



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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

September 9, 2005

Timothy L. Powell  
Northwest Pipeline Corp.  
2800 Post Oak Boulevard  
Houston TX 77056-6100

**REGISTERED MAIL**  
**RR 359 893 730 US**

Dear Mr. Powell:

**RE: Order # 2705**  
**U.S. Army Corps of Engineers # 200400304**  
**Water Quality Certification and Coastal Zone Management Consistency Determination** for the Capacity Replacement Project, consisting of installation of 79.5 miles of 36-inch diameter natural gas pipeline in four loops; Whatcom, Skagit, Snohomish, King, Pierce, Thurston, Lewis, and Clark Counties, Washington.

The request for certification for proposed work in and adjacent to rivers, streams and wetlands in the State of Washington has been reviewed. On behalf of the State of Washington, we certify that the proposed work, as conditioned by the enclosed Order, will comply with applicable provisions of Sections 301, 302, 303, 306 and 307 of the Clean Water Act, as amended, and other appropriate requirements of State law. This letter also serves as the State response to the Corps of Engineers.

Pursuant to 16 U.S.C. 1456 et. seq. (Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended), Ecology concurs with the applicant's determination that this work will be consistent with the approved Washington State Coastal Zone Management Program. This concurrence is based upon the applicant's compliance with all applicable enforceable policies of the Coastal Zone Management Program, including Section 401 of the Federal Water Pollution Control Act.

This certification is subject to the conditions contained in the enclosed Order. If you have any questions, please contact Laura Casey at (425) 649-7148. Written comments can be sent to her at the Department of Ecology, 3190 – 160<sup>th</sup> Ave. SE, Bellevue, WA 98008. The enclosed Order may be appealed by following the procedures described in the Order.

Sincerely,

Geoff Tallent  
Interim Section Manager  
Shorelands and Environmental Assistance Program

Enclosure  
GT:AK:rc

cc: Olivia Romano, US Army Corps of Engineers  
Nancy Brennan-Dubbs, US Fish and Wildlife Service  
Krista Rave-Perkins, US Environmental Protection Agency  
Joan Marchioro, Washington Attorney General's Office  
Kurt Buchanan, Washington Fish and Wildlife  
Loree' Randall, Washington Dept. of Ecology  
Sally Toteff, Washington Dept. of Ecology



**IN THE MATTER OF GRANTING A ) ORDER # 2705**  
**WATER QUALITY ) Corps Reference # 200400304**  
**CERTIFICATION TO ) Capacity Replacement Project: Installation of**  
**Northwest Pipeline Corporation ) 79.5 miles of 36-inch diameter pipeline in four**  
in accordance with 33 U.S.C. 1341 ) loops; cross 154 rivers, streams and other  
(FWPCA § 401), RCW 90.48.120, RCW ) waterbodies, 264 wetland areas, temporary  
90.48.260 and Chapter 173-201A WAC ) impact to 114.1 acres of wetlands; permanent  
impact to 2.4 acres of wetlands; Whatcom,  
Skagit, Snohomish, King, Pierce, Thurston,  
Lewis and Clark Counties, Washington.

TO: Timothy L. Powell  
Northwest Pipeline Corporation  
2800 Post Oak Boulevard  
Houston TX 77056

On March 25, 2005, a public notice seeking a water quality certification from the State of Washington pursuant to the provisions of Section 401 of the Federal Water Pollution Control Act (FWPCA), 33 U.S.C. 1341 was distributed by the U.S. Army Corps of Engineers for the above-referenced project. The proposed project, known as the Capacity Replacement Project, involves installation of approximately 79.5 miles of 36-inch diameter pipeline in four separate loops, referred to as the Sumas, Mount Vernon, Snohomish and Fort Lewis Loops, in Whatcom, Skagit, Snohomish, King, Pierce, and Thurston Counties. In addition, five compressor stations will be modified (in Whatcom, Skagit, Snohomish, Lewis and Clark Counties), three pig launchers and receivers will be constructed, one pig receiver relocated, and several mainline valves will be installed. Most of the existing 26-inch pipeline will be abandoned between Sumas and Washougal following construction.

Description: The work will consist of clearing and grading, excavation and removal of the 26-inch pipeline on part of the Snohomish Loop, excavation and backfill of native material for burial of the new pipeline, pipe stringing, bending and welding, construction of temporary workspaces with associated land clearing, and hydrostatic testing of the new pipeline. The project will cross 154 streams and other waterbodies. Of these waterbodies, Northwest Pipeline expects 93% will be dry at the time of construction and will be crossed using standard dry waterbody crossing or upland cross-country construction techniques. The remaining waterbodies would be crossed using horizontal directional drill (HDD), aerial span, push-pull or modified wet open-cut methods. Streams and riparian buffers will be restored on site.

The pipeline loops will cross 264 wetlands, most of which are emergent wetlands on the maintained pipeline easement. The construction will temporarily impact 114.1 acres of wetlands and result in the permanent conversion of 1.9 acres of shrub-scrub and forested wetlands to emergent or scrub-shrub wetlands. The project will permanently fill 0.4 acres of wetland. Wetland impacts will be restored on site, and compensatory mitigation will be implemented off-site for permanent impacts and for conversion of forested and scrub-shrub wetlands.

The horizontal direction drill method is proposed to be used at the North Fork Nooksack River, and the North and South Forks of the Stillaguamish River to drill underneath these rivers and associated riparian areas. These HDD crossings are proposed for Fall of 2005. The remainder of the project is proposed for construction starting in Spring of 2006.

For purposes of this Order, the term "Applicant" shall mean Northwest Pipeline Corporation and its agents, assigns, and contractors.

#### **AUTHORITIES:**

In exercising authority under 33 U.S.C. 1341, RCW 90.48.260, and RCW 90.48.120, the Department of Ecology (Ecology) has investigated 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 Sections 301, 302, 303, 306, and 307);
2. Conformance with the state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 U.S.C. 1313 and by Chapter 90.48 RCW, and with other appropriate requirements of state law; and,
3. Conformance with 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.

#### **WATER QUALITY CERTIFICATION CONDITIONS:**

Through issuance of this Order, Ecology certifies that it has reasonable assurance that the project as proposed and conditioned will not violate applicable water quality standards and other applicable 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 FWPCA Section 401 water quality certification is granted to the Applicant subject to the following conditions within this Order:

##### **A. Purpose of Pipeline:**

- A1. The purpose of the project is to replace existing pipeline capacity to transport gas supplies, extending from the U.S.-Canadian border at Sumas, Washington, to the Oregon-Washington border at Washougal, Washington.

##### **B. No Further Impairment of Existing Water Quality:**

- B1. 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 Ecology. Nothing in this Order shall absolve the Applicant from liability for contamination and any subsequent cleanup of surface waters, ground water or sediments occurring as a result of project construction or operations.

B2. Short Term Modification to Water Quality Standards: Construction activities waterward of the ordinary high water mark may cause water quality effects that will exceed the state water quality criteria specified in Chapter 173-201A WAC. Per WAC 173-201A-110, Ecology may grant a modification to the standards to allow for exceedances of the criteria on a short-term basis when necessary to accommodate essential activities.

a. Mixing zones (or zones of disturbance) can be authorized to allow for temporary exceedances of certain water quality standards in state waters immediately adjacent to in-water projects, after all known, available, and reasonable methods of prevention, control and treatment (AKART) have been implemented. Within the temporary mixing zones, water quality criteria are modified as follows:

1) Turbidity: Water quality standards for turbidity are waived within the specified mixing zones as outlined within specific conditions of this Order.

This modification shall remain in effect for the entire duration of time necessary to complete the in-water work. However, the waiver of specified standards within the mixing zone is intended for brief periods of time (such as a few hours or a day) and is not an authorization to exceed those standards for the entire duration of construction. In no case does the waiver authorize degradation of water quality that significantly interferes with or becomes injurious to characteristic water uses, including fisheries habitat, or causes long-term harm to the waterbody.

B3. The Applicant shall not adversely affect the water quality in already-impaired waterbodies as identified in Washington State's FWPCA Section 303(d) list, unless specifically addressed through this Order or in the National Pollution Discharge Elimination System (NPDES) General Stormwater Permit (S03-006444), and the Individual Stormwater Permit to be issued for this project.

**C. Plans to be Implemented:**

C1. The Applicant shall follow the construction procedures and mitigation measures described in the JARPA dated November 5, 2004, Final Environmental Impact Statement (FEIS) dated July 2005, and additional information provided to and reviewed and approved by Ecology. Any modification to these procedures, measures or conditions shall include justification relative to site-specific conditions and show how such modification will provide an equal or greater level of environmental protection, and is subject to review and approval by Ecology.

- C2. The Applicant shall implement the following Plans as included in the FEIS (July 2005); except where the conditions of this Order require specific plan revisions for review and approval by Ecology prior to commencing construction:
- a. Federal Energy Regulatory Commission (FERC) Staff's Upland Erosion Control, Revegetation, and Maintenance Plan
  - b. FERC Staff's Wetland and Waterbody Construction and Mitigation Procedures
  - c. Erosion Control and Revegetation Plan
  - d. Spill Prevention, Containment, and Countermeasures Plan
  - e. Horizontal Directional Drill Contingency Plan
  - f. Groundwater Monitoring and Mitigation Plan
  - g. Draft Mitigation Plan for Waterbody Crossings

**D. Additional Information / Plan Revisions Required:**

- D1. Additional plans are required of the Applicant throughout this document. These plans shall be provided to Laura Casey, Federal Permit Coordinator, at Ecology, 3190 160<sup>th</sup> Avenue SE, Bellevue WA 98008, [cala461@ecy.wa.gov](mailto:cala461@ecy.wa.gov), (425) 649-7000, for review and approval, either prior to commencing construction in the Fall of 2005 or in Spring of 2006, as specified for each information request. It is the Applicant's responsibility to provide the requested information in a timely manner. All information provided to Ecology shall reference Order # 2705, and the permit condition, if relevant.
- D2. Prior to commencing construction in Spring 2006, the Applicant shall provide Ecology with revised survey alignment maps/sheets and aerial photographs at a scale not smaller than 1:6000 with station positions for all facilities approved by this Order. Any route realignments or facility relocations shall be identified, documenting the existing land use, and the presence of wetlands, waterbodies or their buffers. This shall not apply to extra workspace allowed per the Upland Erosion Control, Revegetation, and Maintenance Plan or minor field realignments per landowner needs, and those that do not affect other landowners or environmentally sensitive areas. Ecology shall approve in writing any such realignments or relocations prior to construction in or near that area.
- D3. The Applicant shall prepare a plan for the discovery and management of contaminated soils, sediments, and groundwater. The plan shall include specific protocols for the testing, handling, and reporting of pre-existing contaminated soils, sediments, and groundwater encountered during construction as well as the contact names and telephone numbers of appropriate State and local agency personnel. The plan shall be sent to Ecology for review and approval 60 days prior to commencing construction.
- D4. The Applicant shall submit an Implementation Plan to Ecology for review and approval at least 30 days prior to commencing construction of the HDD crossings in Fall 2005, and for the remainder of the crossings 60 days prior to the anticipated start of construction in

Spring 2006. The Plan shall describe how the applicant will implement the mitigation measures required by this Order. The Implementation Plan shall include:

- a. Construction drawings clearly showing the mitigation measures at each site;
- b. Number of Environmental Inspectors (EI) per Loop, numbers of personnel sufficient to implement the environmental mitigation;
- c. Training and instruction the Applicant will give to all personnel involved with construction and restoration;
- d. Procedures if noncompliance occurs; and
- e. The locations of off-site washing / cleaning areas for equipment that will be used in wetlands or waterbodies.

D5. The Applicant shall prepare a revised Erosion Control and Revegetation Plan (ECR Plan) and provide it to Ecology 60 days prior to construction in Spring 2006, for review and approval. The revised ECR Plan shall list all of the EI duties found in Section 2.5 of the FEIS. The ECR Plan shall specifically include the following tasks in the list of EI responsibilities:

- a. Evaluating the source of any imported fill and ensuring that it meets the State standards for clean fill in WAC 173-350-100;
- b. Identifying areas of arsenic and/or mercury contamination along the right-of-way and ensuring that contaminated soils are handled in compliance with State environmental regulations;
- c. Ensuring that equipment is washed before entering waterbodies and traveling on public roadways, and that roadways are swept at the end of the work day if necessary;
- d. Ensuring the repair of all ineffective temporary erosion control measures as soon as possible, but not longer than 24 hours after identification, and requiring the repairs to be completed immediately if discharges of turbid water or other pollutants are occurring;
- e. Determining the quantity and locations where slash or non-merchantable timber would be scattered across the right-of-way to be used for wildlife habitat in consultation with Washington Department of Fish and Wildlife (WDFW); and
- f. Provide notification to Ecology of construction activities, permit violations, and /or situations where permit requirements need to be altered due to field conditions as soon as possible, but no later than 24 hours after identification of the issue, unless a variance through the third party compliance monitoring program or an alternative agreement with individual compliance programs is adopted.

D6. The Applicant shall provide to Ecology a Noxious Weed Management Plan prior to commencing construction in Fall 2005. The Plan will include measures appropriate to control noxious weeds in upland and wetland areas. The Applicant shall manually remove noxious weeds within wetlands, wetland buffers and riparian areas as a first option unless otherwise approved in writing by Ecology.

- D7. The Applicant shall provide to Ecology 60 days prior to commencing construction in Spring 2006, a table and/or figure accurately depicting the location of all wells and springs within 200 feet of the construction work area, and a written description of mitigation measures to avoid or minimize potential impacts on these wells and springs.
- D8. The Applicant shall provide a revised Spill Prevention, Containment, and Countermeasures Plan (SPCC Plan) for review and approval by Ecology 30 days prior to commencing construction in Fall 2006. The SPCC Plan shall include:
- a. Best Management Practices (BMPs) for all in-water and over water construction activities;
  - b. Requirements for the use of equipment with the least potential to spill;
  - c. Provisions requiring (a) the power washing or steam cleaning of equipment before it enters a waterbody, (b) that any such washing/cleaning shall occur offsite at an area where washwater runoff will not cause erosion or harm water quality, and preferably is paved and has stormwater treatment; and (c) prohibition on the use of soaps;
  - d. A checklist and requirement to inspect equipment before it enters the waterbody to check:
    - 1) Hydraulic hoses, connections, and rams for wear and leakage;
    - 2) Lube fittings to ensure that they are wiped clean of excess grease; and
    - 3) Fill caps to ensure that they are tightly sealed; and
  - e. Restriction to keep only the amount of fuel on board that would be used during the work period for vehicles working in or over water.
- D9. The Applicant shall provide to Ecology for review and approval a Residential Work Area Plan for the Saddleback Subdivision 60 days prior to commencing construction in this area in 2006 to address groundwater concerns with regard to the subdivision's drinking water well. The Plan shall:
- a. Require that the contractor bring equipment into the area off of 238<sup>th</sup> Avenue fully loaded with fuel so that no refueling would occur within the temporary extra workspace closest to the subdivision's well;
  - b. Evaluate the feasibility of increasing the setback from the subdivision's well during access to and from the construction work area;
  - c. Further evaluate the feasibility of reducing and moving the majority of the temporary extra workspace currently proposed on the east side of the construction right-of-way near the subdivision's well to the west side of the construction right-of-way;
  - d. Further evaluate the feasibility of reducing the temporary extra workspace currently proposed adjacent to the existing aboveground facility to minimize the amount of tree clearing required in the area; and
  - e. Incorporate a site-specific residential construction mitigation plan that depicts the locations and sizes of all of the proposed temporary extra workspaces in the area.

- D10. The Applicant shall provide to Ecology for review and approval a Residential Work Area Plan for the portion of the Lake of the Woods Subdivision surrounding Colin Creek 60 days prior to commencing construction in this area in 2006 to address water quality concerns in Colin Creek. The Plan shall:
- a. Evaluate the feasibility of moving the temporary extra workspace currently proposed on the property north of Colin Creek to open lawn areas nearby;
  - b. Incorporate a site-specific residential construction mitigation plan that depicts the locations and sizes of all of the proposed temporary extra workspaces in the area;
  - c. Revise the temporary extra workspaces so that no soil storage from the excavation is within 150 feet of Colin Creek; and
  - d. Incorporate proposed site-specific mitigation measures to reduce impacts on this area.
- D11. The Applicant shall submit a report of the remedial action completed at each of the 28 sites listed in Table 4.8.5-1 of the FEIS with Ecology for review, and shall get written concurrence from Ecology's Northwest Regional Office (Norm Peck, [nop461@ecy.wa.gov](mailto:nop461@ecy.wa.gov), 425-649-7047) for sites in Whatcom, Skagit, Snohomish, and King Counties and from Ecology's Southwest Regional Office (Bob Warren, [rwar461@ecy.wa.gov](mailto:rwar461@ecy.wa.gov), 360-407-6361) for Pierce and Thurston Counties prior to ground-disturbing activities at these locations.
- D12. The Applicant shall provide variance requests from FERC Staff's Wetland and Waterbody Construction and Mitigation Procedures to Ecology for review and approval at least 60 days prior to commencing construction in Spring 2006.
- E. Wetland, Stream, River and other Waterbody Crossing Construction and Restoration:**
- E1. The following conditions apply to the Applicant's work in **wetlands**:
- a. All trenches shall be re-filled with native material and the top 12 inches of soil shall be replaced in-situ within the trenches.
  - b. Drill and bore entry and exit points, and all associated excavated soils and drilling mud associated with drilling activities will be located outside forested and scrub-shrub wetlands, unless specifically approved by Ecology in writing prior to commencing construction in the wetland.
  - c. The construction right-of-way through wetlands will be no wider than 75 feet (except in agricultural wetlands and certain extra workspace areas).
- E2. The following conditions apply to **all instream construction in streams, rivers, riparian areas and other waterbodies (except wetlands)**, including flumed or bypassed streams, with the **exception** of the following river and waterbody crossings: Nisqually River,

Pilchuck River, Nooksack River, South Fork and North Fork Stillaguamish River, Olson Lake and Evans Creek.

- a. Instream work shall be performed in accordance with the work windows approved by WDFW.
  - b. The Applicant shall use clean gravel in the upper 12 inches of backfill to stabilize trenches and reduce sedimentation within streams and rivers. The gravel shall be sized appropriately for the gradient and stream flows.
  - c. Temporary stream crossing structures shall be specifically authorized by WDFW; no culverts may be installed in streams unless authorized by WDFW. The Applicant shall provide a plan to Ecology and to WDFW for review and approval 60 days prior to commencing clearing activities in 2006, showing the location of these temporary stream crossing structures. These structures shall be promptly removed and disposed of following construction at each crossing. Alternatively, the foundations and bridge stringers may be left in place where needed to provide access for revegetation crews, then removed following installation of plant materials. The Plan shall identify any structures to be left for revegetation crew access.
  - d. The Applicant shall provide plans for stream channel reconstruction across the entire width of the right-of-way to Ecology and to WDFW for review and approval 60 days prior to commencing construction in 2006. The plans shall include a site-specific timber harvest plan where there is riparian forest at each stream crossing.
  - e. Within the pipeline construction area, the Applicant shall replace all structures that are considered fish passage barriers that will be affected by the project.
- E3. Instream Construction Water Quality Sampling and Monitoring: An Instream Construction Water Quality Monitoring Plan (Water Quality Monitoring Plan) shall be developed and implemented. **The Water Quality Monitoring Plan shall be submitted to Ecology for review and approval at least 60 days before construction is scheduled to begin in Spring 2006.** The plan shall include the following minimum requirements:
- a. Visual monitoring (inspections) of both the work area and the areas upstream and downstream of the work area shall be completed during and between sampling efforts for turbidity. Inspections of these areas shall occur, at a minimum, during work activity and every one (1) hour throughout all in-water construction activity.
  - b. Sampling for turbidity shall be taken at each in-stream construction location, including all streams crossed by trenching with use of a flume or dam and pump methods. Sampling shall occur a minimum of every two (2) hours throughout the first day of in-water construction activity at each location of such work. Subsequent sampling is dependent upon monitoring results, but shall be a minimum of three (3) times per day

during in-water activity if no exceedances are detected. Sampling and Visual monitoring shall increase if turbidity exceedances are observed or measured to be above the WAC 173-201A-110(3) temporary mixing zone criteria.

- c. Locations of water quality sampling sites shall be identified and described in the plan. At a minimum, sampling shall take place at the point of compliance as specified in WAC 173-201A-110(3) or as modified by this Order, and at a site just upstream of the work area to determine background water quality. Beginning sampling at half the distance between the activity and the point of compliance is necessary in order to provide a margin of safety to protect water quality.
- d. Sampling for turbidity is to be accomplished using a turbidometer properly calibrated according to the operator's manual.
- e. If visual inspections or water quality sampling indicates turbidity plume greater than background water quality at half the distance between the activity and the point of compliance downstream of the activity, the Applicant shall reduce or eliminate the rate of activity immediately until turbidity at half the distance between the activity and the point of compliance downstream matches background conditions. 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 the turbidity exceedance in the stream (state waters).
- f. If the results of turbidity sampling meet the criteria specified in WAC 173-201A-110(3) or as modified by this Order, the results shall be forwarded to Ecology on a weekly basis to Laura Casey, Federal Permit Coordinator, at e-mail [cala461@ecy.wa.gov](mailto:cala461@ecy.wa.gov), or fax at (425) 649-7098, and reference Order # 2705. Turbidity sampling results can be included in a weekly "status report" of information regarding completed construction for the previous week and proposed construction locations for the upcoming week.
- g. If exceedances of the criteria specified in WAC 173-201A 110(3) at the point of compliance or locations specified by this Order are detected either by visual inspections or as a result of water quality 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.
- h. **Notification of exceedances:** Notification of exceedances of the criteria specified in WAC 173-201A 110(3) or as specified by this Order through visual inspections or water quality sampling shall be made to Ecology within 24 hours of occurrence. Notification shall be transmitted to Laura Casey, Federal Permit Coordinator, via telephone (425) 649-7148, fax (425) 649-7098, or email [cala461@ecy.wa.gov](mailto:cala461@ecy.wa.gov) and reference Order # 2705. The Applicant shall, at a minimum, provide Ecology with the following information:

- 1) A description of the nature and cause of noncompliance, including the quantity and quality of any unauthorized discharges;
  - 2) The period of noncompliance, including exact dates, duration, and times and/or the anticipated time when the Applicant will return to compliance; and
  - 3) The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the noncompliance.
- i. Reports summarizing the scope of inspections, the personnel conducting the inspection, the results of turbidity sampling (both visual and physical), the date of the inspection and/or sample event, and actions taken as a result of the inspections or monitoring results shall be prepared and retained as part of the water quality monitoring plan and submitted to Ecology weekly.
- E4. The following conditions apply to work in **all wetlands, streams, rivers, riparian areas and other waterbodies**:
- a. Extra workspaces for vehicle parking, refueling, or construction staging areas shall be located a minimum of 300 feet (100 meters) from wetland and surface water boundaries. Temporary extra workspaces for stockpiling excavated material shall be located a minimum of 150 feet (50 meters) from wetland and surface water boundaries. Stockpiling excavated material within the Construction right-of-way/easement shall be located a minimum of 50 feet (16 meters) from wetland and surface water boundaries. These minimum setbacks may be reduced on a site-specific basis with review and approval by Ecology, where it can be shown that wetlands and surface water would be protected equal to or better than with the minimum setback.
  - b. Forested wetlands, forested buffers within 150 feet of wetlands, and forested riparian areas within 150 feet of streams shall not be used as temporary work spaces; they shall not be logged or used for storage of stockpiled material from trench excavations. These minimum setbacks may be reduced on a site-specific basis with review and written approval by Ecology.
  - c. Excavated material shall not be stockpiled beneath the canopy of trees where they extend into a temporary work space in a wetland, stream, riparian area or buffer. The drip line of such trees shall be marked in the field with temporary construction fencing prior to commencing clearing.
  - d. Silt-laden trench water shall be discharged to upland areas at least 100 feet away from waterbodies and wetlands, and shall be prevented from discharging into streams and wetlands.
  - e. On-site restoration of wetland and waterbody impacts shall be accomplished on the designated sites as located and described in the Mitigation Plan for Waterbody

Crossings (April 2005), or as may be revised with review and approval by Ecology. To provide for this on-site restoration of wetland and waterbody impacts, the Applicant shall prepare a final Mitigation Plan for Waterbody Crossings and provide it to Ecology 60 days prior to construction in Spring 2006 for review and approval. The final Mitigation Plan for Waterbody Crossings shall include:

- 1) Final planting plans showing, at a minimum, plant species, spacing, source of materials, condition, and full planting specifications.
- 2) All on-site restoration plantings should be installed according to the final approved Mitigation Plan for Waterbody Crossings. All disturbed wetlands will be returned to original topography and re-seeded with an appropriate native seed mix or if in a farmed area, an approved wetland farm mix. Should the project find it is not possible to get cooperation from a property owner to restore native woody vegetation within disturbed scrub-shrub or forested wetlands as on the approved Mitigation Plan for Waterbody Crossings, then these areas should be noted as permanent impacts and additional compensatory mitigation implemented for these conversion impacts off-site.
- 3) The Applicant shall provide written information to property owners regarding on-site restoration plantings in wetlands, wetland buffers, and riparian areas explaining what has been installed, why it is good land management to maintain the restoration, how the maintenance should be done, and who to call in the future for help in maintaining it. A draft of this information shall be provided to Ecology for review and approval at least 60 days prior to commencing construction in Spring 2006.
- 4) Performance Standards: Measurements of success for all restored areas shall be determined by assessing the rate of survival for the first two monitoring years and percent cover of desirable native plant species for the remaining monitoring years. Success standards shall be as follows:
  - i. 100% of planted species will survive or be replanted after the first year of planting;
  - ii. An 80% survival rate will be attained during the second monitoring year;
  - iii. Native plant species or species in approved wetland seed mixes will have an aerial cover at least 20% of each restored area during the third monitoring year. For forested or scrub-shrub restoration areas, aerial cover will be 30% during the fifth year, 50% the 7th year, and 75% the 10th year; and
  - iv. There shall be no more than 10% cover of non-native invasive plant species in any restoration or mitigation area during the monitoring periods.

- 5) Monitoring: A detailed monitoring program addressing the performance standards outlined above, including the method for measuring percent cover of native plant species, shall be included in the final Mitigation Plan for Waterbody Crossings. The monitoring period shall be three (3) years for emergent vegetation, and ten (10) years for scrub-shrub and forested wetlands and buffers, and riparian areas. The monitoring plan and all monitoring reports shall reference Order # 2705 and be submitted to the Federal Permit Coordinator, Ecology NWRO, 3190 – 160<sup>th</sup> Avenue SE, Bellevue, WA, 98008-5452, as well as to the U.S. Army Corps of Engineers, Regulatory Branch, PO Box 3755, Seattle, WA 98124 by December 31 of each monitoring year. If the results of the monitoring at year ten (10) show that the mitigation areas do not satisfy the performance standards set forth above, additional monitoring and mitigation may be required (e.g., replanting, soil amendments, selection of alternative species, etc.). Any additional monitoring or mitigation measures are subject to review and approval of Ecology.
  
- 6) Contingency Plans: If monitoring results indicate that performance standards are not being attained for any monitoring year, replanting may be necessary. However, some of the planted species may need to be substituted with other species for one reason or another. The Applicant shall contact the permitting agencies to discuss what contingencies may be necessary, and an on-site meeting may be held to decide how to rectify the problem. A contingency plan approved by Ecology shall then be implemented.
  
- 7) Restoration Site Access Restrictions: The Applicant is responsible for the successful restoration of wetlands, wetland buffers, stream crossings and riparian areas following construction of the project. The Applicant shall work with property owners to explain the necessity to limit access to the restoration sites by off-road vehicles (ORVs). Should the Applicant find it is not possible to get cooperation from a property owner to limit ORV access to these restoration sites, then these areas should be noted as permanent impacts and additional compensatory mitigation implemented for these conversion impacts off-site.
  
- 8) Timing: All restored sites along the pipeline corridor shall be planted no later than the first planting season (October through March) after completion of pipeline replacement.
  
- 9) "As-Built" Report: An "As-Built" Report documenting the final design of the restoration areas shall be prepared when site construction and planting is completed. The Report shall include the following:
  - i. Vicinity map showing site access;
  - ii. Final site topography;
  - iii. Drawings that shall clearly identify the boundaries of the restoration areas;

- iv. The installed planting scheme showing quantities, densities, sizes, and approximate locations of plants, as well as plant sources and the time of planting;
  - v. Photographs of the area taken from permanent reference points;
  - vi. Locations of photopoints, sampling and monitoring sites; and
  - vii. An analysis of any changes to the restoration plan that occurred during construction.
- 10) A copy of the "As-Built" Report shall reference Order # 2705 and be sent to Laura Casey, Federal Permit Coordinator, 3190 – 160<sup>th</sup> Avenue SE, Bellevue, WA, 98008-5452, within 90 days of completing plant installation.
- 11) Field Supervision: The restoration plant installations shall be field-supervised and inspected by a qualified consultant during planting operations as well as after planting has been completed, to ensure proper placement of plants.
- 12) Maintenance: The Applicant is responsible for maintenance of the restoration sites such that the required performance standards are met. Maintenance may include irrigation, removal of invasive species, removal of trash, and replacement of dead plants.
- E5. Access: The Applicant shall provide access to all restoration sites upon request by Ecology personnel for site inspections, monitoring, and necessary data collection to ensure that the wetland mitigation is implemented as approved.
- E6. The Applicant shall implement appropriate BMPs as described in FERC's Wetland and Waterbody Construction and Mitigation Procedures in the FEIS during stream and wetland crossings to control erosion and prevent sediment from reaching state waters (streams and wetlands).
- E7. The Applicant shall use a non-toxic bentonite clay drilling mud for the horizontal direction drills.

#### **SITE SPECIFIC WETLAND AND WATERBODY CROSSING CONDITIONS:**

##### **F. Nisqually River Crossing:**

- F1. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval at least 60 days before construction at this location is scheduled to begin. The Plan shall include an evaluation of alternative crossing methods to the proposed "wet open cut" that will enable the work to be done in the "dry" or will otherwise reduce the likelihood of erosion and increased turbidity in the Nisqually River. The Plan shall also include plans for removal and replacement of existing in-river large wood debris, a site specific timber harvest plan for the riparian forest at this crossing, a

site-specific re-vegetation plan including long-term monitoring, and a final restoration plan specific to this location.

- F2. Notification and Pre-Construction Meeting: The Applicant shall convene an on-site pre-construction meeting and invite participation from at least the following: Ecology, WDFW, County staff, contractors, and construction personnel. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting.
- F3. The Applicant shall not remove any tree within the temporary extra work space upland of the toe of slope of the steep, wooded bank north of the shoreline ledge on the north bank of the Nisqually River that exceeds 12 inches diameter at breast height, unless it can justify in writing to Ecology and Pierce County Planning Department that there is no other reasonable alternative approach for required project equipment to reach the river bank.
- F4. All pre-fabrication of pipe segments and pipe preparation on the Pierce County side of the Nisqually River shall take place upland of the top of the steep bank.
- F5. All parking of construction vehicles and employee vehicles in the vicinity of the Nisqually River on the Pierce County side shall take place on the existing pipeline right-of-way north of the top of the steep bank.
- F6. No transferring of liquids and refueling shall take place within 100 feet from the ordinary high water mark of the Nisqually River, except where construction equipment cannot be easily relocated for refueling. In these specific cases, secondary containment capacity equal to at least 110% of the fuel storage capacity of the equipment shall be required.
- F7. Any material stockpiled in the river shall be placed downstream of Ecology blocks, sand or gravel-filled bags, or other structures, to minimize erosion of the stockpiles; unless otherwise approved as part of the Site-Specific Waterbody Crossing Plan.
- F8. For in-water work within the Nisqually River Ecology is granting a short-term modification to the water quality standards and authorizing a temporary mixing zone of 1250 feet from the downstream edge of the in-water activities. This mixing zone is considered reasonably sufficient to allow for temporary turbidity exceedances expected during in-water work. Within the temporary mixing zone, the Class AA standard for turbidity is waived. All other applicable water quality standards shall remain in effect within the temporary mixing zone and all other water quality standards are to be met outside of the authorized temporary mixing zone.
- F9. A Water Quality Monitoring Plan specific for the Nisqually River shall be developed and submitted to Ecology for review and approval at least 60 days prior to beginning of construction. The Plan shall follow the outline in Condition E3, with the following modifications:

- a. Sampling shall occur at 600 feet, 1250 feet, 2500 feet, and one (1) mile downstream.
- b. Turbidity shall be monitored at all sample locations hourly during all activities waterward of the ordinary high water mark.
- c. Sampling results shall be submitted daily to Laura Casey, Federal Permit Coordinator, Ecology, referencing Order # 2705. Submittal can be via fax at (425) 649-7098, e-mail to cala461@ecy.wa.gov, or voicemail at (425) 649-7148.

**G. Pilchuck Creek Crossing:**

- G1. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval at least 60 days before construction is scheduled to begin at this location, showing how a diverted-flow dry method or a flume method will be used for crossing the stream at this location.
- G2. This Order authorizes Pilchuck Creek to be crossed by the flume method. The Applicant shall make every reasonable effort to bypass the stream around the work area during construction.
- G3. The Water Quality Monitoring Plan specific for Pilchuck Creek shall follow the outline in Condition E3, with the following modifications:
  - a. Sampling shall occur at 100 feet and 400 feet downstream. If an exceedance is detected at 400 feet, sampling shall also occur at 1000 feet.
  - b. Turbidity shall be monitored at all sample locations hourly during all activities waterward of the ordinary high water mark.
  - c. Sampling results shall be submitted daily to Laura Casey, Federal Permit Coordinator, Ecology, referencing Order # 2705. Submittal can be via fax at (425) 649-7098, e-mail to cala461@ecy.wa.gov, or voicemail at (425) 649-7148.
- G4. Notification and Pre-Construction Meeting: The Applicant shall convene an on-site pre-construction meeting and invite participation from at least the following: Ecology, WDFW, County staff, contractors, and construction personnel. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting.
- G5. Contingency Plan: If the flume method cannot be used because of high flows, the Applicant shall submit a contingency plan for an alternate crossing of Pilchuck Creek. The Plan shall include measures to reduce and minimize turbidity during construction. Minimization methods may include: partial fluming of the creek to reduce flow, upstream diversion of a portion of the flow, use of ecology block or gravel-filled bags to minimize erosion, or other methods. The Plan shall include stockpile locations of the excavated trench material. The contingency plan shall be submitted to Ecology for review and approval at least 30 days prior to beginning of construction.

G6. For in-water work within Pilchuck Creek, Ecology is granting a short-term modification to the water quality standards and authorizing a temporary mixing zone of 400 feet from the downstream edge of the in-water activities. This mixing zone is considered reasonably sufficient to allow for temporary turbidity exceedances expected during in-water work. Within the temporary mixing zone, the Class AA standard for turbidity is waived. All other applicable water quality standards shall remain in effect within the temporary mixing zone and all other water quality standards are to be met outside of the authorized temporary mixing zone.

**H. North Fork Nooksack River Crossing:**

- H1. This Order authorizes the Nooksack River to be crossed by Horizontal Directional Drill.
- H2. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval. The Plan addressing the HDD method shall be provided at least 30 days prior to commencing construction.
- H3. Notification and Pre-Construction Meeting: The Applicant shall convene an on-site pre-construction meeting and invite participation from at least the following: Ecology, WDFW, County staff, contractors, and construction personnel. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting.
- H4. Contingency Plan: If the HDD method does not succeed, then a revised Waterbody Crossing and Restoration Plan shall be provided to Ecology for review and approval at least 60 days before construction is scheduled to begin in Spring 2006. Any revised Waterbody Crossing and Restoration Plan shall include evaluation of alternative crossing methods to the proposed "wet open cut" that will enable the work to be done in the "dry" or will otherwise reduce the likelihood of erosion and increased turbidity in the North Fork Nooksack River. Methods to minimize erosion and turbidity in the North Fork Nooksack River may include upstream diversion of a portion of the flow, use of ecology block or gravel-filled bags to reduce erosion, or other methods. The Plan shall also identify stockpile locations of the excavated trench material, and address removal and replacement of existing in-river large woody debris, and include a site specific timber harvest plan for the riparian forest at this crossing, a site-specific re-vegetation plan including long-term monitoring, a final mitigation plan specific to this location, and locations of stockpiles of excavated trench material.
- H5. The Contingency Plan shall include a Water Quality Monitoring Plan specific for the North Fork Nooksack River that shall be developed and submitted to Ecology. The Plan shall follow the outline in Condition E3, with the following modifications:
- a. Sampling shall occur at 100 feet and 600 feet downstream of the crossing. If an exceedance is detected at 600 feet, sampling shall also occur at 2000 feet and one (1) mile.

- b. Turbidity shall be monitored at all sample locations hourly during all activities waterward of the ordinary high water mark.
  - c. Sampling results shall be submitted daily to Laura Casey, Federal Permit Coordinator, Ecology, and reference Order # 2705. Submittal can be via fax at (425) 649-7098, e-mail to cala461@ecy.wa.gov, or voicemail at (425) 649-7148.
- H6. For in-water work within the Nooksack River, Ecology is granting a short-term modification to the water quality standards and authorizing a temporary mixing zone of 600 feet from the downstream edge of the in-water activities. This mixing zone is considered reasonably sufficient to allow for temporary turbidity exceedances expected during in-water work. Within the temporary mixing zone, the Class AA standard for turbidity is waived. All other applicable water quality standards shall remain in effect within the temporary mixing zone and all other water quality standards are to be met outside of the authorized temporary mixing zone.
- H7. The Applicant is working with agencies and tribes in the area to provide compensatory mitigation for impacts of the North Fork Nooksack River crossing. The following conditions shall apply, unless revised by Ecology upon review and approval of a final Site Specific Waterbody Crossing and Restoration Plan:
- a. If the HDD is successful, mitigation shall include:
    - 1) Reconstruct all of the pipeline's stream channel crossings (including the new proposal and the two existing pipelines) in Jim Creek Flats to stabilize the channels and minimize risk of pipeline scour, minimize avulsion risk, and provide fish access to historic floodplain habitats. This work should occur for all of the numerous places where the pipelines are located under channel crossings between the active channel edges of the North Fork Nooksack River and Mount Baker Highway.
    - 2) Reestablish the historic channel / flow path of Jim Creek down stream (south) from Truck Road.
    - 3) Develop and implement a comprehensive flood management plan for Jim Creek Flats that minimizes the need for the existing derelict levees and rock riprap along the active river channel that allows for river flow into the Jim Creek Flats during average wet season flow conditions.
    - 4) Bury or fortify the new and existing pipeline crossings with buried sills, to withstand flows that would be expected in the off-channel habitats, and reconstruct the stream crossings to remove blockages and constructions created by the pipelines.
  - b. If the HDD is unsuccessful, mitigation shall include:
    - 1) Same mitigation measures identified in Condition H7.a. above.

- 2) The Applicant must evaluate alternative crossing methods to the proposed "wet open cut" that will enable the work to be done in the "dry" or will otherwise reduce the likelihood of erosion and increased turbidity in the Nooksack River.
- 3) Measures must be taken to ensure appropriate ramping rates and fish rescue for coffer dam and/or diverted flow techniques.
- 4) Develop plans, evaluate feasibility, and where practicable re-bury existing and proposed pipelines across the entire floodplain to maximize the horizontal and vertical channel migration zone.
- 5) Provide buried rock sills to protect pipeline infrastructure in the future and provide for eventual removal or decomposition of the existing levees on the right bank of the North Fork Nooksack River.

**I. North Fork and South Fork Stillaguamish River Crossing:**

- I1. This Order authorizes the North Fork (NF) and South Fork (SF) of the Stillaguamish River to be crossed by Horizontal Directional Drill.
- I2. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval. The Waterbody Crossing and Restoration Plan addressing the HDD method shall be provided to Ecology for review and approval at least 30 days prior to commencing construction, and shall include provisions for replacing the failing culverts under the HDD access road with a fish-passable crossing structure.
- I3. Notification and Pre-Construction Meeting: The Applicant shall convene an on-site pre-construction meeting and invite participation from at least the following: Ecology, WDFW, County staff, contractors, and construction personnel. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting.
- I4. Contingency Plan: If the HDD method does not succeed, the Applicant shall submit a contingency Waterbody Crossing and Restoration Plan for an alternate crossing of the NF and/or SF of the Stillaguamish River. This Plan shall be provided to Ecology for review and approval at least 60 days before construction is scheduled to begin in Spring 2006. The Contingency Plan shall include evaluation of alternative crossing methods to the "wet open cut" proposed that will enable the work to be done in the "dry" or will otherwise reduce the likelihood of erosion and increased turbidity in the NF or SF Stillaguamish River. Methods to minimize erosion and turbidity in the NF or SF Stillaguamish River may include upstream diversion of a portion of the flow, use of ecology block or gravel-filled bags to reduce erosion, or other methods. The Contingency Plan shall also include provisions for replacing the culverts under the HDD access road with a fish-passable crossing structure if the culverts are damaged, altered, or replaced as part of the project. The Plan shall also address modification of the riprap riverbanks and bed on the South Fork, a site specific timber harvest plan for the riparian forest at this crossing, a site-specific re-vegetation plan including long-term monitoring, a final restoration plan specific to this location, and locations of stockpiles of excavated trench material.

- I5. A Contingency Water Quality Monitoring Plan specific for the NF and SF Stillaguamish River shall be submitted to Ecology for review and approval 60 days before construction is scheduled to begin in Spring 2006. The Plan shall follow the outline in Condition E3, with the following modifications:
- a. Sampling shall occur at 100 feet and 600 feet downstream. If an exceedance is detected at 600 feet, sampling shall also occur at 2000 feet and one mile.
  - b. Turbidity shall be monitored at all sample locations hourly during all activities waterward of the ordinary high water mark.
  - c. Sampling results shall be submitted daily to Laura Casey, Federal Permit Coordinator, Ecology, and reference Order # 2705. Submittal can be via fax at (425) 649-7098, e-mail to cala461@ecy.wa.gov, or voicemail at (425) 649-7148.
- I6. For in-water work within the Stillaguamish River, Ecology is granting a short-term modification to the water quality standards and authorizing a temporary mixing zone of 600 feet from the downstream edge of the in-water activities. This mixing zone is considered reasonably sufficient to allow for temporary turbidity exceedances expected during in-water work. Within the temporary mixing zone, the Class AA standard for turbidity is waived. All other applicable water quality standards shall remain in effect within the temporary mixing zone and all other water quality standards are to be met outside of the authorized temporary mixing zone.
- J. Evans Creek Crossing:**
- J1. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval at least 60 days before construction is scheduled to begin in this area. The Plan shall include an evaluation of alternative crossing methods in addition to the currently proposed “push-pull” method. The Plan shall include plans to totally isolate the work site and excavated material, and to prevent discharge of oxygen-depleted water to flowing waters. Methods to minimize turbidity may include installation of silt curtains above and below the work area, upstream diversion of a portion of the flow, use of ecology block or gravel-filled or water-filled bags to reduce erosion, or other methods. The Plan shall also show the stockpile locations of the excavated trench material, and shall include a site-specific revegetation plan.
- K. Olson Lake Crossing:**
- K1. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval at least 60 days before construction is scheduled to begin in this area. The Plan shall include an evaluation of alternative crossing methods in addition to the currently proposed “push-pull” method. It shall include plans to totally isolate the work site and excavated material, and to prevent discharge of oxygen-depleted water to flowing waters. Methods to minimize turbidity may include installation of silt

curtains above and below the work area, upstream diversion of a portion of the flow, use of ecology block or gravel-filled or water-filled bags to reduce erosion, or other methods. The Plan shall also show the stockpile locations of the excavated trench material, and shall include a site-specific revegetation plan.

**L. Mount Vernon Wetlands 16, 17 and 18 (Eagle Creek):**

- L1. The Applicant shall provide a final site-specific Waterbody Crossing and Restoration Plan for Wetlands MV 16, 17 and 18, including a detailed erosion and dewatering plan for the Eagle Creek Flats area and revised temporary work areas to avoid severe encroachment into the stream/wetland. The Plan shall also show the stockpile locations of the excavated trench material, and shall include a site-specific revegetation plan.

**M. Mount Vernon Wetlands 41, 43 and 67A (Machias wetland C-6):**

- M1. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan for Wetlands MV 41, 43 and 67A, addressing isolation of excavated material and control of erosion and turbidity. The Plan shall include a site-specific revegetation plan.

**N. Snohomish Wetlands 33, 34, and 35:**

- N1. The Applicant shall provide a final Site Specific Waterbody Crossing and Restoration Plan for Wetlands SN 33, 34, and 35 addressing erosion, dewatering, and restoration of the previously-installed wetland mitigation areas at these wetlands.

**O. Compensatory Mitigation for Wetlands, and Waterbodies including Rivers, Streams, Riparian Areas and Buffers:**

- O1. The mitigation measures described below are intended to compensate for permanent impacts to wetlands, conversion of wetlands from forested or scrub-shrub communities to emergent communities, and temporal loss of forested or scrub-shrub wetland functions. Mitigation is also intended to compensate for stream, river and riparian area impacts. If any of the proposed crossing methods fail, and the crossing(s) must be installed using a method that increases adverse impacts to wetlands and waterbodies, then the required compensatory mitigation will increase accordingly.
- O2. Compensatory mitigation ratios for wetlands are based on the category of the affected wetland, whether the impact is temporary or permanent, whether the wetland plant community is forested, scrub-shrub or other, and the type of mitigation proposed. Table 4.4.4-1 in the FEIS shows proposed compensatory mitigation for wetlands on each loop of the project.
- O3. **Sumas Loop:**

Compensatory mitigation through enhancement or restoration would require 11.5 acres. If mitigation is through preservation, 72.1 acres would be required. The Applicant proposes compensatory mitigation through enhancement and preservation at Site 8 in Water Resource Inventory Area (WRIA) 1, by acquiring the land and deeding it to a land trust, Whatcom County or the Nooksack Tribe, and through removal of structures and debris on the site and revegetation with native species. At Wetland S-76, the Applicant would establish a conservation easement and work with the Nooksack Tribe to enhance the wetland with native trees and shrubs.

The Applicant shall provide a final Compensatory Mitigation Plan for the Sumas Loop to Ecology and WDFW for review and approval at least 60 days before construction is scheduled to begin. The Plan shall specify the mitigation selected. It shall also indicate who will own the land, and include a copy of the conservation easement to be recorded.

**O4. Mount Vernon Loop:**

Compensatory mitigation through enhancement or restoration would require 12.5 acres. If mitigation is through preservation, 69.8 acres would be required. The Applicant proposes compensatory mitigation through enhancement and preservation at Site 6 in WRIA 5, by acquiring the land and deeding it to Skagit County, the City of Arlington or a land conservancy for inclusion in the Portage Creek Enhancement Project. The Applicant would work with the County and the Natural Resources Conservation Service to development and implement a plan to enhance the wetland on the property.

The applicant shall provide a final Compensatory Mitigation Plan for the Mount Vernon Loop to Ecology and WDFW for review and approval at least 60 days before construction is scheduled to begin. The Plan shall specify the mitigation selected. It shall also indicate who will own the land, and include a copy of the conservation easement to be recorded.

**O5. Snohomish Loop:**

Compensatory mitigation through enhancement or restoration would require 9.4 acres. If mitigation is through preservation, 58.0 acres would be required. The Applicant proposes compensatory mitigation through enhancement and preservation at a site on Evans Creek just north of Sahalee Way's intersection with State Route 202, by acquiring a conservation easement and working with King County to develop and implement an enhancement plan. As an alternative, the Applicant could acquire a conservation easement on part of Perrigo Park and work with the City of Redmond and King County to develop a plan to enhance the wetland. A third alternative would be to provide an in-lieu fee equivalent to the cost of these mitigation measures to be used at specified locations for enhancement of County-owned wetlands.

The applicant shall provide a final Compensatory Mitigation Plan for the Snohomish Loop to Ecology and WDFW for review and approval at least 60 days before construction is

scheduled to begin. The Plan shall specify the mitigation selected, and the amount of any in-lieu fee to be paid to King County's Mitigation Reserve Program. It shall also indicate who will own the land, and include a copy of the conservation easement to be recorded.

**O6. Fort Lewis Loop:**

Compensatory mitigation through enhancement or restoration would require 1.8 acres. If mitigation is through preservation, 12.3 acres would be required. The Applicant proposes compensatory mitigation in Pierce County by working with the County Conservation District to contribute to the Ohop Creek Enhancement Project. In Thurston County, the Applicant would acquire a parcel or a conservation easement at WRIA 13, Site 1, to be deeded to the Capital Land Trust. As an alternative, the Applicant is working with agencies and the Nisqually Tribe to create an alternative mitigation strategy whereby land is acquired for preservation or restoration in the Nisqually basin through the Nisqually Land Trust or other non-profit organization.

The applicant shall provide a final Compensatory Mitigation Plan for the Fort Lewis Loop to Ecology and WDFW for review and approval at least 60 days before construction is scheduled to begin. The Plan shall specify the mitigation selected, the amount of any money to be contributed to the Ohop Creek Enhancement Program, and the amount of any in-lieu fee to be paid. It shall also indicate who will own the land, and include a copy of the conservation easement to be recorded.

**O7. Chehalis Compressor Station:**

Compensatory mitigation is required for impacts from expansion of the Compressor Station. The Applicant would enhance 1.2 acres of existing wetlands in Lewis County along Berwick Creek, and is already owned by the Applicant. The applicant shall provide a final Compensatory Mitigation Plan for the Chehalis Compressor Station to Ecology for review and approval at least 60 days before construction is scheduled to begin.

**O8. Mainline Valve (MLV) at Milepost 1440.1:**

Compensatory mitigation is required for permanent impacts to wetlands at the mainline valve location at milepost 1440.1 along the pipeline alignment. The Applicant shall expand an existing enhancement project near Hansen Creek on the Northern States Property in Skagit County by 0.3 acres. The applicant shall provide a final Compensatory Mitigation Plan for this MLV to Ecology for review and approval at least 60 days before construction is scheduled to begin. The Plan shall indicate who will own the land, and include a copy of the conservation easement to be recorded.

**P. Notification and Preconstruction Meeting:**

P1. The Applicant shall submit an updated application to Ecology if the information contained in the JARPA dated November 5, 2004 is altered by route modification or facility relocation submittals to the federal agency and/or state agencies. Within 30 days of receipt of an updated application Ecology will determine if a modification to this Order is required. All submittals shall be sent to Department of Ecology, Federal Permit Coordinator, 3190 - 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452 and display Order Number 2705.

P2. Except as specified above in sections F through I, the Applicant shall hold a pre-construction meeting at least 30 days before construction begins, and invite participation from at least the following: Ecology, WDFW, County staff, contractors, and construction personnel. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting. During this meeting, site conditions, permit specifications and the requirements of the Implementation Plan and other plans listed above will be reviewed. This will assist all involved parties in understanding the intent, specifications, and requirements of the permits and plans. Notification shall be sent to Department of Ecology, Laura Casey, Federal Permit Coordinator, Shorelands & Environmental Assistance, 3190 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452 and Sally Toteff, Office of Regulatory Assistance, PO Box 47600, Olympia, WA 98504 and reference Order # 2705. The project construction schedule shall also be provided with the meeting notification.

**Q. Construction Conditions:**

Q1. During construction, the Applicant shall comply with all stormwater requirements within the Stormwater General permit for Construction Activity #S03-006444 issued for this project or any Individual Stormwater Discharge permit Ecology may issue for this project.

Q2. All construction debris or deleterious material shall be properly disposed of at an approved solid waste facility and according to local solid waste regulations implemented by local health departments. Prior to disposal, the Applicant shall consult with the local health department.

Q3. All excess excavated material shall be disposed of above the 100-year floodplain and shall be contained and stabilized using a combination of BMPs listed in Ecology's Stormwater Management Manual for Western Washington (2005) in order to prevent pollution into waters of the state.

Q4. Erosion and sediment control BMPs listed in the Stormwater Management Manual for Western Washington (2005) suitable to prevent erosion of soils and subsequent exceedances of state water quality standards shall be implemented and in place before starting project construction.

- Q5. The project shall be clearly marked/staked prior to construction. Clearing limits, travel corridors and stockpile sites shall be clearly marked. Sensitive areas to be protected from disturbance shall be delineated and marked with brightly colored construction fence, so as to be clearly visible to equipment operators. Equipment shall enter and operate only within the delineated clearing limits, corridors and stockpile areas.
- Q6. All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. All on-site erosion and sediment control measures shall be inspected at least once every seven (7) days and within 24 hours after any storm event of greater than 0.5 inches of rain per 24-hour period.
- Q7. Whenever inspection reveals that the BMPs implemented on site are inadequate, due to the actual discharge or the potential to discharge a significant amount of any pollutant, the BMPs shall be modified or enhanced as expeditiously as practicable to stop, contain and clean up any discharge of pollutants and to prevent violations of state water quality standards.
- Q8. The Applicant shall provide updated status reports with Ecology on a bi-weekly basis until all construction-related activities, including restoration, are complete. These reports shall include:
- a. Current construction status of each loop, work planned for next reporting period, any schedule changes for stream crossings or work in other environmentally sensitive areas
  - b. List of all problems encountered and each instance of noncompliance observed by the Environmental Inspector or third-party compliance monitor(s) during the reporting period
  - c. Corrective actions implemented in response to instances of noncompliance and their effectiveness
  - d. Scope of inspections, personnel conducting the inspections
  - e. Results of turbidity sampling (both visual and physical), the date of the inspection and/or sample event
- Q9. At the completion of construction, hydroseeding may be used to stabilize slopes and soils until other required planting is completed. Hydroseed mix shall be consistent with BMP C120 "Temporary and permanent seeding" as described in the Stormwater Management Manual for Western Washington (2005), except in wetlands, buffers and riparian areas where it shall be as listed in the Restoration Plan for each specific waterbody crossing.
- Q10. Wash water containing oils, grease, or other hazardous materials resulting from wash down of equipment or working areas shall not be discharged into state waters except as authorized by an NPDES or state waste discharge permit.

**R. Fractures during Horizontal Directional Drill Process:**

- R1. Any fractures (“frac-outs”) observed in or within 150 feet of rivers, streams, or wetlands shall be reported within one hour to Laura Casey, Federal Permit Coordinator, at Ecology via fax at (425) 649-7098, e-mail to [cala461@ecy.wa.gov](mailto:cala461@ecy.wa.gov), or (425) 649-7148, and the WDFW Area Habitat Biologist, and County staff and reference Order # 2705. If the “frac-out” occurs before 9 am or after 5 pm Monday through Friday, then it shall be reported to the appropriate Spill Response number at Ecology. The Northwest Regional Office Spill Response is at (425) 649-7000 for incidents in Whatcom, Skagit, Snohomish and King Counties. For incidents in Pierce or Thurston Counties call Ecology’s Southwest Regional Office Spill Response at (360) 407-6300. In addition to providing such notice, the Applicant shall also report to Ecology the following information.
- a. A description of the nature and the cause of the ‘frac-out’, including the quantity and quality of the discharge;
  - b. The period and duration of ‘frac-out’, including the exact dates and times and/or the anticipated time of ‘frac-out’;
  - c. Evaluation of the impact of the ‘frac-out’ on aquatic resources, including downstream salmonid habitat;
  - d. The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the ‘frac-out’.
  - e. If this information is provided orally, a written submittal shall be provided by the applicant within five (5) days of the date of the ‘frac-out”, unless Ecology waives or extends this requirement in writing on a case-by-case basis.
  - f. Frac-outs must be cleaned up immediately, their location flagged and mapped, photos taken. Unless otherwise approved in writing by Ecology, the Applicant shall conduct two years of monitoring to determine if the stream, wetland or buffer vegetation has reestablished on its own, or if supplemental plantings are needed.
  - g. In the event that aquatic resources are damaged by inadvertent drilling mud discharges, the Applicant shall develop and implement a restoration/mitigation plan in consultation with Ecology within 180 days of the discharge.

**S. Emergency Spill Cleanup Measures:**

- S1. Any in-water work that is out of compliance with the provisions of this Order, or any discharge of oil, fuel, or chemicals into state waters, including wetlands, or onto land with a potential for entry into state waters, is prohibited. If these occur, the Applicant shall immediately take the following actions:
- a. Cease operations.
  - b. Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.
  - c. In the event of a discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal

work. Cleanup shall include proper disposal of any spilled material and used cleanup materials.

- S2. Spills of petroleum products or chemicals into state waters, spills onto land with a potential for entry into state waters, or other significant water quality impacts, shall be reported immediately to Ecology's Northwest Regional Office Spill Response at (425) 649-7000 for incidents in Whatcom, Skagit, Snohomish and King Counties. For incidents in Pierce or Thurston Counties report spills to Ecology's Southwest Regional Office Spill Response at (360) 407-6300.
- S3. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters, including wetlands.
- S4. Construction monitoring: During and immediately after project construction, the Applicant or contractor shall visually monitor the area for distressed or dying fish. If water quality exceedances are observed outside the dilution zone, in-water work shall cease immediately and the Applicant or the contractor shall contact Ecology's Northwest Regional Office Spill Response at (425) 649-7000 for incidents in Whatcom, Skagit, Snohomish and King Counties. For incidents in Pierce or Thurston Counties, report to Ecology's Southwest Regional Office Spill Response at (360) 407-6300.

**T. Hydrostatic Test Water Discharge:**

- T1. Ecology Water Quality staff shall conduct field reviews of proposed hydrostatic test water discharge locations as part of the NPDES permit review process. Hydrostatic test water discharge locations for the pipelines to be installed by HDD beneath the Nooksack, and North and South Fork Stillaguamish River, shall be inspected by Ecology Water Quality staff prior to such discharge. Based on this field review, modifications to the discharge locations will be made as necessary to ensure that the test water will infiltrate into the ground before reaching waterbodies, including but not limited to streams, rivers, and wetlands. At a minimum, discharge locations shall be 200 feet from waterbodies such as rivers, streams or wetlands, unless topography or other physical features at a specific location will prevent discharge waters from entering a waterbody when the discharge location is closer than 200 feet to the waterbody.
- T2. The water from the hydrostatic testing shall be sampled for turbidity, pH, chlorine, metals and temperature. The sampling shall be completed during the first day of operation and then every day hydrostatic testing occurs thereafter to determine the concentration of pollutants present within the hydrostatic test water. The frequency of this requirement may be waived or amended by Ecology in writing.
  - a. Sampling results shall be submitted to Laura Casey, Ecology's Federal Permit Coordinator, via fax (425) 649-7098, or email ([cala461@ecy.wa.gov](mailto:cala461@ecy.wa.gov)). If sampling

indicates exceedances of state surface or ground water quality standards (Chapters 173-201A WAC and 173-200 WAC), treatment of the hydrostatic test water is required prior to discharging such water within 200 feet of surface or ground waters of the state.

b. Hydrostatic test water shall be infiltrated into soils to the maximum extent possible.

**U. General Conditions:**

- U1. This Order shall be valid during construction and long-term operation and maintenance of the project.
- U2. This Order does not authorize direct, indirect, permanent, or temporary impacts to waters of the state or related aquatic resources, except as specifically provided for in conditions of this Order.
- U3. This Order does not exempt and is conditioned upon compliance with other statutes and codes administered by federal, state, and local agencies. The Applicant shall obtain a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife prior to doing in-water work, or constructing temporary equipment access stream crossings. The Applicant shall obtain a Forest Practices Permit (FPA) as necessary from the Washington Department of Natural Resources.
- U4. The Applicant shall designate an environmental inspector (EI) to be on-call and readily accessible to the site at all times. The EI shall be the primary point of contact for inspections, monitoring, discharge approvals, and reporting. The EI shall have adequate authority to ensure proper implementation of all the conditions within this Order, as well as immediate corrective actions necessary because of changing field conditions. If the EI issues a directive necessary to implement a condition of this Order or to prevent pollution to waters of the state, all personnel on site, including the Applicant's personnel, construction contractor and/or sub contractor's employees, shall immediately comply with this directive.
- U5. The Applicant shall construct and operate the project in a manner consistent with the project description contained in the JARPA dated November 5, 2004, Corps' Public Notice dated March 25, 2005, and Final Environmental Impact Statement (July 2005), or as otherwise approved by Ecology.
- U6. The Applicant shall reapply with an updated application for certification if five (5) years elapse between the date of the issuance of this Order and the beginning of construction and/or discharge for which the federal license or permit is being sought.
- U7. The Applicant shall reapply with an updated application if the information contained in the JARPA or Public Notice is voided by subsequent submittals to the federal agency. Any future action at this project location, emergency or otherwise, that is not defined in the

Corps' Public Notice, or has not been approved by Ecology, is not authorized by this Order. All future actions shall be coordinated with Ecology for approval prior to implementation of such action.

- U8. The Applicant shall provide access to the project site upon request by Ecology personnel for site inspections, monitoring, necessary data collection, or to ensure that conditions of this Order are being met.
- U9. Copies of this Order and all related permits, approvals, and documents shall be kept on the project site and readily available for reference by the project managers, construction managers and foremen, other employees and contractors of the Applicant, and state agency personnel.
- U10. The Applicant shall ensure that all appropriate Chief Inspectors, Supervisors and Contractors at the project site and mitigation sites have read and understand relevant conditions of this Order and all permits, approvals, and documents referenced in this Order. **The Applicant shall provide to Ecology a signed statement from each Chief Inspector, Environmental Inspector, Supervisor and Contractor that they have read and understand the conditions of this Order and the above-referenced permits, plans, documents and approvals.** These statements shall be provided to Ecology no less than seven (7) days before construction begins at the project or mitigation sites. The Applicant shall also provide a similar signed statement to Ecology from each new supervisor or contractor hired or assigned after the project begins within 30 days of hiring.
- U11. Ecology retains continuing jurisdiction to make modifications hereto through supplemental Order, if it appears necessary to further protect the public interest.
- U12. This Order does not confer right of access to property not owned by the Applicant. It is the Applicant's responsibility to obtain ownership or legal access to all properties and have supporting documentation available upon Ecology's request.
- U13. Liability: Any person who fails to comply with any provision of this Order shall be liable for a penalty of up to ten thousand dollars (\$10,000) per violation for each day of noncompliance.

#### **Appeal Process:**

You have the right to appeal this Order to the Pollution Control Hearings Board. Pursuant to Chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

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

Your appeal must be filed with:

The Pollution Control Hearings Board  
4224 - 6th Avenue SE, Rowe Six, Bldg. 2  
P.O. Box 40903  
Lacey, Washington 98504-0903

Your appeal must also be served on:

The Department of Ecology  
Appeals Coordinator  
P.O. Box 47608  
Olympia, Washington 98504-7608.

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

Loree' Randall  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504-7600

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

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Ch. 43.21B RCW.

Dated SEPTEMBER 9, 2005 at Bellevue, Washington.



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Geoff Tallent, Interim Section Manager  
Shorelands and Environmental Assistance Program  
Department of Ecology  
State of Washington