



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

October 10, 2003

CERTIFIED MAIL

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Reid Brown
Relicensing Project Manager
Trinity Hydropower Project
3139 E. Lake Samammish SE
Samammish, WA 98075

**RE: Trinity Hydropower Project (FERC No. 719)
401 Certification / Order No. DE 03WQCR-5800**

Dear Mr. Brown:

The request for certification for the licensing of the Trinity Hydropower Project (FERC #719), Chelan County, Washington, has been reviewed. On behalf of the State of Washington, we certify that the project, as conditioned by the enclosed Order, will comply with applicable provisions of 33 USC 1311, 1312, 1313, 1316, 1317 and other appropriate requirements of State law.

The certification conditions are contained in the enclosed Order. If you have any questions, please contact Pat Irle at (509) 454-7864. Written comments and correspondence relating to this document should be directed to Section Manager, Water Quality Program, 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 Quality Program

GTT:wv

Enclosure

cc: Rod Mace, USFS
Walt Dortch, USFS
Tony Eldred, WDFW
H. Bruce Butts, Trinity Conservancy Inc.
Jocelyn Somers, USDA
William Frymire, WA Attorney General's Office
FERC Coordinator, USFS



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF GRANTING A)	ORDER
WATER QUALITY CERTIFICATION TO:)	NO. DE 03WQCR-5800
Trinity Hydropower Project)	Licensing of the Trinity
in accordance with 33 U.S.C. 1341)	Hydropower Project (FERC #719)
FWPCA § 401, RCW 90.48.260)	Chelan County, Washington
and Chapter 173-201A WAC)	

TO: Mr. Reid Brown
Project Manager
Trinity Conservancy Inc.
3139 E. Lake Sammamish SE
Sammamish, WA 98075

On October 11, 2002, Trinity Conservancy Inc (Trinity) filed an application with the State of Washington Department of Ecology (Ecology) requesting issuance of a certification under the provisions of 33 USC 1341 (FWPCA § 401) to be submitted with their application for a license to the Federal Energy Regulatory Commission for the Trinity Hydropower Project certifying that the project will comply with applicable provisions of 33 USC 1311, 1312, 1313, 1316, 1317 and with any other appropriate requirement of state law.

NATURE OF PROJECT:

The Trinity Hydropower Project is located on Phelps Creek, near the community of Trinity, located near Lake Wenatchee, in Chelan County. The current project generates between 25 and 75 kW of power. The project includes a diversion dam, approximately 10 feet high and 75 feet long. The diversion dam is approximately 11,000 feet upstream of the confluence of Phelps Creek with the Chiwawa River. Water for hydropower is conveyed from the intake at the dam via a 6,700-foot-long aqueduct to a settling tank, then from there through a 2,750-foot-long penstock to the powerhouse. Flow from the powerhouse empties into a tailrace, from which it flows approximately 647 feet into the Chiwawa River, just upstream of its confluence with Phelps Creek.

AUTHORITIES:

In exercising authority under 33 U.S.C. 1341 and RCW 90.48.260, Ecology has investigated this application pursuant to the following:

1. Conformance with all applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under 33 U.S.C. Sections 1311, 1312, 1313, 1316, and 1317 (FWPCA Sections 301, 302, 303, 306, and 307);
2. Conformance with the state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 U.S.C. 1313 and by Chapter 90.48 RCW, and with other appropriate requirements of state law; and,

3. Conformance with any and all applicable provisions of Chapter 90.48 RCW and of using all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.

FINDINGS:

- A. The Trinity Power Project was originally constructed in 1924 to support the Red Mountain Copper Mine. The mine ceased operation in the 1930s.
- B. The plant is currently being used to meet the electrical needs of approximately four households. Although the nameplate capacity is 240 kW, the project currently is used to produce between 25 to 75 kW.
- C. Primary fish of concern in the vicinity are spring Chinook, steelhead and bull trout. Phelps Creek is flow limited, meaning that the flows needed for the preferred depths and velocities of these fish do not normally occur during the low flow months. Thus it is desirable to minimize the amount of water diverted during the low flow months (August-Oct 15) and return it as far upstream in Phelps Creek as feasible. Daily maximum temperatures in Phelps Creek did not exceed 16 °C for the years 1999 to 2001.
- D. A combination of measures have been identified that would return increased flows in the bypassed portion of Phelps Creek. Essentially, these measures will return the lower portion of Phelps Creek to its natural flow during the low flow months. This area contains the most and best Chinook spawning habitat and includes bull trout spawning habitat. The measures include:
 - 1) Implementing conservation improvements to reduce the total water diverted during the low flow season (August-Oct 15) from 5.0 cfs to 1.8 cfs and to reduce the amount spilled at the settling tank from 1.0 cfs to 0.25 cfs.
 - 2) Creating a new tailrace that would capture outflow from the fish pond (0.3 cfs), which currently dissipates subsurface in the Chiwawa River floodplain, and redirect it into Phelps Creek.
- E. Another benefit of the tailrace relocation measures are that water would flow through 340 feet of a riparian environment and would provide additional juvenile rearing habitat, adding a total of 858 feet of aquatic habitat. The new tailrace would have an average slope of 3.5% which is suitable for juvenile salmonids.
- F. Maintaining a lower, minimal flow (0.25-0.50 cfs) through the existing tailrace would preserve the existing lentic and wetland habitats; it would retain the helicopter bucket dipping site used for fire suppression in the upper section; and it would preserve 70 linear feet of the existing juvenile rearing habitat.
- G. There currently is no diesel engine at the site. Introducing a diesel engine would adversely affect other environmental attributes, and greatly increase the risk of spill to the pristine waters. This certification is based on the premise that a diesel generator will not be introduced to the site.

- H. Trinity, Washington State Department of Fish and Wildlife, Ecology and the USDA Forest Service have worked collaboratively to develop flows deemed to minimize impacts of the Project on Phelps Creek and are reflected in this certification.

CONDITIONS:

I. HABITAT MODIFICATIONS IN THE NEW AND EXISTING TAILRACES

- A. No later than one year after the effective date of the license, Trinity must develop a detailed plan for construction of a new 858-foot tailrace to run from the existing power plant to enter Phelps Creek approximately 40 feet above the Hikers' bridge. This new tailrace will meet up with an existing outflow stream from the fish pond, and the combined flow will be redirected to an old stream channel leading to Phelps Creek. Construction should include standard river habitat restoration techniques to include structural roughness to moderate velocities and provide habitat diversity. Plans should include identification of appropriate native plant species, planting methods, and protection and watering for planting and maintaining native vegetation along the currently exposed portion of the new tailrace (517 feet).
- B. All necessary permits should be obtained and construction complete within one year of plan approval. An "As-Built" shall be prepared by Trinity after construction and/or modifications to improve habitat in the new channel and the tailrace. The "as-built" shall be of sufficient detail to identify specific logs and trees.
- C. No later than two years after the effective date of the license, a detailed plan for effectiveness monitoring and adaptive management responses (EMP) should be prepared and implemented.
- D. Plans should be developed in coordination with and subject to the approval of the relevant resource management and regulatory agencies (e.g., Ecology, USDA Forest Service, Washington State Department of Fish and Wildlife, US Fish and Wildlife Service, and NOAA Fisheries).
- E. In March of each year, Trinity shall provide to Ecology a the results from the EMP that (1) summarizes the results of implementation, (2) evaluates the need for modification of the program, and (3) recommends any new or modified restoration measures that are needed. Such recommendations shall contain a schedule for timely implementation.
- F. If consensus is achieved among Trinity, WDFW, USDA Forest Service and Ecology as to new or modified measures needed the recommendations shall be deemed to be part of this Order. However, Ecology retains authority to order new or modified measures if needed to achieve compliance with state or federal water quality standards or other appropriate requirements of state law. Such order shall be subject to appeal under state law. Any new or modified measures agreed by consensus or ordered by Ecology are deemed a condition of this 401 certification. If FERC

requests that such measures be submitted to it for its approval, Trinity shall petition FERC to so amend the license.

II. INSTREAM FLOWS FOR FISH

- A. Trinity shall operate the project such that the total water diversion at the existing diversion dam during the low flow months (August 1st through October 15th) is limited to an instantaneous maximum of 1.8 cfs. Flow restriction devices at the diversion dam and flow gage monitoring at the tailrace will be used to control and monitor flow.
- B. Trinity shall install computerized load management efficiencies to reduce peak load demand which would reduce the amount of water needed at the power plant by 0.25 cfs. This should reduce the current demand of 1.5 cfs to 1.25 cfs during the low flow season.
- C. Trinity will reduce the amount of water spilled at the settling tank to a maximum of 0.25 cfs during the low flow months based on the proposed water budget.
- D. If additional power plant efficiencies reduce the amount of water needed at the power plant, the first 0.25 cfs reduction from the 1.25 cfs used at the power plant may be used to increase the amount spilled at the settling tank (increasing it to an instantaneous maximum 0.5 cfs). Any additional efficiency reductions, beyond the first 0.25 cfs, will be used to reduce the total water diverted during the low flow months from the current maximum of 1.8 cfs. Additional flow restriction devices will be installed to meet the new instantaneous maximum flow limit.
- E. Trinity shall maintain the beneficial uses of the existing tailrace (635 feet to the Chiwawa River) with a minimal flow of 0.25 cfs except during the low flow months when no flow will be released down the existing tailrace to the Chiwawa River. Except during the low flow months, if the beneficial uses are not maintained, the flow may be increased up to 0.5 cfs, but still will be zero during the low flow months. This determination of an increase to 0.5 shall be made by agreement among the relevant management and regulatory agencies (Ecology, the USDA Forest Service, Washington State Department of Fish and Wildlife, US Fish and Wildlife Service, and NOAA Fisheries).
- F. At any time, including during the low flow months, up to 0.75 cfs may be put down the existing tailrace to fill the tailrace pond when needed for emergency fire suppression.
- G. The project shall provide and maintain the following instream flows at the locations identified, as shown in Table 1.

Table 1. Water Budget for Trinity Hydropower Project (cfs)

	Current Aug to Mid-Oct (Low Flow)	Proposed Aug to Mid-Oct (Low Flow)	Proposed Mid Oct - April (Winter, Typical)	Proposed Mid Oct - April (Winter, Worst Case)	Proposed May - July (Spring, Typical)	Proposed May - July (Spring, Worst Case)
Water diverted at dam	2.80	1.80	3.55	4.50	2.30	5.00
Used by settling tank, returned to Phelps	1.00	0.25	1.00	1.00	0.50	1.00
Remainder, water sent to Trinity site	1.80	1.55	2.55	3.50	1.80	4.00
Used by power plant	1.50	1.25	2.25	3.20	1.50	3.70
Used by fish pond, domestic	0.30 ¹	0.30	0.30	0.30	0.30	0.30
Water returned to Phelps and Chiwawa	1.50	1.55	2.55	3.50	1.80	4.00
Returned to Chiwawa via old tailrace ²	1.50	0.00	0.25	0.50	0.25	0.50
Returned to Phelps via new tailrace	N/A	1.55	2.30	3.00	1.55	3.50

¹ Under current conditions, outflow from the pond dissipates subsurface.

² Existing tailrace flow will start at 0.25 cfs (except during low flows from Aug 1 to Oct 15). If this flow does not maintain the existing tailrace pond level or habitat, then flow may increase to 0.50 cfs -- EXCEPT during low flow months.

H. The identified flows shall be provided by Trinity as soon as the appropriate modifications are made, but no later than two years after issuance of the license.

III. HABITAT CONSTRUCTION WORK

A. Turbidity Standards

- 1) Certification of this project does not authorize the applicant to exceed the turbidity standard for Class AA waters beyond the mixing zone described below. Turbidity in Class AA waters shall not exceed 5 NTU over background turbidity when turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

- 2) Consistent with WAC 173-201A-100(7) and -110(3), a mixing zone is established within which the turbidity standard is waived. The mixing zone is established to allow only temporary exceedances of the turbidity criteria during and immediately after project construction. The temporary turbidity mixing zone shall be as follows:
 - a. For waters up to 10 cfs flow at the time of construction, the point of compliance shall be 100 feet downstream from activity causing the turbidity exceedance.
 - b. For waters above 10 cfs up to 100 cfs flow at the time of construction, the point of compliance shall be 200 feet downstream from activity causing the turbidity exceedance.
 - c. For waters above 100 cfs flow at the time of construction, the point of compliance shall be 300 feet downstream from activity causing the turbidity exceedance.

B. Construction Water Quality Protection Plan (WQPP)

- 1) A water quality protection plan (WQPP) shall be prepared, and followed, for all in-water construction work related to the project. The plan shall include descriptions of all applicable Best Management Practices (BMPs) for in and near-water work. It should include procedures for monitoring water quality during construction, actions to implement should a water quality exceedance occur, and procedures for reporting any water quality violations to the Department of Ecology. The WQPP shall include all water quality protection measures consistent with a Hydraulic Project Approval (HPA) for the project.
- 2) Turbidity and dissolved oxygen shall be monitored 100 feet upstream of the location where in-water construction is taking place and at the point of compliance during construction. Samples shall be taken at a minimum of once each day during construction in or adjacent to any water bodies within the project area that may be affected by the construction.
- 3) A copy of the water quality protection plan shall be in the possession of the on-site construction manager, and available for review by Department of Ecology staff, whenever construction work is under way.

C. Minimum Best Management Practices for Construction

- 1) Work in or near the waterway shall be done so as to minimize turbidity and other water quality impacts.
- 2) The work shall include all reasonable measures to minimize the impacts of construction activity on waters of the state. Water quality constituents of particular concern are turbidity, suspended sediment, settleable solids, oil and grease, and pH. These measures include use of Best Management Practices (BMP's) to control erosion and sedimentation, proper use of chemicals, oil and chemical spill prevention and control, and clean-up of surplus construction supplies and other solid wastes.

- 3) During construction, all necessary measures shall be taken to minimize the disturbance of existing riparian, wetland or upland vegetation.
- 4) All construction debris shall be properly disposed of on land so that it cannot enter a waterway or cause water quality degradation to state waters. Retention areas or swales shall be used to prevent discharging of water from construction placement areas.
- 5) Trinity shall ensure that any fill materials that are placed for the proposed improvements to habitat in any waters of the state do not contain toxic materials in toxic amounts.
- 6) Coverage under an NPDES Aquatic Pesticides Permit for the Project shall be obtained prior to the use of any herbicides, pesticides, algicides that may be used in or adjacent to waters of the state, and any other applicable state requirement such as SEPA.

IV. WATER QUALITY MONITORING

A. Water Quality Standards

Phelps Creek is designated a Class AA water. The current water quality standards for Class AA waters are:

- 1) Temperature. Human sources are not allowed to cause the maximum daily temperature to exceed 16°C or to cause an increase of more than 2.8 °C above natural conditions.
- 2) Dissolved Oxygen (DO). DO must be greater than 9.5 mg/l.
- 3) Flow standards are shown in Table 1.

B. Monitoring and Reporting Results

- 1) Trinity shall monitor the above parameters at least twice a month, August to mid-October, at the Hiker's bridge and in the new tailrace just before it enters Phelps Creek.
- 2) Data shall be summarized and a report submitted annually. The report shall be submitted by March 1st of the year following the collection of the data.
- 3) Data shall be summarized and reported in a format approved by Ecology. A combination of table and graph is generally preferred. Any violations of state water quality standards should be highlighted.
- 4) Data reports shall be submitted to Department of Ecology, Water Quality Program, Central Regional Office.
- 5) Any observed values in violation of water quality standards in either Phelps Creek, below the dam, or in the Chiwawa River, or in the new or existing tailrace, for any of the parameters listed below shall be reported to Washington Department of Ecology, Central Regional Office immediately upon observation or no later than 48 hours with explanation for cause and notification

of the course of action taken. The parameters include temperature, pH, dissolved oxygen, turbidity, sheen observed from petroleum products, and fish dying.

C. Monitoring Plan Modifications

- 1) A more rigorous water quality sampling program for the listed parameters or additional parameters may be required by Ecology if necessary to protect water quality in the future based on monitoring results, regulatory changes, changes in project operations and/or requirements of TMDLs or to otherwise provide reasonable assurance of compliance with state water quality standards.
- 2) Trinity may petition Ecology to modify or eliminate parts of the monitoring program after a period of five years.

V. **OIL SPILL PREVENTION AND CONTROL**

A. Standards

Chapter 90.56 RCW prohibits any discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry into state waters.

B. Oil Spill Prevention, Containment, and Countermeasure Plan

An Oil Spill Prevention, Containment, and Countermeasure Plan must be prepared that covers all oil-filled equipment to be used at the site. The plan must include the following Best Management Practices (BMPs), at a minimum. The plan must be kept on site, in the possession of the person in charge of construction oversight, at all times during construction.

C. Minimum Best Management Practices for Spill Prevention

The following minimum BMPs apply:

- 1) Care must be taken to prevent any petroleum products, paint, chemicals, or other harmful materials from entering the water.
- 2) Visible floating oils released from construction or project operation shall be immediately contained and removed from the water.
- 3) All oil, fuel or chemical storage tanks shall be diked and located on impervious surfaces so as to prevent spills from escaping to surface waters or ground waters of the state.
- 4) Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters. No refueling of equipment shall occur over or within 50 feet of rivers, creeks, wetlands, or other waters of the state. Proper security shall be maintained to prevent vandalism.
- 5) No emulsifiers or dispersants are to be used in waters of the state without

prior approval from the Department of Ecology, Central Regional Office.

- 6) Wash water containing oils, grease, or other hazardous materials resulting from wash down of equipment or working areas shall be contained for proper disposal, and shall not be discharged into state waters.

D. Spill Response

- 1) In the event of a discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry 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.
- 2) Spills into state waters, spills onto land with a potential for entry into state waters, or other significant water quality impacts, shall be reported immediately to the Department of Ecology, Central Regional Office at (509) 575-2490 (24-hour phone number).
- 3) Trinity shall submit a detailed written report to Ecology within five (5) days of the spill event that describes the nature of the violation, corrective action, and/or planned steps to be implemented to prevent reoccurrence, results of samples taken, and any other pertinent information.
- 4) Compliance with this condition does not relieve the Trinity from responsibility to maintain continuous compliance with terms and conditions of this order or resulting liability from further failure to comply.

VI. INSPECTIONS AND ADMINISTRATION

- A. Trinity shall allow Ecology such access as necessary to inspect the project operations, project area and project records required by this certification in order to monitor compliance with the conditions of this order.
- B. Copies of this order and associated permits, licenses, approvals and other documents shall be kept on site and made readily available for reference by Trinity staff, its contractors and consultants, and by Ecology.

VII. GENERAL REQUIREMENTS

- A. All water quality criteria as specified in Chapter 173-201A WAC apply to the various waters affected by this project and Trinity shall comply with those criteria. Nothing in this order shall be construed to allow Trinity to violate Washington's water quality standards.
- B. Discharge of any solid or liquid waste to the waters of the state of Washington without approval from Ecology is prohibited.
- C. In the event of changes or amendments to the state water quality standards (Chapter 173-201A WAC), 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 also apply to this project and any attendant agreements, orders or permits.

- D. Trinity shall obtain Ecology review and approval before undertaking any change to the project that might significantly and adversely affect the water quality (other than project changes required or considered by this Order).
- E. This certification does not exempt compliance with the state's Shorelines Management Act.
- F. This certification does not exempt compliance with other statutes and codes administered by federal, state and local agencies.
- G. This certification will cease to be valid if the project is constructed and operated in a manner not consistent with the application for certification, or the attached conditions of the certification.
- H. This certification will cease to be valid and the applicant must reapply with an updated application if five or more years elapse between the date of the issuance of this certification and receipt of federal license.
- I. This certification will cease to be valid and the applicant must reapply with an updated application if the information contained in the application is voided by subsequent submittals to the federal agency.
- J. Ecology reserves the right to amend this Section 401 water quality certification if it determines that the provisions hereof are no longer adequate to provide reasonable assurance of compliance with applicable water quality standards or other appropriate requirements of State law. Such determination shall be based upon new information or changes in (i) the construction or operation of the project, (ii) the characteristics of the water, (iii) water quality criteria or standards, or (iv) effluent limitations or other applicable requirements of State law. Amendments of the 401 certification shall take effect immediately upon issuance, unless otherwise provided in the order of amendment, and shall be appealable to the Pollution Control Hearings Board pursuant to RCW 43.21B. Ecology shall transmit such orders to the Federal Energy Regulatory Commission to update the Commission's records as to the current certification conditions.
- K. Ecology reserves the right to issue orders or to initiate legal actions pursuant to state law or federal law to enforce the requirements of this certification, state and federal water quality requirements and standards, and any other appropriate requirements of state or federal water quality laws. Such authority includes the rights to assess civil or criminal penalties under state and/or federal law, to order compliance, and to obtain injunctive relief.

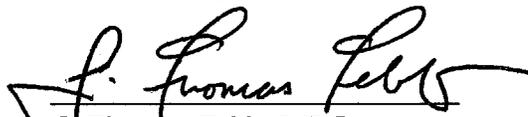
CERTIFICATION:

Subject to the above conditions and in accordance with 33 USC 1341, RCW 90.48.260 and Chapter 173-201A WAC, certification is granted to Trinity Conservancy Inc. for the Trinity Hydropower Project.

Any person who fails to comply with any provision of this Order shall be liable for a penalty of up to ten thousand dollars for each day of continuing noncompliance.

This Order may be appealed. Your 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, your appeal must also be sent to the Department of Ecology, Central Regional Office, 15 W Yakima Ave., Ste 200, Yakima, WA 98902. Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Chapter 43.21B RCW.

DATED this 10th day of October 2003 at Yakima, Washington.



G. Thomas Tebb, L.E.G.
Water Quality Section Manager
Central Regional Office
Department of Ecology
State of Washington