



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

March 27, 2012

Mr. Mark Cauchy
Director Regulatory and Environmental Affairs,
Pend Oreille County Public Utility District No. 1
P.O. Box 190
Newport, WA 99156

Re: Mill Pond Dam Decommissioning and Sullivan Lake Cold Water Release Facility Installation
Project 401 Water Quality Certification Order No. 9039

Dear Mr. Cauchy:

The State of Washington, Department of Ecology (Ecology) has reviewed Pend Oreille County Public Utility District's request for certification under the Section 401 of the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. § 1341) for the Mill Pond Dam Decommissioning and Sullivan Lake Cold Water Release Facility in Pend Oreille County, Washington. Subject to and limited by the conditions stated in the enclosed Order, Ecology certifies that it has reasonable assurance that the project will comply with applicable provisions of 33 U.S.C. §§ 1311, 1312, 1313, 1316, and 1317, and other appropriate requirements of State law.

The enclosed Order may be appealed by following the procedures described in the Order.

If you have any questions, please contact Michael Maher at (509) 329-3584.

Sincerely,

Sara Hunt, Section Manager
Shorelands and Environmental Assistance Program
Ecology Eastern Regional Office

By Certified Mail

Enclosure

cc: Kimberly Bose, FERC
Pat Regan, FERC
Barbara Greene, SCL
John Armstrong, SCL
Bob Geddes, Pend Oreille County PUD
ecyrefedpermits@ecy.wa.gov



IN THE MATTER OF GRANTING A) ORDER NO. 9039
WATER QUALITY) Mill Pond Dam Decommissioning and
CERTIFICATION TO) Installation of a Cold Water Release Facility in
Pend Oreille County Public Utility) Sullivan Lake in Pend Oreille County,
District No. 1 in accordance with 33) Washington
U.S.C. 1341 (FWPCA § 401), RCW)
90.48.120, RCW 90.48.260 and Chapter)
173-201A WAC)

TO: Mr. Mark Cauchy
Pend Oreille County PUD No. 1
P.O. Box 190
Newport, WA 99156

On April 2, 2011, Pend Oreille County PUD #1 (District) requested that the Washington State Department of Ecology (Ecology) certify the proposed removal of the Mill Pond Dam and associated structures and the installation of a cold water release facility at Sullivan Lake. The proposed projects are in connection with the surrender of the District's Federal Hydropower License for the Sullivan Creek Project (FERC #2225-015). This request follows a previous request for federal Clean Water Act Section 401 Water Quality Certification (Certification) submitted on April 6, 2010 that was withdrawn on March 31, 2011 and resubmitted on April 2, 2011. The projects are located on Sullivan Lake, Sullivan Creek and Outlet Creeks within the Colville National Forest in northern Pend Oreille County, Washington.

1.0 PROJECT BACKGROUND

The Sullivan Creek Project was constructed in 1909 by the Inland Portland Cement Company to supply electricity to Metaline Falls. It consisted of Sullivan Lake dam, Sullivan Lake, Mill Pond dam, Mill Pond, an intake structure on Mill Pond, a wooden flume, a canal, a tunnel, and powerhouse. Mill Pond Dam, which operated to generate power under a Forest Service permit, was decommissioned in 1956 after a portion of the project's wooden flume collapsed. The turbines were removed from the powerhouse in 1958 and the turbine bays filled with rocks and gravel; the intake on Mill Pond was removed; and the remaining facilities were abandoned in place.

The Federal Power Commission, now the Federal Energy Regulatory Commission (FERC), issued the District a 50 year license for the project in 1958. Under the license, the District was authorized to operate a storage project benefiting generation at downstream projects, with the possibility of restoring generation at the site if it were economically feasible to do so. The District did not restore the project's generating facilities during the term of the license. The District's 50 year license for the Sullivan Creek Project expired on October 1, 2008, and the project is currently covered under an annual license.

Mill Pond, located at RM 3.5 on Sullivan Creek, was created when a log crib dam was constructed in 1909 by the Portland Cement Company. An un-gated concrete Mill Pond Dam was built in 1921 just below the log crib dam. Mill Pond Dam is 134 feet long and about 55 feet high and historically maintained the water surface elevation of Mill Pond at approximately 2,520

feet NAVD 88. In 1973, the supporting pillars were removed from the top of Mill Pond Dam creating an open spillway and establishing the current elevation at 2505.7 feet. Mill Pond Dam is a complete barrier to the upstream movement of resident fish (SCL 2009).

Mill Pond Dam has altered the natural sediment transport processes in Sullivan Creek by trapping all bed-load material behind the dam (USFS 1996). This has created a condition where Sullivan Creek downstream of Mill Pond Dam is sediment depleted (USFS 1996). Therefore, the sediment transport capacity exceeds the sediment supply in the reach below the dam, which results in a lack of appropriately sized spawning gravel for local trout populations and extensive armoring of the bed surface. Mill Pond Dam has also altered, to some extent, the downstream transport of large woody debris (LWD) (USFS 1996).

Water temperatures, measured at RM 1.7 by R2 Resource Consultants (1998), demonstrated the warming effect of Mill Pond Dam on waters discharged from Sullivan Lake and flowing towards the mouth of Sullivan Creek. During the summer months, water temperatures can exceed 16 °C, with Mill Pond Dam increasing Sullivan Creek water temperature by approximately 2.0 to 2.4 °C (Doug Robison, WDFW, pers. comm. 2009).

The dam removal project is detailed in the Mill Pond Dam Removal and Restoration: Alternatives Analysis and Evaluation of Recommended Alternative (McMillen 2010) (the "McMillen Report"), the Mill Pond Decommissioning Plan and further described within the Boundary Hydroelectric Project Relicensing Settlement Agreement FERC Project No. 2144 submitted to FERC and Ecology and includes;

- Removal of Mill Pond Dam and the associated log crib dam
- Sediment management of the Affected Area
- Restoration of Sullivan Creek stream channel through the Affected Area
- Implementation of site restoration measures for the Affected Area
- Conducting short term monitoring and maintenance
- Installation of a cold water release facility at Sullivan Lake

The Affected Area shall include (a) all of the area inundated by Mill Pond to the original ordinary high water mark of 2520 feet (NAVD 88), (b) the stream channel, (c) floodplain, and (d) any upland areas impacted or disturbed by any restoration or construction activities associated with the project, from immediately downstream of Mill Pond Dam up to and including the confluence with Outlet Creek.

Removal of the Mill Pond Dam will have the following impacts: (1) elimination of the man-made barriers to upstream fish passage which could potentially increase fish passage to 16 miles of new upstream habitat; (2) restoration of downstream transport of coarse sediment and LWD; (3) improvements to water quality in the form of reduced summer water temperatures due to reductions in water surface area and increases in water velocity in the area of Mill Pond; (4) the unavoidable loss of 63 acres of lake habitat, (5) short-term, local disturbances of fish and wildlife during deconstruction activities and (6) displacement of people seeking to recreate at Mill Pond to other nearby lakes.

Construction of the Cold Water Release Facility at Sullivan Lake: Results of the temperature modeling, productivity studies, entrainment studies and preliminary design studies conducted at Sullivan Lake indicate that a cold water release facility installed near the dam consisting of a 48-inch diameter pipe with fish screening at the pipe intake would be effective in lowering temperatures in Outlet and Sullivan Creeks during the summer and fall.

Installation of the gravity flow cold water release intake and pipe will have the following impacts: (1) short-term disturbance along the lake bed, (2) reduced entrainment of fish over the dam, (3) reduced water temperatures in Outlet and Sullivan Creeks and (4) a reduction in the loss of lake productivity due to no longer spilling temperature augmentation water from the upper productive portion of Sullivan Lake. No long term adverse water quality impacts are expected.

2.0 AUTHORITIES

In exercising authority under Section 401 of the Clean Water Act (33 U.S.C. § 1341), RCW 90.48.120 and RCW 90.48.260, Ecology has reviewed this application pursuant to the following:

- 1) Conformance with 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 §§ 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 the provision of using all known, available, and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.

3.0 WATER QUALITY CERTIFICATION CONDITIONS

In view of the foregoing and in accordance with Section 401 of the federal Clean Water Act (33 U.S.C. § 1341), RCW 90.48.260 and Chapter 173-201A WAC, Ecology finds reasonable assurance that the project as proposed and conditioned will comply with the applicable provisions of 33 U.S.C. Sections 1311, 1312, 1313, 1316, and 1317, state and federal water quality standards and other appropriate requirements of state law. Therefore, in view of the foregoing and in accordance with 33 U.S.C. 1341, RCW 90.48.260, RCW 90.48.120 Chapter 173-200 WAC and Chapter 173-201A WAC, a federal Clean Water Act Section 401 water quality certification is granted to the District subject to the following conditions within this Order.

3.1 General Conditions

- a. In this Order, the term "Applicant" shall mean Pend Oreille County Public Utility District No. 1 (District) and its agents, assignees and contractors.

- b. All submittals required by this Order shall be sent to Ecology's Eastern Regional Office Attn: Federal Project Coordinator, 4601 N Monroe St., Spokane, WA 99205-1295 or via e-mail to Ecology's Eastern Regional Office Federal Project Coordinator assigned to this project. All submittals shall be identified with Order No. 9039 and include the name of the owner of the project, project name, project location, the project contact and the contact's phone number.
- c. All notifications listed below shall be made via phone or e-mail to Ecology's Eastern Regional Office Federal Permit Coordinator assigned to this project.
- i. At least seven (7) days prior to any pre-construction meeting,
 - ii. At least seven (7) days prior to the start of work on the project site,
 - iii. At least seven (7) days prior to the dam breaching,
 - iv. Within seven (7) days of project completion,
- d. Work authorized by this Order is limited to the work described in the Boundary Hydroelectric Project Relicensing Settlement Agreement FERC Project NO. 2144 (Agreement) and its associated Appendices and Attachments (listed in the table below) submitted to FERC on March 29, 2010, unless otherwise authorized by Ecology.

Table 1

Plan Name	Prepared By	Date
Mill Pond Dam Removal and Restoration: Alternatives Analysis and Evaluation	McMillen	March, 2010
Sullivan Lake Cold Water Gravity Intake Memorandum	McMillen	March, 2010
Settlement Agreement- Project No. 2144	Seattle City Light (SCL)	March, 2010
Cold Water Release Facility Plan	EES Consulting	February, 2010
Appendix A – Protection, Mitigation and Enhancement	SCL	March, 2010
Appendix B License Surrender Conditions	SCL	March, 2010
Appendix E -Mill Pond Decommissioning Plan	SCL	March, 2010
Mill Pond Decommissioning Plan	Pend Oreille PUD	2010
Fish and Aquatics Management Plan	SCL	2010
Interlocal Agreement for Mill Pond Decommissioning Between SCL and Pend Oreille County PUD No. 1	SCL	2010
Interlocal Agreement for the Cold Water Release Facility Between SCL and PUD No. 1	SCL	2010

- e. As documented in the Settlement Agreement, the Applicant shall create a final Mill Pond Dam Removal and Restoration Design Plan (“Final Design Plan”) prior to dam removal. This Final Design Plan shall be developed consistent with the documents listed above and shall include any site specific design and adaptive management provisions identified during the Final Design planning and conditioned by this Order. This Final Design Plan shall be submitted to Ecology for review and approval.
- f. The Final Design Plan shall also include the following information:
 - i. Detailed plans and narrative for the dam removal, management of sediments and restoration of the site;
 - ii. Short term compliance and effectiveness monitoring program to be conducted by Seattle City Light (SCL); as well as long term compliance and effectiveness monitoring program to be implemented by the Applicant;
 - iii. Contingency plan to address the event that more than one construction season will be needed to complete the stream channel restoration work. The contingency plan shall provide protection from flood flows for all the un-stabilized portions of the reservoir and/or stream channel to minimize erosion and movement of sediment downstream;
 - iv. Best Management Practices (BMPs) i.e. silt curtains, controlled delivery of cover material etc. to ensure that minimal turbidity will be generated and that it will be contained to the greatest extent possible;
 - v. A turbidity monitoring and contingency plan which includes the requirements in Condition 3.2. below;
 - vi. A revegetation component that will result in creating diverse fish and wildlife habitat, providing stream shading during the summer months, controlling stream bank erosion and moderating water velocities in Sullivan Creek. All vegetation and seeding shall consist of appropriate native species and shall meet USFS standards and requirements; and
 - vii. An updated wetland delineation report following the *1987 Corps of Engineers Wetland Delineation Manual* and the *Western Mountains and Valleys Regional Supplement*. The report shall also present a wetland categorization per the *Washington State Wetland Rating System for Eastern Washington (Ecology Publication #04-06-015)*. The Final Design Plan shall describe what measures are planned to maintain the water surface elevation in the delta wetlands, and an analysis of their predicted success rates. The Final Design Plan shall also quantify temporary impacts to wetlands as described in the Mill Pond Removal and Restoration: Alternatives Analysis and Evaluation Section 6.2.2.1.6 and shall describe impact avoidance and minimization measures.
- g. The Applicant shall notify Ecology in writing of any proposed changes to the project that might significantly and adversely affect water quality (other than project changes required or

considered by this Order). Within 30 days of receipt of such notice, Ecology will determine if the revised project requires a new water quality certification and public notice or if a modification to this Order is required. Regardless, any such proposed changes to the project may not commence without Ecology's review and written approval.

- h. This Order shall be rescinded if FERC does not issue the Sullivan Creek Project License Surrender Order.
- i. Copies of this Order and associated permits, licenses, and approvals shall be kept on the project site and readily available for reference by Ecology personnel, the construction superintendent, construction managers and lead workers, and state and local government inspectors.
- j. The Applicant shall ensure that all project engineers, contractors, and other workers at the project site with authority to direct work have read and understand relevant conditions of this Order. The Applicant shall provide Ecology a signed statement (see Attachment A for an example) from each signatory that they have read and understand the conditions of this Order. These statements shall be provided to Ecology 15 days prior to starting on-site work. For those project engineers, contractors and other workers that are brought on site after the project has begun the signed statements shall be submitted prior to starting work.
- k. The Applicant shall provide access to the project site, all staging areas and all mitigation sites upon request by Ecology personnel for site inspections, monitoring, necessary data collection, and/or to ensure that conditions of this Order are being met.
- l. Nothing in this Order waives Ecology's authority to issue additional orders if Ecology determines that further actions are necessary to implement the water quality laws of the State. Further, Ecology retains continuing jurisdiction to make modifications hereto through supplemental orders if additional impacts due to project construction or operation are identified (*e.g.*, violations of water quality standards, downstream erosion, etc.), or if additional conditions are necessary to further protect water quality.
- m. 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, Ecology reserves the right to issue an administrative order to incorporate any such changes or amendments applicable to this project.
- n. In the event the Applicant is unable to comply with any of the conditions of this Order due to any cause, the Applicant shall:
 - i. Cease operations at the location of noncompliance;
 - ii. Assess the cause of noncompliance and take appropriate measures to correct the problem and/or prevent further environmental damage;
 - iii. Notify Ecology's Eastern Regional Office Federal Project Coordinator in accordance with condition 3.1.b.

- iv. Submit a detailed written report to Ecology within five (5) days that describes the nature of the noncompliance, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

Compliance with this condition does not relieve the Applicant from responsibility to maintain continuous compliance with the terms and conditions of this Order or the resulting liability from failure to comply.

- o. Failure of any person or entity to comply with the Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.
- p. This Order will automatically transfer to a new owner or operator if:
 - i. A written agreement between the Applicant and new owner or operator with the specific transfer date of the Order's obligations, coverage, and liability is submitted to Ecology per condition 3.1.b.;
 - ii. A copy of this Order is provided to the new owner or operator; and
 - iii. If Ecology does not notify the new Applicant that this Order must be modified.

3.2 Water Quality and Water Quality Monitoring Conditions

- a. This Order does not authorize the Applicant to exceed applicable state water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC) or sediment quality standards (Chapter 173-204 WAC). Water quality criteria contained in WAC 173-200, WAC 173-201A-030(1) and WAC 173-201A-040 shall apply to this project, unless otherwise authorized by this Order.
- b. The Applicant shall prepare a quality assurance project plan (QAPP) and submit the plan to Ecology for review and written approval 60 days prior to monitoring. The plan shall include at a minimum, the monitoring as directed in 3.2.c, a map of the sampling locations, 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. The applicant shall re-evaluate and propose any needed revisions to the QAPP at least every five years. Changes need written approval by Ecology before taking effect. 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.
- c. The Applicant shall conduct Water Quality Monitoring per the table below, unless otherwise approved by Ecology.

Time Period	Parameter	Locations	Schedule
Begin one (1) day prior to concrete cutting and sawing to one (1) day after	pH	Immediately below Mill Pond Dam	Daily while the concrete cutting and sawing is taking place
Whenever siphoning is occurring	Turbidity	Immediately downstream of the siphon tube discharge to Sullivan Creek	In 15 minute intervals whenever the siphon is operating
Begin one (1) week prior to project initiation; continue until end of year two after dam removal	Turbidity	Boundary Reservoir at the mouth of Sullivan Creek.	Hourly for turbidity using a fixed monitoring location anchored by a buoy
Begin at end of year two (2) after dam removal until site restoration is complete and approved by Ecology	Turbidity	Boundary Reservoir at the mouth of Sullivan Creek	Daily for turbidity using a fixed monitoring location anchored by a buoy
Begin one (1) week prior to beginning cold water gravity intake pipe installation until project completion	Turbidity	Just above the confluence of Outlet Creek and Sullivan Creek	Grab water sample daily

- d. Water Quality Monitoring results shall be submitted to the Eastern Regional Office Ecology Federal Project Coordinator, per condition 3.1.b, under the following schedule unless otherwise requested and approved in writing by Ecology.

Time period	Reporting Frequency
From one (1) week after project initiation through six (6) months after dam removal	Weekly
Day of the dam removal	Within 24 hours of removal
Week following removal	Daily (submit the following morning)
From six (6) months after dam removal to two (2) years after removal	Monthly
From two (2) years after dam removal until stabilization measures have been completed and approved in writing by Ecology	Yearly and after all precipitation events producing flows at or greater than the five (5) year return interval flows for Sullivan Creek

- e. If at any time changes in the QAPP are determined to be necessary, the Applicant shall submit a revised QAPP to Ecology for review and approval. Once approved the applicant shall comply with the approved plan.

3.3 Upland Activities including Equipment and Staging Areas

- a. The Applicant shall obtain and comply with the current National Pollutant Discharge Elimination System Construction Stormwater General Permit (NPDES Permit) for this project.
- b. The Applicant shall submit a final Erosion Control Plan which includes any changes and/or additions required by this Order to Ecology's Eastern Regional Office Federal Project Coordinator for review and written approval at least 90 days prior to initial project mobilization. Once approved by Ecology the Applicant shall implement the approved plan.
- c. The Applicant shall install initial erosion control measures in the affected area, monitor them and implement corrective measures in accordance with the approved Erosion Control Plan. Where water is concentrated in channels on the soil surface whether from storm runoff or stream flow (Sullivan Creek, or stream flow from side channels running into the reservoir area), the channel shall be armored effectively to limit erosion of the channel bottom.
- d. All environmentally sensitive areas including but not limited to, wetlands, wetland buffers, and mitigation areas that are not to be disturbed, shall be clearly marked (by site preservation line or flagging) prior to commencing construction and/or demolition activities. These areas shall be protected throughout construction of the project.
- e. All temporary roads and staging areas related to the construction and/or demolition work shall be removed within one (1) year of dam removal, unless access is needed to fulfill obligations of the revegetation and mitigation plan(s). The Applicant shall notify Ecology's Federal Project Coordinator within one (1) week after the last area has been restored.
- f. All construction and/or demolition debris and materials temporarily stored on-site shall be placed in a manner that does not adversely affect waters of the state, including wetlands, unless otherwise authorized by Ecology.
- g. Staging areas, storage areas, and stockpile sites shall be located a minimum of 50 feet and, where practicable, 200 feet from waters of the state, including wetlands, unless otherwise conditioned in this Order. If any of these areas or sites must be located within 50 feet of a water of the state, then the Applicant shall notify Ecology's Federal Project Coordinator, per condition 3.1(b) for written approval prior to using those areas or sites.
- h. Extreme care shall be taken to ensure that no petroleum projects, hydraulic fluid, fresh cement, foreign sediments or chemicals, or any other toxic or deleterious construction materials are allowed to enter or leach into surface and/or ground water.

- i. Equipment and vehicle-fueling shall not occur within 50 feet of waters of the state, including wetlands, unless authorized by Ecology.
- j. Fuel hoses, oil drums, oil fuel transfer valves and fittings, etc. shall be maintained on upland areas in order to prevent contamination of waters of the state, including wetlands.
- k. Wash water containing oils, grease, or other pollutants shall not be discharged into waters of the state, including wetlands. The Applicant shall set up a designated area for washing equipment.
- l. Cleaning solvents or chemicals used for tool or equipment cleaning shall not be discharged to the ground or waters of the state, including wetlands.

3.4 General In-water Activities

- a. For the purpose of the Order any work below the Ordinary High Water Mark (OHWM) of Mill Pond reservoir (2,520 feet NAVD 88) shall be considered in-water work until a new OHWM is designated for Sullivan Creek within the reservoir area.
- b. The Applicant shall implement the following conditions for all in-water activities in addition to any activity specific condition within the Order, unless approved by Ecology in writing.
 - i. Equipment authorized to work in flowing waters shall be free of any external petroleum products and all drive mechanisms (wheels, tracks, tires, etc.) shall be pressure-washed to remove accumulations of soil or other materials.
 - ii. The Applicant shall use biodegradable hydraulic fluid for all equipment used below the Ordinary High Water Line.
 - iii. The Applicant shall implement in-stream BMPs per the Final Design Plan during these in-water activities (e.g., use of silt curtains).

3.5 Cold Water Intake Construction

- a. All material placed in Sullivan Lake to protect the coldwater release pipe shall be clean and washed prior to placement.
- b. The Applicant shall submit "As built plans" of the Cold Water Intake to Ecology within 60 days of project completion.
- c. The cold water release schedule contained in the Settlement Agreement shall be strictly followed. If changes to that schedule prove necessary, written approval from Ecology must be attained before any changes may be implemented.

3.6 Dam Decommissioning

- a. The Applicant shall conduct dam decommission as described in the McMillen Report and the Final Design Plan, except as modified by this Order or revised and approved by Ecology.
- b. The Applicant shall obtain a Dam Modification Permit from the Washington State Department of Ecology's Dam Safety Program prior to beginning dam dewatering.
- c. The Applicant shall implement a dam bypass and gradual flow release approach for removal of the log-crib and concrete dams at the site. Mill Pond reservoir shall be drained and diverted to Sullivan Creek below the dam through the installation of a main siphon pipe located through the dike to the west of the dam. The reservoir shall be lowered approximately 20 to 25 feet by this means.
- d. A cofferdam shall be installed upstream of the log-crib dam to keep incoming water out of the dam removal area, and a siphon and/or pump shall be used to drain the water in between the concrete dam, log crib dam and cofferdam areas.
- e. As part of the construction of the coffer dam, the Applicant shall install a decanting tower upstream of the cofferdam, connected to a low-level pipe through the bottom of the coffer dam. The decanting tower and pipe will allow the lowering of the reservoir level down to the base of the coffer dam, approximately an additional 15 feet in elevation.
- f. The Applicant shall install fish exclusionary devices in the vicinity of the main siphon pipe inlet to prevent fish mortality.
- g. In conjunction with the lowering of the reservoir through the main siphon pipe, the streambed in the upper portion of Reach 2, into Reach 3 (shown and described in the McMillen Report) shall be excavated and stabilized to prevent head cutting in the upstream channel, and to establish the flow of Sullivan Creek into a stable channel as the reservoir surface elevation drops. The drop in the reservoir surface elevation shall occur at such a rate that the suspension of sediment in the reservoir from the excavation activities is minimized. Once the original streambed is found in the excavation of the new channel, the old streambed can be used as the stable channel for flows within the construction period. As the reservoir surface is lowered to a point that fish are concentrated enough to trap and relocate, work shall start to relocate fish out of the construction area and into suitable habitat (not impacted by dam removal activities) in Sullivan Creek.
- h. After the dam area has been dewatered and stabilized and the HABS/HAER assessments are complete, the concrete dam shall be removed using a concrete diamond wire saw. Large blocks of concrete shall be cut out of the dam and removed using a crane and/or excavator.
- i. During activities to remove concrete including drilling and saw cutting or blasting if found to be necessary, containment measures shall be in place to minimize, to the extent feasible, the amount of concrete debris that might enter waters of the state, including wetlands.

- j. All demolition debris and other waste material shall be properly managed and disposed of at Non-Forest Service sites.

3.7 Sediment Management and Monitoring

- a. The Applicant shall manage and monitor sediments as described in the McMillen Report and/or the approved Final Design Plan, except as modified by this Order or revised and approved in writing by Ecology.
- b. The data collected as part of the sediment monitoring program will be used to determine when the reservoir has attained a stable condition. A stable condition will generally be attained when:
 - i. Remaining slopes and banks are stable and do not present a public safety risk;
 - ii. The reconstructed streambed within the former reservoir area has attained a stable course and channel width, floodplain configuration and gradient similar to the historical channel with no un-natural impediments to fish passage and
 - iii. The amount of sediment released from the reservoir is no longer significant, as determined from water quality (turbidity) measurements.
- c. Upon determination by Ecology that the criteria in condition 3.7 b above have been attained, the Applicant may cease monitoring of the project area for the purposes of sediment management. However, monitoring required as part of other management plans shall continue based upon the criteria for those specific monitoring efforts.

3.8 Site Restoration and Re-Vegetation

- a. Site restoration in the newly exposed upland area will occur in dry conditions created by the reservoir siphon and the use of bypass pipes to channel flow around the immediate work area. NOTE: Wetland area revegetation conditions are addressed in the Wetlands Section of this Order.
- b. The Applicant shall use a reference reach design process to determine stream morphology and streambed material values for design of Reaches 1, 2 and 3. The proposed streambed and floodplain shall be designed to withstand velocities of a flood event having a 100-year recurrence interval.
- c. The Applicant shall utilize the existing stream channel alignment as the new stream channel as identified on the Mill Pond bathymetry map in Reach 2, and where it is determined that the existing stream channel is in a stable condition considering current hydrology.
- d. The Applicant shall design Reach 3 with a hydrologically connected streambed and floodplain. In Reach 3, the floodplain is intended to consist of the existing wetland areas adjacent to the proposed streambed where possible. In conjunction with the proposed

streambed, the Applicant shall design restoration and stabilization measures within Reach 3 of Sullivan Creek to prevent head-cutting in the creek that could dewater the southern wetland areas. Monitoring and adaptive management are to be implemented and measures such as grade controls (e.g. rock weirs) are to be considered to maintain the existing wetland water surface elevation.

- e. The Applicant shall design the bankfull channel to carry the highest frequency flood levels (2-year flood events).
- f. The Applicant shall revegetate with native plants suitable for the specific location – streambank, floodplain and upland locations. Native plant material propagated from seeds, roots or cuttings taken from plants in a similar elevation band within Pend Oreille County shall be utilized. The revegetation areas are divided into four planting zones depending on soil hydrology and position within the riparian valley. The four zones are listed and described below:
 - Riparian Zone: This zone is designed for areas adjacent to Sullivan Creek and includes portions of the streambank above the edge of the stream channel up to the 5-year flood elevation. Native riparian plants shall be selected and a native herbaceous seed mix shall be used to meet both the Colville National Forest (CNF) standards for native plants and weed control. Live stakes and potted plants will be installed in this zone.
 - Wet Zone: This zone is designed for wetland areas near the inlet of Sullivan Creek into Mill Pond and includes the areas from the edge of the stream channel up to the 2-year flood elevation. Plantings in this zone shall consist of live stakes collected from native trees and native shrubs from the surrounding area and native containerized plants that meet the standards of the CNF. The wet zone shall be designed to be inundated when the stream reaches the 2-year flood elevation.
 - Upland Zone: This zone is designed for areas above the 5-year flood elevation and shall include upland trees and shrubs. However, plants suited to riparian conditions (those that can withstand variable hydrology) shall be intermixed near the bottom of the upland zone to reduce water velocities and add roughness during elevated flows. Upland areas that are not adjacent to streams shall use plants suited for drier conditions. This zone shall also be underseeded with a native herbaceous seed mix that meets the native plant standards of the CNF.
 - Sediment Depositional Zone: This zone is designed for areas above the 100-year flood elevation where sediment removed from the channel has been placed in compacted layers. The soils are expected to be sterile and have little structure, other than the structure developed by the placement and compaction process. The planting plan developed during the final design shall address soil fertility as well as developing a plant community that can progress through the successional stages. This zone shall not be exposed to channel flows and will be graded to reduce upslope soil erosion entering the stream. Therefore, the plant community shall be selected to resist localized surficial

erosion while providing the other characteristics expected from upland zones in the area. Selected trees and shrubs shall be suited to drier conditions and meet the CNF native plant and weed control standards. This zone shall also be underseeded with a native herbaceous seed mix.

- g. The Applicant shall implement a program to provide for the prevention, suppression, containment, eradication and/or control of invasive, non-native plant species, as appropriate, within the area of restoration and revegetation.
- h. The Applicant, in consultation with Ecology and other permitting agencies shall develop protocols for collecting compliance and effectiveness monitoring information. The Applicant shall begin Compliance Monitoring in the same construction season as the completion of dam removal, sediment management and site restoration activities. At a minimum, Compliance Monitoring shall include documentation collected during implementation of the Plan, such as survey data, records of purchased materials (LWD pieces, ballast, etc), and photographs of the site before and after dam removal and implementation of site restoration measures.
- i. The Applicant shall monitor the effectiveness (Effectiveness Monitoring) of the site restoration and revegetation in the Affected Area starting for three (3) years following completion of dam removal, sediment management and site restoration.
- j. The Applicant shall develop and submit an Effectiveness Monitoring report to Ecology for review and approval. Based upon Effectiveness Monitoring results, additional stabilization work and/or repair of existing restoration measures may be required to maintain the streambed and the constructed floodplain and uplands in their designed configuration.
- k. For areas suitable for establishing vegetation, mitigation planting success and any remedial measures shall achieve at least 80 percent survival of trees and shrubs and 50 percent canopy cover of native species after three (3) years from the date of planting. Grasses, forbs, shrubs, and trees shall be planted to achieve the desired structure and function for site-specific habitat conditions.

3.9 Wetland Conditions

- a. The Applicant shall minimize and track wetland impacts as described in the McMillen Report and or the Final Design Plan except as modified by this Order or revised and approved by Ecology.
- b. Seeding used as a temporary erosion control BMP within wetlands must be a wetland mix consisting of native and non-invasive plant species.
- c. The Applicant shall not use hay, straw, or Polyacrylamide as a temporary erosion control BMP on exposed or disturbed soil areas that are proposed to be riverine or slope wetlands.

- d. Upon completion of site-grading and prior to planting, the Applicant shall submit to Ecology written confirmation that the finished grades are consistent with the approved mitigation plan or subsequent Ecology-approved plan changes. Written confirmation can be a signed letter from the surveyor or project engineer indicating how final elevations were confirmed and whether they are consistent with the plan. The required information shall be submitted to Ecology no later than 30 days after completion of the project.
- e. The Applicant shall submit to Ecology one hard and one electronic copy of monitoring reports documenting existing site conditions at the Reach 3 wetland complex for years 1, 3, 5, 7, and 10. At a minimum, the reports must contain the information in Attachment B (Information Required for Monitoring Reports). The Applicant shall submit the first monitoring report 12 months after completing site construction and initial planting.
- f. The Applicant shall water and maintain all restoration site plantings so as to meet the performance standards set forth in the Final Design Plan.
- g. For monitoring years 5 and 10, the Applicant shall use the 1997 Washington State Wetlands Identification and Delineation Manual (or as updated) to delineate all remaining wetlands and include delineation information (e.g. data sheets, maps, etc.) in the monitoring reports.
- h. At the end of the monitoring period, the Applicant shall use the August 2004 Washington State Wetlands Rating System for Eastern Washington (or as updated) to rate all wetlands (except those that have been preserved), and include the information in the monitoring report.

4.0 Environmental Monitoring

- a. The Applicant shall conduct all environmental monitoring as described in the McMillen Report and or the Final Design Plan, except as modified by this Order or revised and approved by Ecology.
- b. The Applicant shall submit a final Environmental Monitoring Plan which includes any changes and/or additions to environmental monitoring required by this Order to Ecology's Federal Project Coordinator for review and written approval by Ecology at least 90 days prior to beginning the project. **Work below the OHWM is not authorized to begin until final Ecology approval is received.** Once approved, the Applicant shall implement the plan.
- c. The Applicant shall manage and monitor woody debris as described in the McMillen Report and/or the Final Design Plan except as modified by this Order or revised and approved by Ecology. Woody debris monitoring reports shall be submitted to Ecology by the end of the calendar year, starting the calendar year after dam removal.

5.0 Timing Requirements

- a. This Order is valid ten (10) years from the date of issuance of this Order.
- b. The cofferdam used during dam removal shall be removed no later than May 1 of the year following the removal of the dam. The Applicant must notify Ecology's Eastern Regional Office Federal Project Coordinator no later than one week after removal of the cofferdam.

6.0 Emergency/Contingency Measures

- a. The Applicant shall submit a final Spill Prevention, Control and Countermeasure (SPCC) Plan which includes any changes and/or additions required by this Order to Ecology's Eastern Regional Office Federal Project Coordinator for review and approval by at least 90 days prior to beginning the project. Once approved the applicant shall implement the approved plan.
- b. The Applicant shall provide training to all on-site crew on the contents of the SPCC Plan, assign a foreman to the site, and have the plan and emergency response equipment readily available on site.
- c. In the event of a spill the Applicant shall immediately report the spill to Ecology's 24-Hour Spill Response Team at (509)329-3400, and within 24 hours to Ecology's Eastern Regional Federal Permit Coordinator at (509) 329-3584.
- d. The Applicant shall immediately notify Ecology's Eastern Regional Spill Response office at (509)329-3400 of any unusual conditions indicating disposal of chemicals on-site may have occurred. And, within 24 hours to Ecology's Eastern Regional Federal Permit Coordinator at (509)329-3584.
- e. If at any time as a result of project activities fish are observed in distress, a fish kill occurs or water quality problems develop (including equipment leaks or spills), immediate notification shall be made to the Washington Department of Ecology at 1-800-258-5990 and to the WDFW Area Habitat Biologist at 509-892-1001.

7.0 Appeal Process

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001 (2).

To appeal you must do the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel Rd SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

CONTACT INFORMATION

Please direct all questions about this Order to:
Michael Maher
Department of Ecology Eastern Regional Office
4601 N Monroe St
Spokane, WA 99205-1295

(509) 329-3584
Michael.Maher@ecy.wa.gov

MORE INFORMATION

Pollution Control Hearings Board Website
www.eho.wa.gov/Boards_PCHB.aspx

Chapter 90.48 RCW – Water Pollution Control
<http://apps.leg.wa.gov/RCW/default.aspx?cite=90.48>

Chapter 173-201A WAC – Water Quality Standards for Surface Waters of the State of Washington
www.ecy.wa.gov/biblio/wac173201A.html

SIGNATURE

Sara Hunt, Section Manager
Shorelands and Environmental Assistance Program
Ecology's Eastern Regional Office

ATTACHMENT A

**Mill Pond Dam
Decommissioning Project
Water Quality Certification Order #9039**

**Statement of Understanding of
Water Quality Certification Conditions**

I have read and understand the conditions of Order #9039 Section 401 Water Quality Certification for the Mill Pond Dam Decommissioning Project. I have also read and understand all permits, plans, documents, and approvals associated with the project referenced in this Order.

Signature

Date

Title

Attachment B

Required Information for Monitoring Reports

MILL POND DAM DECOMMISSIONING AND COLD WATER RELEASE FACILITY PROJECT Water Quality Certification Order # 9039

FERC #2225-015

Ecology requires the following for monitoring reports submitted under this Order. Ecology will accept additional information that may be required by other regulators.

Background Information

- 1) Project name
- 2) Ecology docket number, FERC's reference number and the U.S. Army Corps' reference number
- 3) Name and contact information of the parties responsible for the mitigation site including:
 - a) The Applicant
 - b) The Landowner
- 4) Name and contact information for the party responsible for the monitoring activities and report
- 5) Who the report was prepared for (name, address, and phone number) *{if different from number 3 above.}*
- 6) Month and year the monitoring data were collected
- 7) Month and year the report was produced

Wetland Mitigation Project Information (If Required)

- 8) Brief description of the mitigation project including:
 - a) Directions to the site
 - b) Acreage and type(s) (re-establishment, rehabilitation, creation, enhancement, and preservation) of mitigation authorized to compensate for wetland impacts
- 9) Brief description of monitoring approach and methods.
- 10) A list of the goals and objectives for the mitigation project
- 11) Summary table of monitoring data compared with performance standards as identified in the wetland mitigation plan. Using the monitoring data, describe how the site is developing toward goals and objectives and whether the project is in compliance with performance standards
- 12) Summary (including dates) of management actions (maintenance, contingencies, and corrective actions) implemented at the site(s)
- 13) Summary of any difficulties or significant events that occurred on the site that may affect the ultimate success of the project

- 14) Specific recommendations for any additional corrective actions or adaptive management with a time table
- 15) Summary of any lessons learned
- 16) Site maps (8 1/2" x 11" or larger) of the compensatory mitigation site(s) including the following (at a minimum):
 - a) The month and year when the maps were produced and, if applicable, when information was collected.
 - b) The geographic location of the site with landmarks.
 - c) Clear delineation of the project perimeter(s).
 - d) Species, numbers, and approximate locations of all replanted material vegetation.
 - e) Location of habitat features.
 - f) Location of permanent photo stations and location of any other photos.
 - g) Location of sampling points or transects.
- 17) Photographs taken at permanent photo stations (and other photographs as needed) from the most recent monitoring visit, which are dated and clearly indicate the direction from which the photo was taken. We recommend photo pans.