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

October 7, 2005

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

REGISTERED MAIL
RR 359 893 805 US

Dear Mr. Powell:

RE: Water Quality Certification Order # 2859 (Corps of Engineers # 200400304) 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.

Northwest Pipeline Corporation requested a water quality certification from the state of Washington for the above-referenced project pursuant to the provisions of 33 U.S.C. 1342 (FWPC 401). The request for certification was received November 8, 2004 and made available for public review and comment through the U.S. Army Corps of Engineer's Public Notice No. 200400304 dated March 25, 2005.

Ecology issued a 401 certification for this project on September 9, 2005. Ecology hereby rescinds Order Number 2705. The enclosed, Order Number 2859, constitutes the water quality certification for Northwest Pipelines' Capacity Replacement Project.

If you have any questions, please contact me at (425) 649-7096. 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
Doug Sipe, Federal Energy Regulatory Commission
Kurt Buchanan, Washington Fish and Wildlife
Misha Vakoc, EPA

IN THE MATTER OF GRANTING A WATER QUALITY CERTIFICATION TO Northwest Pipeline Corporation in accordance with 33 U.S.C. 1341 (FWPCA § 401), RCW 90.48.120, RCW 90.48.260 and Chapter 173-201A WAC	)))))))	**ORDER # 2859** **Corps Reference # 200400304** Capacity Replacement Project: Installation of 79.5 miles of 36-inch diameter pipeline in four loops; cross 154 rivers, streams and other waterbodies, 264 wetland areas, temporary 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

Northwest Pipeline Corporation requested a water quality certification from the state of Washington for the above-referenced project pursuant to the provisions of 33 U.S.C. 1342 (FWPC 401). The request for certification was received November 8, 2004 and made available for public review and comment through the U.S. Army Corps of Engineer's Public Notice No. 200400304 dated March 25, 2005. Ecology issued a 401 certification for this project on September 9, 2005. Ecology rescinded Order Number # 2705 on October 7, 2005. This document, Order Number 2859, constitutes the 401 certification for Northwest Pipelines' Capacity Replacement 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. Revised or additional plans are required of the Applicant throughout this document. These plans shall be provided to Ecology's Northwest Region, Federal Permit Coordinator – 401/CZM, at Ecology, 3190 - 160th Avenue SE, Bellevue WA 98008, referencing Order # 2859 / U.S. Army Corps of Engineers Reference # 200400304, 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 # 2859, U.S. Army Corps Reference # 200400304, 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 final 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 final plan shall be sent to Ecology for review and approval 60 days prior to commencing construction in the Spring 2006.

D4. The Applicant shall submit an Implementation Plan to Ecology for review and approval 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 additional 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.

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 and shall include the following additional 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 conduct Noxious weed control as outlined within Erosion Control and Revegetation Plan 7.14 with the following conditions:

a. Any noxious weed control within wetlands or other water bodies must be approved by Ecology prior to implementation.
b. Site specific plans for Noxious weed control shall be made available upon request to Ecology field staff.

D7. The Applicant shall provide to Ecology 60 days prior to commencing construction in Spring 2006, a final Groundwater Monitoring Plan with tables and/or figures 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 Counter measures Plan (SPCC Plan) for review and approval by Ecology 30 days prior to commencing construction in Spring 2006. The revised 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 238th 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 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. Include a request to Ecology for approval for any temporary extra workspace located within 50 feet of Colin Creek; and
d. Incorporate proposed site-specific measures to reduce impacts on this area including appropriate best management practices identified in Condition E4 of this Order.

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, 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, 360-407-6361) for Pierce and Thurston Counties prior to ground-disturbing activities at these locations.

D12. The Applicant shall provide a list of variances being requested 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 unless the location has previously been identified and reviewed by Ecology.
d. For construction right-of-way through wetlands wider than 75 (except in agricultural wetlands and certain extra workspace areas) that have not been reviewed by Ecology, the Applicant shall submit Plan 60-days prior to work in that location for Ecology's review and approval. The Plan shall specify the need for the wider area and how the wetland impacts will be minimized.

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. The Applicant shall provide a plan to Ecology for review and approval 60 days prior to commencing clearing activities in 2006, showing the location of 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 channels to be restored to pre-work contours and for in-stream improvements within those contours to Ecology for review and approval 60 days prior to commencing construction in 2006.
e. Within the pipeline construction area, the Applicant shall replace all structures that are considered fish passage barriers if the structures are damaged, altered, or replaced as a result of this project.

E3. The Applicant shall revise the Mitigation Plan for Water body Crossings to include a section identified as Water Quality Monitoring for Instream Construction. This revised 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 be taken:

    1) At the point of compliance as specified in WAC 173-201A-110(3) or as modified by this Order:
    2) At a site just upstream of the work area to determine background water quality; and
    3) Half the distance between the activity and the point of compliance to provide a margin of safety to protect water quality.

    The Applicant shall identify the reason for sampling sites that deviate from above and propose an alternative sample location.

d. Sampling for turbidity is to be accomplished using a turbidometer properly calibrated according to the operator's manual.
e. If 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 bi-weekly (every other week) basis to Ecology's Northwest Region, Federal Permit Coordinator, 160th Avenue SE, Bellevue WA 98008 or fax at (425) 649-7098, and reference Order # 2859.
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 Ecology's Northwest Region, Federal Permit Coordinator, via telephone (425) 649-7000, or faxed (425) 649-7098, with a reference to Order # 2859. 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 bi-weekly (every other week).

E4. The following conditions apply to work in **all wetlands, streams, rivers, riparian areas and other waterbodies:**

a. Stockpiling excavated material within the construction right-of-way/easement shall be located a minimum of 50 feet (16 meters) from all wetland and surface water boundaries unless approved by Ecology.
b. No off right-of-way vegetation shall be cleared between the temporary extra workspaces and the edge of stream banks and/or wetlands.
c. Temporary erosion controls will be installed immediately after initial disturbance (clearing) and will be properly maintained throughout construction and reinstalled as necessary until replaced by permanent erosion controls or restoration is complete.
d. Hazardous materials, chemicals, fuels and lubricating oils will be stored in upland areas at least 100 feet from waterbodies and wetlands.
e. Open cut crossings of waterbodies shall be stabilized and temporary sediment barriers installed within 24 hours.
f. Final grading and permanent erosion control measures shall be completed within 20 days after the trench is backfilled.
g. For Category I wetlands, or Category II wetlands and/or salmon–bearing streams with forested buffers or where a steep slope above the wetland or stream is within 50 feet of the wetland boundary the Applicant shall submit a revised Erosion Control and Revegetation Plan identifying the above location 60 days prior to the anticipated start

of construction in Spring 2006. The Plan shall identify the standard BMPs to be implemented at these locations and include the additional BMPs:

1) Stockpiles of excavated material shall be placed at the maximum setback possible from wetlands or streams and should not be closer than 50 feet under any circumstances unless approved by Ecology.
2) Stockpiles shall be covered with plastic at the end of each day and remain covered until removal or additional material is added.
3) Temporary slope breakers and sediment barriers shall be installed at all locations with a slope greater than 5 percent.
4) For locations with slope greater than 15 percent, erosion control fabric shall be installed within 24 hours of filling the pipeline trench.

h. Temporary extra workspaces for stockpiling material from trench excavations:

1) Stockpiling of trench material will be done in a manner that prevents erosion of sediments to surface water or wetlands.
2) Stockpiling may occur within non-forested wetlands to be temporarily disturbed along the construction corridor. Soil will be stockpiled on pads with containment so that the site can be restored to original contours when stockpiled material is replaced in the trench.
3) Stockpiling over organic soils will be done in a manner that prevents compression of organic soils. For these areas, the depth of stockpiles to be allowed on pads will be determined before construction begins.
4) Stockpiling will not be allowed closer than 10 feet to the trunks of trees that are outside of areas identified for disturbance in the easement or within temporary extra workspaces. Tree protection measures shall be taken to protect these trees from damage during construction. Measures will include marking in the field with temporary construction fencing or other method that will remain visible during construction, prior to commencing clearing.

i. Silt-laden trench water shall be discharged to upland areas away from waterbodies and wetlands, and shall be prevented from discharging into streams and wetlands.

j. 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) Typical planting schemes that will apply to forested or scrub-shrub wetlands, including 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. For sites where non-native invasive plants are well-established at cover levels beyond 10%, a site specific plan shall be developed that specifically identifies what actions will be taken to decrease the cover of invasive on the site and what performance standard will be used to assess the success of the site with respect

to non-native invasive species. Alternative performance standards developed for these sites shall be submitted to Ecology for review and approval.

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 # 2859 / U.S. Army Corps of Engineers Reference # 200400304 and be submitted to the Federal Permit Coordinator – 401/CZM, Ecology NWRO, 3190 – 160th 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 restored 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 # 2859 / U.S. Army Corps of Engineers Reference # 200400304, and be sent to Northwest Region Federal Permit Coordinator – 401/CZM, 3190 – 160th 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 construction

methods to the proposed "wet open cut" that will 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, and contractors. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting.

F3. 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.

F4. 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.

F5. 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.

F6. 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.

F7. 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.

F8. 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 Southwest Region Federal Permit Coordinator – 401/CZM, Ecology, referencing Order # 2859 / U.S. Army Corps of Engineers Reference # 200400304. Submittal can be via fax at (360) 407-6305, or voicemail at (360) 407-6926.

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 at 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 Northwest Region Federal Permit Coordinator – 401/CZM, Ecology, referencing Order # 2859 / U.S. Army Corps of Engineers Reference # 200400304. Submittal can be via fax at (425) 649-7098, or voicemail at (425) 649-7000.

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, and contractors. 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 (HDD). The following conditions shall apply, unless revised in writing by Ecology:

a. If the HDD is successful, construction shall include, at a minimum:

1) Within the channel migration zone bury or fortify the new pipeline crossings with buried sills, to withstand flows that would be expected in the off-channel habitats, and from avulsion of the upstream Nooksack River.
2) In the area north (toward the Mt Baker Highway) of the HDD entry location, the pipeline shall be constructed in a manner that allows the continued flow of tributaries across Jim Creek Flats to the Nooksack River. Blockages and/or constrictions of the tributaries as a result of the pipeline construction shall be avoided unless specifically approved by Ecology.

b. If the HDD method does not succeed and an alternate crossing method is required the Applicant shall provide a revised Site Specific Waterbody Crossing and Restoration Plan to Ecology for review and approval at least 60 days before construction is scheduled to begin in Spring 2006. The revised Waterbody Crossing and Restoration Plan shall include:

1) Same construction measures identified in Condition H1.a. above.
2) Evaluation of alternative construction techniques for 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 (e.g. include upstream diversion of a portion of the flow, use of ecology block or gravel-filled bags to reduce erosion, or other methods).
3) Identify stockpile locations of the excavated trench material.
4) Address removal and replacement of existing in-river large woody debris.
5) Include a site specific timber harvest plan for the riparian forest at this crossing,
6) Site-specific re-vegetation plan including long-term monitoring.
7) Final mitigation plan specific to this location
8) Measures to be taken to ensure appropriate ramping rates and fish rescue if coffer dams and/or diverted flow techniques are approved.
9) Bury proposed pipeline across the entire floodplain to maximize the horizontal and vertical channel migration zone.

H2. Notification and Pre-Construction Meeting: The Applicant shall convene an on-site pre-construction meeting to review the conditions of this Order related to this crossing. The Applicant shall invite participation from at least the following: Ecology, WDFW, County staff, and contractors. Ecology shall be informed of the time and location of the meeting at least two (2) weeks prior to the meeting.

H3. 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.

H4. The Applicant shall revise the Waterbody Mitigation Plan to include a section identified as "Water Quality Monitoring" specific for the North Fork Nooksack River that shall be submitted to Ecology for approval. 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 Ecology's Northwest Regional, Federal Permit Coordinator – 401/CZM, and reference Order #2859 / U.S. Army Corps of Engineers Reference # 200400304. Submittal can be via fax at (425) 649-7098, or voicemail at (425) 649-7000.

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 prior to commencing construction, and 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 a result of the project.

I3. Notification and Pre-Construction Meeting: The Applicant shall convene an on-site pre-construction meeting to review the conditions of this Order related to this crossing. The

Applicant shall invite participation from at least the following: Ecology, WDFW, County staff, and contractors. 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 construction 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 a result 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. 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.

I6. If the HDD method does not succeed the Applicant shall revise the Waterbody Mitigation Plan to include a section identified as the Water Quality Monitoring Plan specific for the NF and SF Stillaguamish River. The revised Plan 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 Northwest Region, Federal Permit Coordinator – 401/CZM, Ecology, and reference Order # 2859 / U.S. Army Corps of

Engineers Reference # 200400304. Submittal can be via fax at (425) 649-7098, or voicemail at (425) 649-7000.

J. Evans Creek Crossing:

J1. The Applicant shall provide a 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 construction methods. 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. Snohomish Wetlands 33, 34, and 35:

L1. 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.

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

M1. 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.

M2. 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.

M3. **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.

M4. **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 develop 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.

M5. **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.

M6. **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.

M7. **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, which 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.

M8. **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.

N. Notification and Preconstruction Meeting:

N1. 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 Ecology Northwest Region, Federal Permit Coordinator – 401/CZM, 3190 - 160th Avenue SE, Bellevue, WA 98008-5452 and reference Order # 2859 / U.S. Army Corps of Engineers Reference # 200400304.

N2. Except as specified above in sections F through I, the Applicant shall hold a pre-construction meeting in the Spring of 2006 to go over conditions within the Order that apply to the entire project. This pre-construction meeting shall be held at least 30 days before construction begins, and invite participation from at least the following: Ecology, WDFW, County staff, and contractors. 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 parties involved in understanding the intent, specifications, and requirements of the permits and plans. Notification shall be sent to Department of Ecology, Ecology's Northwest Region, Federal Permit Coordinator - 401/CZM, Shorelands and Environmental Assistance, 3190 - 160th Avenue SE, Bellevue, WA 98008-5452 and reference Order # 2859 / U.S. Army Corps of Engineers Reference # 200400304. The project construction schedule shall also be provided with the meeting notification.

O. Construction Conditions:

O1. 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 NPDES permit Ecology may issue for this project.

O2. 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.

O3. 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.

O4. Temporary erosion and sediment control BMPs listed in the Stormwater Management Manual for Western Washington (2005) suitable to prevent erosion of soils shall be installed immediately after initial disturbance to allow installation of BMPs (clearing). All BMPs shall be properly maintained throughout construction and reinstalled as necessary until replaced with permanent erosion controls or restoration is completed.

O5. 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.

O6. 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.

O7. 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.

O8. 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

O9. 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 the ECRP, except in wetlands, buffers and riparian areas where it shall be as listed in the Restoration Plan for each specific waterbody crossing.

O10. 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.

P. Fractures during Horizontal Directional Drill Process:

P1. Any fractures ('frac-outs') observed in or within 150 feet of rivers, streams, or wetlands shall be reported within one hour to Ecology's Northwest Region, Federal Permit Coordinator – 401/CZM, at Ecology via fax at (425) 649-7098, or (425) 649-7000, referencing Order # 2859 / U.S. Army Corps of Engineers Reference # 200400304. 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.

Q. Emergency Spill Cleanup Measures:

Q1. 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.

Q2. 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.

Q3. 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.

Q4. 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.

R. Hydrostatic Test Water Discharge for the HHD work in the Fall of 2005:

R1. The Applicant shall comply with the following conditions relating to the discharge of water resulting from hydrostatic testing until Ecology issues an Individual Stormwater NPDES permit for this project.

a. Northwest Pipeline shall develop and maintain on site a specific Stormwater Prevention and Protection Plan (SWPPP) for each length of pipeline tested prior to any discharge relating to this project. The SWPPP shall include best management practices (BMPs) and an approvable water quality monitoring plan which will address hydrostatic test water discharges associated with pipeline construction.
b. Each specific monitoring plan shall include sample locations, sampling frequencies, parameters to be sampled, collection and analytical protocols, data management techniques, and a drainage map showing nearby surface waters. Parameters of concern are primarily pH and total petroleum hydrocarbon (TPH).
c. The Applicant shall not discharge the water with pH outside the range of 6.5 to 8.5 pH units.
d. If the results of a test sample exceed 10 mg/L for Total Petroleum Hydrocarbons (TPH), treatment shall be provided. Treatment shall be consistent with the SWPPP. If an oily sheen is observed, absorbent pad materials shall be employed on the water. At no time is the soil in the infiltration area allowed to exceed 2000 mg/Kg of diesel range petroleum hydrocarbon and heavy oils.
e. The SWPPP will identify a responsible project official for each length of pipeline tested, who shall have authority to direct necessary corrective measures for the protection of water quality.

R2. At a minimum, land application locations shall be 200 feet from surface water bodies such as rivers, streams or wetlands, unless topography, or other physical or technically engineered features, at a specific location will prevent discharge waters from entering a water-body when the discharge location is less than 200 feet from the water-body.

R3. The hydrostatic test water shall be released slowly in a controlled manner to the hydrostatic test dewatering structures (hay bales structure or sand filter bags system) for infiltration. These BMP structures shall be functional before discharging hydrostatic test water to them, and they shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function.

R4. At no time is runoff or sheet flow allowed to flow into rivers, streams, lakes, ponds, wetlands, or other surface bodies.

R5. During heavy storm events, the Applicant shall cease discharge of hydrostatic test water to the hydrostatic test dewatering structures if such discharge timing would result in runoff or sheet flow to a surface water receptor.

R6. Samples shall be collected, analyzed, logged and reported to Ecology in accordance with the SWPPP.

R7. The SWPPP for each length of pipeline testing must be on site prior to any project related discharges.

R8. Monitoring data and SWPPP submittals for this project shall be submitted to: Jeanne Tran, Department of Ecology, 3190 - 160th Avenue SE, Bellevue, WA 98008-5452.

S. General Conditions:

S1. This Order shall be valid during construction and long-term operation and maintenance of the project.

S2. 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.

S3. This Order does not exempt and is conditioned upon compliance with other statutes and codes administered by federal, state, and local agencies.

S4. 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.

S5. 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.

S6. 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.

S7. 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.

S8. 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.

S9. 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.

S10. 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.

S11. Ecology retains continuing jurisdiction to make modifications hereto through supplemental Order, if it appears necessary to further protect the public interest.

S12. 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.

S13. 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.

T. Appeal Process:

T1. 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.

T2. Persons wishing to appeal this Order may want to consult Section 313 of the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005), as it may affect state appeal processes.

Dated OCTOBER 7, 2005 at Bellevue, Washington.

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