



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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

September 17, 2009

**REGISTERED MAIL**  
**RB 336 146 266 US**

Mr. Kim Moore  
Assistant General Manager  
Water Resource Division  
Snohomish Public Utility District  
2320 California Street  
Everett, WA 98201

Dear Mr. Moore:

Re: Order No. 6689 (401 Certification Amendment)  
Youngs Creek Hydroelectric Project FERC No. 10359

Enclosed is Order No. 6689. This is the second amendment to the 401 Certification issued to the Youngs Creek Hydroelectric Project (FERC No. 10359) on May 5, 1992. This amendment supersedes prior 401 Certification Orders issued for Youngs Creek Hydroelectric Project. The project is located on Youngs Creek, a tributary to Elwell Creek, which is a tributary to the Skykomish River, approximately four miles south from the city of Sultan, Washington.

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 – 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452. The enclosed Administrative Order may be appealed by the procedures described in this Order.

Sincerely,

  
Kevin C. Fitzpatrick  
Water Quality Section Manager

KCF:MK:ct

Enclosure

cc: Kimberly D. Bose, Secretary, FERC, Washington, D.C.  
Daryl Williams, Tulalip Tribe  
Anne Savery, Tulalip Tribe  
Randel Perry, Army Corps of Engineers  
Hal Beecher, WDFW  
Thomas O'Keefe, American Whitewater  
Kelly Susewind, Ecology/HQ  
Jeannie Summerhays, Ecology/NWRO, via e-mail: [jsum461@ecy.wa.gov](mailto:jsum461@ecy.wa.gov)  
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Monika Kannadaguli, Ecology/NWRO  
Central Files: Youngs Creek Hydroelectric Project



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

IN THE MATTER OF GRANTING	)	ORDER No. 6689
WATER QUALITY CERTIFICATION TO	)	Second Amendment
Snohomish Public Utility District	)	
With Chapter 90.48 RCW and the	)	
Rules and Regulations of the	)	
Department of Ecology	)	

To: Mr. Kim Moore  
Assistant General Manager  
Water Resource Division  
Snohomish Public Utility District  
2320 California Street  
Everett, WA 98201

On October 3, 2008, Snohomish Public Utility District (SNOPUD) filed an application with the state of Washington Department of Ecology (Ecology) requesting an amendment to the Section 401 Water Quality Certification to address the changes in flow conditions, ramping rates, and state's water quality standards. Through this Order the certification is hereby amended.

## 1.0 PROJECT BACKGROUND

Youngs Creek Hydroelectric project is a run-of-river hydroelectric project owned and managed by SNOPUD. It is located on Youngs Creek, a tributary to Elwell Creek which is a tributary to the Skykomish River, approximately four miles south of the city of Sultan, Washington (Appendix A). This project is in SNOPUD's service area and is in close proximity to SNOPUD's other hydroelectric sites.

Federal Energy Regulatory Commission (FERC) issued a license for this project to Hydro West Group, Incorporated on May 05, 1992 (FERC No. 10359). A Section 401 Water Quality Certification was issued on February 24, 1992, and was later revised on November 18, 1993. Construction of the Youngs Creek Hydroelectric Project began in 1993-1994. However, completion of construction was put on hold due to unfavorable energy market conditions at that time. In October 2008, SNOPUD acquired ownership of the Youngs Creek Project from Hydro West Group Inc. through a sale agreement. FERC License, Permits/Certifications, etc., and ownership of the project property were also transferred to SNOPUD. Now the project is solely owned and operated by SNOPUD. Because of the recent increase in needs for renewable energy in the Northwest, SNOPUD is proposing to construct and operate Youngs Creek Hydroelectric Project.

SNOPUD has requested Ecology to amend the existing 401 Water Quality Certification to incorporate the changes in flow conditions, ramping rates, and state's water quality standards.

## 2.0 AUTHORITIES

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

- 1) Conformance with all applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under Sections 301, 302, 303, 306, and 307 of the Clean Water Act (33 USC Sections 1311, 1312, 1313, 1316, and 1317, FWPCA Sections 301, 302, 303, 306, and 307).
- 2) Conformance with any and all applicable provisions of Chapter 90.48 RCW, including the provision to use all known, available, and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010.
- 3) Conformance with the state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 USC 1313 and by Chapter 90.48 RCW, and with other appropriate requirements of state law that are related to compliance with such standards.
- 4) Conformance with RCW 90.56, which prohibits discharge of oil, fuel, or chemicals into state waters or onto land where such contaminants could potentially drain into state waters.

Certification of this proposal does not authorize SNOPUD to exceed applicable ground water standards (Chapter 173-200 WAC) or sediment quality standards (Chapter 173-204 WAC). Furthermore, nothing in this certification shall absolve SNOPUD from liability for contamination and any subsequent cleanup of surface waters, ground waters, or sediments occurring as a result of project construction or operations.

## 3.0 CURRENT STANDARDS

- 1) Washington State Water Pollution Control Act – The intent of actions required in this certification is to support the goals of the state of Washington to “maintain the highest possible standards to ensure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wildlife, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known, available, and reasonable technologies (AKART) by industries and others to prevent and control the pollution of the waters of the state of Washington” (RCW 90.48.010).
- 2) Washington State Water Quality Standards (WAC 173-201A, 2006) – Effective December 21, 2006, Washington State revised the surface water quality standards (Chapter 173-201A WAC). Based upon the revised standards, use-based water quality characteristics for Youngs Creek are:

*Char spawning/rearing aquatic life use, extraordinary primary contact recreation  
and all other water supply and miscellaneous uses.*

Youngs Creek is a tributary to Elwell Creek, which is a tributary to the Skykomish River in Water Resource Inventory Areas (WRIA) 7. Use designations for Skykomish River and its tributaries are listed in WAC 173-201A-600.

- 3) Toxics and Oil Spills [WAC 173-201A-260(2)(a), 2006 and RCW 90.56] – Toxic concentrations shall be below those which have the potential, either singularly or cumulatively, to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health. RCW 90.56 prohibits any discharge of oil, fuel, or chemicals into state waters or onto land where such contaminants could potentially drain into state waters.

#### 4.0 COMPLIANCE WITH STANDARDS

As per the updated standards, water quality at Youngs Creek project site shall meet or exceed the requirements for all designated and existing uses. Specific numeric criteria for various water quality parameters are as follows:

**Table 1.** Applicable 2006 numeric criteria for Youngs Creek.

PARAMETER	STANDARD/CRITERIA TO BE MET
Temperature	Char Spawning and Rearing: 12°C (53.6°F) as measured by the 7-day average of the daily maximum temperatures (7-DADMax). [When waterbody's temperature is higher than the criteria due to natural conditions, then human actions considered cumulatively may not increase the 7-DADMax temperature more than 0.3°C above natural conditions. All reasonable and feasible measures must be taken to achieve conditions that best protect the designated uses [WAC 173-201A-200(1)(c)(i)].
TDG	Not to exceed 110% of saturation at any point of sample collection.
Turbidity	Turbidity shall not exceed 5 NTU over background turbidity when background turbidity is 50 NTU or less, or have more than a 10 percent increase when background turbidity is more than 50 NTU.
Dissolved Oxygen	Char Spawning and Rearing: 9.5 mg/l. [When waterbody's DO is lower than the criteria due to natural conditions, then human actions considered cumulatively may not decrease lowest 1-day minimum more than 0.2 mg/L (WAC 173-201A-200(1)(d)(i))].
pH	pH shall be within the range of 6.5 to 8.5 standard units, with a human-caused variation within the above range of less than 0.2 standard units.

## 5.0 FINDINGS

- 1) Construction Activities – SNOPUD is proposing to construct and operate a run-of-the-river small hydroelectric facility with an estimated capacity of 7.5 MW and generating an average of 20,000 MWh of energy annually. Major findings related to construction activities are listed below:
  - a) An approximately 12-foot high, 65-foot long, reinforced concrete diversion weir and intake structure, with a crest elevation of 1530 feet mean sea level (msl), at five miles upstream from the junction with Elwell Creek, will be constructed. The diversion dam would create a small impoundment with a surface area of approximately 0.21 acres at normal pool elevation of 1530 feet.
  - b) A 48- to 51-inch diameter, 14,500-foot long steel penstock; an approximately 48-foot wide by 64-foot long masonry powerhouse with a turbine-generator unit; a short tailrace will be constructed.
  - c) The powerhouse will be connected directly to the SNOPUD's existing distribution system line through a new 12.5 kV transmission line, which will be extended approximately 8.2 miles to reach the powerhouse from Sultan substation.
  - d) Transmission lines will be buried where no overhead lines exist and will follow overhead lines where overhead lines already exist. The transmission line has been designed to avoid construction activities within all drainages and wetlands along its route via locating the buried part of the transmission line within the existing road right-of-way, by trenching under or over existing culverts, pole placement to avoid wetlands, and overhead or bridge crossings.
  - e) All in-water work will be constructed in isolation from surface water with the exception of construction of the cofferdam. Cofferdam will be constructed in accordance with the WDFW HPA. BMPs will be applied to minimize the impacts to the waters of the state. Work will be done by use of bypass pipes and temporary cofferdams. The outlet area of the bypass pipes will be protected with riprap to prevent erosion and scour. Discharge from the bypass outlet will be located approximately 50 feet downstream from the work site.
  - f) Sump pumps will be used if any water seeps under the cofferdam. Sumps will be located to capture any seepage from the upstream cofferdam. Prior to releasing water flow, all bank protection or armoring will be completed. All materials used for cofferdams will be removed when cofferdams are no longer needed for construction. If high flow conditions that may cause siltation are encountered during construction of the project, work will stop until the flow subsides.
  - g) Construction within drainages and wetland seeps will be done in isolation from surface water. If water is present, then culverts or bypass pipes will be installed first to confine the flow and keep the trench excavation for the penstock dry. The penstock would be installed under the culvert and the trench backfilled.

- h) Youngs Creek will be diverted around the work site in one or more bypass pipes. A temporary upstream cofferdam will be installed to divert and transition the flow into the bypass.
- 2) Wetlands – There are two isolated wetlands on the project site – Wetlands C and F.
- a) Wetland C is located in a small, isolated wetland seep that emerges at the base of an existing large gravel stockpile area forming a ditch-like feature along the existing road. Water from the wetland (estimated to be substantially less than 0.1 cfs in late October 2008), flows under the existing road via a two-foot diameter culvert in the penstock corridor. Additional ground water seeps down-slope of the road, but the seepage quickly infiltrates into the forest. If water is present during excavation, the culvert will be replaced first to isolate the flow and keep the trench excavation for the penstock dry, and the penstock will be installed under the culvert and the trench backfilled. Sediment barriers will be installed, as needed, to intercept and detain sediment from disturbed areas. Following construction, the original grade above the culvert will be restored using compacted fill, which will then be re-vegetated. No impacts to the isolated wetland are anticipated from construction of the penstock along the existing road.
  - b) Wetland F is located in the road section that was built in 1993 to provide access from the bridge to the intake/diversion site, but was mistakenly abandoned in 2007 by the forest company that manages the adjacent forests. Wetland F results from the natural small spring up-slope of the old road cut. Vegetation is currently sparse along this abandoned road grade. A new 24-inch corrugated metal pipe (CMP) culvert will be installed at its original location, when the penstock is installed and the access road is replaced. The penstock and culvert will be installed when there is low or no flow in the trench. If flow is present, then the culvert will be installed first to isolate the flow and keep the trench excavation for the penstock dry. The penstock will be installed under the culvert and the trench backfilled. No impacts to the wetland seep are anticipated from construction of the penstock along the abandoned road.
- 3) Fish and Wildlife
- a) The diversion weir, intake structure, and powerhouse tailrace channel are all located upstream of a natural barrier to anadromous fish, but potential impacts to resident fish could occur during project construction and operation. Resident fish barriers occur throughout Youngs Creek in the vicinity of the project and a falls precluding upstream passage is located approximately 200 feet upstream of the project intake structure and diversion weir.
  - b) Intake screens will be installed to prevent fish entrainment during project operations. Downstream fish passage of resident fish will be provided through a slotted exit orifice in the sluiceway. Flow continuation will be provided by deflecting water from the turbines during project shutdowns and established ramping rates will prevent stranding of salmonid fishes. Intake design will ensure air entrainment does not occur in water withdrawn for the project.

- c) To protect resident populations of rainbow trout, fish will be removed from the immediate diversion area during construction.
  - d) Trout surveys will be conducted after project operations begin to ensure licensed flow releases do not harm fisheries resources in accordance with the Resident Fish Monitoring Plan described in Section 7.0, below.
- 4) Flow
- a) A Memorandum of Understanding (MOU) was established on June 12, 2009, between Ecology, WDFW, and SNOPUD to address instream flow and flow monitoring requirements. The minimum instream flow and ramping rate requirements reflected in this certification are a direct result of the MOU and numerous studies conducted by the parties involved.
- 5) Project Schedule
- a) SNOPUD is proposing to start project construction in September 2009, as permitting allows. Completion of the project is intended to be in early 2011 and no later than December 30, 2011.

## 6.0 GENERAL REQUIREMENTS

- 1) 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 SNOPUD through an Administrative Order of any such changes or amendments applicable to its project.
- 2) 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, SNOPUD 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.
- 3) Road construction through forest lands shall meet the requirements for water quality protection in the State Forest Practice Rules - WAC 222-24-020 road location and design, WAC 222-24-030 road construction, and WAC 222-24-040 water crossing structures. The requirements marked by an asterisk in the rules apply.
- 4) Discharge of any solid or liquid waste to the waters of the state of Washington without approval from Ecology is prohibited.
- 5) SNOPUD 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.

- 6) This Order does not exempt compliance with other statutes and codes administered by federal, state, and local agencies.
- 7) The Washington State Department of Fish and Wildlife (WDFW) requires a Hydraulic Project Approval (HPA) (under 75.20 RCW) for work in waters of the state. SNOPUD shall obtain HPA coverage as required by WDFW for the Youngs Creek Hydroelectric Project.
- 8) Ecology retains the right, by further Order, to modify schedules or deadlines provided under this Order or provisions it incorporates.
- 9) Ecology retains the right, by further Order, to require additional monitoring studies or measures by Administrative Order 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.
- 10) Ecology retains the right, by further Order, to amend this Order if it determines that its provisions are no longer adequate to provide reasonable assurance of compliance with applicable water quality standards or other appropriate requirements of state law that are related to protection of water quality or aquatic resources. Amendments of this 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 amending orders to FERC to update FERC's records as to the current certification conditions.
- 11) If a conflict or inconsistency arises between this Order and the MOU, or any part thereof, the terms of this Order shall govern.
- 12) This Order does not exempt, and is provisional upon, compliance with other statutes and codes administered by federal, state, and local agencies, including the state's Coastal Zone Management Act.
- 13) This Order addresses work associated with the project, including project operation and related construction. Any additional work not specified in this certification that may impact water quality will require attainment of any and all applicable permits and/or certifications at the appropriate time. SNOPUD shall consult with Ecology to determine whether any such additional work triggers the need of additional permits or a separate Section 401 Certification. If a project would result in a new discharge or alteration to an existing discharge that is not specifically addressed in this Order, it will in most cases require modification of this Order or a new Section 401 Certification, depending on the circumstance.
- 14) 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. Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.



- 15) The conditions of this Order shall not be construed to prevent or prohibit SNOPUD 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.
- 16) 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 SNOPUD, its contractors and consultants, and by Ecology.
- 17) SNOPUD 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.
- 18) SNOPUD 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.
- 19) 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 other violations of the state water quality standards are prohibited.

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

## **7.0 INSTREAM FLOWS AND RAMPING RATES**

The project shall protect the designated uses listed in WAC 173-201A-200 by complying with the instream flow and flow monitoring requirements as set forth within the June 12, 2009, Memorandum of Understanding (MOU) between Ecology, WDFW, and SNOPUD. These requirements are as follows:

- 1) SNOPUD shall implement 5-year incremental flow increases to be adjusted if monitoring indicates a decrease in resident trout population as evaluated per Exhibit A of the Youngs Creek Hydroelectric Project Resident Trout Monitoring Plan (Beak Consultants Incorporated, November 1993).
- 2) SNOPUD shall accept all conditions and management responsibilities as described in Youngs Creek Hydroelectric Project Resident Trout Monitoring Plan (Beak Consultants Incorporated, November 1993). The plan shall be accepted entirely except for the following changes:
  - a) Replace first four paragraphs on page 10 in the section headed SCHEDULE AND AGENCY REVIEW PROCESS with the following language:

*Surveys of trout abundance in the project reach will be conducted annually until the FERC determines the prescribed flow regime adequately protects the aquatic resources of Youngs Creek. Snorkel surveys of ten selected pools in the project reach were conducted on August 8, 1991; August 11, 1992; August 18, 1993; August 11, 1994; and August 14, 2008. Surveys will be repeated in early- to mid-August each year until the project is constructed and will continue for at least three additional years following power generation. Project construction is expected to start during Fall 2009, with project operation expected in the winter of 2010/2011.*

- b) Replace exhibit on Page 3 of Appendix 3 of the Response to Agency Comments, labeled 'Table 1. Instream flow schedule for the Youngs Creek Project with fixed incremental adjustments (if required based on fish monitoring results)' with the Instream Flow Schedule provided in the following table (Table 2).

**Table 2.** Instream Flow Schedule for the Youngs Creek Project.

Years of Project Operation	1-5 years	6-10 years	11-15 years	16-20+ years		
Month	Start-up Flows	Flow Schedule Adjustment <sup>1</sup>			95% Flow <sup>2</sup>	POC <sup>3</sup>
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup> <sup>4</sup>		
October	3	4	6	5.5	8	8
November	3	4	6	5.5	18	8
December	3	4	6	5.5	27	4
January	3	4	6	5.5	20	4
February	3	4	6	5.5	21	4
March	3	4	6	5.5	24	4
April	3	4	6	5.5	37	4
May 1-15	8	9	11	10.5	47	8
May 16-31	40	40	40	40	42	>150
June	40	40	40	40	36	>150
July 1-15	40	40	40	40	13	>150
July 16-31	22	22	22	22	8	22
August	22	22	22	22	6	22
September	22	22	22	22	6	22

<sup>1</sup> Flow increases to be adjusted only if approved monitoring plan determines decrease in resident trout population.

<sup>2</sup> 95% flow exceedance at the upper gage below dam in the bypassed reach.

<sup>3</sup> POC (Peak-of-the-curve) Flow at which maximum weighted usable area for the life stage of concern would result.

<sup>4</sup> Instream flow rates would decrease in increments of 0.5 cfs to no less than 5 cfs if after consecutive 5-year population surveys showed recovery to pre-project levels in accordance with the decision criteria in the 1993 Resident Monitoring Plan.

**Note:** This table includes fixed incremental adjustments, if required, based on fish monitoring results per the June 12, 2009, MOU signed by SNOPUD, WADOE, and WDFW.

- 3) The project is considered operational once electricity is generated. The project must operate through a spring and early summer season before a subsequent survey can be considered to represent post-project conditions. Assuming the project reach will be surveyed during August each year, the following schedule will apply:

**Table 3.** Project monitoring schedule.

<b>PROJECT OPERATIONS BEGIN</b>	<b>INITIAL POST-PROJECT MONITORING SURVEY*</b>
August 16 – December 31, 2010	August 2011
January 1 – March 21, 2011	August 2011
March 22 – August 15, 2011	August 2012
* If initial project operation is delayed beyond August 15, 2011, the corresponding dates will be adjusted by one full year for each year construction is delayed.	

- 4) SNOPUD shall operate the facility per the ramping rates described in the White Paper—Youngs Creek Hydroelectric Project: Operational Plan, Ramping Rates, and Compliance Monitoring. SNOPUD shall use a 4-inch per hour down-ramping rate (in the bypass reach) for flows > 20 cfs and a 2-inch per hour ramping rate for flows < 20 cfs. The licensee shall avoid normal shutdown during the nighttime hours between June 15 and October 15 each year.
- 5) SNOPUD shall install two compliance gauges. The location of these gauges will be mutually determined by the licensee, the Washington Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the Washington Department of Ecology prior to project operation.
- a) The licensee shall install one gage downstream from the powerhouse in the anadromous reach. This gage will be used to measure compliance with powerhouse down-ramping.
- b) The licensee shall install one gage in the bypass reach below the diversion. This gage will be used to measure compliance with minimum instream flows as well as down-ramping that may occur in the bypass as a result of powerhouse or dam operations.
- 6) The powerhouse shall be equipped with deflector shields designed to allow for the continuation of flow out of the powerhouse when any turbine is wholly or partially taken off-line.
- 7) Ecology anticipates, based upon existing analyses and information, that the MOU will be consistent with Section 401 of the CWA, and the CZMA. However, in the event that new analysis or information indicates an inconsistency, Ecology reserves the right to address such inconsistency in any future 401 certifications or CZMA consistency determination.
- 8) Ecology reserves the right, by Order, to use adaptive management to modify flows, ramping rates, and conditions related to them if the measures prescribed above fail to adequately protect the resources.

## 8.0 CONSTRUCTION

SNOPUD shall prepare and implement a water quality protection plan (WQPP) for all project-related construction, maintenance, and repair work that is in- or near-water that has the potential to impact surface and/or groundwater quality. WQPP shall include, but not be limited to, the following elements:

- 1) Stormwater Pollution Prevention Plan (SWPPP) for Upland Construction Work – SNOPUD is required to develop a SWPPP for upland construction activities. The SWPPP shall specify the Best Management Practices (BMPs) and other control measures to prevent pollutants from entering state's surface water and ground water from upland construction activities. The SWPPP shall also specify the management of chemicals, hazardous materials, and petroleum (spill prevention and containment procedures), including refueling procedures, preventive measures in the event of a spill, and reporting and training requirements. The SWPP shall also specify water quality monitoring protocols and notification requirements.
- 2) In-Water-Work Protection Plan for In-Water Construction Work – SNOPUD is required to develop an In-Water-Work Protection Plan for construction activities that require work within surface waters. This plan shall specifically address the BMPs and other control measures to prevent contaminants from entering surface water and ground water. In addition to construction activities, this work includes, but is not limited to, the application of herbicides, pesticides, fungicides, disinfectants, and lake fertilization.

The plan shall address water quality monitoring provisions for all in-water work, including monitoring outside the area that could be influenced by the work, and at the point of compliance throughout the project. This includes, but is not limited to, construction and maintenance of, or emergencies from, any of the following:

*fish collection structures, generation turbines, penstocks, hatcheries, transportation facilities, portable toilets, boat ramps, access roads, transmission corridors, structures, gravel augmentation projects, and staging areas for all project-related activities.*

The plan shall include the following minimum requirements:

- a) Locations of samples: Locations of water quality sampling sites shall be identified and described in the plan and on a map of the project area. At a minimum, sampling shall take place at the point of compliance as specified in WAC 173-201A-200(1)(e)(i), which allows temporary area of mixing for turbidity resulting from disturbance of in-place sediments in Youngs Creek. Background samples shall be collected outside the area of influence of in-water work. Background samples shall be collected concurrently and at the same frequency as the point of compliance samples.
- b) Number of samples: Number and frequency of water quality samples shall be specified in the plan.
- c) Parameter to be sampled: Turbidity, pH, oil and sheen, temperature and dissolved oxygen (DO) shall be sampled for this project.
- d) Equipment: Sampling shall be done using properly calibrated instruments.

3) Best Management Practices for Construction Work

BMPs used for the upland construction activities shall be consistent with the *Stormwater Management Manual for Western Washington* (most recent edition) or equivalent. SNOPUD shall identify the site-specific BMPs for upland and in-water construction work and list them in the WQPP. Some of the recommended BMPs are listed below.

- a) Construction stormwater, sediment, and erosion control best management practices (BMPs) suitable to prevent exceedances of state water quality standards shall be in place before starting construction at the site. Sediment and erosion control measures shall be inspected and maintained prior to and during project implementation. All reasonable measures shall be taken to minimize the impact of construction on waters of the state. Water quality constituents of particular concern are turbidity, dissolved oxygen, temperature, suspended sediment, oil and sheen, and pH.
- b) All necessary measures shall be taken to minimize the disturbance of existing riparian, wetland, or upland vegetation.
- c) SNOPUD shall ensure that any fill materials placed for habitat improvements in any waters of the state do not, by reference to applicable standards, contain toxic materials in toxic amounts.
- d) All construction debris shall be properly disposed of on land above the limits of flood water in an approved upland disposal site. SNOPUD must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.
- e) SNOPUD shall ensure that fill (soil) placed for the proposed project does not contain toxic materials in toxic amounts.
- f) If cast in place, wet concrete/grout shall be prevented from entering waters of the state. Forms for any concrete/grout structure shall be constructed to prevent leaching of wet concrete/grout. Impervious materials shall be placed over any exposed concrete/grout not lined with the forms that will come in contact with state waters. Forms and impervious materials shall remain in place until the concrete/grout is cured.
- g) Work in or near the water that may affect fish migration, spawning, or rearing shall cease immediately upon a determination by Ecology or WDFW that fisheries resources may be adversely affected.
- h) All equipment shall be placed safely so that it cannot accidentally enter a waterway or cause water quality degradation to state waters.
- i) Prior to blasting the bedrock for the intake structure and penstock, SNOPUD shall remove overburden from above the rock.
- j) All possible measures, such as blast mats, shall be used to prevent rock from entering state waters during blasting.

If exceedances of water quality standards are detected through sampling and monitoring, the applicant shall immediately take action to stop, contain, and prevent unauthorized discharges or otherwise stop the violation and correct the problem. After such an event, the applicant shall assess the efficacy of the site BMPs and update or improve the BMPs used at the work site in an effort to reduce or prevent recurrence of noncompliance.

## **9.0 MONITORING AND REPORTING REQUIREMENT**

WQPP shall be submitted to Ecology for review at least two (2) months prior to work initiation and all the subsequent modification must be submitted to Ecology at least thirty (30) days before implementation. A copy of the WQPP shall be in the possession of the on-site construction manager, and the plan shall be made available for review by Ecology staff, upon request. Water quality monitoring must be conducted per the WQPP. Results of water quality sampling, as determined by the WQPP, shall be submitted to Ecology on a monthly basis during construction.

If water quality exceedances for turbidity are predicted as being unavoidable, a short-term mixing zone must be applied for in writing to Ecology at least three (3) months prior to project initiation. If any project has a long-term impact on a regulated water quality parameter, characterization monitoring must be performed for the impacted parameter(s), and a monitoring plan must be outlined in the WQPP.

Notification of noncompliance shall be made to Ecology within 24 hours of detection or observation of occurrence of the noncompliance followed by a detailed report within five (5) days of detection or observation of the noncompliance. Notification shall be made with reference to Order #6689, Attn: Monika Kannadaguli, by telephone at (425) 649-7028 or (425) 649-7000, or by fax to (425) 649-7098.

Submittals required by this Order are listed in Appendix B.

## **10.0 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 Chapter 90.56 RCW and Chapter 90.48 RCW.
- 2) In the event of accidental discharge from project-related activities or facilities of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, SNOPUD shall immediately begin and complete containment and cleanup efforts, taking precedence over normal work. Cleanup shall include proper disposal of any used or contaminated cleanup materials. As soon as possible, SNOPUD shall restock cleanup materials.
- 3) SNOPUD shall not use emulsifiers or dispersants in waters of the state without prior approval from Ecology, Northwest Regional Office.
- 4) Within three (3) months of receiving the amended license from FERC, SNOPUD shall establish an Ecology-approved on-site spill cleanup material inventory and maintain it on-site.

- 5) Project operators shall be familiar with, and trained on use of, oil spill cleanup materials.
- 6) SNOPUD shall record the proper disposal location in the oil consumption records and keep copies of disposal records of contaminated cleanup supplies on-site for inspection.
- 7) SNOPUD shall 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.
- 8) SNOPUD shall 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.
- 9) 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 or no later than 24 hours after discovery to the Ecology's Northwest Regional Office at 425-649-7000 (24-hour phone number). SNOPUD shall provide a written follow-up report to Ecology within two (2) weeks of the incident stating what occurred, whether the incident was due to natural events or human-related activities, SNOPUD's response, a plan detailing long-term corrective actions and monitoring protocols if needed, any measures SNOPUD proposes to reduce future similar occurrences, results of any samples taken, and any additional pertinent information.

10) Transformers

- a) Transformer deck containment area surfaces must be impervious. SNOPUD shall conduct periodic inspections and resurface areas, fill cracks, caulk metal plate footings, or otherwise ensure that containment areas will contain all spill fluids. Remove any observed rainwater pooling in the containment areas.
- b) SNOPUD shall obtain prior approval from Ecology before breaching containment areas for reasons other than containment area maintenance.
- c) SNOPUD shall conform to industry standards for protecting water quality and preventing and containing spills when transporting transformers and transformer oil.

11) Sump

- a) SNOPUD shall immediately repair all oil and water leaks in the sump.
- b) SNOPUD shall provide waterproof lighting in the sump or spotlights adequate to view the surface water in the sump. SNOPUD shall provide a mechanism to satisfactorily deploy and recover sorbent boom in the sump area.

12) Oil, fuel, and chemical storage containers, containment areas, and conveyance systems

- a) SNOPUD shall provide proper containment around each storage container (including transformers) or around a combination of storage containers as appropriate.

- b) SNOPUD shall 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) SNOPUD shall not refuel equipment within 50 feet of rivers, creeks, wetlands, or other waters of the state, unless otherwise authorized by Ecology.
  - d) SNOPUD 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) SNOPUD shall 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) SNOPUD shall keep oil consumption records maintained on-site and 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.
- 13) Other
- a) SNOPUD shall maintain site security at the project site to reduce chance of oil spills.
  - b) SNOPUD shall initiate, plan for, document, and train staff for the deployment of General Response Plan and boom strategies. SNOPUD shall review and update the General Response Plan and boom strategies as needed annually.

## 11.0 APPEAL PROCESS

You have a right to appeal this Order. To appeal this you must:

- 1) File your appeal with the Pollution Control Hearings Board within thirty (30) days of the "date of receipt" of this document. Filing means actual receipt by the Board during regular office hours.
- 2) Serve your appeal on the Department of Ecology within thirty (30) days of the "date of receipt" of this document. Service may be accomplished by any of the procedures identified in WAC 371-08-305(10). "Date of receipt" is defined at RCW 43.21B.001(2).



Be sure to do the following:

- Include a copy of this document that you are appealing with your Notice of Appeal.
- Serve and file your appeal in paper form; electronic copies are not accepted.

**1. To file your appeal with the Pollution Control Hearings Board:**

Mail appeal to:

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

Deliver your appeal in person to:

OR The Pollution Control Hearings Board  
4224 – 6<sup>th</sup> Ave SE Rowe Six, Bldg 2  
Lacey WA 98503

**2. To serve your appeal on the Department of Ecology:**

Mail appeal to:

The Department of Ecology  
Appeals & Application for Relief Coordinator  
PO Box 47608  
Olympia WA 98504-7608

Deliver your appeal in person to:

OR The Department of Ecology  
Appeals & Application for Relief Coordinator  
300 Desmond Dr SE  
Lacey WA 98503

**3. And send a copy of your appeal to:**

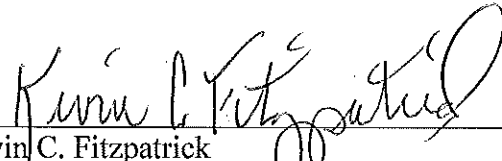
Enforcement Coordinator  
Department of Ecology  
Northwest Regional Office  
3190 160<sup>th</sup> Ave SE  
Bellevue WA 98008-5452

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

*To find laws and agency rules visit the Washington State Legislature Website:  
<http://www1.leg.wa.gov/CodeReviser>*

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 September 17, 2009 at Bellevue, Washington.

  
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Kevin C. Fitzpatrick  
Water Quality Section Manager

## APPENDIX A

**Figure 1:** Youngs Creek Hydroelectric Project and Vicinity Map

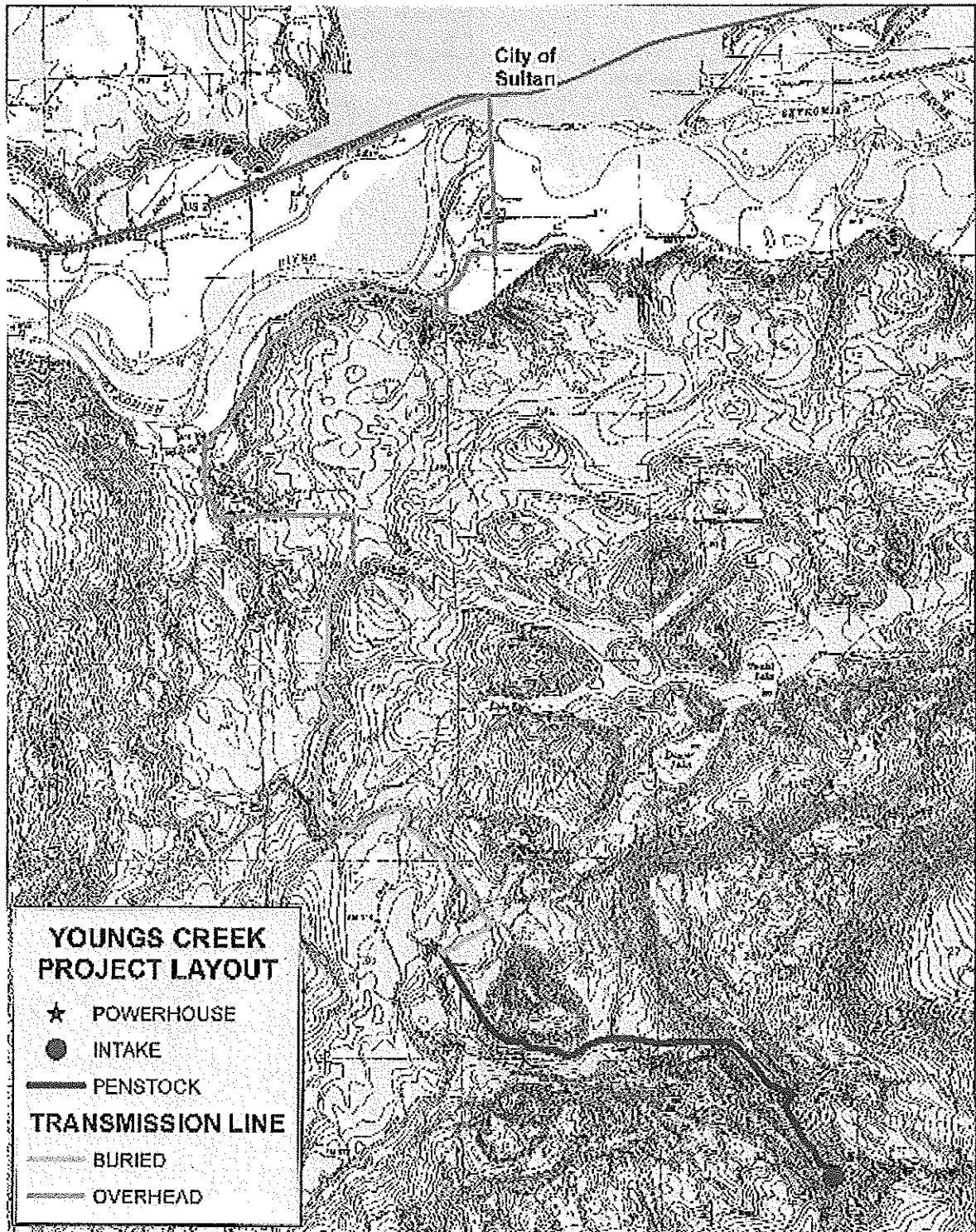
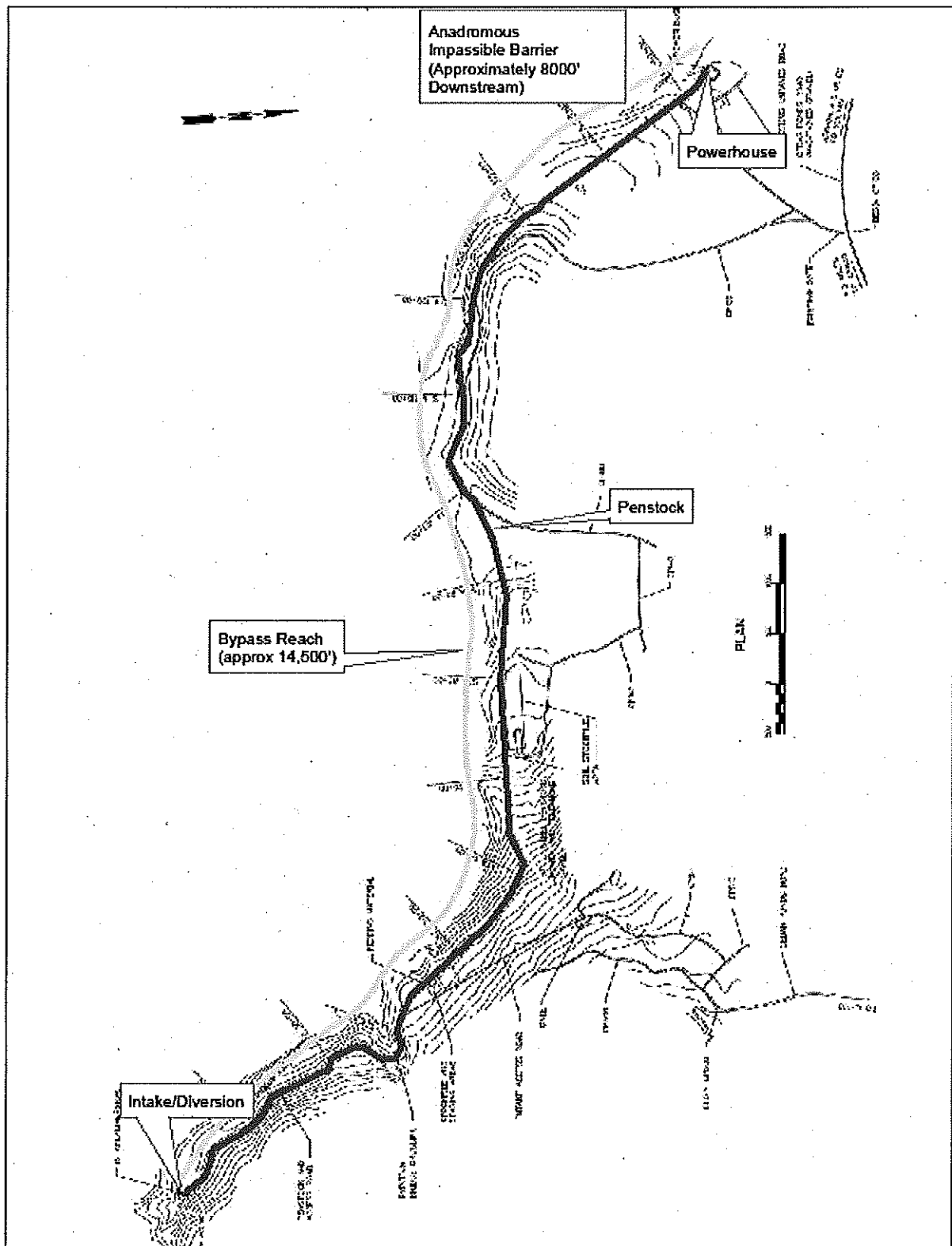


Figure 2: Youngs Creek Hydroelectric Project



## APPENDIX B

### SUMMARY OF SCHEDULED SUBMITTALS

Order Section	Submittal	Frequency	First Submittal Date
8.0	Water Quality Protection Plan (WQPP)	Once	At least two (2) months prior to initiation of construction work.
8.0	WQPP modification	As required	One (1) month prior to implementation.
8.0	Water Quality Sampling Results	Monthly	One (1) month after commencement of construction.
9.0	Noncompliance notification	As required, during project construction	Within 24 hours after discovery of the noncompliance event, followed by a detailed report within five (5) days.
10.0, 4)	On-site spill cleanup material inventory	Once	Within three (3) months of receiving the amended license from FERC.
10.0, 10)	Spill Report	As required	Within 24 hours after discovery of the incident followed by a detailed report within two (2) weeks.

All submittals must be sent to:

Youngs Creek Hydroelectric Facility Manager  
Water Quality Program  
WA State Department of Ecology  
Northwest Regional Office  
3190 – 160<sup>th</sup> Avenue SE  
Bellevue, WA 98008-5452

## **APPENDIX C**

### **Acronyms**

AKART – All known, available, and reasonable technologies

BMP – Best Management Practices

cfs – cubic feet per second

DO – Dissolved Oxygen

FERC - Federal Energy Regulatory Commission

HPA – Hydraulic Project Approval

msl – mean sea level

MW – megawatt

NPDES – National Pollutant Discharge Elimination System

NWRO – Ecology's Northwest Regional Office

PSE – Puget Sound Energy

RM – River Mile

SEPA – State Environmental Policy Act

SNOPUD – Snohomish Public Utility District

SPCC – Spill Prevention Control and Counter measures

SWPPP – Stormwater Pollution Prevention Plan

TDG – Total dissolved gas

WDFW – Washington Department of Fish and Wildlife

WQPP – Water Quality Protection Plan

## **APPENDIX D**

### References:

- 1) White Paper; Youngs Creek – Hydroelectric Project: Operational Plan, Ramping Rates, and Compliance Monitoring.
- 2) Youngs Creek Hydroelectric Project Resident Trout Monitoring Plan, Beak Consultants Inc. 1993.