheries, Silver Springs, Maryland, pursuant to 50 CFR § 222.307(b) (2001) and 50 CFR § 222.102 (2001); and (2) the parties participating in the development of the signed 2002 Wells HCP.

¹ Exhibits 1 - A, 1 - B and 1 - C are now referenced separately as Supporting Documents D, A, and B, respectively and are referenced exclusively from within the 2002 Wells HCP (Exhibit 1).

Letter to Mr. Robert D. Lohn
May 23, 2002
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If you have any questions pertaining to this letter or if you require additional information, please feel free to contact me at (509) 884-7191 Ext. 2285, rclubb@dcpud.org or Shane Bickford Ext. 2208, sbickford@dcpud.org. Alternatively, please feel free to contact the District's council in this matter, Stan Bastian, at (509) 662-3685, stanB@IDSALaw.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Clubb". The signature is written in a cursive style with a large initial "R".

Robert W. Clubb, PhD

Chief of Environmental and Regulatory Services

Enclosures

cc: See attached Service List

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EXHIBIT NO. 1

**Anadromous Fish Agreement and
Habitat Conservation Plan
The Wells Hydroelectric Project**

FERC License No. 2149

March 26, 2002

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**Anadromous Fish Agreement and Habitat Conservation Plan
Wells Hydroelectric Project, FERC License No. 2149**

THIS AGREEMENT for the Wells Hydroelectric Project (Project) is entered into between the Public Utility District No. 1 of Douglas County, Washington, (District) a Washington municipal corporation; 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., (American Rivers) a Washington D.C., nonprofit corporation (the JFP and American Rivers, are referred to as the Fisheries Parties (FP); and the Power Purchasers which shall be represented through a single non-voting representative whom they will designate from time to time. All entities, who have executed this agreement, 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 and their habitat 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 provide 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 (Termination) and Section 10 (Endangered Species Act Compliance). 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 TERM OF AGREEMENT

1.1 Term. Unless terminated early according to Section 2 (Termination), this Agreement shall become effective on the date this Agreement is approved by FERC and shall remain in full force and effect for a period of fifty (50) years from that date. From the date this Agreement becomes effective, it shall prospectively supersede the Wells Settlement Agreement dated October 1, 1990.

SECTION 2 TERMINATION

2.1 Automatic Termination Events. This Agreement shall terminate automatically: (1) at the end of the term of the Agreement as set forth in Section 1 (Term of Agreement), (2) in the event the FERC issues the District a non-power license for the Project, (3) in the event the FERC orders removal of the Project, (4) in the event the FERC orders drawdown of the Project or (5) the District withdraws from this Agreement based on sub-Section 2.2 (Elective Withdrawal Events). 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.

2.2 Elective Withdrawal Events.

2.2.1 Enough Already.

2.2.1.1 A Party may withdraw from this Agreement when at least twenty (20) years has 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.

2.2.1.2 If NMFS and the District are in agreement as to specific Measures to remedy the District's 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, 2018, 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 explicitly to seek drawdown, dam removal, and/or 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 withdrawing from the Agreement or suspension or revocation of the Permit.

2.2.2 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 60 Days of Dispute Resolution being completed. Sub-Section 2.2.6 (Withdrawal of Another Party) applies to a Party's receipt of notice provided for in this sub-Section.

2.2.3 Governmental Action. A Party may elect to withdraw from this Agreement, pursuant to 9.3.2, 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.

2.2.4 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.

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

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

2.3 Conditions Precedent to Withdrawal. Two conditions must be satisfied before a Party can withdraw from the Agreement pursuant to sub-Section 2.2.3 (Governmental Action), 2.2.4 (Impossibility), sub-Section 2.2.5 (Revocation of Permit) or sub-Section 2.2.6 (Withdrawal of Another Party). First, the Party desiring to withdraw from the Agreement shall provide written 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.

2.4 Effect of Withdrawal. Except as set forth in sub-Section 2.5 (Effect of Termination), sub-Sections 9.4.1 and 9.4.3, and sub-Sections 10.5 (Permit Suspension, Revocation and Re-Instatement) and 10.6 (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.

2.5 Effect of Termination. Except as set forth in sub-Section 7.3.7.6 (Account Status upon Termination), sub-Sections 9.4.1 and 9.4.3 and sub-Sections 10.5 (Permit Suspension, Revocation and Re-Instatement) and 10.6 (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 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 4 (Passage Survival Plan), Section 7 (Tributary Conservation Plan) and Section 8 (Hatchery Compensation Plan), shall be evaluated as provided in sub-Sections 6.9 (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 sub-Section 4.1.1. (91% Combined Adult and Juvenile Survival) and sub-Section 4.1.2 (93% Juvenile Project Survival and 95% Juvenile Dam Passage Survival).

Based upon the best available information the District will achieve NNI within a few years time, well before the 2013 date. The District has achieved the 93% Juvenile Project Survival goal for yearling chinook and steelhead (See sub-Section 4.2.1 Phase I (1998-2002)) and Parties believe that the calculated Juvenile Dam Passage Survival for sockeye and sub-yearling chinook is probably greater than 95%. Adult survival cannot be conclusively measured at this time, as indicated in sub-Section 4.1.1 (91% Combined Adult and Juvenile Survival) and 4.1.3 (Adult Survival Assumptions). The Plan Species Account will be established upon FERC approval and will be used to fully compensate for adult mortality until an adult survival study can be conducted. The District has provided or is in the process of providing the 7% hatchery commitments or equivalent (in the case of sockeye). Achievement of the NNI goal by 2013 does not affect or diminish the provisions of sub-Section 2.2.1 (Enough Already) and sub-Section 9.5 (Re-Licensing).

3.2 To ensure NNI is achieved and maintained, the Coordinating Committee shall: (1) oversee monitoring and evaluation, and (2) periodically adjust the Measures to address actual project 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. Initially, adult survival estimates

will be used to adjust the Plan Species Account contribution and Juvenile Project Survival estimates will be used to adjust hatchery based compensation programs (See Section 7: Example 1 and See Section 8: Example 2).

However, 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 the NNI compensation requirements for each Plan Species. Hatchery compensation shall not exceed 7% and tributary funding shall not exceed 2% unless agreed to by the Coordinating Committee.

3.3 The District shall be responsible for achieving the pertinent survival standard as provided in Section 3 (Survival Standards and Allocation of Responsibility for No Net Impact) and 4 (Passage Survival Plan) for each Plan Species affected by the Project through project improvement Measures (including adult, juvenile, and reservoir Measures). 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 sub-Section 8.4.5 (Adjustment of Hatchery Compensation - Population Dynamics) and further adjustments to the Hatchery Compensation Plan to reflect the results of survival studies as provided in Section 8.4.4 (Adjustment of Hatchery Compensation - Survival Studies). If the District is unable to achieve the pertinent survival standard, 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 sub-Section 2.2.4 (Impossibility), or other provisions of this Agreement.

3.4 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, the Hatchery Committee may examine additional hatchery improvements to meet the Unavoidable Project Mortality hatchery obligation. If the Hatchery and Tributary Committees are unable to develop plans and programs to fully implement the Hatchery Compensation Plan and Tributary Conservation Plan, respectively, to meet compensation levels necessary to meet

NNI, then the respective committees may consult with the Coordinating Committee to jointly seek a solution.

3.5 Implementation of Measures to meet NNI shall follow the time frames set out in the Passage Survival Plan, the Tributary Conservation Plan and the Hatchery Compensation Plan. Where a deadline is not specified, implementation of Measures shall occur as soon as is reasonably possible.

SECTION 4 PASSAGE SURVIVAL PLAN

4.1 Survival Standards.

4.1.1 91% Combined Adult and Juvenile Survival. The District shall achieve and maintain 91% Combined Adult and Juvenile Project Survival, as required in sub-Section 3.3, which means that 91% of each Plan Species, juvenile and adult combined, survive Project effects. As of 2002, the Parties agree that adult fish survival cannot be conclusively measured for each Plan Species. Until technology is available to accurately determine Project effects, the District will implement the adult Measures as identified in sub-Section 4.4 (Adult Passage Plan). 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 in Section 4.1.2, (93% Juvenile Project Survival and 95% Juvenile Dam Passage Survival) below. It is anticipated that the District shall implement the measurement of adult survival at some time in the future should adult survival study methodologies and study plans be agreed to by the Coordinating Committee. Mitigation Measures will be adjusted at that time, if necessary, to address the new information.

4.1.2 93% Juvenile Project Survival and 95% Juvenile Dam Passage Survival. Limitations associated with the best available technology have required the development of three standards for assessing juvenile fish survival 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 using one of these standards, 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 measurement is possible (See Section 13, "Juvenile Project Survival").

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 (Standards 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) (See Section 14, Figure 1. Wells HCP Survival Standard Decision Matrix).

Wells HCP Survival Standard Decision Matrix. The decision making process for implementation of the survival standards explained in Sections 4.1 (Survival Standards) and 4.2 (Phased Implementation Plans) is graphically depicted in Figure 1 below and Section 14 (Figures).

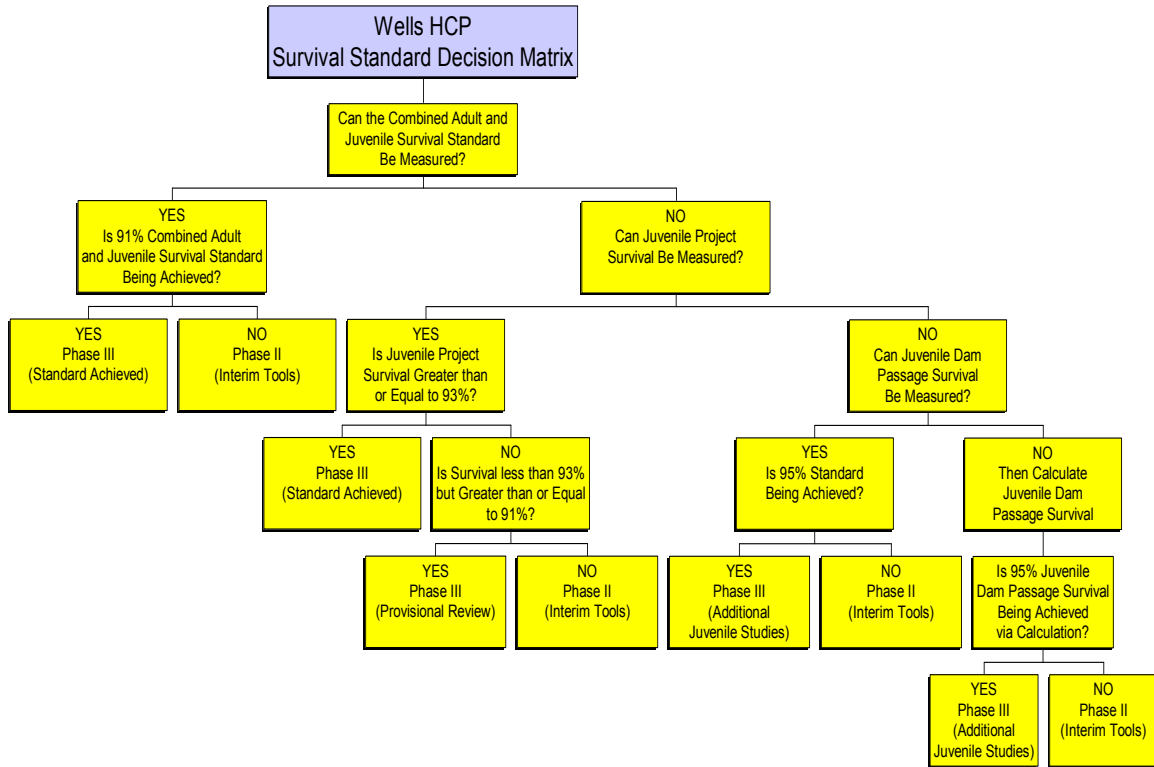


Figure 1. Wells HCP Survival Standard Decision Matrix

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 (See Section 13, "Juvenile Dam Passage Survival"). The Juvenile Dam Passage Survival Standard is 95%.

For some Plan Species such as sockeye and subyearling chinook where measurement of Juvenile Project Survival and Juvenile Dam Passage 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.

4.1.3 Adult Survival Assumptions. As of 2002, the Parties agree that adult fish survival cannot be conclusively measured for each Plan Species. Based on regional information, the survival of adult Plan Species is estimated to be 98-100%. Until, the Coordinating Committee approves and the District implements adult survival studies, the District will implement the adult passage Measures identified in sub-Section 4.4 (Adult Passage Plan) and provide the Tributary Conservation Plan account specified in Section 7 (Tributary Conservation Plan).

4.1.4 Methodologies. The survival standards contained within Section 4 (Passage Survival Plan) will be measured using the best available technology and study designs approved by the Coordinating Committee. Current methodologies are summarized in Supporting Document C. These methodologies are not exclusive, and may be updated based on new information or techniques. Juvenile Plan Species survival 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). Results from a study meeting this precision level will automatically be included in the three-year average, unless the study has violated critical model assumptions or has been determined to be invalid by the Coordinating Committee. If a study meet all of the testing protocol and model assumptions and provided that the standard error around the point estimate does not exceed plus or minus 3.5%, then the Coordinating Committee, following unanimous approval, may utilize this information in the calculation of the three-year average. Point estimates of survival measured from the three years of valid studies shall be averaged (arithmetic) to compare against the pertinent Plan Species Survival Standard. The use of survival studies with standard errors between 2.5% and 3.5% shall not be subject to Dispute Resolution. 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.

The testing shall reflect Representative Environmental Conditions and Representative Operational Conditions for each test, for each Plan Species and life history. Studies conducted during years where flow conditions, during the study, fall between the 10% and 90% points on the Flow Duration Curve (See Section 14, Figure 2a and 2b) shall be considered to have satisfied Representative Environmental Conditions (See Section 13, "Representative Environmental Conditions"). Should flow conditions fall outside the 10% and 90% points on the Flow Duration Curve but be between the 5% and 95% points on the Flow Duration Curve, then the Coordinating Committee, following unanimous approval, may utilize this information in the calculation of the three-year average. The use of survival studies that fall outside the 10% and 90% points on the Flow Duration Curves shall not be subject to Dispute Resolution. The Flow Duration Curves shall be subject to periodic review based upon new information.

The testing shall consider direct, indirect and delayed mortality wherever it may occur and can be measured (as it relates to the Project) given the available mark-recapture technology. The Coordinating Committee shall facilitate the availability of test fish for studies that may include rearing of additional fish beyond that required to meet NNI.

4.2 Phased Implementation Plans.

4.2.1 Phase I (1998 - 2002).

This Agreement shall be implemented in three phases. Under Phase I, the District shall implement 1) juvenile and adult operating plans and criteria to meet the Survival Standards set forth in sub-Section 4.1 (Survival Standards) and 2) a monitoring and evaluation program to determine compliance with the standards. Following the completion of the three-year monitoring and evaluation program in Phase I, 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 standards has been achieved). In addition, three separate sub-phases were established within Phase III. The three sub-Phase designations are referred to as Phase III (Standards Achieved), Phase III (Provisional Review) and Phase III (Additional Juvenile Studies). The Parties to this Agreement established separate sub-phases within Phase III as a way to address existing limitations in the

measurement of adult survival and Juvenile Project Survival for sockeye and subyearling chinook (See Section 14, Figure 1).

The Parties recognize that Douglas PUD has completed the three years of valid Juvenile Project Survival studies as documented in Section 15, Appendix B. The Parties further recognize that the District has achieved the 93% Juvenile Project Survival goal for yearling chinook and steelhead and that once this Agreement is implemented the District will move into Phase III (Standard Achieved) for these Plan Species. The District also recognizes that project survival information is currently limited for yearling chinook and steelhead originating from the Okanogan Basin. As a result, future Project Survival Studies (e.g. 10 year standards verification studies) shall consider and attempt to quantify the effect of the Wells reservoir on Okanogan origin yearling chinook and steelhead.

Measurement and evaluation of 91% Combined Adult and Juvenile Project Survival or 93% Juvenile Project Survival or the measurement or calculation of 95% Juvenile Dam Passage Survival will be assessed by the Coordinating Committee by 2002. Measurement of Juvenile Project Survival or Juvenile Dam Passage Survival during Phase I is expected to take three years to complete, unless additional years of study are agreed to by the Coordinating Committee.

Juvenile survival studies conducted during Phase I (See Section 15, Appendix B) may result in different phase designations for each of the Plan Species. For example, the District will move to Phase II (Interim Tools) or (Additional Tools), or to Phase III (Standard Achieved, Provisional Review or Additional Juvenile Studies) as described in Figure 1, depending on the survival results for individual Plan Species. At the conclusion of Phase I, the Coordinating Committee will determine the appropriate phase designation for each Plan Species. If the Coordinating Committee cannot agree, 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 address the need for additional Measures during the period of measurement and evaluation.

4.2.2 Phase II.

If the Coordinating Committee has determined, based upon 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.

4.2.3 Phase II -- (Interim Tools). If measurement and evaluation of Phase I concludes that the applicable survival standard has not been achieved, then the Wells bypass flow will be increased to 4.4 kcfs per bypass at night (1 hour before sunset to sunrise) for the period during which 80% of the Plan Species not meeting the Juvenile Dam Passage Survival Standard pass the Wells Project or for 40 days, whichever is less. The effect of increased bypass flows will be evaluated to determine if either 95% Juvenile Dam Passage Survival or the 93% Juvenile Project Survival or the 91% Combined Adult and Juvenile Project Survival levels are being attained. The Coordinating Committee will determine the number of valid studies (not to exceed three years of study) necessary to make a Phase determination following the implementation of Interim Tools. If the Combined Adult and Juvenile Survival or the Juvenile Project Survival goals are being achieved, as measured by the re-assessment studies, the District will advance to Phase III (Standards Achieved). If Juvenile Project Survival is re-evaluated and determined to be less than 93% and greater than or equal to 91%, then the Parties shall proceed to Phase III (Provisional Review). If Juvenile Dam Passage is re-evaluated and determined to be greater than or equal to 95%, then the Parties shall proceed to Phase III (Additional Juvenile Studies). If Juvenile Dam Passage Survival continues to be less than 95% and Juvenile Project Survival continues to be less than 91%, then the District shall proceed to Phase II (Additional Tools).

4.2.4 Phase II - (Additional Tools). The Coordinating Committee shall jointly decide on additional Tools, for the District to implement in order to achieve the pertinent survival standard(s) using the following criteria:

1. Likelihood of biological success;
2. Time required to implement; and
3. Cost-effectiveness of solutions, but only where two or more alternatives are comparable in their biological effectiveness.

Until the pertinent survival standard is 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 sub-Section 2.2.1 (Enough Already) and sub-Section 2.2.4 (Impossibility). The Coordinating Committee will determine the number of valid studies (not to exceed three years of study) necessary to make a Phase determination following the implementation of Additional Tools.

4.2.5 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 set forth in Section 4 (Passage Survival Plan) for the term of the Agreement.

4.2.5.1 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 performance under the applicable standards every 10 years. The Coordinating Committee shall pick representative species for all Plan Species. However, only one species will be utilized to represent spring migrants and one species for summer migrants. 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 (Standards Achieved) status will remain in effect. If the survival standard is not achieved, then an additional year of testing will occur. If the survival standard remains un-achieved over three years of re-evaluation, then Phase II (Interim or Additional Tools) will take affect for the species evaluated. The Coordinating Committee shall then consider re-evaluating the passage survival of other Plan Species. If the survival standards are exceeded then passage Measures at the Dam shall remain in effect, however supplementation rates may be adjusted from the 7% level based on actual project survival as described in sub-Section 8.4.4. (Adjustment of Hatchery Compensation – Survival Studies).

4.2.5.2 Phase III (Provisional Review). The District shall proceed to Phase III (Provisional Review) when Juvenile Project Survival is measured at 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 Dam Passage Survival Studies or Juvenile Project Survival Studies or Combined Adult and Juvenile Survival Studies. The results of the

Provisional Review Studies will be evaluated by the Coordinating Committee to more accurately determine whether the pertinent survival standard is being achieved. The Coordinating Committee will determine the number of valid studies (not to exceed three years of study) necessary to make a Phase determination following the completion of the Provisional Review survival studies. The Parties will then proceed based upon the results of these new studies. During Phase III (Provisional Review), supplementation levels shall be maximized at 7% for the affected Plan Species and 2% compensation shall be provided by the District to the Plan Species Account.

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).

If after the one time, five-year Provisional Review period, Juvenile Project Survival is still less than 93% and greater than or equal to 91% and the Combined Adult and Juvenile Survival studies are inconclusive, then the District will revert back to Phase II (Interim Tools). If the increased bypass flows implemented under Phase II (Interim Tools) do not achieve either 95% Juvenile Dam Passage Survival or 93% Juvenile Project Survival, the District shall proceed to Phase II (Additional Tools).

4.2.5.3 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 evaluation(s). The Coordinating Committee will determine the number of valid studies (not to exceed three years of study) necessary to make a Phase determination under Additional Juvenile Studies. The Parties will then proceed based upon the results of these new studies. During Phase III (Additional

Juvenile Studies), supplementation levels shall be maximized at 7% for the affected Plan Species and 2% compensation shall be provided by the District to the Plan Species Account.

4.3 Wells Dam Juvenile Dam Passage Survival Plan.

4.3.1 The District will continue to implement a bypass program of controlled Spill using five (5) bypass baffles at the Wells Project to meet the criteria set out below.

(a) No turbine will be operated during the juvenile migration period unless the adjacent bypass system is operating according to the following criteria.

(b) The five (5) bypass system bays will be Nos. 2, 4, 6, 8, and 10. Operation of the turbines will be in pairs with the associated bypass system bays as follows:

<u>Turbines Operated</u>	<u>Bypass Bays Operated</u>
1 and/or 2	2
3 and/or 4	4
5 and/or 6	6
7 and/or 8	8
9 and/or 10	10

(For example, if turbines 1, 5, and 6 are operating, bypass systems 2 and 6 will be operating.)

(c) At least one bypass will be operating continuously throughout the juvenile migration period, even if no turbines are operating.

(d) The bypass systems and spillgates will be operated in configuration K of the 1987 bypass system report (bottom Spill, 1 foot spill gate opening, 2,200 cfs, vertical baffle opening) for all bypass system bays.

(e) Top Spill has been shown to be as effective as bottom Spill in bypass bays 2 and 10, therefore, top Spill will be allowed in these bays.

(f) If the Chief Joseph Dam Uncoordinated Discharge Estimate is 140,000 cubic feet per second (140 Kcfs) or greater for the following day, all five bypass systems will be operated continuously for 24 hours regardless of turbine unit operation.

(g) If the Chief Joseph Dam Uncoordinated Discharge Estimate is less than 140 Kcfs, bypass system operation will be as follows:

<u>Number Turbines Operating</u>	<u>Minimum Number Bypass Systems Operating</u>
10	5
9	5
8	4
7	4
6	3
5	3
4	2
3	2
2	1
1	1
0	1

4.3.2 The District shall operate the bypass system continuously between April 10 and August 15. Initiation of the bypass system may occur between April 1 and April 10 when it can be demonstrated that greater than 5% of the spring migration takes place prior to April 10. The basis for making this determination shall be the historical hydro-acoustic index, verified by historical species composition information. Termination of the bypass system between August 15 and August 31 will occur when it can be demonstrated that 95% of the summer migration has passed the project. The basis for making this determination shall be the historic hydro-acoustic index, verified by the historical species composition information. The bypass will not operate past August 31 unless a Party to this Agreement provides credible scientific evidence to the Coordinating Committee that the run timing is such that a significant component of a Plan Species migrates through the Forebay, Dam and Tailrace outside the usual migration period (April 1 through August 31).

Run timing information will be gathered through the 2002 migration. The Historic Hydroacoustic and Fyke Netting information (1982 - 2002) will be used to verify that 95% of the spring and 95% of the summer migrations are being protected by operating the bypass system from April 10 through August 15.

After the 2002 migration, changes to the April 10 through August 15 operation may be agreed to by the Coordinating Committee based upon historical hydroacoustic and species composition information that would provide bypass operations for 95% of the spring and 95% of the summer migration of juvenile Plan Species.

Additional hydroacoustic 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 migration is not present outside the normal bypass operating period (April 10 through August 15) 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.

4.3.3 Predator Control Measures shall be implemented by the District and will consist of both northern pikeminnow removal and piscivorous bird harassment and control Measures. The northern pikeminnow removal program may include a pikeminnow bounty program, fishing derbies and tournaments, the use of long lines and trapping. 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.

4.4 Adult Passage Plan. 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. The District shall use Tools, including but not limited to the following.

4.4.1 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 Appendix A: Wells Hydroelectric Project, Adult Fish Passage Plan.

4.4.2 The District shall operate Spill and turbine units in a manner that provides for adult passage while meeting the pertinent juvenile survival standard.

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

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

4.4.5 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, and will assess the effects of ladder trapping, project operations, the Wells Fish Hatchery and downstream tributaries 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 be significant, 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 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.

4.4.6 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 Wells 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 Plan Species Account. 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% compensation provided through hatchery programs and 2% tributary funding, would be utilized to satisfy NNI compensation requirements for each Plan Species.

4.4.7 Pursuant to the 2000 Biological Opinion (BiOp) for the Federal Columbia River Power System, the federal action agencies are required to conduct a comprehensive evaluation to assess adult survival at federal dams. The BiOp 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 5 RESERVOIR AS HABITAT AND WATER QUALITY

5.1 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.

5.2. 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 an incidental take of species listed as endangered or threatened under the ESA, requiring advance authorization from NMFS or USFWS.

5.3 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 6 COORDINATING COMMITTEE

6.1 Establishment of Committee. There shall be a Coordinating Committee composed of one (1) representative of each Party, provided, that the District's 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.

6.2 Meetings. The Coordinating Committee shall meet whenever requested by any two (2) members following notice (unless waived).

6.3 Meeting Notice. The chair of the Coordinating Committee shall provide all committee members with a minimum of ten (10) Days advanced 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.

6.4 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 regarding agenda items that may be brought to a vote during the proposed Coordinating Committee meeting. 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 at a Coordinating Committee meeting, the Party must notify the chair of the Coordinating Committee who shall delay a vote on an agenda item for up to five business days on specified issue(s) to be addressed in a meeting and 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.

6.5 Chair of the Coordinating Committee. The Parties shall choose and the District shall fund a neutral third party to act as the chair the Coordinating Committee. The chair is expected to prepare an annual list of understandings based on the results of studies (See below sub-Section 6.7 (Authority)), 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.

6.6 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.

6.7 Authority. The Coordinating Committee will oversee all aspects of standards, methodologies, and implementation. The Coordinating Committee shall 1) establish the protocol(s) and methodologies to determine whether or not the survival standards contained within Section 4 (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; 4) determine the most appropriate standard in Section 4 (Passage Survival Plan) to be measured for each Plan Species; 5) approve all studies prior to implementation; and 6) review study results, determine their

applicability, and develop an annual list of common understandings based on the studies; 7) periodically adjust the Measures (after Phase I) to address survival and Unavoidable Project Mortality as provided herein; provide that no more than 9% Unavoidable Project Mortality shall be replaced 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; 8) resolve disputes brought by the Hatchery and Tributary Committees, and (9) 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).

6.8 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 60 Days unless the Coordinating Committee decides otherwise, and comments will either be addressed in order or made an appendix to the final report. All reports will be kept on file with 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 study results and/or reports.

6.9 Progress Reports: Each year, with assistance from 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 progress toward achieving the survival standards contained within Section 4 (Passage Survival Plan), and common understandings based upon studies. By March 2013, a comprehensive progress report shall be prepared by the District, at the direction of the Coordinating Committee, assessing overall status of achieving NNI. The Coordinating Committee shall direct an analysis to determine whether each Plan Species is rebuilding. Comprehensive progress reporting shall continue to occur at successive ten-year intervals.

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 D, (Tributary Plan, Project Selection, Implementation, and Evaluation). The Tributary Plan is also supported by Supporting Document A (Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Watersheds). The Parties recognize that Supporting Document A and D 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 Wells Tailrace) and the Methow, and Okanogan watersheds, in order to compensate for up to two percent Unavoidable Project Adult and/or Juvenile Mortality; provided that the Parties shall not be required to actually measure whether the Tributary Plan compensates for up to two percent Unavoidable Adult Project Mortality.

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 Full Disclosure. 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.

7.3.3 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 a minimum of ten (10) Days advance written notice to all members of the Tributary Committee 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 during the meeting including items that may be brought to a vote during the meeting.

7.3.4 Voting. Except as set forth in sub-Section 7.3.7.1 (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 alternative cannot be present for an agenda item to be voted upon, the Party must notify the chair of the Tributary Committee who shall delay a vote on an agenda item for up to five business days on specified issue(s) to be addressed in a meeting or conference call 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 the Tributary Committee. The Parties shall choose and the District shall fund a neutral third party to chair the Tributary Committee meetings. The chair of the Tributary Committee shall have the same responsibilities and authorities 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.

7.3.6 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.

7.3.7 Plan Species 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 sub-Section 7.3.7.1 (Prohibited Uses of Account).

7.3.7.1 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 to attend and participate in Tributary Committee meetings 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 (1998 dollars) in any given year without the unanimous vote of the Tributary Committee.

7.3.7.2 Financial Reports. At least annually, the District shall provide financial reports of Plan Species account activity to the Tributary Committee.

7.3.7.3 Selection of Projects and Approval of Budgets. 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 "tributary projects") intended to further the purpose of the Tributary Plan for Plan Species. Tributary Projects shall be chosen based upon the guidelines set forth in Supporting Document D, "Tributary Compensation, Project Selection, Implementation, and Evaluation" and Supporting Document A, "Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Watersheds ". Tributary Projects shall not be implemented outside the area specified in sub-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.

7.3.7.4 Ownership of Assets. The Tributary Committee shall make determinations regarding ownership of real and personal property purchased with funds from the Plan Species Account. 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.

7.3.7.5 Account Status Upon Termination. Upon the Agreement's termination, (1) the District's unspent advanced 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.

7.4 Funding.

7.4.1 The District shall make an initial contribution of \$1,982,000 in 1998 dollars to the Plan Species Account. Five years after the initial contribution to the Plan Species Account, the District shall do one of the following: 1) make annual payments of \$176,178 (2%) in 1998 dollars as long as the Agreement is in effect; or 2) provide an up front payment of \$1,761,780 (2% for 10 years) in 1998 dollars, but deducting the actual cost of bond issuance and interest.

7.4.2 The District's funding of the Plan Species Account will be considered to be full and complete compensation for adult mortality associated with the Wells Hydroelectric Project until the actual adult survival rate can be accurately determined.

7.4.3 If the adult survival rate is determine to be equal to or greater than 98% and the Juvenile Project Survival rates is determined to be greater than 93%, the Tributary Fund will be reduced to reflect the actual adult survival estimate of the four Permit Species. Adult survival estimates for each Permit Species will independently determine one quarter of the Plan Species Account (See Example 1).

7.4.4 If the Juvenile Project Survival rate for each Plan Species is less than 93% but the Combined Adult and Juvenile Project Survival rate is maintained above 91%, the Plan Species Account may be used to compensate for juvenile losses, with a maximum compensation rate of 2%.

7.4.5 The choice of annual or up front payment under sub-Sections 7.4.1 shall be made by the FP.

7.4.6 If the “up front payment option” is selected then at the end of 15 years, the Parties will determine the distribution of the remaining funds to the Plan Species Account in amounts equivalent to annual payments of \$176,178.00 in 1998 dollars.

7.4.7 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.

7.5 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 tributary enhancement projects approved by the Tributary Committee and directly funded by the initial contribution to the Plan Species Account (See Section 7.4.1). 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 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 individual tributary enhancement 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).

Example 1. Adult steelhead and spring chinook survival measured at 99% but no other adult Permit Species have been studied. Tributary funding would remain at 2% for sockeye and summer/fall chinook but would be reduced to 1% based upon the results from the adult steelhead and spring chinook survival studies. Annual Contributions to the Plan Species Account would reduce the prospective payments from a full 8/8 contribution to a 6/8 contribution.

Plan Species Account Calculations:

Before Adult Studies		After Adult Studies	
Steelhead	(2%)	(1%)	
Spring Chinook	(2%)	(1%)	
Summer/Fall Chinook	(2%)	(2%)	
Sockeye	(2%)	(2%)	
	8/8th	6/8th	

SECTION 8
HATCHERY COMPENSATION PLAN

8.1 Hatchery Objectives.

8.1.1 The District shall provide hatchery compensation for all of the Permit Species including; a) spring chinook salmon, b) summer/fall chinook salmon, c) sockeye salmon d) summer steelhead as further described in Section 8 (Hatchery Compensation Plan). The District shall also provide hatchery compensation for coho salmon should they become established under the criteria set forth in Section 8.4.5.1 (Coho).

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 program 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. This compensation may include Measures to increase the off-site survival of naturally spawning fish or their progeny (i.e. Sockeye Enhancement Decision Tree, Section 14, Figure 3).

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 eligible 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 this Agreement for which the District has responsibility for funding. This includes overseeing the implementation of improvements and monitoring and evaluation relevant to the District's hatchery programs, as identified in the Hatchery Compensation Plan, the Permit and this Agreement. The Hatchery Committee shall also coordinate in-season information sharing and shall discuss unresolved issues. The Hatchery Committee decisions shall be based upon: likelihood of biological success, time required to implement, and cost-effectiveness of solutions.

8.2.3 Meeting Notice. The Hatchery Committee shall meet at least twice per year or whenever requested by any two (2) members following a minimum of ten (10) Days advance written notice to all members of the Hatchery Committee 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 during the meeting including items that may be brought to a vote during the meeting.

8.2.4 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 insure that all members are sent notice of all Hatchery Committee meetings. Abstention does not prevent a unanimous vote. If a Party or its designated alternative cannot be present for an agenda item to be voted upon, then the Party must notify the chair of the Hatchery Committee who shall delay a vote on an agenda item for up to five business days on specified issue(s) 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 agenda item. If the Hatchery Committee cannot reach agreement, then upon request of any Party, that issue shall be referred to the Coordinating Committee.

8.2.5 Chair of the Hatchery Committee. The Parties shall choose and the District shall fund a neutral third party to chair the Hatchery Committee meetings. The chair 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 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. However, it is the District's responsibility to ensure that their obligations under Section 8 (Hatchery Compensation Plan) are satisfied. The Hatchery Committee must approve any proposed agreements or trades of production.

8.4.2 Calculation of Hatchery Commitments. During Phase I, the District shall provide the funding and capacity required of the District to meet the 7% hatchery compensation level necessary to achieve NNI. Juvenile Project Survival estimates, when available, will be used to adjust hatchery based compensation programs and adult survival estimates will be used to adjust the Plan Species Account contribution. However, should adult survival rates fall below 98% but the Combined Adult and Juvenile survival rates be maintained above 91%, additional hatchery compensation for adult losses, toward a maximum contribution of 7% compensation provided through hatchery programs, would be utilized to provide compensation for Unavoidable Project Mortality. The rationale for determining the initial hatchery production commitment requirement is supported by Supporting Document B, "Biological Assessment and Management Plan: Mid-Columbia Hatchery Program". The Parties recognize that Supporting Document B is a supporting document and does not by itself create contractual obligations.

8.4.3 Phase I Production Commitment. Douglas will continue to fund the operation and maintenance of the Wells Hatchery and Methow Spring Chinook Supplementation Hatchery. The Parties agree that the Phase I production commitments to be provided by the District for juvenile passage losses are satisfied by maintaining current production commitments at existing facilities of 49,200 pounds of spring chinook at about 15 fish per pound (738,000 fish) and 30,000 pounds of summer steelhead at about 6 fish per pound (180,000 fish). Summer chinook passage losses are mitigated with 40,000 pounds of summer chinook at about 10 fish per pound (400,000 fish), currently being satisfied through the species trade with Chelan PUD (40,000 pounds of summer chinook are reared by Chelan PUD in exchange for 19,200 pounds of spring chinook reared by Douglas PUD). A portion of passage losses for sockeye (5%) are satisfied through the substitution of 15,000 pounds of spring chinook production (225,000 fish) at the Methow Hatchery as a species substitution for 9,240 pounds of sockeye (231,000 fish). After 2003 brood, NNI for sockeye will be accomplished through the implementation of a set of options identified in the Sockeye Enhancement Decision Tree (See Section 14, Figure 3). As a result of implementing the Sockeye Enhancement Decision Tree, the District's spring chinook obligation shall be reduced by 15,000 pounds starting with the 2004 brood.

8.4.4 Adjustment of Hatchery Compensation - Survival Studies. Hatchery production commitments, except for original inundation compensation, shall be adjusted based upon the results of survival studies conducted during Phase I, Phase II and Phase III (Standard Achieved, Additional Juvenile Studies, and Provisional Review). Hatchery compensation for yearling chinook and steelhead shall be adjusted based upon the results from the three years of accurate and precise Juvenile Project Survival studies completed at the Wells Hydroelectric Project. The arithmetic average of the three years of survival study indicate that the survival of yearling chinook and steelhead averages 96.2%. As a result, compensation for spring chinook, yearling summer chinook and steelhead shall be reduced to 3.8% as indicated below:

Spring Chinook: The District's commitment for Methow Basin spring chinook shall be 4,071 pounds at about 15 fish per pound (61,071 smolts). In addition, the District will provide 15,000 pounds of spring chinook at about 15 fish per pound (225,000 fish) through brood year 2003 as compensation for sockeye salmon losses.

The District will rear for Chelan PUD, through contractual agreement between the two PUDs, up to 19,200 pounds of spring chinook at about 15 fish per pound (288,000 fish).

Steelhead: The passage loss of steelhead shall be mitigated through the production of 8,143 pounds of fish at about 6 fish per pound (48,858 fish).

Sockeye: Through spring 2005 (2003 Brood), 15,000 pounds (225,000 smolts) of spring chinook salmon will be raised as species substitution for 9,240 pounds of sockeye. After 2005, NNI for sockeye will be accomplished through the implementation of a set of options identified in the Sockeye Enhancement Decision Tree (See Section 14, Figure 3).

Summer Chinook: The District's commitment for summer chinook shall be 10,857 pounds of yearling summer chinook at about 10 fish per pound (108,570 fish). Chelan PUD, through contractual agreement with Douglas PUD, will rear these fish at the Carlton Acclimation Pond.

8.4.5 Adjustment of Hatchery Compensation - Population Dynamics. Hatchery production commitments, except for original inundation mitigation, shall be adjusted in 2013 and every 10 years thereafter to achieve and maintain NNI as 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 the smolt-to-adult survival rate from the hatchery production facilities, using methodologies described in Supporting Document B, "Biological Assessment and Management Plan (BAMP): Mid-Columbia Hatchery Program". However, it should be noted that Supporting Document B is a supporting document and does not by itself create contractual obligations.

Example 2: Juvenile Project Survival for steelhead measured at 96.2% with error of less than 5% at a 95% confidence interval. Hatchery supplementation commitments for steelhead would be established at 3.8% (14% compensation for steelhead under the Wells Settlement Agreement equates to 30,000 pounds of steelhead; 7% compensation for steelhead equates to 15,000 pounds). At a 3.8% compensation rate, steelhead production would be reduced to 3.8/7 of 15,000 pounds or 8,143 pounds of steelhead raised as compensation for mainstem project passage losses. This production would be in addition to the fixed inundation compensation of 50,000 pounds of steelhead. Total steelhead production would be established under Phase III (Standards Achieved) at 58,143 pounds of steelhead at 6 fish per pound.

8.4.5.1 Coho. Compensation for Methow River coho will be assessed in 2006 following the development of an anticipated long-term coho hatchery program and/or the establishment of a Threshold Population of naturally reproducing coho in the Methow Basin. The Hatchery Committee shall make a determination on whether a hatchery program and/or naturally reproducing population of coho is present in the Methow Basin (by an entity other than the District and occurring outside this Agreement). Should the Hatchery Committee determine that such a program and/or population exists, then the Hatchery Committee shall determine the most appropriate means to satisfy NNI for Methow Basin coho. Programs to meet NNI for Methow Basin coho may include but is not limited to; 1) provide operation and maintenance funding in the amount equivalent to 3.8% project passage loss or 2) provide funding for acclimation or adult collection facilities both in the amount equivalent to 3.8% juvenile passage loss at the Wells Project. The programs selected to achieve NNI for Methow Basin coho will utilize an interim value of project survival, based upon the three-year average Juvenile Project Survival estimate of 96.2%, until project survival studies can be conducted on Methow Basin coho.

8.4.5.2 Okanogan Basin Spring Chinook. Compensation for Okanogan Basin spring chinook will be assessed in 2007 following the development of a long-term 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 make a determination on 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 and/or population exists, then the Hatchery Committee shall determine the most appropriate means to satisfy NNI for Okanogan Basin spring chinook. Programs to meet NNI for Okanogan Basin spring chinook may include but not be limited to; 1) provide O & M funding in the amount equivalent to 3.8% 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 3.8% juvenile passage loss at the Wells Project. The programs selected to achieve NNI for Okanogan Basin spring chinook will utilize an interim value of project survival based upon the three-year average Juvenile Project Survival estimate of 96.2% until project survival studies can be conducted on Okanogan Basin yearling chinook.

8.4.6 Fixed Hatchery Compensation - Inundation. Of the existing production commitment 50,000 pounds of yearling steelhead at about 6 fish per pound (300,000 fish), 32,000 pounds of yearling summer chinook at about 10 fish per pound (320,000 fish) and 24,200 pounds of subyearling summer chinook, at about 20 fish per pound (484,000 fish), is compensation for original inundation and shall not be subject to adjustment as provided in sub-Section 8.4 (Hatchery Production Commitments).

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. The first monitoring and evaluation plan shall be completed by the Hatchery Committee within one year following FERC approval of this Agreement. Existing monitoring and evaluation programs will continue until replaced by the Hatchery Committee.

8.5.2 The Parties agree that over the duration of this Agreement new information and technologies may be developed and may be considered in a comprehensive hatchery evaluation program. The District shall fund the comprehensive hatchery evaluation program consistent with the hatchery goals set forth in sub-Section 8.1.2 and 8.4 (Hatchery Production Commitments) and the monitoring and evaluation guidelines as outlined in the BAMP and as determined by the Hatchery Committee.

8.5.3 The Hatchery Committee shall plan and the District shall implement the following steelhead studies that are related to the District's production program. First, the District shall fund a study to investigate the natural spawning (reproductive) success of hatchery reared steelhead relative to wild steelhead. This study should utilize a statistically valid number of fish necessary to develop baseline DNA profiles for Methow River steelhead. This analysis should be conducted for approximately 5 brood years. The District shall also conduct an assessment of longer-term acclimation for steelhead, using small scale temporary or existing facilities. This study shall continue for approximately 3 brood years and will not compromise in any way on-going supplementation programs at existing facilities.

8.6 Program Modifications.

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 existing facility use 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. Program modifications will be made following unanimous agreement of the Hatchery Committee, as set forth in sub-Section 8.2.4 (Voting), to achieve specific program objectives as outlined in Section 8 (Hatchery Compensation Plan), including sub-Section 8.4.4 (Adjustment of Hatchery Compensation - Survival Studies) and sub-Section 8.4.5 (Adjustment of Hatchery Compensation - Population Dynamics), as determined by Section 10 Permit and as defined in monitoring and evaluation plans to be developed. The District will make reasonable efforts to complete program modifications as soon as possible, following agreement with the Hatchery Committee.

8.6.2 As of the date this Agreement is signed by the Parties, two areas have been identified for program modification and improvement. The District working with the Hatchery Committee shall assess program modification options and implement them based upon the results of the assessment, as indicated below.

- 1) Improve the adult trapping facility efficiency for adult spring chinook returning to the Chewuch River without undue delay in adult migration and/or displacement of natural spawners to non-target areas. In coordination with the JFP, the District will use its best effort to implement trap improvements by removal of rock debris below Fulton Dam (Chewuch River) by May 2002. The Hatchery Committee will assess whether these improvements are sufficient to achieve the trapping objective without changing adult migration/spawning behavior. If the trapping objectives are achieved, no additional improvements will be required. In the event that these repairs do not result in achievement of the trapping objective, the District, working with the Hatchery Committee, will assess the methods to improve trap efficiency including the following options; 1) additional improvements to Fulton Dam, or 2) a new trapping facility. Based on these assessments, the Hatchery Committee shall select a preferred option and an implementation plan shall be developed by the District. The District will complete

program modifications as soon as reasonably possible (possibly 2003), following agreement with the Hatchery Committee.

2) Improve the adult trapping facility efficiency for adult spring chinook returning to the Twisp River without undue delay in adult migration and/or displacement of natural spawners to non-target areas. The Hatchery Committee will assess methods to improve trap efficiency including the following two options; 1) modifying the existing trap and weir or 2) development of a new trapping facility. Based on these assessments, the Hatchery Committee shall select a preferred option and the District shall develop an implementation plan. The District will complete program modifications as soon as reasonably possible (possibly 2003), following agreement with the Hatchery Committee.

8.6.3 In addition to these program modifications and with concurrence from the Hatchery Committee, the District may pursue the development of a memorandum of understanding between parties concerning use of shared facilities, fish, and water rights.

8.6.4 During the duration of the Agreement, NMFS shall have the opportunity to seek hatchery program modifications (that do not change the 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 hatchery 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 sub-Section (8.6.4) involve the use of such a program, NMFS agrees to take the program design and intent into account in reaching any conclusion regarding the need for emergency modifications.

8.7 Changed Hatchery Policies under ESA.

8.7.1 Except in 2013 and every ten years hereafter, NMFS will refrain from applying hatchery policy decisions that would preclude the 7% hatchery levels (as adjusted) from being achieved. In 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 the issue to be elevated to the Administrator of NMFS. Between 2013 and 2018, except as provided in sub-Section 8.4 (Program Commitments) and 8.6 (Program Modifications), if NMFS fails to allow full utilization of the District's hatchery capacity to achieve the 7% hatchery levels (as adjusted), this shall not be considered a basis for NMFS withdrawal from the Agreement or revocation of the Permit until 2018. In such a case, the District working with the Parties shall develop a transition plan between 2013 and 2018 to make up for the 7% hatchery levels (as adjusted). The transition plan may be implemented as soon as reasonably possible however the transition plan must be initiated by 2018. 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 conclusion.

8.7.2 Until 2013, facility modifications are based on monitoring and evaluations 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 Coordinating Committee).

8.8 Program Review. In 2003 and every ten years thereafter, the hatchery evaluations program, including natural population/hatchery interaction studies, will undergo a program review to determine whether or not the applicable hatchery program is operating in a manner that is consistent with the goals outlined in that particular facilities hatchery evaluation plan. In 2013 and every ten years thereafter, the hatchery program will undergo a program review to determine if adult-to-smolt and smolt-to-adult survival standards, hatchery

program goals, and objectives as defined in the Hatchery Plan, the Section 10 Permits, and as further defined in this document 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. The Hatchery Committee shall be responsible for conducting the hatchery program review, developing a summary report, and in the event that program objectives, as defined in sub-Section 8.1 (Hatchery Objectives) above, are not being met, shall be responsible for establishing alternative plans to the District to achieve them. The District shall be responsible for developing and funding implementation plans.

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 modified facility use is compatible with and does not compromise ongoing programs.

SECTION 9 ASSURANCES

9.1 Project License. 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 Wells Settlement Agreement dated October 1, 1990.

9.2 Regulatory Approval.

9.2.1 The Parties shall provide reasonable efforts to expedite any NEPA, SEPA, and other regulatory processes required for this Agreement to become 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.

9.3 Regulatory Approval Without Change.

9.3.1 Except for the District's obligations in sub-Section 10.2 (Permit Issuance) and sub-Section 9.1 (Project License), the terms of this Agreement shall not take effect until the NMFS issues the District a Permit, the FERC issues the required FERC orders and the USFWS completes necessary consultations under the ESA. Provided, the Parties shall continue to conduct planning and study efforts throughout the approval process.

9.3.2 Any Party may withdraw from this Agreement within 60 Days of FERC issuing a license modification 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 of the first 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 their intent to withdraw and state in the notice their reason(s) for withdrawing from the Agreement. 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 sub-Section shall be in writing and either served in person or provided by U.S. Mail, return receipt requested.

9.4 Release, Satisfaction and Covenant Not to Sue.

9.4.1 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 impacts 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 obligation to any other entity.

9.4.2 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 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 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.

9.4.3 Termination of this Agreement or withdrawal of a Party shall have no effect upon the release provided for in sub-Section 9.4.1.

9.4.4 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.

9.5 Re-Licensing.

9.5.1 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 the 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 license conditions that take effect after this Agreement expires.

9.5.2 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 Project license.

9.5.3 Notwithstanding sub-Section 9.5.2 and sub-Section 9.10 (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.

9.6 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 sub-Section 9.5.2 and 9.5.3.

9.7 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 Coordinating 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 Parties to this Agreement 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, and treaties (consistent with their duties and responsibilities under those statutes, regulations and treaties) in a manner that allows this Agreement to be fulfilled.

9.8 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 specifically required to take such action by statute.

9.9 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.

9.10 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.

9.11 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.

9.12 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.

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

SECTION 10 ENDANGERED SPECIES ACT COMPLIANCE

10.1. Scope. This Section 10 Endangered Species Act Compliance applies only between the NMFS and the District and does not apply to the other Parties unless specifically referenced.

10.2. Permit Issuance.

10.2.1 The District shall revise its incidental take permit applications for Permit Species based upon this Agreement and submit a directed take permit application for Hatchery Operations. This Agreement and its Figures and Appendices shall constitute the District's habitat conservation plan in support of the District's incidental take permit application. Supporting Documents A, B, C and D are to be used as supporting documents to the Agreement and as such, Supporting Documents A, B, C and D do not, by themselves, create contractual obligations under this Agreement or through the permit issued by NMFS.

10.2.2 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 of Permit Species 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

10.2.3 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 (Hatchery permits are addressed in sub-Section 10.2.5). 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 sub-Section 10.5 (Permit Suspension, Revocation and Re-Instatement), 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 sub-Section 10.5 (Permit Suspension, Revocation and Re-Instatement), whichever occurs sooner. Withdrawal from this Agreement and revocation of the Permit as provided in Section 2 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 (See Section 13, "Unforeseen Circumstances").

10.2.4 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.

10.2.5 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 authorize 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 in the hatchery Programs identified in ten (10) year program reviews (See Section 8.8 Program Review).

10.3. 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 4 (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.

10.4. Permit Modification.

10.4.1 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.

10.4.2 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.

10.5 Permit Suspension, Revocation and Re-Instatement. Except as set forth in sub-Section 2.2.1 (Enough Already), the Permit shall be suspended, revoked and reinstated 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.

10.6 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 pertinent survival standards, its Tributary Plan funding obligations, and its Hatchery Plan funding and capacity obligations, early termination mitigation shall not apply to the District.

10.7 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.

10.8 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 default committee). That Committee shall have 20 Days within which to resolve the dispute. If at the end of 20 Days there is no resolution, any Party may request that the dispute proceed as provided in sub-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 utilized to resolve the dispute.

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 chair of the Policy Committee shall provide advanced written notice of all meetings. The Policy Committee shall

have 30 Days, following the referral, to convene and consider the dispute. 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.

Agreements reached in the Policy Committee shall be based upon unanimous agreement of those Parties 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 from votes does not prevent a unanimous vote. If a Party or its designated representative 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 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 agenda 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 that they might otherwise have. The Parties agree that 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 outlined above 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.

12.3 Notices. Except as set forth in sub-Section 2.3 (Conditions Precedent to Withdrawal) and sub-Section 9.3 (Regulatory Approval Without Change), 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 Appendices (See Section 15, Appendix) 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 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 FP 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 FP will not be required under this Agreement to expend any of their 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 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 the Interior, or her designee, for any approval to the extent required by 25 U.S.C. § 81.

12.11 Indian Tribal Treaty or 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 sub-Section shall be deemed to modify each and every Section and sub-Section of this Agreement as if it is set out separately in each Section.

12.12 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 their participation there in.

12.13 No Precedent/Compromise of Disputed Claims. The conditions described and measures proposed to rectify the issues set forth in this Agreement are fact specific and uniquely tied to the circumstances currently existing at the Wells 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 Rules of Evidence 408.

SECTION 13 DEFINITIONS

Capitalized terms are defined as follows:

13.1 “Agreement” means this document, figures and Appendix A - B. This Agreement is supported by Supporting Documents A through D but does not incorporate these documents.

13.2 “BAMP” means Supporting Document B “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) survival Project effects when migrating through the Project’s reservoir, Forebay, Dam and Tailrace including direct, indirect, and delayed mortality wherever it may occur and can be measured (as it relates to the Project) given the available mark-recapture technology.

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

13.5 “Day” is defined by the Federal Rules of Civil Procedure.

13.6 “ESA” means the Endangered Species Act, 16 U.S.C. ss 1531 through 1543, as amended, and it’s implementing regulations.

13.7 “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.

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

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

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

13.11 “Forebay” means the body of water from the Dam face upstream approximately 500 feet.

13.12 “Historic Hydroacoustic and Fyke Netting” refers to the use of the 20-year record (1982-2002) of available hydroacoustic and species composition information collected at the Wells Project, as it relates to the passage of juvenile spring and summer migrants.

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 wherever 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, wherever 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 (Standards 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 sub-Section 9.10 (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 (*Onocorhynchus 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/fall chinook salmon (*Onocorhynchus tshawytscha*), sockeye salmon (*O. nerka*), coho salmon (*O. kisutch*), and steelhead (*O. mykiss*).

13.21 “Power Purchasers” refers to entities that have executed long-term power sales contracts specifically Puget Sound Energy, Inc., Portland General Electric, PacifiCorp., and Avista Corp.

13.22 “Project” means the Wells Hydroelectric Project owned and operated by Public Utility District No. 1 of Douglas County, Washington pursuant to FERC Project Number 2149. The geographic boundaries of the Project including the reservoir, Forebay, Dam and Tailrace are defined in Exhibit K of the Project’s FERC License.

13.23 “Representative Environmental Conditions” means river flows between the 10% and 90% points on the Flow Duration Curve, as calculated using the best available information on historical average river flow (1929-1978, 1993-2001HydroSim) as measured at the Tailrace of Grand Coulee Dam.

13.24 “Representative Operational Conditions” means normative plant operations at Wells Dam that have and are expected to take place during future outmigrations (e.g. normal bypass, fishway and turbine operations).

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 from the base of the Dam to a point approximately 1000 feet downstream.

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 sub-Section 9.10 (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.

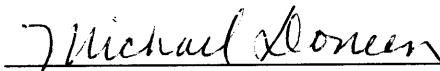
13.31 “Unforeseen Circumstance” is defined by 50 CFR 222.102 (2001), and implemented according to 50 CFR 222.307(g) (2001). If these regulations are modified, the modified regulations will apply only to the extent the modifications were required by subsequent action of Congress or court order, unless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

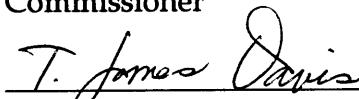
IN WITNESS WHEREOF, the Parties hereto execute this Agreement as of the date last signed below.

Dated MAY 28, 2002

PUBLIC UTILITY DISTRICT NO. 1 OF
DOUGLAS COUNTY, WASHINGTON

By 
Commissioner


Commissioner


Commissioner

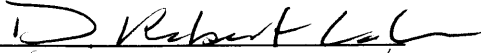
Address for Notice:

Public Utility District No. 1 of
Douglas County, Washington
1151 Valley Mall Parkway
East Wenatchee, WA 98802-4497

Attn: Chief Executive Officer/Manager

Dated 4/5/02

NATIONAL MARINE FISHERIES SERVICE,

By 
Regional Administrator
Director, Northwest Region

Address for Notice:

7600 Sandpoint Way, NE
Box C15700, Bldg 1
Seattle WA 98115-0070

Dated 4/10/2002

UNITED STATES FISH AND WILDLIFE SERVICE,

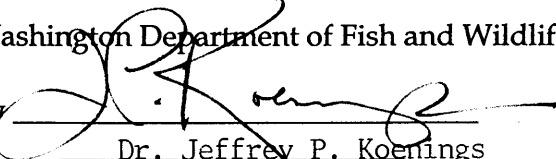
By Rowan W. Gauld
Deputy Regional Director
(Title)

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 4/2/2012

Washington Department of Fish and Wildlife

By 
Dr. Jeffrey P. Koenigs
(Title) Director

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

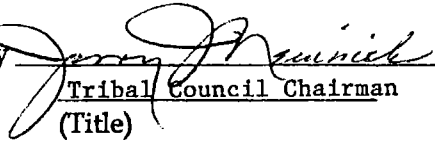
By Colleen F. Causton
Chair, Colville Business Council
(Title)

Address for Notice:

P.O. Box 852
Nespelem, WA 99155

Dated 3-24-05

CONFEDERATED TRIBES AND BANDS OF
THE YAKAMA INDIAN NATION

By 
Tribal Council Chairman
(Title)

Address for Notice:

P. O. Box 151

Toppenish WA 98948

Dated _____

CONFEDERATED TRIBES OF THE
UMATILLA INDIAN RESERVATION

By _____

(Title)

Address for Notice:

Dated _____

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

By _____

(Title)

Address for Notice:

Dated May 8, 2002

PUGET SOUND ENERGY

By Stuart P. Reynolds
CEO
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Dated May 7, 2002

PORTLAND GENERAL ELECTRIC

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Business Terms	<u>BNJ</u>
Legal	<u>LM</u>
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Dated 5/10/02

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SECTION 14
FIGURES

Figure 1. Wells HCP Survival Standard Decision Matrix.

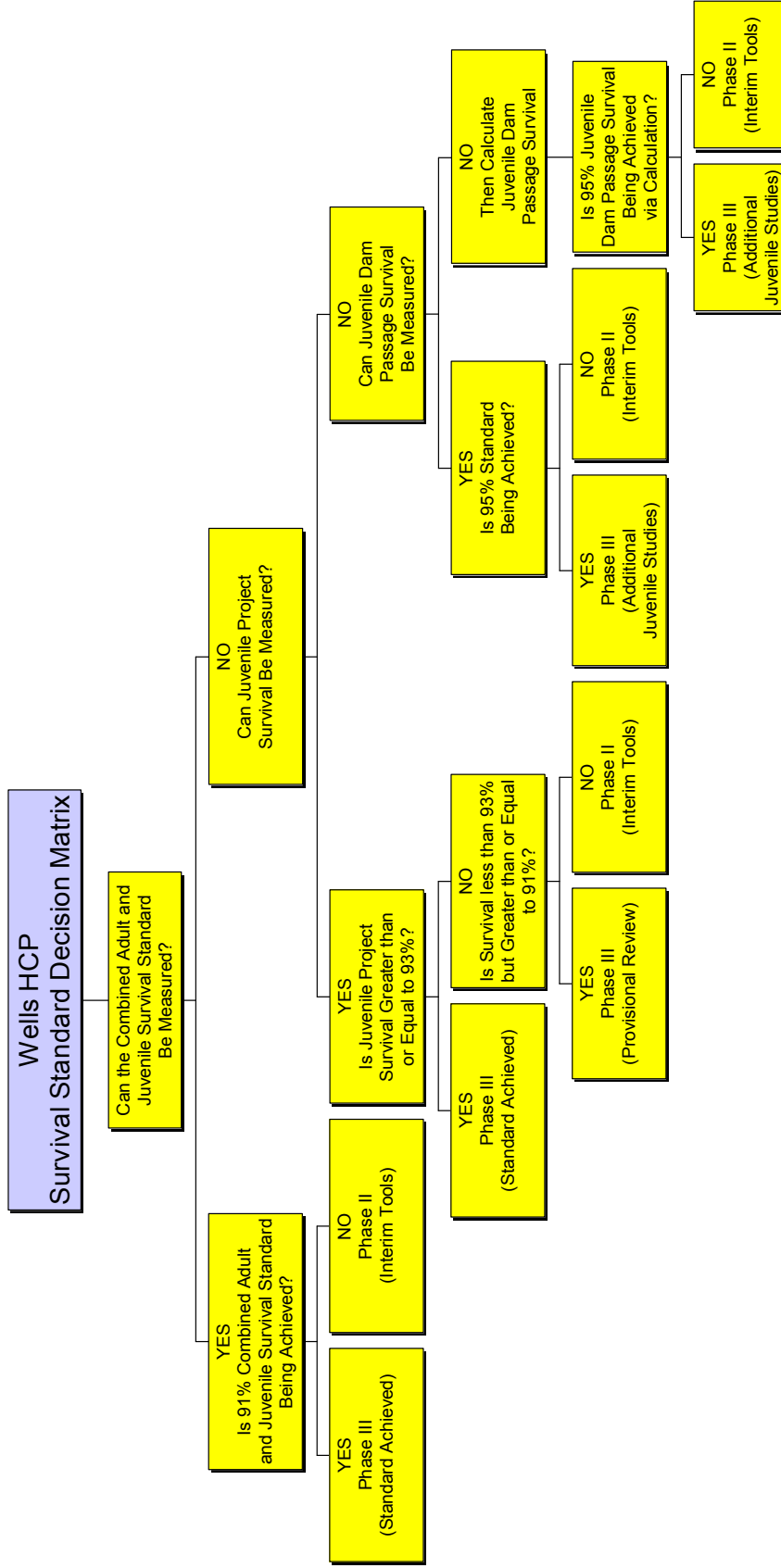


Figure 2a. Spring Flow Duration Curve

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

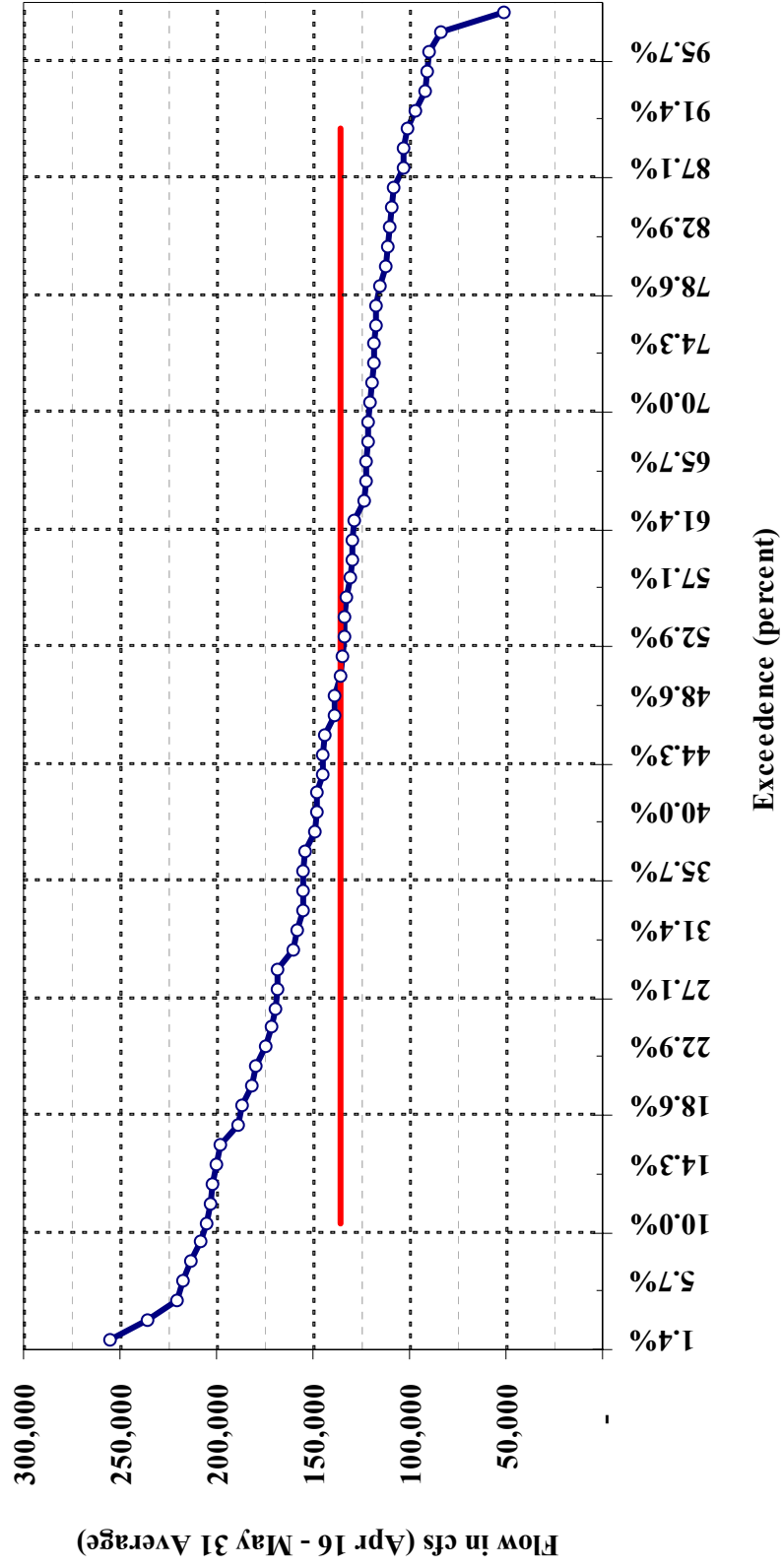
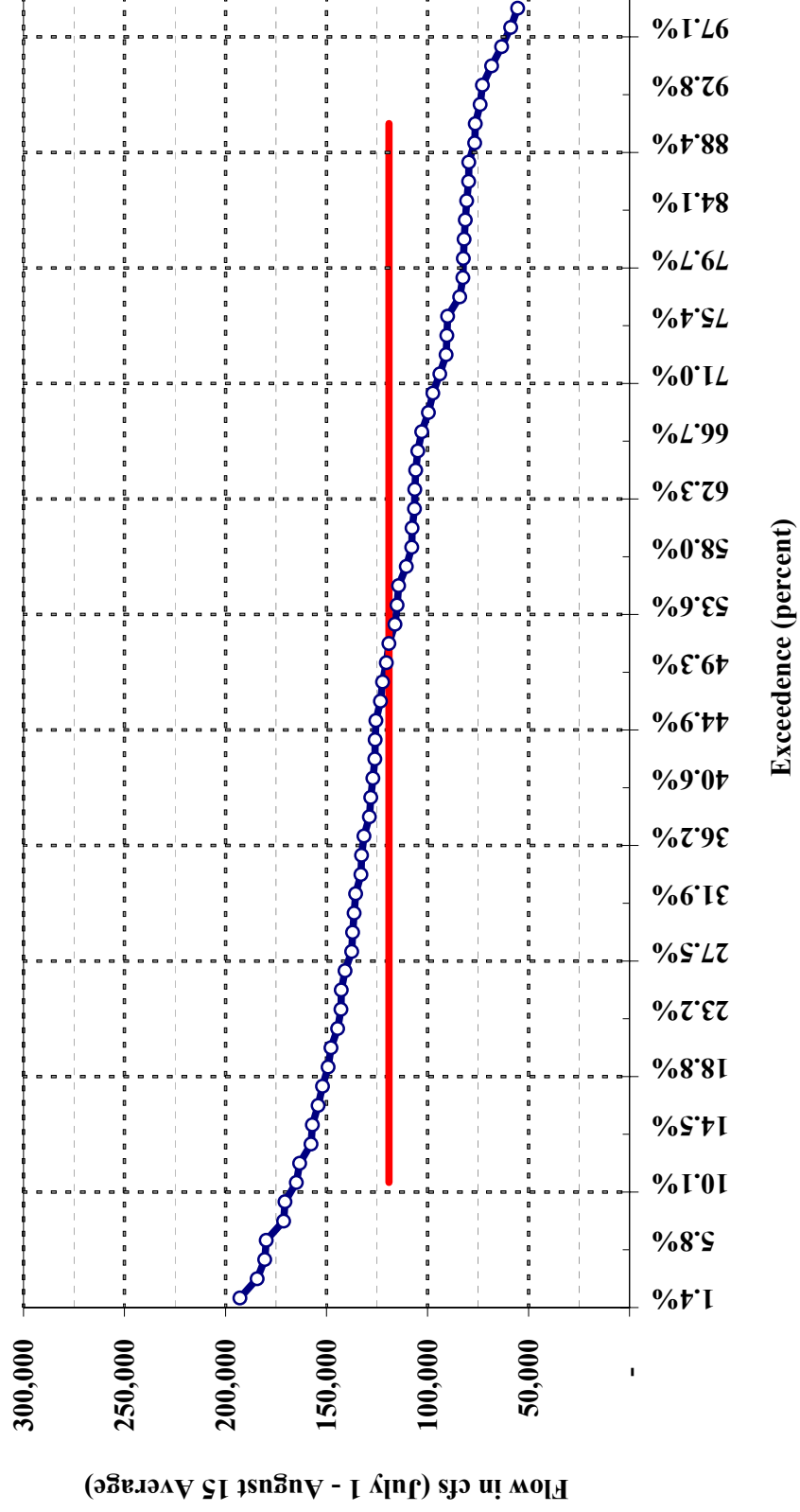


Figure 2b. Summer Flow Duration Curve

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



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SECTION 15
APPENDIX

Appendix A: Wells Hydroelectric Project, Adult Fish Passage Plan.

Adult Passage Plan

Adult passage at Wells Dam was addressed under the project's FERC license (Project No. 2149). Minor modifications to the FERC fish passage conditions were made during negotiations of the Settlement Agreement. Fishway operations are coordinated with the Fish Passage Center. Changes in operating criteria require unanimous support of the Coordinating Committee including approval by NMFS Hydro Program.

Wells Dam was constructed with two fish ladders. Since 1967, an average of 50,000 adult salmon and steelhead have ascended Wells Dam on their way to spawning grounds above the Dam.

The two fish ladders at Wells Dam are conventional staircase type fish ladders with 73 pools. The ladders are located at the east and west ends of the Dam. The lower 56 pools discharge a constant 48 cfs of water. At each pool, the water drops approximately one foot until this water reaches the tailwater level in the collection gallery. Supplemental water can be added at each inundated pool at the upper end of the collection gallery. The upper pools in the adult fishway, pools 73 - 56, discharge water from one pool to another through fishway weirs. Each weir in the upper portion of the adult fishways contains two orifice openings. These orifices are located one foot from the base of the weir. This design provides a sanctuary pool between each of the upper fishway weirs. From pool 56 downstream to the collection gallery, each fishway weir is designed to operate with 48 cfs of water. The water passes from one weir to the next via a seven foot wide overflow section between pools and through two 18 inch by 15 inch submerged orifices.

To accommodate 10 feet of reservoir drawdown, the drop between the upper 17 pools varies from one foot at full reservoir to six inches during a 10 foot reservoir drawdown. The flow through the upper 17 ladder pools consequently varies from 44 cfs at full reservoir to about 31 cfs at maximum reservoir drawdown. To increase the flow to the 48 cfs required in the lower ladder pools, supplementary water is introduced into Pool No. 56 through a pipeline from the reservoir.

Pool No. 64 of both fishway ladders contains facilities for counting fish. The main features of the counting facility include a counting room, an observation window into the fish ladder, a telescoping gate to guide the fish closer to the observation window, a light panel and a bypass gate to control the flow and velocity past the observation window. Video records of fish passage are collected 24-hours per day starting on May 1 and continue

through November 15. The video are then reviewed and counts of fish by species by ladder are made available on a daily basis through coordination with the Army Corps of Engineers adult fish counting program.

At Pool No. 40, each of the two fish ladders has provisions for sorting and trapping various species of fish. The west ladder sorting facility allows for selected fish to travel through a flume to a holding pond at the Wells Hatchery. The east ladder sorting facility allows for fish to travel to a holding container where they are anesthetized, netted and placed in transportation containers to be moved across the Dam to appropriate hatchery facilities. The fisheries agencies and tribes currently develop species-specific broodstock collection protocols at the beginning of each season. Brood stock presently collected at Wells Dam includes spring and summer chinook and summer steelhead. Brood stock collection protocols are developed by the Washington Department of Fish and Wildlife and are annually submitted to the Wells Coordinating Committee and NMFS Hydro Program for annual approval prior to trapping at the Dam. In addition to brood stock collection, the adult fish traps are occasionally used to collect information from CWT tagged steelhead, collect sockeye scales for stock identification and age analysis and collect adult bull trout, chinook, sockeye and steelhead for radio-tagging.

The 2000-2002 Wells Biological Opinion (Section 10.1.4, page 45) requires that the operation of the Wells ladder traps for the collection of broodstock or other fisheries assessment be limited to a maximum of 16-hours per day for three days per week or as approved by NMFS Hydro Program, Portland, Oregon. The Wells Biological Opinion (Section 10.1.4, page 45) requires that adult trapping facilities be manned whenever the trap is in operation and that the collection of adults from the fishway traps be discontinued whenever river water temperature exceed $69 F^{\circ}$. Specific operating criteria for the fish ladder traps can be found below (See: Adult Trap Operating Criteria).

At the bottom of the fish ladder, projecting downstream from the line of the hydrocombine is the portion of the endwall structure that incorporates the functions of fish attraction and collection. Two turbine pumps on each ladder deliver 800 to 2500 cfs (depending upon tailwater elevation) of fish attraction flow to the water supply chamber located immediately adjacent to the collection gallery. Supply chamber water flows into the upper sections of the collection gallery where it is used to maintain an attraction velocity of 2 feet per second; and also into the main collection gallery at the foot of the ladder through diffusion gratings. The total fishway flow from the turbine pump(s) and the 48 cfs coming down the ladder from the forebay is discharged into the tailrace through two fish entrances. Fishway entrances are operated according to hydraulic conditions as

specified in the Wells Settlement Agreement. The specific operating conditions of the ladder are described below (See: Adult Fishway Operating Criteria). Modification to the ladder operating criteria can only take place following approval by the Wells Coordinating Committee.

To reduce the total project passage times of adult fish, the main fishway entrances will be operated at an 8-foot opening. To reduce the incidence of fish falling out of the collection gallery, the side gates to the collection gallery will remain closed during normal fishway operations.

Since July 1970, the ladders have been operated with a 1.5 foot differential maintained by constantly adjusting the output of the fish pumps. Under normal conditions the fish pumps operate automatically to maintain a pre-set differential level between the water supply chamber and the main collection chamber.

Fishways are inspected daily to ensure that debris accumulations are removed, that the automated fishway instruments are calibrated properly and to ensure that lights in the fishway are maintained.

Adult Fish Ladder Operating Criteria

Water Depth Criteria

The water depth over the weirs of the adult fish ladder will be 1.0 to 1.2 feet.

Entrance Criteria

1. Head: 1.5 feet
2. Gate Settings: Main Wing Gate open 8 feet,
Side Wing Gate closed,
Side Gate Attraction Jets closed.

Staff Gauge and Water Level Indicator Criteria

Staff guage and water level indicators are located and maintained upstream and downstream of the Main Wing Gates and adult fishway exit trashracks. These guages should be clearly visible from a convenient location and they should be clean and readable at all water levels. Manual staff guage readings should be checked each day to ensure that consistent readings are being displayed within the control room.

Trashrack Criteria

Visible buildups of debris will be cleaned immediately from picketed leads near counting stations, and from trashracks at adult fishway exits. The staff gauges located immediately upstream and downstream of the adult fishway exit trashracks should be monitored for water surface differential, which may indicate a buildup of debris on the submerged trashracks. The trashracks will be cleaned immediately if the differential reading is greater than 1.0 foot.

Modification of Adult Passage Facilities

If adult passage studies identify biologically significant delay and/or mortality, the operating criteria described above may be changed or modified following approval of the Coordinating Committee. If changes in the operating criteria do not alleviate the problems, then structural modifications to the adult passage facilities may be required. Provided that any disagreements over the appropriateness of facility modifications of \$325,000.00 or less (1988 dollars) may be taken through dispute resolution and any disagreement over the appropriateness of facility modifications of more than \$325,000.00 (1988 dollars) is resolved under the FERC Rules of Practice and Procedure.

Adult Trap Operating Criteria

Startup: The adult fish traps are located on each fish ladder at Pool 40. The traps are operated by placing a barrier fence across the entire width of Pool 40. Once the barrier fence is in place, the steep-pass denil, upwelling enclosure and sorting chute jets are turned on.

Fish Sorting: Fish that swim up the denil eventually enter the upwell enclosure. Once inside the upwell enclosure, fish are attracted down the sorting chute by jets of water introduced into the upwell enclosure near the top of the sorting chute. As fish slide down the chute, they are identified and a decision is made to either shunt the fish back into the ladder immediately upstream of the barrier fence, or to retain the fish for brood stock or stock assessment. Excess water introduced into the fish ladder from the trap denil and upwell enclosure can, when necessary, be removed from the fish ladder through a piped diversion located downstream of the trap in Pool 40.

Fish Disposition: At the east ladder trap, fish retained for stock assessment are anesthetized, sampled and re-introduced back into the ladder via a recovery/re-introduction tank that is located upstream of the pool 40 barrier fence. Fish retained for brood stock are anesthetized, marked and placed into hatchery transport vehicles. On the west ladder trap, fish retained for brood stock and for stock assessment are passed into a holding pond at the Wells Fish Hatchery. Fish in the holding pond are sorted by WDFW personnel. Fish retained for brood stock are either retained in the hatchery holding pond or placed into transportation vehicles for distribution to other hatchery facilities. Fish retained for stock assessment purposes are placed into transport vehicles and released upstream of the dam.

Safety Measures: The steep-pass denil has been outfitted with two removable gates. The bottom gate prevent fish from moving into the upwell enclosure when the trap is unattended and the top gate prevents fish in the upwell enclosure from moving down the steep-pass denil. The sorting chute has also been upgraded to include a gate on the upstream end. This gate prevents fish from moving down the sorting chute once sufficient numbers of fish have already been placed in the anesthetic tank. The sorting chute has been modified to include full padding and jets of water to keep it moist and cool. Temperature monitors are deployed in the ladder at pool 40 and in the anesthetic tank to ensure compliance with the Wells 2000 BiOp trapping criteria.

Shut Down - Daily: At the end of each trapping day, the barrier fence is lifted out of the ladder, the steep-pass denil is gated first at the bottom and then at the top, the water to the upwelling enclosure is left on, the sorting chute is locked in the return to ladder direction, the sorting chute water jets are left on, the anesthetic tank is drained away from the ladder and all of the fish in the recovery tank are released back into the fish ladder.

Shut Down - Annual: At the end of the trapping season, all water is turned off, all tanks should be checked for fish and then drained. The upwell enclosure water is turned off last and all remaining fish and water should be drained directly into the fish ladder through the upwell enclosure bypass pipe.

BiOp Conditions: The 2000-2002 Wells Biological Opinion (Wells 2000 BiOp) requires that the operation of the Wells ladder traps be limited to a maximum of 16-hours per day for three days per week. To ensure adherence to this trapping schedule, the District has installed remote monitors on the fishway traps. The fish ladder trap monitors notify District personnel when the trap is in operation. The location and duration of ladder trapping is recorded daily and reviewed weekly with WDFW staff. The Wells 2000 BiOp also requires that the adult trapping facilities be manned whenever the trap is in operation and that the collection of adults from the fishway traps be discontinued whenever river water temperature exceed 69 F° . Thermographs have been installed immediately adjacent to the traps to ensure that the temperature criteria is not exceeded during adult trapping.

Annual Meeting: District and WDFW trapping personnel meet annually to review the annual brood collection goals, assessment projects, to review current ladder trapping and operating criteria and to discuss modifications to the trap.

Adult Ladder Dewatering Plan

Stage 1 (Notification): Project personnel requiring access to the submerged portions of the adult fish ladders must contact a District Fish Biologist seven days prior to initiating any temporary or extended dewatering of either of the two fishways at Wells. Emergency ladder dewatering should be coordinated with District Fish Biologists to the maximum extent practical given the extent of the emergency. Ladder dewatering to clean the visitor center and the fish counting windows is not considered an emergency. Notice is required to allow District Biologists time to ensure coordination between the scheduled dewatering event and ongoing efforts to collect brood stock for hatcheries, tag fish for stock assessment studies, coordinate fisheries passage inspections and to monitor fish behavior relative to normal project operations. In addition, due to the presence of three stocks of ESA listed fish (UCR spring chinook, UCR steelhead and Columbia River Bull trout) it is important that dewatering events be coordinated with the appropriate resource agencies responsibility for administering the ESA.

Stage 2 (Equipment Preparation): Once notice has been provided to all appropriate entities and resource agencies (including WFH staff), an agreed to ladder dewatering schedule and fish salvage plan should be discussed and coordinated with all affected departments. District personnel are responsible for gathering and inspecting all necessary equipment required to safely collect, hold, transfer and release adult and juvenile fish salvaged from the dewatered fishways. Equipment required for a successful salvage operation include dip nets, a block seine, waders, rain gear, ropes, two 20 foot extendable ladders, flood lights, head lamps, fish totes and fish transport vehicles. Equipment needed for salvaging fish from the dewatered ladder should be moved to the fish ladder at least one day prior to initiating Stage 5 (Exit Gate Closure).

Stage 3 (Day Prior to Dewatering): The day before a scheduled fish ladder dewatering and salvage operation, project personnel should turn off and bulk head each of the two fish pumps located within the water supply chamber. The collection gallery entrances and the ladder exit orifice gates should be operated at normal levels for the remainder of the day.

Stage 4 (Evening Prior to Dewatering): The evening prior to dewatering the fish ladder, the exit orifice gates should be partially closed to allow less than full orifice flow through each of the weirs located in the upper fishway (Weir 73 - 57). The Pool 56 supplemental water supply valve should be set to the fully open position. These settings should remain in place until Stage 7 (Fish Salvage - Upper Fishway) operations have been completed.

Stage 5 (Exit Gate Closure): On the morning of the scheduled dewatering and salvage operation, the exit orifice gates must be turned off gradually. It should require at least 2 hours to completely close off the exit orifice gates. It is important that a District Fish Biologist and appropriate WFH staff be in close proximity to the upper fishway, with equipment in place, prior to project personnel completely closing off the exit orifice gates.

Stage 6 (Supplemental Water): Once the exit orifice gates are closed, it is important to verify that sufficient supplemental water is being added into the middle fishway at Pool 56. If additional water is required, the control room should be contacted to ensure that the supplemental water supply system is being operated at maximum capacity. If the plant operators cannot provide additional water into Pool 56 via the supplemental water supply system, then the District Fish Biologist and the appropriate plant supervisor should discuss whether it is appropriate to move to Stage 7 (Fish Salvage – Upper Fishway). It may be more appropriate to re-open the exit orifice gate and attempt to fix the problem with the supplemental water supply system prior to proceeding to State 7. However, if a determination is made to continue to Stage 7 (Fish Salvage – Upper Fishway) then it is the responsibility of the operators to carefully add additional water into the ladder by opening the exit orifice gate until adequate amounts of water are flowing through the middle ladder. Adding supplemental water through the exit orifice gates should only be used as a last resort as this operation establishes a dangerous work environment for personnel attempting to salvage fish from the upper fishway.

Stage 7 (Fish Salvage – Upper Fishway): Provided that sufficient water exists in the middle fish ladder (below Pool 56) fish salvage operations should proceed as described below. Fish salvage operations should start at Pool 73 and move downstream until the upper fishway is free of fish. Fish found in each sanctuary pool will have to be collected with a dip net and transferred directly into the portable fish totes. The order of priority is to net and transfer ESA listed adults, ESA listed juveniles, anadromous adults, anadromous juveniles and then non-listed resident fish.

Once loaded with fish, the fish totes should be hoisted from the sanctuary pool and deposited into Pool 56. Fish collected from Pool 73 through pool 57 are to be hoisted into Pool 56 where supplemental water has been added to carry fish downstream through the middle and lower fishway and into the collection gallery and tailrace. Once all fish have been salvaged from Pool 73 through 57 and all personnel have been evacuated from the fish ladder, the

operators should be contacted to initiate a Stage 8 (Middle Fishway - Pulsed Flow Operation) as described below.

State 8 (Middle Fishway - Pulsed Flow Operation): In order to move fish from Pool 56 down to the tailrace of the project, the adult fishway should be partially re-watered and then dewatered several times. It may become necessary to pulse water from the exit orifice gates several times. Typically three pulses of water are required to flush fish out of the middle and lower ladder and into the tailrace. Pool 40 is a location where fish frequently become stranded during the pulsed flow operation. A hatchery tanker truck and appropriate fish salvage personnel should be stationed at Pool 40 should fish require transport back to the river. The order of priority for fish collection shall be to net and transfer ESA listed adults, ESA listed juveniles, anadromous adults, anadromous juveniles and then net and transfer non-listed resident fish.

Once the fishway has been cleared of fish, the fish being held in the tanker truck should be released back into the river and the exit orifice gates should be closed. Fish salvaged from the east ladder will be released upstream of the dam and fish salvaged from the west ladder will be released into the tailrace.

Stage 9 (Lower Fishway - Collection Gallery): The lower fishway and collection gallery can only be dewatered following the placement of bulkheads across the entrance gates. The floor of the collection gallery can be up to 40 feet below the surface of the tailrace. Therefore the collection gallery must be dewatered with a sump pump. This operation can take several hours depending upon tailrace elevation and leakage into the collection gallery. Once the collection gallery is within one foot of becoming dry, fish salvage personnel should be hoisted with a crane down into the gallery. Once in the gallery, the fish totes should be filled with water and a seine net deployed upstream of the floor diffuser. Fish on top of the floor diffusers should be netted before the water levels drop to less than 6 inches. Once netted, fish should be placed into the fish totes. Depending upon the number and size of fish captured, the fish totes may need to be lifted out of the collection gallery before all of the fish have been collected. Once the crane has lifted the fish totes onto the deck of the dam, the fish should be placed into either a fish release container (300 gallon) or a hatchery transport truck.

Once the collection gallery has been cleared of stranded fish, the fish being held in the tanker truck will be released into either the forebay or tailrace of the dam.

Wells Project Survival Estimates

1998 WELLS SURVIVAL STUDY

The 1998 Survival Study, as described in the 1998 study plan "1998 Wells Dam Pilot Survival Study", was submitted to the WCC for review on September 2, 1997. The study plan was discussed during the September 8th and October 16th meetings of the WCC. The Study plan was modified in September 1997 to include several items requested by the WCC. The Study plan was approved during a conference call on October 16th as documented in the Wells Coordinating Committee meeting minutes (97-8). All parties to the Wells Settlement Agreement were contacted and provided unanimous support for the 1998 study.

The study was completed as directed in the study plan and draft results were presented to the WCC as documented in the 98-4, -5, -6, -8 meeting minutes. The Draft report was submitted to the WCC for review and comment on February 12, 1999. No comments were received by the end of the 60-day comment period. The comment period was extended to allow NMFS additional time for review. The comment period was closed following a 90-day review and following a call from Bob Dach (NMFS) indicating that no comments were going to be submitted by NMFS. The final report entitled: "Project Survival Estimates for Yearling Chinook Salmon Migrating through the Wells Hydroelectric Facility, 1998" was completed on May 27, 1999 and was distributed to the WCC on June 7, 1999. Results of the 1998 Survival Study using yearling Chinook indicated that project survival (Mouth of the Methow River to 1000 feet downstream of Wells Dam) was 99.7% ($\hat{SE} = 0.015$).

1999 WELLS SURVIVAL STUDY

The 1999 Survival Study, as described in the 1999 study plan "Wells Dam Steelhead Survival Study, 1999", was distributed prior to the August 12, 1998 meeting of the WCC. The study plan was discussed during the August 12th and September 22nd meetings. The study plan was revised based upon committee input in late September. The modified study plan was re-submitted to the WCC on October 2, 1998. The modified study plan was further discussed at the October 20, 1998 meetings of the WCC. The 1999 Study plan was unanimously approved during a conference call on November 2nd and reaffirmed at the next formal WCC meeting on November 12, 1998 as documented in the Wells Coordinating Committee meeting minutes (98-10, -11). All parties to the Wells Settlement Agreement were contacted and provided unanimous support for the 1999 study.

The study was completed and preliminary results were sent to the WCC on July 13, 1999. These results were formally presented to the WCC at the September 21, 1999 meeting (99-7). The Draft report was submitted to the WCC for review and comment on November 16, 1999. No comments were received by the end of the 60-day comment period. However, comments were received on February 18, 2000 from Steve Smith (NMFS) and all of Steve's comments were addressed in the final report. Steve Smith's comments and the authors response to Steve's comments can be found in the final report in Appendix C. The final report entitled: "Project Survival Estimates for Yearling Summer Steelhead Migrating through the Wells Hydroelectric Facility, 1999" was completed on March 9, 2000 and was distributed to the WCC on March 24, 2000. Results of the 1999 Survival Study using yearling summer steelhead indicated that project survival (Mouth of the Methow River to 1000 feet downstream of Wells Dam) was 94.3% ($\hat{SE} = 0.016$).

2000 WELLS SURVIVAL STUDY

The 2000 Survival Study, as described in the 2000 study plan "Wells Dam Steelhead Survival Study, 2000", was distributed to the WCC on September 21, 1999 (99-7). The study plan was discussed during the September, October and November 1999 meetings of the WCC (99-7, -8, -9). The Study plan was modified prior to the November meeting based upon input from the WCC. The 2000 survival study plan was approved at the November 1999 meeting as documented in the Wells Coordinating Committee meeting minutes (99-9). All parties to the Wells Settlement Agreement were contacted and provided unanimous support for the 2000 study.

The study was completed and preliminary results were presented to the WCC at the September 12, 2000 meeting (00-10). The Draft report was submitted to the WCC for review and comment on November 30, 2000. No comments were received by the end of the 60-day comment period. However, comments were later received from NMFS and these comments were addressed in the final report. NMFS comments and the author's response to NMFS's comments can be found in the final report in Appendix E of the final report. The final report entitled: "Project Survival Estimates for Yearling Summer Steelhead Migrating through the Wells Hydroelectric Facility, 2000" was completed on March 23, 2001 and was distributed to the WCC on March 29, 2001. Results of the 2000 Survival Study using yearling summer steelhead indicated that project survival (Mouth of the Methow River to 1000 feet downstream of Wells Dam) was 94.6% ($\hat{SE} = 0.015$).

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SECTION 16
LIST OF SUPPORTING DOCUMENTS

Supporting Document A: Aquatic Species and Habitat Assessment: Wenatchee, Entiat, Methow, and Okanogan Watersheds (1998).

Supporting Document B: Biological Assessment and Management Plan (BAMP): Mid-Columbia Hatchery Program (1998).

Supporting Document C: Briefing Paper: Estimating Survival of Anadromous Fish through the Mid-Columbia PUD Hydropower Projects (2002).

Supporting Document D: Tributary Plan, Project Selection, Implementation and Evaluation (1998).

To receive copies of the Supporting Documents please refer to the District's website, the National Marine Fisheries Service website or contact the District directly as indicated below.

www.douglaspud.org

www.nwr.noaa.gov/1hydrop/hydroweb/ferchcps.html

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