

PUBLIC UTILITY DISTRICT NO. 1 *of* CHELAN COUNTY
P.O. Box 1231, Wenatchee, WA 98807-1231 • 327 N. Wenatchee Ave., Wenatchee, WA 98801
(509) 663-8121 • Toll free 1-888-663-8121 • www.chelanpud.org

April 4, 2006

VIA ELECTRONIC FILING

Honorable Magalie Roman Salas, Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 First Street NE
Washington, DC 20426

Subject: Water quality certification issued under Section 401 of the federal Clean Water Act for the Rocky Reach Hydroelectric Project FERC No. 2145

Dear Ms. Salas:

On March 17, 2006, the Washington State Department of Ecology issued a water quality certificate for the Rocky Reach Hydroelectric Project pursuant to section 401 of the federal Clean Water Act.

A copy of this certification is attached. Please do not hesitate to contact me with questions.

Sincerely,

Michelle Smith
Licensing and Compliance Manager

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

March 17, 2006

CERTIFIED MAIL
7005 1820 0006 5951 1367

Gregg Carrington
Relicensing Project Manager
Public Utility District No. 1 of Chelan County
PO Box 1231
Wenatchee, WA 98807-1231

RE: Rocky Reach Hydroelectric Project (FERC No. 2145)
401 Certification / Order No. 3155

Dear Mr. Carrington:

The request for certification for the licensing of the Rocky Reach Hydroelectric Project (FERC No. 2145), Chelan County, Washington, has been reviewed. On behalf of the State of Washington, we certify that the Project, as conditioned by the enclosed attached Order, will comply with applicable provisions of 33 USC 1311, 1312, 1313, 1316, 1317 and other appropriate requirements of State law.

This certification is subject to the conditions contained in the enclosed Order. If you have any questions, please contact G. Thomas Tebb at (509) 575-3989. Written comments and correspondence relating to this document should be directed to G. Thomas Tebb, Department of Ecology, Central Regional Office, 15 W. Yakima Avenue, Suite 200, Yakima, WA 98902. The enclosed Order may be appealed by following the procedures described.

Sincerely,

G. Thomas Tebb, L.E.G.
Section Manager
Water Resources Program

GTT:wv

Enclosure

cc: Bill Tweit, WDFW
Carmen Andonaegui, WDFW
Mark Miller, USFWS
Steve Lewis, USFWS
Julie Carter, CRITFC
Bob Heinith, CRITFC
Bob Rose, Yakama Nation
Rich Domingue, NOAA Fisheries

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF GRANTING A WATER QUALITY CERTIFICATION to: Public Utility District No. 1 of Chelan County, Washington in accordance with 33 USC 1341 (FWPCA section 401), RCW 90.48.260 and WAC 173-201A	)))))))	**ORDER NO. 3155** Relicensing of the existing Rocky Reach Hydroelectric Project (FERC No. 2145) on the Columbia River, Chelan County, Washington

TO: Mr. Gregg Carrington
Director of Hydro Services
Chelan County Public Utility District No 1
P.O. Box 1231
Wenatchee, WA 98807-1231

Chelan County Public Utility District No. 1 (Chelan PUD) has requested water quality certification from the State of Washington Department of Ecology (Ecology) for the Rocky Reach Hydroelectric Project, FERC No. 2145 (Project), pursuant to the provisions of 33 USC 1341 (FWPCA § 401), as required to obtain its New License from the Federal Energy Regulatory Commission (FERC). Chelan PUD first applied on June 29, 2004. On June 13th, 2005, Chelan PUD withdrew its application and re-applied. Chelan PUD again withdrew its application and re-applied on February 12, 2006.

1.0 NATURE of the PROJECT

The Project includes the Rocky Reach dam and the associated reservoir, located on the Columbia River, in central Washington. The dam is located at River Mile 473.7, approximately 7 miles upstream of the City of Wenatchee. The waters affected by the Project are portions of the Columbia River in Washington State, within and immediately downstream of the Project. The associated reservoir, also known as Lake Entiat, extends 43 miles upstream to the tailwater of Douglas County PUD's Wells Dam and has a surface area of approximately 8,235 acres. The normal pool operating level is between 703 and 707 feet in elevation. At present the Project operates in the top foot of reservoir storage 73 percent of the time, and in the top two feet 98 percent of the time. The Project is a run-of-the-river project. The average annual flow through the Project since the completion of Mica dam, in Canada, has been 113,200 cfs (1973-2001).

The Project went into commercial service in 1961. The dam is 2,847 feet long and 130 feet high. The powerhouse is located on the west side and spillways are on the east side of the dam. The powerhouse contains eleven turbines and can accommodate a maximum flow of up to 212 kcfs. It has an installed generating capacity of 1,237.4 megawatts but was reduced by FERC to 865.76 MW in its November 19, 2004 Order Amending License and Revising Annual Charges under Article 43(i) of the Federal Power Act. The spillway consists of twelve 50-foot-wide bays. The Project also includes a 2800-foot-long upstream fishway, consisting of a lower fishway with three main entrances and a 1400-foot fish ladder with 100 pools ascending one foot in elevation per pool. The Project also includes a downstream bypass system, with surface collector and a 4600-foot-long conduit, which extends approximately one-third mile downriver of the dam.

The total area within the Project Boundary is 1,500 acres, consisting of the lands necessary for the operation, maintenance, and energy transmission of the Project. Other purposes of the Project include recreation, environmental enhancement and mitigation, cultural protection, and Project security.

2.0 AUTHORITIES

In exercising authority under Section 401 of the Clean Water Act (33 USC 1341) and the Washington State Water Pollution Control Act (RCW 90.48.260), Ecology has investigated this proposal for:

1) Conformance with all applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under Sections 301, 302, 303, 306, and 307 of the Clean Water Act (33 USC 1311, 1312, 1313, 1316, and 1317);

2) Conformance with the state water quality standards as provided for in Chapter 173-201A WAC and by Chapter 90.48 RCW, and with other appropriate requirements of state law;

3) Conformance with all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010; and

4) Conformance with RCW 90.56, which prohibits discharge of oil, fuel or chemicals into state waters or onto land where such contaminants could potentially drain into state waters.

3.0 CURRENT STANDARDS

1) **Washington State Water Pollution Control Act**. The intent of actions required in this Certification is to support the goals of the State of Washington to "maintain the highest possible standards to ensure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the state of Washington" (RCW 90.48.010).

2) **Washington State Water Quality Narrative Standards** (1997). Within the Project area, the Columbia River is classified as Class A under Washington's Water Quality standards (WAC 173-201A). Under these standards, water quality for Class A shall meet or exceed the requirements for all or substantially all uses. Characteristic uses include, but are not limited to:

   - Salmonid migration, rearing, spawning, and harvesting.
   - Other fish migration, rearing, spawning, and harvesting.
   - Wildlife habitat.
   - Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment),
   - Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste. (WAC 173-201A-030)

3) **Washington State Water Quality Numeric Standards** (1997). Under the state water quality standards, specific numeric criteria have been assigned for various water quality parameters, including total dissolved gas (TDG) and temperature.

4) **Total Dissolved Gas (TDG) standards** (1997). Water quality criteria for this section of the Columbia River (WAC 173-201A-030(2)(c)(iii)) require that total dissolved gas (TDG) shall not exceed 110% of saturation at any point of sample collection. The water quality criteria for TDG shall not apply when the stream flow exceeds the seven-day, ten-year frequency flood stage (7Q10).

5) A special exemption exists for TDG during fish passage in the Columbia River (173-201A-060). During fish passage, TDG must not exceed an average of 120% as measured in the tailrace of the dam. TDG also must not exceed an average of 115% as measured in the forebay of the next downstream dam. These averages are based on the twelve (12) highest hourly readings in any one day. In addition, there is a maximum one-hour average of 125%, relative to atmospheric pressure, during spillage for fish passage. Nothing in these special conditions allows an impact to existing and characteristic uses. This exemption is only allowed when the Project is operated in accordance with an Ecology-approved gas abatement plan (GAP). The purpose of the GAP is to identify additional reasonable and feasible measures to control and reduce TDG, but not beyond the 110% standard.

6) **Temperature standards** (1997). Water quality criteria for this section of the Columbia River require that when water temperature naturally exceeds 18°C, human factors shall not create a further increase of more than 0.3°C. Below 18°C, the project shall not cause an increase of more than 28/(T+7), where T is background. (WAC 173-201A-030 (2)(c)(iv))

7) **Compliance schedule for dam.** (WAC 173-201A-510(5), 2005). A plan for water quality compliance for dams must include a compliance schedule not to exceed ten years.

8) **Turbidity.** (WAC 173-201A-030(2), 2005). Turbidity shall not exceed five (5) NTU over background when the background is 50 NTU or less; or a ten (10) percent increase in turbidity when the background turbidity is more than 50 NTU.

9) **Toxics and oil spills.** (WAC 173-201A-030(2)(c)(viii), 1997 and RCW 90.56). Toxic concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters or adversely affect public health. RCW 90.56 prohibits any discharge of oil, fuel or chemicals into state waters or onto land where such contaminants could potentially drain into state waters.

4.0 FINDINGS

1) **Current management for fish habitat and flow**. The Columbia River is managed for fish habitat and flow by the following international and regional agreements:

- **Columbia River Treaty**: An agreement between Canada and the United States in which Canada has agreed to provide storage for improving flow in the Columbia River to maximize power and flood control.
- **Pacific Northwest Coordination Agreement**: An agreement among the U.S. Bureau of Reclamation (USBR), the Bonneville Power Administration (BPA), the U.S. Army Corps of Engineers (Corps), and 15 public and private generating utilities to maximize usable hydroelectric energy.
- **Mid-Columbia Hourly Coordination Agreement**: An agreement whereby the mid-Columbia PUDs (Chelan, Douglas and Grant), the Corps, the USBR, and BPA coordinate operations in order to maximize the output of hydroelectric power. Effects have included reducing forebay elevation fluctuations and spill.
- **The Federal Columbia River Power System** (FCRPS) **Biological Opinion**, by NOAA Fisheries, applies to actions by the Corps, the USBR, and BPA for impacts on Endangered Species Act (ESA)-listed salmon and steelhead on the Columbia River

system. A Technical Management Team sets flow releases and other operations of the FCRPS that determine the daily and weekly flows that will pass through the Project.

- **Hanford Reach Fall Chinook Protection Program Agreement** (Hanford Reach Agreement): Chelan PUD, Douglas PUD, Grant PUD, NOAA Fisheries, Washington Department of Fish and Wildlife (WDFW), USFWS, Confederated Tribes of the Colville Indian Reservation, and BPA have agreed to river flow management actions to support Grant PUD's effort to manage flow in the Hanford Reach to protect fall Chinook salmon redds and pre-emergent fry during the spawning to emergence periods (typically October to May).

- **Habitat Conservation Plan** (HCP): The Project is specifically managed to achieve fish survival standards for five species of Columbia River steelhead and salmon under the Rocky Reach Anadromous Fish Agreement and Habitat Conservation Plan (HCP). It was approved in a Biological Opinion by NOAA Fisheries, dated August 12, 2003. Species covered under provisions of the HCP are spring and summer/fall Chinook, sockeye, and coho salmon and steelhead.

- **Settlement Agreement for the Rocky Reach Hydropower Project** (Settlement Agreement). A Settlement Agreement among numerous federal and state agencies, tribes, and local entities will be signed in March of 2006. Ecology will be one of the parties. This Settlement Agreement includes several of the documents listed in this section of the Certification, including the HCP, four fish management plans and a water quality management plan. Copies of the Settlement Agreement and the plans are available at Ecology's Central Regional Office and at Chelan PUD's website http://www.chelanpud.org/rr%5Frelicense/.

- **Fish Management Plans**. The Settlement Agreement contains the following fish management plans that call for coordination with federal, state and tribal resource agencies consistent with the Biological Objectives and implementation measures set forth in these plans (Chapters 3, 4, 5 and 6 of the Comprehensive Plan, Attachment B to the Settlement Agreement, dated February 3, 2006):

  White Sturgeon Management Plan;

  Pacific Lamprey Management Plan;

  Bull Trout Management Plan;

  Resident Fish Management Plan;

  The Settlement Agreement also provides for the formation of a fish forum (Rocky Reach Fish Forum, or RRFF) to assist in the implementation of these Chapters of the Comprehensive Plan.

2) **Interagency Agreement between Ecology and Washington State Department of Fish and Wildlife (WDFW)**. In 2005, Ecology entered into an Interagency Agreement with the WDFW for the purpose of obtaining WDFW's expert consultation and coordination on fish issues involving the Project. Under the Agreement, WDFW will act as the primary representative for Ecology, subject to certain limitations. A copy of the Agreement is attached to this Certification as Appendix A.

3) **Water quality parameters.** As part of the relicensing process, Chelan PUD has prepared a Water Quality Management Plan (WQMP), which is Chapter 2 of the Comprehensive Plan, Attachment B to the Settlement Agreement. A summary table of the critical activities and schedules is contained in Appendix B to this Certification. The descriptions of terms and timeframes within the main body of this Certification govern, in the event that there are any inconsistencies with the table in Appendix B. The plan focuses on the water quality parameters of TDG and temperature. It includes a study of localized impacts on water quality parameters.

4) **Study results for TDG.** Studies were performed for 2000-2004, using April through August for the fish spill results and September through March for the non-fish spill results. The fish spill season was modeled using assumptions of one turbine out of operation, flows of 7Q10 (that is, high flows that would occur on an average of every 10 years, for seven days), and standard operation. Using these conservative assumptions, the results showed TDG levels in the tailrace during the fish spill season would be only slightly above 120%. For the non-fish spill season, based on flow data from 2000-2004, the TDG standard of 110% would be met about 99.6% of the time; adding increased powerhouse operation during the highest flow periods, studies show they could attain 99.8% compliance. Compliance in the forebay of the downstream dam (Rock Island) was more difficult to determine. Calculations indicate that the average TDG levels would meet the 115% compliance criteria, using the maximum powerhouse discharge at high spill levels. Study results indicate that altering the spill pattern among the spill gates might improve TDG during fish spill and, hence, also in the Rock Island forebay. Several construction measures were also reviewed and looked possible. However, the actual usefulness would not be known without further studies and analysis.

5) **Study results for temperature.** The impact of the Project on water temperatures in the water impounded behind the Rocky Reach dam was modeled using CE-QUAL-W2. The comparison was made to the river with and without the Rocky Reach dam. Extensive water temperature data was used to calibrate the model, and then used to predict the Project's impact for the years 2000-2004. The model produced 3 to 6 simulated events per year where daily temperature increases exceeded 0.3°C.

6) **Total Maximum Daily Loads** (TMDLs). The Clean Water Act provides for establishment of TMDL requirements for waters that are designated as impaired. The Columbia River in this location has been designated for total dissolved gas (TDG) and temperature. Two TMDLs have been prepared that are relevant to the Project's area. The Mid Columbia River and Lake Roosevelt TDG TMDL was prepared by Ecology and approved by EPA in June of 2004. EPA has prepared a *Preliminary Draft* Columbia/Snake Rivers Temperature TMDL which is pending further review and approval.

5.0 WATER QUALITY CERTIFICATION CONDITIONS

In view of the foregoing and in accordance with Section 401 of the Clean Water Act (33 USC 1341), RCW 90.48.260 and WAC Chapter 173-201A, Ecology finds reasonable assurance that the proposed FERC license will attain compliance with state and federal water quality standards and other appropriate requirements of state law *provided* the following conditions are met. Accordingly, through this Order issued and enforceable under RCW 90.48, Ecology grants Section 401 water quality certification to Chelan PUD for the Rocky Reach Hydroelectric Project (FERC 2145) subject to the following conditions. This order shall hereafter be referred to as the "Certification."

5.1 GENERAL REQUIREMENTS

1) The Project shall comply with all water quality standards (currently codified in WAC 173-201A), ground water standards (currently codified in WAC 173-200), and sediment quality standards (currently codified in WAC 173-204) and other appropriate requirements of state law that are related to compliance with such standards. The conditions below set forth Adaptive Management processes and measures to achieve full compliance with standards and constitute a water quality attainment plan under WAC 173-201A-510(5).

2) In the event of changes in or amendments to the state water quality, ground water, or sediment standards or changes in or amendments to the state Water Pollution Control Act (RCW 90.48) or changes in or amendments to the Federal Clean Water Act, such provisions, standards, criteria or requirements shall apply to the Project and any attendant agreements, orders, or permits, to the fullest extent permitted by law.

3) Discharge of any solid or liquid waste to the waters of the State of Washington without prior approval from Ecology is prohibited.

4) Chelan PUD shall implement the measures identified in the Rocky Reach Settlement Agreement, Attachment B, Sections 4 of Chapters 2, 3, 4, 5, and 6, of the Comprehensive Plan, except as may be subsequently modified in accordance the Settlement Agreement or Ecology's Reservation of Authority within this Certification.

5) Chelan PUD shall consult with Ecology before it undertakes any change to the Project or Project operations that might significantly and adversely affect compliance with any applicable water quality standard (including designated uses) or other appropriate requirement of state law. If, following such consultation, Ecology determines that such change would violate state water quality standards or other appropriate requirements of state law, Ecology reserves the right to condition or deny such change, in accordance with the dispute resolution process provided in the Settlement Agreement and applicable federal and state law.

6) This Certification does not exempt compliance with other statutes and codes administered by federal, state and local agencies.

7) As a signatory to the Settlement Agreement, Ecology will administer and enforce this Certification in compliance with the Settlement Agreement, unless the Settlement Agreement is terminated or Ecology ceases to be a party to it. However, if a conflict or inconsistency exists or arises between this Certification and the Settlement Agreement or any part thereof that is incorporated in this Certification, the terms of this Certification shall govern.

8) Ecology retains the right to modify schedules and deadlines provided under this Certification or provisions of the Comprehensive Plan that it incorporates.

9) Ecology retains the right to require additional monitoring, studies, or measures if it determines that there is a likelihood or probability that violations of water quality standards or other appropriate requirements of state law have or may occur, or insufficient information exists to make such a determination.

10) Ecology reserves the right to amend this Certification if it determines that the provisions hereof no longer provide reasonable assurance that the proposed FERC license will comply with water quality standards or other appropriate requirements of state law. Any such amended certification shall take effect immediately upon issuance, unless otherwise provided in the amended certification, and may be appealed to the Pollution Control Hearings Board (PCHB) under RCW 43.21B.

11) Ecology reserves the right to issue administrative orders, assess or seek penalties, and to initiate legal actions in any court or forum of competent jurisdiction for the purposes of enforcing the requirements of this Certification.

12) The conditions of this Certification should not be construed to prevent or prohibit Chelan PUD from either voluntarily or in response to legal requirements imposed by a court, the FERC, or any other body with competent jurisdiction, taking actions which will provide a greater level of protection, mitigation or enhancement of water quality or of existing or designated uses.

13) If five or more years elapse between the date this Certification is issued and issuance of the New License for the Project, this Certification shall have deemed to be expired and denied at such time and Chelan PUD shall send Ecology an updated 401 application that reflects then current conditions, regulations and technologies. This provision should not be construed to otherwise limit the reserved authority of Ecology to withdraw, amend or correct the Certification before or after the issuance of the New License.

14) Copies of this Certification and associated permits, licenses, approvals and other documents shall be kept on site and made readily available for reference by Chelan PUD, its contractors and consultants, and by Ecology.

15) Chelan PUD shall allow Ecology access to inspect the Project and Project records required by this Certification for the purpose of monitoring compliance with the conditions of this Certification. Access will occur after reasonable notice, except in emergency circumstances.

16) Chelan PUD shall, upon request by Ecology, fully respond to all reasonable requests for materials to assist Ecology in making determinations under this Certification and any resulting rulemaking or other process.

17) This Certification refers to and incorporates the HCP and various sections of the Comprehensive Plan, including the WQMP, the Bull Trout Management Plan, the Sturgeon Management Plan, the Lamprey Management Plan, and the Resident Fish Management Plan, which in turn refer or incorporate other documents, such as the Preliminary Draft Environmental Assessment. Ecology has conducted a sufficient review of the facts to execute and support the Settlement Agreement consistent with its statutory obligations. However, Ecology does not necessarily approve of all the statements or analyses (including without limitation interpretations of data, studies, and law) contained in the Comprehensive Plan and documents referenced therein. As stated in the definition of "Adaptive Management" in the Settlement Agreement, if goals and objectives have not been achieved, previously considered measures may be re-evaluated.

18) The provisions of this Certification that incorporate any provisions of the Settlement Agreement shall continue to apply even if the Settlement Agreement ceases to exist, Ecology withdraws from it, or if FERC fails to fully incorporate any provisions of the Settlement Agreement in the Project license. The requirement for dispute resolution referred to herein shall be eliminated if the Settlement Agreement ceases to exist or Ecology ceases to be a party to it. If the RRFF ceases to exist for whatever reason, Ecology reserves the right to designate replacement entities to serve, with Chelan PUD, in that capacity.

19) If Chelan PUD is unable, as a matter of federal law, to perform a requirement under this certification without obtaining FERC approval, Chelan PUD shall not be considered in violation of such requirement to the extent that FERC does not provide such approval, provided that Chelan PUD diligently seeks such approval and so notifies Ecology.

20) This Certification shall be construed to require Chelan PUD to mitigate or remedy a water quality violation or problem only to the extent that there is substantial evidence that the Project causes (or contributes to) such violation or problem. (RCW 90.48.422(3)).

21) The reservations contained in this Certification do not preclude or limit any right of Chelan PUD to contest the validity of any such reservation in connection with any order or any other action taken by Ecology pursuant to such reservation.

5.2 FLOW

1) Chelan PUD shall continue to coordinate operations under the Pacific Northwest Coordination Agreement and the Mid-Columbia Hourly Coordination Agreement (Hourly Coordination Agreement) insofar as such agreements contribute to the protection of water quality (including, but limited to, the generation of TDG) and existing and designated use. Chelan PUD shall also abide by any successors to such agreements to which it is a party. If either of these agreements is terminated and not replaced with a successor agreement to which Chelan PUD is a party, Project operations shall, to the extent reasonable and feasible and within Chelan PUD's control, continue to provide an equivalent (or higher, if Chelan PUD chooses to do so) level of protection of water quality and existing and/or designated uses as they provided under such agreements.

2) Subject to paragraph 3 below, Chelan PUD shall continue to operate under the Hanford Reach Agreement to cooperate with other utilities in managing flow and flow fluctuations (e.g., ramping rates) to address fish resource impacts within and downstream of the Project area, including the Hanford Reach. Chelan PUD shall also abide by any successors to such agreements to which it is a party. If such agreement is modified or terminated and not replaced with a successor agreement to which Chelan PUD is a party, Project operations shall, to the extent reasonable and feasible and within Chelan PUD's control, continue to provide an equivalent (or higher level, if Chelan PUD chooses to do so) of protection of water quality and existing and/or designated uses as it provides under such agreement.

3) If the best available science shows that flow fluctuations allowed under the existing Hanford Reach Agreement, or as exist if such agreement is terminated, are causing significant harm to fall Chinook in the Hanford Reach, and the Project contributes to such flow fluctuations, then the Chelan PUD shall to the extent reasonable and feasible and consistent with the Biological Objectives adaptively manage Project operations to address its contribution. This

requirement shall not take effect until 2014, concurrent with the re-opener period contained in the Hanford Reach Agreement.

5.3 FISH USE

1) **Implementation**. Chelan PUD shall implement the actions identified in the HCP and the Comprehensive Plan, Chapters 3, 4, 5 and 6 (HCP and each of the Fish Management Plans) as exist or may be modified. Under the HCP, measures may be modified based on consensus of the HCP Coordinating Committee. Under the Settlement Agreement, modification of the Fish Management Plans is based on consensus of the Rocky Reach Fish Forum (RRFF). Unless modified, implementation of the Fish Management Plans shall occur on the timeframes and using the Adaptive Management process set forth in the Settlement Agreement. The RRFF roles, functions and procedures are described in the Settlement Agreement.

2) **Biological Objectives**. The Biological Objectives for fish within and passing through the Project's area are identified in the HCP and each of four Fish Management Plans, identified above. The Biological Objectives are summarized in Appendix C of this Certification. The descriptions of terms and timeframes within the HCP and Fish Management Plans govern, in the event that there are any inconsistencies with the table in Appendix C. The Fish Management Plan objectives are subject to modification through the RRFF. Chelan PUD shall undertake all reasonable and feasible actions to achieve these Biological Objectives through the Adaptive Management process implemented through the RRFF. If the RRFF ceases to exist or if the RRFF is unable to reach consensus following the completion of dispute resolution under the Settlement Agreement as to modification of a Biological Objective, Ecology reserves the right in consultation with fish agencies and Chelan PUD, to modify the Biological Objective insofar as necessary for the protection of existing and/or designated uses.

3) **Status Reports**. By no later than February 1 of every five years, starting with Year Five (5) of the effective date of the New License, Chelan PUD shall develop, in consultation with the RRFF, and provide to Ecology and other members of the RRFF, a draft Biological Objectives Status Report that (1) summarizes the results of monitoring and evaluation program, and evaluates the need for modification of the program, (2) describes the degree to which the Biological Objectives have been achieved, and the prospects for achieving those objectives in the next reporting period, (3) reviews management options (both operational and structural) taken to meet those Biological Objectives, and (4) recommends any new or modified implementation, monitoring and/or evaluation measures that are needed to meet the Biological Objectives, to the extent reasonable and feasible. Such recommendations shall contain a schedule for timely implementation. Chelan PUD shall consult with the RRFF prior to issuing the final report. If a RRFF member is not in agreement with the draft report or recommendations and has an alternative evaluation or recommendation, Chelan PUD shall include in the final report a discussion of that alternative or recommendation, and Chelan PUD's reasons for not incorporating the alternative recommendations and/or evaluations. Chelan PUD shall provide a final report to the RRFF and any member of the interested public no later than March 30th of each year for which a report is due.

4) **Implementation of New Measures**. If consensus is achieved within the RRFF as to new or modified measures needed to achieve Biological Objectives and the schedule of implementation thereof, the recommendations shall become part of the Fish Management Plan and implemented in accordance with the schedule. Such new and modified measures are deemed to be part of this Certification if consensus is achieved by the RRFF.

5) **Resolution of Disagreements**. If, after completing the dispute resolution process provided in the Settlement Agreement, the RRFF does not reach consensus as to new or modified measures needed to achieve the Biological Objectives, Ecology reserves the right to make a final determination of measures, including monitoring and evaluation measures, to be implemented as necessary for the protection of existing and/or designated uses. Under the terms of the dispute resolution process, Ecology is not required to complete dispute resolution if it determines that expeditious action is required to maintain and protect water quality, including existing, designated, and beneficial uses. During the pendency of the dispute resolution process, the minimum level of new or modified measures that the fish management agencies, Ecology, and Chelan PUD can agree upon shall be implemented in a timely manner.

6) **Protection of Species**. Ecology expects that the Fish Management Plans provide, and will continue to provide, adequate protection of fish species and habitat, including existing and designated uses. In the event that any of these plans, as determined by Ecology, fail, or begin to fail, to adequately protect existing and designated uses, Ecology reserves the right, in compliance with the dispute resolution process under the Settlement Agreement, to require such changes in operation or physical structures as it determines necessary to protect these uses.

7) **Evaluation of Compliance with Biological Objectives**. No later than ten (10) years after the effective date of the New License, Chelan PUD shall, in consultation with HCP parties and the RRFF, provide Ecology with the information necessary to make a determination on whether the Biological Objectives have been achieved. Ecology will consult with the RRFF prior to making a determination whether and to what extent the Biological Objectives have been met.

8) **Biological Objective Not Met**. Following the issuance of the final Biological Objectives Status Report in Year Ten (10), if Ecology, after consulting with the RRFF, concludes that a Biological Objective has not been met, Chelan PUD shall continue to implement the Adaptive Management process described in this section until the Biological Objective has been attained or is modified pursuant to the Adaptive Management process in the Settlement Agreement or to Ecology's reserved authority.

9) **Maintenance of Biological Objectives**. Once a Biological Objective (or the alternative as described under 8 above) are met, the actions needed to maintain attainment of the Biological Objective must be continued through the term of the New License. Monitoring shall be continued and the results posted annually on Chelan PUD's website or equivalent. Chelan PUD shall provide special notification to all members of the RRFF (including Ecology) no later than six (6) months after any of the Biological Objectives ceases to be met. Monitoring to determine attainment of Biological Objectives shall continue throughout the life of the New License, including any subsequent annual licenses.

5.4 TOTAL DISSOLVED GAS

1) **Water Quality Management Plan**: Chelan PUD shall begin implementation of Section 4 of the Water Quality Management Plan (WQMP) immediately upon the effective data of the New License. Measures include the following:

   a) Monitor TDG Compliance. Maintain two fixed monitoring stations at Rocky Reach Dam to monitor TDG levels annually from April through August, one in the forebay and one in the tailrace, for the term of the New License and any subsequent annual licenses or until such monitoring is no longer required by Ecology. The monitoring point for

TDG in the tailrace shall be moved to a location at or near the Juvenile Bypass System outfall as soon as practicable, but no later than Year 2 of the New License. If it is not feasible to conduct TDG monitoring at this site, an alternate location may be developed provided that if such alternate location is not representative of levels of TDG from spillway flows in the tailrace, measurements at the alternate location shall be indexed to the actual TDG levels in the tailrace below the spillway. Outside of the "fish spill" season, Chelan PUD may use spill volume as a surrogate for TDG levels. However, Ecology retains the option to require TDG monitoring during spills outside the fish spill season, including monitoring in expectation that a discharge will occur that exceeds hydraulic capacity (e.g., based on snow depths and predicted weather conditions.)

b) TDG Abatement Measures. Manage spill toward meeting water quality criteria for TDG during all flows below 7Q10 levels, but only to the extent consistent with meeting the passage and survival standards set forth in the HCP and Fish Management Plans, as follows:

(1) Minimize voluntary spill

(2) During fish passage, manage voluntary spill levels in real time in an effort to continue meeting TDG numeric criteria, using the Operational Plan for TDG,

(3) Minimize spill, to the extent practicable, by scheduling maintenance based on predicted flows

(4) Avoid spill by continuing to participate in the Hourly Coordination Agreement, or any successor agreement to which Chelan PUD is a party, to the extent it reduces TDG

(5) Maximize powerhouse discharge as appropriate up to 212 kcfs.

(6) Implement alternative spillway operations, using any of gates 2 through 12, to determine, in consultation with the RRFF and HCP Coordinating Committee, whether TDG levels can be reduced without adverse effects on fish passage. If effective, implement to reduce TDG.

c) Gas Bubble Trauma Study. Chelan PUD shall prepare and implement a study of Gas Bubble Trauma (GBT). Such study may be included as part of the biological study for the GAP. The proposed study plan (including scope) and study results should be closely coordinated with the RRFF and the HCP Coordinating Committee, subject to Ecology approval. The final study plan and final study report will be peer-reviewed by recognized experts.

d) Determination of Compliance. In Year 5 of the effective date of the New License, Chelan PUD shall prepare a report summarizing the results of all TDG studies performed to date, and describing whether compliance with the numeric criteria has been attained. If Ecology concludes, upon reviewing such report and other applicable information, that the Project complies with the applicable TDG numeric criteria, Ecology, in consultation with Chelan PUD, will determine which measures will be continued for the term of the New License to maintain such compliance. If Ecology concludes that compliance with the TDG numeric criteria has not been attained, Chelan PUD shall prepare a report that evaluates what measures (operational and structural) may be reasonable and feasible to implement to further reduce TDG production at the Project. Probable and possible impacts to fish species from such TDG abatement

methods shall be included in the report. Chelan PUD shall also submit a report to Ecology summarizing GBT monitoring and other relevant information regarding the effects of TDG produced by the Project on aquatic life. Chelan PUD shall submit these reports to Ecology, members of the RRFF, and members of the HCP Coordinating Committee.

e) Actions if TDG Numeric Criteria Not Achieved. If compliance with numeric TDG criteria has not been achieved within five years of the effective date of the New License, Ecology will proceed as described below. Such determination shall be based on an analysis of the water quality standard for TDG from the perspective of attainability and biological necessity, as provided in subsections (1) and (2), below:

(1) Aquatic Life Adversely Affected. Upon receipt of the section d) reports, Ecology will determine, based on the monitoring data and analysis provided by Chelan PUD, as may be supplemented by the RRFF and/or the HCP Coordinating Committee, whether aquatic life has been adversely affected, or insufficient information exists to conclude that it has not been adversely affected, by TDG resulting from the Project. If Ecology determines an effect has occurred or insufficient information exists, it shall then further determine, in consultation with Chelan PUD and the RRFF, whether additional reasonable and feasible measures exist to further reduce TDG without significant adverse impact to fish species, and, if so, Chelan PUD shall begin implementation, which may include structural modifications. Ecology retains the right to make the final determination with respect to measures it requires to be implemented to reduce TDG subject to FERC approval, when needed. Nothing limits either Ecology's or Chelan PUD's option to evaluate new, additional or previously evaluated alternatives to abate TDG. Ecology may also require Chelan PUD to perform additional engineering studies of TDG abatement structures or operations. Notice should be given to all parties potentially affected by this decision. If structural modifications are necessary and found reasonable and feasible, Chelan PUD shall provide design, construction and final assessment reports to Ecology in a timely manner as determined by Ecology. If it appears to Ecology based on the information before it that no reasonable and feasible TDG abatement measures may exist, Ecology will follow the procedures set forth in subsection (g) below in processing a related rule petition that Chelan PUD may file. If the Corps of Engineers requires a 404 permit, Ecology retains its option to issue a separate water quality certification for construction.

(2) Aquatic Life Not Adversely Affected: If Ecology determines, under subsection (1), that aquatic life has not been adversely affected by TDG resulting from ongoing Project operations, Chelan PUD shall consult with Ecology and the RRFF to determine if any additional reasonable and feasible measures may exist to meet the TDG standards. If Chelan PUD concludes that no other additional reasonable and feasible measures exist to reduce TDG, Chelan PUD may petition Ecology to modify the standards as described below.

f) Chelan PUD may petition Ecology for a rule change to the TDG standard after Year 10 or sooner, if Chelan PUD believes that it can demonstrate it has done everything reasonable and feasible to attain the TDG numeric criteria at that time. In evaluating whether all reasonable and feasible measures have been done as part of reviewing such petition, Ecology will, among other relevant factors, consider information regarding biological impacts of TDG caused by the Project and the extent to which the Project has

achieved the Biological Objectives. However, to be granted, any petition for a rule change must satisfy any additional legal requirements that are applicable.

g) If, in conformance with the above, Chelan PUD petitions Ecology to modify the standards to eliminate any non-compliance with such standards, and files a timely and scientifically robust petition, Ecology will provide a schedule for the evaluation and completion of action on such rulemaking petition. Such schedule shall provide target dates for Ecology's determination of whether to grant or deny the petition, and, if granted, for submission of proposed rule change to EPA. While such petition is pending before Ecology and EPA, no non-compliance orders or penalties for TDG violations shall be issued against Chelan PUD, as long as Chelan PUD continues to operate in accordance with the GAP and this Certification.

2) **Definition of Fish Spill**. For purposes of compliance, the "fish spill" season, found in Ecology regulations (currently codified as WAC 173-201A-060(4)(b)) shall be designated to occur from April 1 through August 31; and "non-fish spill" season shall be designated to occur from September 1 to March 31, unless otherwise specified in writing by Ecology following consultation with the RRFF and the HCP Coordinating Committee. Should spill for fish cease to be required by the fish agencies, the regulatory exemption for elevated levels of TDG occurring during fish spill shall no longer be applicable.

3) **Gas Abatement Plan (GAP)**. The GAP (required by WAC 173-201A-060(4)(b), 1997, and WAC 173-201A-510(5)(b)(iii), 2003) shall be revised annually, to reflect any of the above changes, and new or improved information and technologies, and submitted to Ecology for review and approval, by April 1 of the year of implementation. The GAP shall be accompanied by an up-to-date operations plan, a fishery management plan, a physical monitoring plan and a biological monitoring plan (e.g., for GBT). The GAP shall include a copy of the "Fish Passage Plan" (or its alternate, as describe above) for the coming year. Beginning in Year 10 and every 10 years thereafter, the GAP update shall include a review of reasonable and feasible gas abatement options to incrementally reduce TDG caused by the Project, in light of new information and technology. If any reasonable and feasible measures are identified, an implementation plan shall be included in the GAP. In determining whether options to reduce TDG levels are reasonable and feasible, Ecology will consider data and analyses presented by Chelan PUD, the RRFF and affected tribes regarding biological impacts of TDG at the Project.

4) **Annual Reports** Chelan PUD shall perform the following for the term of the New License or until no longer required by Ecology, whichever occurs sooner. To monitor compliance with the TDG numeric criteria, Chelan PUD shall report the results of the TDG monitoring, including forebay monitoring data reported by the Rock Island Project, the use of any gas abatement measures, and spill levels to Ecology annually. Chelan PUD will also report the biological effects of GBT. Presentation of TDG monitoring results in the annual monitoring report should include the following:

a) Flow over the preceding year (cfs over time)

b) Spill over the preceding year (cfs and duration)

c) Reasons for spill (e.g., for fish, turbine down time)

d) TDG levels during spill (hourly)

e) Summary of exceedances and what was done to correct the exceedances

f) Results of the fish passage efficiency (FPE) studies and survival per the HCP

g) Analysis of monitoring data for confirmation or refinement of the regression equations in the WQMP (Table 2-7, Rocky Reach TDG Compliance Table) used to predict compliance with TDG numeric criteria

h) Results of all monitoring and studies performed for TDG control and abatement shall be provided to Ecology in a format acceptable to Ecology.

5) Operational and structural changes (e.g., those identified in the Biological Opinion for the Project) that may affect TDG must be subject to review and approval by Ecology during the design and development phase to assure that such changes incorporate consideration of TDG abatement, when appropriate.

6) Chelan PUD shall continue operations as described above under 1 through 5, unless modified by a rule change or an amendment to this Certification.

7) **Total Maximum Daily Load (TMDL).** This Certification, along with the WQMP and the updated GAPs, is intended to serve as the Rocky Reach Project's portion of the Detailed Implementation Plan (DIP) for the Mid Columbia River and Lake Roosevelt TDG TMDL.

5.5 *TEMPERATURE*

1) **Water Quality Management Plan (WQMP).** Chelan PUD shall implement Section 4 of the WQMP. This includes the following:

a) Chelan PUD shall monitor hourly water temperatures in the forebay and tailrace annually from April through October for the term of the New License and any subsequent annual licenses or until such monitoring is no longer required by Ecology, whichever occurs sooner. Chelan PUD shall monitor water temperatures in the juvenile bypass system and upstream fishway for one year, unless Ecology determines, in consultation with the RRFF, that additional monitoring is required. Chelan PUD shall also compile hourly water temperature data from the Wells dam tailrace for the term of the New License or any subsequent annual licenses or until such data collection is no longer required by Ecology, whichever occurs sooner. All monitoring shall be performed in accordance with a QAPP, prepared as described in Section 5.7 of this Certification.

b) Chelan PUD will collect or compile meteorological and water temperature data, including hourly water temperature data from the Wells dam tailrace, for at least the first five (5) years of New License; such data shall be of sufficient quality to meet technical peer review group standards for running the CE-QUAL-W2 model.

c) Using the data collected in the first five years of the New License, Chelan PUD shall run the CE-QUAL-W2 model to evaluate the Project compliance with numeric temperature criteria. Chelan PUD shall evaluate, as feasible, the causes of any modeled

exceedances. Chelan PUD shall provide a report to Ecology summarizing the results of the ten years of monitoring and modeling (first five years of the new FERC license plus five previous years). The input data, modeling, and results shall be subject to a peer review and review by Ecology. Chelan PUD shall provide the results to Ecology in Year 6 of the New License.

d) If Ecology concludes that the Project is in compliance with numeric temperature criteria, the aforementioned monitoring and/or analysis requirements may be reduced or eliminated by Ecology. Chelan PUD shall evaluate, as feasible, the causes of any modeled exceedances and include this analysis in the report to Ecology. If Ecology, in consultation with the technical peer review group, concludes that the analysis is deficient with respect to data input or inappropriate modeling assumptions or procedures and this deficiency is judged to potentially result in significant inaccuracy, Ecology reserves the right to request revision and re-running of the model based on revised data, assumptions or procedures.

e) If the Project is out of compliance with the numeric temperature criteria, Chelan PUD shall submit documentation to identify how it intends to come into compliance. However, in lieu of submitting such documentation, Chelan PUD may, upon a showing to Ecology that no reasonable and feasible improvements exist, request a change to water quality standards as appropriate and consistent with legal requirements. In evaluating whether all reasonable and feasible measures have been taken, Ecology will consider, among other relevant factors, information regarding biological impacts of temperature non-compliance caused by the Project and the extent to which the Project has achieved the Biological Objectives.

f) If, in conformance with the above, Chelan PUD petitions Ecology to modify the standards to eliminate any non-compliance with such standards, and files a timely and scientifically robust petition, Ecology will provide a schedule for the evaluation and completion of action on such rulemaking petition. Such schedule shall provide target dates for Ecology's determination of whether to grant or deny the petition, and, if granted, for submission of proposed rule change to EPA. While such petition is pending before Ecology and EPA, no non-compliance orders or penalties for temperature violations shall be issued against Chelan PUD, as long as Chelan PUD continues to operate in accordance with this Certification.

g) Chelan PUD shall maintain the calibrated CE-QUAL-W2 model and data used for the 10-year analysis and make the data and model available to EPA, Ecology, affected tribes and other entities involved in the TMDL implementation program. Chelan PUD will participate and cooperate with the parties implementing the TMDL.

h) Chelan PUD, as part of its participation in tributary restoration planning and implementation under the HCP, will help identify opportunities to improve water temperature in the tributaries.

2) **Temperature TMDL**. Ecology anticipates that EPA will issue a temperature TMDL for the Columbia River at some future date. If provisions of the temperature TMDL are more protective of temperature, such provisions shall supersede any conflicting provisions of this Certification, subject to FERC approval, if needed. If a TMDL is not timely approved,

Ecology reserves the right to address any temperature exceedences as may be necessary to meet state water quality standards for temperature.

5.6 LOCALIZED PROJECT EFFECTS

1) **Macrophyte Beds**. Chelan PUD shall implement the actions identified in the WQMP, Section 4, with respect to localized impacts on macrophyte beds. Chelan PUD will develop a QAPP (per requirements in Section 5.7 below) to determine if the water quality criteria for dissolved oxygen (DO), temperature and pH are met in shallow water habitats, including macrophytes beds, in the reservoir. If measurements reveal non-compliance with water quality numeric criteria or potential problems for designated uses, further sampling will be conducted, in coordination with the RRFF and Ecology, to determine the impact on aquatic habitat and associated biota. This additional sampling will be coordinated with any concurrent resident fish monitoring that may be developed by Chelan PUD, in consultation with the RRFF. If such impacts are found to be significant and caused by the Project, Chelan PUD will consult with the RRFF and Ecology to determine what actions may be reasonable and feasible to protect aquatic life. If monitoring of water quality in shallow water habitats shows noncompliance with water quality standards for pH, DO, or temperature, and substantial evidence exists that the project causes such noncompliance, Chelan PUD shall, in consultation with the RRFF and Ecology, identify any actions that are reasonable and feasible to protect aquatic life that may be adversely affected from such noncompliance and propose an action plan for Ecology's approval or modification.

2) **Aquatic Invasive Species (AIS).** Within one year of the effective date of the New License, in consultation with the RRFF, Chelan PUD shall develop and begin implementation of an AIS Monitoring and Control Plan (Monitoring Plan) for the Rocky Reach Project, to monitor for presence of new invasive species at or near Project facilities. The Monitoring Plan shall be coordinated with the Ecology's Freshwater Aquatic Weed Control Program The Monitoring Plan and implementation shall include the following components:

   a) Signage at boat launches and distribution of educational materials and boater questionnaires to voluntary participants at Rocky Reach Reservoir boat launch sites during the peak boating season (May 1 – October 30 each year) to increase boater awareness of dangers of spreading AIS, including the methods one can take to decrease the spread of AIS (e.g., clean the weeds off the boat and drain the live well before going to a new waterbody)

   b) Methodology and schedule of prevention, monitoring and control measures to regarding the presence and movement of AIS at or near Project facilities.

   c) An annual report of monitoring and educational activities conducted each year.

3) **Stormwater**. Chelan PUD shall comply with state stormwater requirements as they apply to the Project.

5.7 MONITORING AND REPORTING WATER QUALITY PARAMETERS

1) **Monitoring Plans**. Within one year of the issuance of the effective data of the New License, Chelan PUD shall prepare quality assurance project plans (QAPP) for all studies included in the WQMP and submit them to Ecology for review and written approval. A QAPP shall be

prepared for all water quality monitoring, including TDG and temperature studies, the proposed GBT study, and monitoring water quality in shallow water habitat in the reservoir.

2) **QAPP**. The QAPP shall follow the Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies (July 2004, Ecology Publication Number 04-03-030) or its successor. The QAPP shall include, at a minimum, a list of parameters to be monitored, a map of sampling locations, and descriptions of the purpose of the monitoring, sampling frequency, sampling procedures and equipment, analytical methods, quality control procedures, data handling and data assessment procedures, and reporting protocols. Chelan PUD shall review and update the QAPP annually based on a yearly review of data quality. Ecology may also require future revisions to the QAPP based on monitoring results, regulatory changes, changes in project operations and/or the requirements of TMDLs. Changes proposed by Chelan PUD need written approval by Ecology before taking effect, and shall be implemented as approved or modified by Ecology.

3) The TDG monitoring program shall be at least as stringent as the QA/QC calibration and monitoring procedures and protocols developed by the USGS monitoring methodology for the Columbia River.

4) **Implementation**. Implementation of each QAPP shall begin as soon as Ecology has provided Chelan PUD with written approval of the plan.

5) **Peer Review**. Chelan PUD shall coordinate a technical peer review of any proposed monitoring, study plans, or study plan results, should Ecology request such. Ecology shall be a participant or observer. Results of such peer review shall be summarized and provided to Ecology.

6) Hourly TDG information shall be made available to the public via Chelan PUD's website, as close to the time of occurrence as technologically feasible.

7) **Notification Regarding TDG Spill.** Chelan PUD shall notify Ecology, Central Regional Office, Water Quality Program within 48 hours (either before or after) of any TDG spill; this includes the start of spill for fish, as defined above, and any deviation from the Operational Plan for TDG or the fish spill plan that adversely affects TDG levels. This notification may be either electronic or written.

8) **Annual Report.** Water quality monitoring results, along with a summary report, shall be submitted by March first of each year to the Department of Ecology, Central Region Office, Water Quality Program. Observed violations shall be highlighted. Ecology will use the monitoring results to track the Project's progress toward meeting and remaining in compliance with state water quality standards.

9) **Duration of Monitoring and Reporting:** The monitoring and reporting required under this Certification are intended to continue throughout the life of the New License and any subsequent annual licenses, or until such monitoring is modified or no longer required by Ecology, whichever occurs sooner.

5.8 CONSTRUCTION ACTIVITIES

1) Ecology may require a separate 401 water quality certification if another Federal permit is needed for construction of any development or mitigation project.

2) All water quality criteria as specified in WAC 173-201A apply to any construction work needed to implement development or mitigation projects required under the New License.

3) Unless otherwise stated in a separate 401 certification (described above), the turbidity criterion for Class A waters (WAC 173-201A-030(2), 1997) may be modified to allow a temporary mixing zone during and immediately after in-water or shoreline construction activities that disturb in-place sediments. A temporary turbidity mixing zone is subject to the constraints of WAC 173-201A-100(4) and (6) and may be authorized by Ecology only after the activity has received all other necessary local and state permits and approvals, and after the implementation of appropriate best management practices (BMPs) to avoid or minimize disturbance of in-place sediments and exceedences of the turbidity criterion. The temporary turbidity mixing zone for waters with flows greater than 100 cubic feet per second (cfs) at the time of construction is 300 feet downstream of the activity causing the turbidity exceedences.

4) For all construction activities under the New License, a water quality protection plan (WQPP) shall be prepared and implemented for each project involving work in or near water. The WQPP shall include:

   - a copy of the Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW) for the project;
   - a description of all Best Management Practices (BMPs) to be employed for in and near-water work;
   - a plan for sampling and monitoring during construction;
   - a plan for implementing mitigation measures should a water quality violation occur; and
   - a procedure for reporting any water quality violations to Ecology.

5) Chelan PUD shall submit each WQPP to Ecology for review and written approval prior to starting work.

5.9 Spill Prevention And Control

1) RCW 90.56 prohibits any discharge of oil, fuel or chemicals into state waters or onto land where such contaminants could potentially drain into state waters.

2) Chelan PUD shall keep records of the amounts of oil used on-site for any oil-using components at each development. These records shall be made available to Ecology upon request.

3) Chelan PUD shall comply with its most recent approved version of the Spill Prevention Control and Countermeasure (SPCC) Plan for the Project and shall make available to Ecology during any on-site inspection.

4) Chelan PUD shall coordinate spill response planning and efforts with other hydroelectric facilities on the Columbia River such as through its participation with the Columbia-Snake River Spill Response Initiative (CSRSPI). Chelan PUD shall train employees in the proper

response techniques and the proper use and deployment of equipment.

5) Activities causing distressed or dying fish, fish kills, or any discharge of oil, fuel, or chemicals into state waters, or onto land or structures where such contaminants could potentially drain into state waters, are prohibited.

6) Clean-Up. In the event of a discharge of oil, fuel or chemicals into state waters, or onto land or such structures where such contaminants could potentially drain into state waters, containment and clean-up efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Clean-up shall include proper disposal of any spilled material and used clean-up materials.

7) Reporting. Spills into state waters, spills onto land where contaminants could potentially drain into state waters, or cause fish kills or any other significant water quality problems, shall be reported immediately to Ecology's Spills Response Program, in the Central Regional Office, at 1-800-258-5990. Notification shall include a description of the nature and extent of the problem, any actions taken to correct the problem, plus any proposed changes in operations to prevent further problems. Chelan PUD also shall notify Ecology's Water Quality Program in the Central Regional Office within 48 hours, with a written follow-up report within two weeks of the incident.

6.0 CERTIFICATION

1) Any person who fails to comply with any provision of this Certification shall be liable for criminal and civil penalties as provided for under state and/or federal law.

2) This Certification may be appealed. An appeal must be filed with the Pollution Control Hearings Board, P.O. Box 40903, Olympia, Washington 98504-0903 within thirty (30) days of your receipt of this Order. At the same time, the appeal must also be sent to the Department of Ecology, Central Region Office, 15 W. Yakima Avenue, Suite 200, Yakima, Washington 98902. An appeal alone will not stay the effectiveness of this Certification. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B RCW.

Dated this 17th day of March, 2006 at Yakima, Washington.

G. Thomas Tebb, L.E.G.
Central Region Office
Department of Ecology

APPENDIX A
Inter-Agency Agreement

INTER-AGENCY AGREEMENT
Between
WASHINGTON STATE
DEPARTMENT OF ECOLOGY
And
WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

REGARDING COORDINATION ON
ROCKY REACH HYDROELECTRIC PROJECT
August 2005

THIS INTER-AGENCY AGREEMENT (IA) is entered by Washington State Department of Ecology (Ecology) and Washington State Department of Fish and Wildlife (WDFW) (collectively the "Agencies") and describes the commitments and procedures to enhance coordination and cooperation between the agencies with respect to protecting water quality and aquatic species of the State of Washington affected by the Rocky Reach Project.

I. PURPOSE AND SCOPE

A. Ecology expects to issue a section 401 water quality certification (33 USC sec 401) to Public Utility District No. 1 of Chelan County, Washington (Chelan PUD) in the context of Chelan PUD's application to the Federal Energy Regulatory Commission (FERC) for a new long-term license for operation of the Rocky Reach Hydroelectric Project (FERC No. 2145). The 401 certification will assess and address the impacts to water quality resulting from the operation of the Rocky Reach Project and establish conditions to assure compliance with water quality standards, including the protection of designated uses of fish and other aquatic species. In particular, the section 401 certification will require actions or conditions for the protection of salmonids, Pacific lamprey, white sturgeon, bull trout, resident fish, and nonfish aquatic species affected by the project. In 2003, WDFW entered the Rocky Reach Project Habitat Conservation Plan (HCP) with Chelan PUD, among other signatories. Barring any unforeseen developments, WDFW and Ecology will enter a multi-party Settlement Agreement later in 2005. The Settlement Agreement will contain the mutually agreed obligations of Chelan PUD for the protection, mitigation, and enhancement of aquatic resources and water quality to be included in the FERC license for the project. Specifically, the Settlement Agreement will address obligations concerning anadromous fish resources by adopting as a proposed license article the HCP. Ecology anticipates that substantive and procedural commitments to protect, mitigate impacts to, and enhance aquatic resources, contained in the Settlement Agreement, will be incorporated as terms of the section 401 certification.

B. This IA is intended to provide a process for Ecology and WDFW to share technical expertise with respect to compliance with the terms and conditions of the Settlement Agreement and the section 401 certification as relate to the protection of water quality and aquatic species affected by the project. In general, this IA provides that WDFW, as the agency with greater expertise on Columbia River fisheries and aquatic resources, will monitor Chelan PUD's implementation of the protection, mitigation, and enhancement measures for salmonids, bull trout, sturgeon, lamprey, and resident fish and periodically report and consult with Ecology on these matters, as provided below. This assistance is intended to minimize the duplication of efforts, and recognizes that WDFW has certain expertise that Ecology does not currently possess. Ecology, as the agency with water quality authority, shall coordinate its implementation of water quality improvements with WDFW. This IA is designed to identify how responsibilities are to be shared. This agreement does not in way any limit, delegate, or diminish Ecology's legal authority, including but not limited to Ecology's authority to enforce or modify the section 401 certification or the Settlement Agreement, issue penalties, or seek any other relief.

II. CRITERIA FOR USE

A. Rocky Reach Settlement Agreement and Section 401 Certification. This IA shall serve to assist the implementation of the section 401 certification and the Settlement Agreement via collaboration between WDFW and Ecology. However, if either WDFW or Ecology fails to enter or withdraws from the Settlement Agreement, this IA shall remain in place, unless formally abrogated under section IV.

B. WDFW shall:

1. Provide technical support to Ecology with respect to compliance with the terms and conditions of the Settlement Agreement and the section 401 certification that address the protection of fish and other aquatic species affected by the project.
2. Represent Ecology on the Rocky Reach Fish Forum, except when Ecology wishes to participate directly. It is anticipated that WDFW will provide notice to Ecology of significant meetings, dispute resolution, reports of important meetings (via email or paper), and copies of important documents regarding this subject that Ecology has not already received. For purposes of any issue brought to dispute resolution under the Settlement Agreement, Ecology will represent itself, unless it notifies WDFW otherwise.
3. Provide written progress reports and, upon request, periodic oral briefings to Ecology regarding this subject. These shall be submitted at a minimum annually, by February 15th of each year following the year of implementation.
4. In the event that urgent problems may arise regarding fish or other aquatic species covered by the Settlement Agreement or 401 certification, promptly notify Ecology's primary contact and keep Ecology informed of actions being taken to address any such problems. WDFW shall to the extent feasible coordinate efforts to address such problems with Ecology.
5. Provide technical expertise for the modification of compliance measures, biological objectives, or water quality standards applicable to the project, if needed.
6. Provide litigation support related to the project in the form of technical advice and expert witnesses with respect to fish and other aquatic species.

C. Ecology shall:

1. Respond promptly to WDFW requests for coordination on fish management and water quality issues under the Rocky Reach Settlement Agreement and the section 401 certification.
2. Consult with WDFW on Ecology decisions relating to the project that specifically address or have potential to affect fish and other aquatic species.
3. Coordinate implementation of water quality improvements with WDFW.
4. Provide written progress reports and, upon request, periodic oral briefings to WDFW staff regarding compliance with the section 401 conditions. These shall be submitted at a minimum annually, by February 15th of each year following the year of implementation.

D. Both Agencies shall:

1. Designate a primary contact for purposes of this Interagency Agreement. This person shall be the one to whom notices are provided.
2. Work together to ensure consistent application of the Settlement Agreement and the section 401 certification with regard to the protection of water quality, fish, and other aquatic species.
3. Generally provide notice to and consultation with each other prior to taking any non-routine regulatory or compliance actions regarding areas covered by this IA. Specifically,

it is intended that the agencies will consult prior to taking action on new section 401 certification or hydraulic permit conditions or enforcement of existing conditions.

4. In the event that a dispute may arise with respect to the implementation of this agreement, the parties will meet to discuss the issue at the lowest possible levels. If such meetings are unable to resolve any issues satisfactorily, disputes may be elevated within the respective agencies, with final resolution, if needed, by agency directors.

III. REVISIONS

A. Revisions to this IA shall be provided in writing, and agreed to and signed by both parties.

B. Review of this IA shall occur at a minimum of every five years for updates.

IV. EFFECTIVE DATE AND TERMINATION

This IA is to be effective upon the date of signature below. This IA contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of this IA shall be deemed to exist or to bind either of the parties hereto. This IA may be terminated by either party upon a minimum of thirty (30) days written notice to the other party.

IN WITNESS WHEREOF, the parties execute this IA:

WASHINGTON STATE
DEPARTMENT OF FISH AND WILDLIFE

JEFF KOENINGS, WDFW Director

Date: 8/26/05

WASHINGTON STATE
DEPARTMENT OF ECOLOGY

JAY MANNING, Ecology Director

Date: 8/26/05

APPENDIX B
Water Quality Implementation Measures

WQ Parameter	PME Components	Effective Date	Frequency	Duration	Reporting Requirement	WQMP Section
TDG	*Measures to Meet Numeric Criteria and Standards*	*Effective Date of License*	*See below*	*Term of License*	*Annual Report to Ecology; Annual Gas Abatement Plan*	*4.1*
	Gas Abatement Plan (GAP)	Effective Date of New License	Annually	Term of License	GAP	4.1
	TDG Monitoring (Forebay and Tailrace at JBS Outfall; data from Rock Island Dam Forebay). Relocated tailrace monitor.	Effective Date of New License; relocate monitor by Year 2 of New License	Hourly from April – August during fish spill. As directed, outside fish spill.	Term of License or until Ecology no longer requires	Daily during April-May to Chelan PUD website. In Annual Report	4.1.1
	Operation Plan for Fish Passage Spill Management	Effective Date of New License	During fish spill	Term of License	In GAP	4.1.2
	Minimize Voluntary Fish Passage Spill *	Effective Date of New License	During fish spill	Ongoing to meet survival standards – Term of License	In Annual Report	4.1.3
	Minimize Spill Due to Maintenance *	Effective Date of New License	January - December	Term of License	In Annual Report	4.1.4
	Avoid Spill *	Effective Date of New License	January - December	Term of License	In Annual Report	4.1.5
	Maximize Powerhouse Discharge, Manage Active Storage *	Effective Date of New License	January – December, when flows exceed 200 kcfs	Term of License	In Annual Report	4.1.6.1
	Spill From Gates 2-12 *	Effective Date of New License	April – August, evaluate when flows exceed 200 kcfs	Term of License	In Annual Report	4.1.6.2

* To the extent consistent with the survival standards in the HCP and Fish Management Plans

WQ Parameter	PME Components	Effective Date	Frequency	Duration	Reporting Requirement	WQMP Section
	Monitoring of Aquatic Life for GBT (salmon, resident fish and macroinvertebrate studies)	Effective Date of New License	RI Dam for salmon annually April – August. Resident fish studies during high spill periods (May – July) in high flow years. Or as modified subject to Ecology approval.	Salmon Monitoring for five years. Resident fish and macroinvertebrate studies for 1-2 years or until database adequate to conclude either no effect or that TDG levels harm designated uses. Or as modified by peer review group.	Annual Report after each study.	4.1.7
	Determination of TDG Compliance at Year 5	Year 5	Once	Five years	Annual Report Final Determination	4.1.8
	Additional actions, which may include structural modification feasibility studies	Year 6, if criteria not met. If appropriate, begin feasibility studies by Year 6.	Not Applicable	If Implemented, Permanent Structure	Feasibility, Value Engineering, Design, Construction, and Final Assessment Reports.	4.1.8.1
	Actions if TDG Compliance Not Achieved	Year 6				4.1.9
	Aquatic Life Adversely Affected. Reasonable and feasible additional actions, which may include structural modification	Year 6	Annually	New Term of Compliance Schedule for Dams	As determined by Ecology	4.1.9.1
	Aquatic Life Not Affected. If no reasonable and feasible actions, Chelan PUD may petition Ecology for rule modification.	Year 6	Once	As needed to complete	As determined by Ecology	4.1.9.2
Temperature	*Measures*	*Effective Date of License*	*On going*	*Term of License*		*4.2*

WQ Parameter	PME Components	Effective Date	Frequency	Duration	Reporting Requirement	WQMP Section
	Water Temperature Monitoring during TDG Monitoring (Forebay and Tailrace; Rock Island Dam Forebay; record Wells Tailrace)	Effective Date of New License	Hourly during April – October	Term of License or until Ecology no longer requires	Daily during April-October to Regional Database. Annual Report	4.2.1
	Temperature Monitoring in Fishways and JBS	Effective Date of New License	Hourly during April – October	One year unless Ecology determines additional monitoring is required	Annual Report	4.2.1
	Temperature Modeling to Confirm Compliance	Effective Date of New License; modeling report due Year 6	Once, unless compliance not confirmed	At end of first five years.	6th Annual Report	4.2.2
	EPA Water Temperature TMDL Participation	Upon Implementation of TMDL	As needed	Term of License	As Required	4.2.3
	Tributary Watershed Participation and HCP Tributary Committee	Effective Date of New License	Annually	Term of License	Not Applicable	4.2
Flow	*Project Operations*	*On going*	*Annually*	*Term of License*		*4.3*
	Hourly Coordination	Effective Date of New License	On-going	Term of License	Annual status report	4.3
	Hanford Reach Agreement	Effective Date of New License	On-going	Term of License	Annual status report	4.3
Shallow Water Macrophyte Beds (temperature, DO and pH)	*Water Quality Monitoring*	*Effective Date of New License*	*In the initial year.*	*One year, unless RRFF determines additional monitoring is needed.*	*Annual Report*	*4.4*
Aquatic Invasive Species	*Aquatic Invasive Species Monitoring and Control Plan*	*Effective Date of New License*	*Annually*	*Term of License*	*Annual Report*	*4.5*
Spills of Oils and Toxics	*SPCC Plan & Columbia-Snake River Spill Response Initiative*	*Effective Date of New License*	*On-going, updated as required*	*Term of License*	*As required by SPCC regulation*	*4.6*

APPENDIX C
Biological Objectives and Implementation Measures per the Fish Management Plans to Support Existing and Designated Uses

Designated Use	Biological Objective	Evaluation Timeframe	Actions if Objective Achieved	Alternative Management Actions	Fish Management Plan Action
Salmonid Migration	HCP Plan Species (Chinook, Steelhead, Sockeye, Coho) 91% Project Passage Survival	By 2013	Maintain Action.	Additional Tools (bypass modifications, spill, other)	HCP Sections 3 and 5
Salmonid Harvest	HCP Plan Species NNI Hatchery Production Achieves 7%	By 2013	Maintain Action. Adjust 7% Production Level Every 10 Years	Modify hatchery facilities or use other method for artificial production (lake outplants)	HCP Sections 3 and 8
Salmonid Rearing	HCP Plan Species Tributary Fund Implements Habitat Improvements For NNI	By 2013	Maintain Action.	Modify type of projects funded	HCP Sections 3 and 7
Salmonid Spawning	HCP Plan Species Adult Passage Survival Included in 91% Project Passage Survival.	By 2013	Maintain Action.	Additional Tools	HCP Sections 3 and 5
Bull Trout Adult Upstream Passage	Take does not exceed 2% through the upstream fishway.	2005-2008	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Bull Trout Plan Sections 4.1.1-4.1.3
Bull Trout Adult Downstream Migration	Take does not exceed 5% passing through turbines; 2% passing through spillways; and 2% passing through the downstream bypass.	2005-2008	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Bull Trout Plan Section 4.1.2
Bull Trout Adult Rearing in the Reservoir	Take does not exceed 2 fish for the fish predator control program.	2005-2008	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Bull Trout Plan Section 4.1.2
Bull Trout Sub-adult Downstream	Take does not exceed limits when established by USFWS.	As recommended by the RRFF.	Maintain Action. Continue appropriate monitoring and the	Pursue feasibility of Project operations of fishway/bypass if migration problems are identified	Bull Trout Plan Sections 4.1.1-4.1.3

Designated Use	Biological Objective	Evaluation Timeframe	Actions if Objective Achieved	Alternative Management Actions	Fish Management Plan Action
Migration			adaptive management process.		
Bull Trout Sub-adult Rearing in the Reservoir	Take does not exceed limits when established by USFWS.	2005-2008	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problem(s).	Bull Trout Plan Section 4.1.2
White Sturgeon Natural Recruitment	Natural reproduction potential	Years 8-10, 13, and 18	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problem(s).	White Sturgeon Plan Section 4.4
White Sturgeon Population at Carrying Capacity	Increase the white sturgeon population in the Reservoir through supplementation to a level commensurate with available habitat and allowing for appropriate and reasonable harvest	Years 3-5, adjust stocking level; Years 6 – 50	Maintain Action. Continue appropriate monitoring and the adaptive management process.	RRFF to recommend stocking level, broodstock source. Develop and implement a plan, in consultation with the RRFF, to address identified problems	White Sturgeon Plan Sections 4.1-4.3; 4.6
White Sturgeon Harvest	Success in creating population with a stable age-structure that allows for limited harvest	Years 20 – 50	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	White Sturgeon Plan Sections 4.1-4.6
Pacific Lamprey Adult Upstream and Downstream Migration	Success similar to best experience at other similar projects (Adult upstream fish passage as defined by the RRFF)	By Year 5	(Continuous reassessment every 10 years)	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Pacific Lamprey Sections 4.1.1-4.1.7 and 4.4
Pacific Lamprey Juvenile Downstream Migration	Maintain safe, effective, and timely volitional passage Criteria (as defined by the RRFF)	TBD by RRFF with 5 year review by RRFF	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Pacific Lamprey Sections 4.2.1-4.2.2 and 4.4
Pacific Lamprey Rearing	Avoid and minimize Project impacts on rearing habitat	By Year 5	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Pacific Lamprey Sections 4.3 and 4.4

Designated Use	Biological Objective	Evaluation Timeframe	Actions if Objective Achieved	Alternative Management Actions	Fish Management Plan Action
Pacific Lamprey Overall Combined Goal	No Net Impact	TBD by RRFF	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Pacific Lamprey Section 4
Native, Non-Stocked Resident Fish Species	No negative impacts caused by ongoing Project operations.	Years 1-2, with subsequent surveys determined by RRFF	Maintain Action. Continue appropriate monitoring and the adaptive management process.	Develop and implement a plan, in consultation with the RRFF, to address identified problems.	Resident Fish Plan Section 4.2