



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

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Mr. Victor A Engel, P.E.
Vice President, Engineering and Regulatory Affairs
Twin Falls Hydro Associates, L.P.
One Tech Drive, Suite 220
Andover, MA 01810

Dear Mr. Engel:

Re: Order No. 4002 (401 Certification Amendment)
Twin Falls Hydroelectric Project FERC No. 4885

Enclosed is Order No. 4002. This is the amendment to the 401 Certification issued to the Twin Fall project (FERC No. 4885) on April 1, 1983. The project is located on the South Fork Snoqualmie River Basin in King County, Washington. This amendment requires you to maintain the minimum instream flow at the Twin Falls Hydroelectric Project as cited in the Order.

If you have any questions, please contact Monika Kannadaguli, at (425) 649-7028. All written correspondence relating to this document should be directed to the Enforcement Coordinator, Department of Ecology, Northwest Regional Office, 3190 – 160th Avenue SE, Bellevue, WA 98008-5452. The enclosed Certification-Order may be appealed by the procedures described in the Certification-Order.

Sincerely,

Kevin C. Fitzpatrick
Northwest Region Manager
Water Quality Program

KCF:MK:ct
Enclosure

cc: FERC Service List
Magalie Roman Salas, Secretary, FERC, Washington, D.C.
Dave Peeler, Water Quality Program Manager
Monika Kannadaguli, Ecology
John Drabek, Ecology
Cyma Tupas, Ecology
Andrea Rodgers, Snoqualmie Tribe, In-House Legal Counsel
Ian Kanair, Snoqualmie Tribe, Environmental Protection Manager
Kevin Buckley, Snoqualmie Tribe, Environmental Protection Manager
Central Files: Twin Falls Hydroelectric Project



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF GRANTING) ORDER No. 4002
WATER QUALITY CERTIFICATION TO)
Twin Falls Hydro Associates, L.P.)
with Chapter 90 48 RCW and the)
Rules and Regulations of the)
Department of Ecology)

To: Mr. Victor A. Engel, P.E.
Vice President, Engineering and Regulatory Affairs
Twin Falls Hydro Associates, L.P.
One Tech Drive, Suite 220
Andover, MA 01810

This Order amends the Clean Water Act 401 Certification issued to Twin Falls Hydroelectric Project (FERC No 4885) on April 1, 1983, for operation of the Twin Falls Hydroelectric Project. This Order is issued under the provisions of chapter 90.48 RCW and chapter 173-201A WAC.

Through this Order the certification is hereby amended.

1.0 Nature of Project

The Twin Falls project is a small 24 MW hydroelectric facility located on the South Fork Snoqualmie River, approximately five miles southeast of North Bend, Washington. The Federal Energy Regulatory Commission (FERC) issued a license for the project on May 6, 1985. The project is owned by and licensed to Twin Falls Hydro Associates, L.P. (TFH), and managed by Twin Falls Hydro Company, Inc. Major project features include: (a) a 65-foot long, 9 9-foot high collapsible steel diversion weir located at river mile (RM) 11.3; (b) an intake structure, with a submerged entrance housing fish screens and a fish bypass system; (c) two 450-foot long by 8-foot diameter vertical intake shafts conveying water to an underground powerhouse; (d) a 2740-foot long access tunnel; (e) two 12,000 kilowatt (kW) generating units (horizontal Francis turbines) with a combined hydraulic capacity of 710 cfs; (f) a 3820-foot long outlet tunnel; and (g) a 1.1-mile long project bypass reach (RM 10.2 to RM 11.3)

Currently Twin Falls Project is operated in a run-of-river mode and has no useable storage capacity. Consequently, the project can only operate when the natural river flow is significantly greater than the required bypass reach minimum flow. Typically the project operates from October through mid-July and is shut down in the summer and early fall due to insufficient river flows.

Pursuant to Article 35 of the existing project license, the bypass reach minimum flow at the Twin Falls Project is 75 cfs or natural flow, whichever is less, from August through April, and 150 cfs or natural flow, whichever is less, from May through July. This minimum flow requirement is met via the spill over the end of the two fish screens in the intake tunnel and over the crestgate at the project dam. Each fish screen spill weir has its own staff gage and level sensor. The project's control system adjusts the turbine load to meet the minimum flow requirement and to control ramping rates in the reach below the tailrace

2.0 Findings

Project background information related to the certification amendment

- 1) The instream flow agreement for the Twin Falls project established an initial flow of 75 cfs for all months but May, June and July, when the minimum flows would be increased to 150 cfs to protect habitat for spawning rainbow trout. The agreement further stipulated that flows could be reduced to 75 cfs year-round if prescribed enhancement measures were found to compensate for any loss of trout caused by the project
- 2) Over the past 20 years TFH has conducted annual trout population surveys at several sites in the South Fork Snoqualmie River, monitored water temperature and total dissolved gas concentrations (TDG) at the project's diversion and tailrace, and installed boulders and large woody debris (LWD) in an "enhancement reach" in the river channel upstream of the project.
- 3) Beginning in 1996, by agreement among the resource agencies, the Tribes and FERC, the instream flows in the project's bypass reach have been held at 75 cfs year-round to evaluate the effect on trout populations and provide the data necessary to make a final determination on the minimum instream flow regime. The result of these efforts has shown not only that there has been no statistically significant decrease in trout numbers in the project's bypass reach at the 75 cfs test flow, but an actual increase in trout numbers in the enhancement reach.
- 4) On August 1, 2005, at a meeting of the majority of parties to the instream flow agreement, the state and federal fishery agencies stated that they would support an amendment to the FERC license making the 75 cfs year-round minimum instream flow at the project permanent.

3.0 General Requirements

- 1) The project shall comply with all water quality standards approved by the Environmental Protection Agency (currently codified in ch. 173-201A WAC), ground water quality standards (currently codified in ch. 173-200 WAC), and sediment quality standards (currently codified in ch. 173-204 WAC) and other appropriate requirements of state law.
- 2) In the event of changes or amendments to the state water quality, ground water quality, 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 Clean Water Act, such provisions, standards, criteria, or requirements shall apply to this project and any attendant agreements, orders or permits. Ecology will notify the Licensee through an Administrative Order of any such changes or amendments applicable to its project.
- 3) Discharge of any solid or liquid waste to the waters of the state of Washington without approval from Ecology is prohibited.
- 4) The Licensee shall obtain Ecology review and approval before undertaking any change to the project or project operations that might significantly and adversely affect the water quality or compliance with any applicable water quality standard (including designated uses) or other appropriate requirement of state law.
- 5) This Certification-Order does not exempt compliance with other statutes and codes administered by federal, state, and local agencies.

- 6) A Hydraulic Project Approval (HPA) (under 77.55 RCW) shall be acquired from the Washington State Department of Fish and Wildlife (WDFW) prior to any work in waters of the state
- 7) Ecology retains the right, by further Order, to modify schedules or deadlines provided under this Order or provisions it incorporates.
- 8) Ecology retains the right by Administrative Order to require additional monitoring studies or measures if it determines there is likelihood that violations of water quality standards or other appropriate requirements of state law have occurred or may occur, or insufficient information exists to make such determination.
- 9) Ecology reserves the right to amend this Order 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. Any such amended Order shall take effect immediately upon issuance, unless otherwise provided in the amended Certification-Order, and may be appealed to the Pollution Control Hearings Board (PCHB) under ch. 43.21B RCW.
- 10) Ecology reserves the right to issue 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 Order.
- 11) The conditions of this Order shall not be construed to prevent or prohibit the Licensee 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.
- 12) Copies of this Order and associated permits, licenses, approvals and other documents shall be kept on the project site and made readily available for reference by the Licensee, its contractors and consultants, and by Ecology.
- 13) The Licensee shall allow Ecology access to inspect the project and project records required by this Order for the purpose of monitoring compliance with its conditions. Access shall occur after reasonable notice, except in emergency circumstances.
- 14) The Licensee shall, upon request by Ecology, fully respond to all reasonable requests for materials to assist Ecology in making determinations under this Order and any resulting rulemaking or other process.
- 15) Any work that is out of compliance with the provisions of this Order, or conditions that result in distressed, dying or dead fish, or any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, or turbidity greater than 5 NTU over background conditions is prohibited. If these conditions occur, the Licensee shall immediately take the following actions:
 - a) Cease operations at the location of the violation to the extent such operations may reasonably be causing or contributing to the problem.
 - b) Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
 - c) Notify Ecology of the failure to comply. Oil or chemical spill events shall be reported immediately to Ecology's 24-Hour Spill Response Team at (800) 258-5990 within 24 hours. Other noncompliance events shall be reported to Ecology's Federal Permit Manager at (800) 424-8802.

- d) Submit a detailed, written report to Ecology within five (5) days that describes the nature of the event, corrective action taken and planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.
- e) Observed violations at the project shall be highlighted in the annual monitoring report.

16) The project shall meet the Class AA narrative standards listed in WAC 173-201A-030

Compliance with these requirements does not relieve the Licensee from responsibility to maintain continuous compliance with the terms and conditions of this Certification-Order or the resulting liability from failure to comply.

4.0 Monitoring and Reporting Requirement

Licensee shall submit to the Department for approval a two-year monitoring plan to ensure the dam meets the state water quality standards for temperature and dissolved oxygen. After two years of study, if the monitoring data shows that the project does not cause or contribute to any violation of water quality standards, then the Licensee may request to terminate further monitoring.

4.1 Flow

Licensee shall discharge from the Twin Falls Project diversion weir the following continuous minimum flows, or the inflow to the project, whichever is less, for the protection of aquatic resources in the South Fork Snoqualmie River: **at least 75 cubic feet per second (cfs) for the entire year.**

The minimum flow may be temporarily modified if required by operating emergencies beyond the control of the Licensee, or for a short period upon mutual agreement between the Licensee and Ecology. Ecology reserves the authority to require modification of the minimum flows if new information or analysis shows that the flows are inadequate to protect designated uses.

4.2 Operational Requirement

- 1) Licensee shall maintain a lowered crestgate when river temperatures are at or above 15.5°C in order to prevent project operation from causing unacceptable warming of the river.

5.0 Construction Projects, Miscellaneous Discharges, and Habitat Modifications

- 1) When a construction project meets the coverage requirements of the National Pollution Discharge Elimination System (NPDES) permit and State Waste Discharge General permit for stormwater discharges associated with construction activity, the Licensee shall either, at Ecology's discretion, apply for this permit and comply with the terms and conditions of the permit or apply for and comply with the terms of an individual NPDES permit.

5.1 Oil Spill Prevention and Control

- 1) No oil, fuel, or chemicals shall be discharged into waters of the state, or onto land with a potential for entry into waters of the state as prohibited by ch. 90.56 RCW and ch. 90.48 RCW.

- 2) Contain and remove from the water, visible floating oils released from construction or project operation.
 - a) 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, immediately begin and complete containment and cleanup efforts, taking precedence over normal work. Cleanup shall include proper disposal of any spilled material and used cleanup materials.
 - b) Do not use emulsifiers or dispersants in waters of the state without prior approval from Ecology, Northwest Regional Office.
 - c) Within three (3) months of receiving the amended license from FERC, establish an Ecology-approved on-site spill cleanup material inventory. Maintain this on-site inventory and a complete inventory list.
 - d) Project operators shall be familiar with and trained on use of oil spill cleanup materials. In the event of an oil spill, properly dispose of used/contaminated materials and oil and as soon as possible restock new supplies. Include records of proper disposal in the oil consumption records and keep copies of disposal records of contaminated cleanup supplies on-site for inspection.
 - e) Ensure that operational work boats and trained boat operators are available on short notice in the event of a spill. Install mechanisms as appropriate to safely launch or lower work boats into areas where work boats would be deployed in the event of an oil spill.
 - f) Identify and map floor drains. Post these maps at the project in a conspicuous location for use by operators and other personnel in the event of an oil spill. Seal floor drains that are no longer needed.
 - g) Install, or have on-site to deploy staircases, ladders, etc. which will allow for oil spill response staff to safely reach areas that could, in the event of an oil spill, need to be accessed to deploy sorbent pads and boom materials.
- 3) Transformers
 - a) Transformer deck containment area surfaces must be impervious. Conduct periodic inspections and resurface areas, fill cracks, caulk metal plate footings or otherwise ensure that containment areas will contain all spill fluids.
 - b) Obtain prior approval from Ecology before breaching containment areas for reasons other than containment area maintenance.
 - c) Conform to industry standards for protecting water quality and preventing and containing spills when transporting transformers and transformer oil.
 - d) Conduct weekly inspections of transformer deck containment area including an inspection of the drains leading to the OWS for freeze-up conditions. Remove any observed rainwater pooling in the containment areas.
- 4) Sump
 - a) Immediately repair all oil and water leaks.
 - b) Provide waterproof lighting in the sump or spotlights adequate to view the surface water in the sump. Provide a mechanism to satisfactorily deploy and recover sorbent boom in the sump area.

- 5) Oil, fuel and chemical storage containers, containment areas, and conveyance systems
 - a) Provide proper containment around each storage container (including transformers) or around a combination of storage containers as appropriate.
 - b) Regularly check all fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc, for drips and leaks. Maintain and properly store them to prevent spills into state waters.
 - c) Do not refuel equipment within 50 feet of rivers, creeks, wetlands, or other waters of the state.
 - d) Licensee is required to implement the BMPs for spills of oil or hazardous substances from Department of Ecology's *Stormwater Management Manual for Western Washington (SWMM)* or equivalent.
 - e) Maintain container inspection sheets to include: maximum container volume and an exact reading recording of the oil level by the staff/operator conducting the inspection.
 - f) Keep oil consumption records maintained on-site; provide these records to Ecology immediately upon request
 - g) Contain wash water containing oils, grease, or other hazardous materials resulting from wash-down of equipment or working areas for proper disposal, and do not discharge this water into state waters.
- 6) Other
 - a) Maintain site security at the project site to reduce chance of oil spills.
 - b) Initiate, plan for, document, and train staff for the deployment of General Response Plan and boom strategies. Review and update as needed annually.

6.0 Order

Any person who fails to comply with any provision of this Order No. 4002 shall be liable under the Clean Water Act for a penalty of up to twenty (20) thousand dollars per day and under the state Water Control Act, for a penalty of up to ten (10) thousand dollars per day per violation or such other amount as may be authorized under state law as exists now or may be amended during the term of the license

This order is based upon the currently available data and analysis for different parameters of concerns. Ecology reserves the right to make any further modifications to this document based upon any future TMDL findings.

Ecology retains continuing jurisdiction to make modifications hereto through supplemental order if it appears necessary to protect the public interest.

You have the right to appeal this Order to the Pollution Control Hearings Board. Pursuant to chapter 43 21 BRCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this order, your notice of appeal must contain a copy of the Ecology Order you are appealing.

You must file your appeal with the Pollution Control Hearings Board

Mail your appeal to:

The Pollution Control Hearings Board
PO Box 40903
Olympia, WA 98504-0903

OR

Deliver your appeal in person to:

The Pollution Control Hearings Board
4224 6th Ave SE Rowe Six, Bldg 2
Lacey, WA 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
PO Box 47608
Olympia, WA 98504-7608

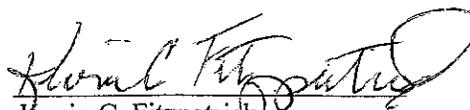
In addition, please send a copy of your appeal to:

Ms. Tricia Miller
Enforcement Coordinator
Department of Ecology
3190 - 160 Ave SE
Bellevue, WA 98008-5452

For additional information Environmental Hearings Office Website:
<http://www.eho.wa.gov>

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 Ch. 43.21B RCW

DATED January 25, 2007, at Bellevue, Washington


Kevin C Fitzpatrick
Water Quality Section Manager
Northwest Regional Office