

**Comments on the Draft EIS and Responses**

**NATIVE AMERICAN TRIBES**

# Native American Tribes

April 22, 2005

Magalie R. Salas, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE, Room 1A  
Washington, DC 20426

RE: Northwest Pipeline Corp., Capacity Replacement Project, Docket Nos. CP05-32-000, -001

Dear Secretary Salas:

The Lummi Nation Tribal Historic Preservation Office (LNTHPO) received on March 7, 2005, the Draft Environmental Impact Statement (DEIS) dated March 2005 for the proposed project referenced above. We are responding to the Federal Energy Regulatory Commission's (FERC's) request for comments as a potentially affected tribe pursuant to the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA).

NAT1-1

The LNTHPO has been participating in the NEPA pre-filing process for this project since June 2004. We have primarily worked with the lead agency, FERC, and Northwest Pipeline's archaeological consultant, AINW. We have reviewed AINW's cultural resource survey (multiple volumes) and are awaiting review of the next installments. We have concurred with their findings thus far and have provided them with current contact information in the event of any inadvertent discovery of human remains and/or archaeological materials. We understand that the Lummi Sche'lang'en Department is working with AINW to conduct a survey of Traditional Cultural Properties (TCP).

The LNTHPO believes review of the project required pursuant to Section 106 of the NHPA should be coordinated with the NEPA process already in progress. FERC's recommendations to this end may be found on page 4-218 of the DEIS. The LNTHPO concurs with these recommendations.

We look forward to continuing to participate in review of this project pursuant to both NEPA and the NHPA. Should you have any questions or concerns, please do not hesitate to contact me at (360) 384-2298.

Sincerely,

Mary Rossi,  
Tribal Historic Preservation Officer  
Lummi Nation Tribal Historic Preservation Office

cc: James Hillaire, Interim Director, Lummi Sche'lang'en Department  
Merle Jefferson, Executive Director, Lummi Natural Resources Department  
Leroy Deardorff, Director, Lummi Natural Resources-Environmental Program  
Rob Whitlam, Washington State Archaeologist, Office of Archaeology and Historic Preservation  
Terry Ozburn, Senior Archaeologist, AINW

NAT1-1 Thank you for your comment. Section 4.10.3 has been updated to include these comments regarding NEPA review.

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DEPARTMENT \_\_\_\_\_

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Magalie R. Salas, Secretary  
 Federal Energy Regulatory Commission  
 888 First Street, NE, Room 1A  
 Washington, DC 20426

**SUBJECT: Northwest Pipeline Corporation, Capacity Replacement Project, Draft Environmental Impact Statement (Docket No. CP05-32-000, -001)**

Dear Secretary Salas;

The purpose of this letter is to provide comments from the Lummi Nation's Natural Resources Department on the Draft Environmental Impact Statement (DEIS) for the Northwest Pipeline Corporation's Capacity Replacement Project. As you know, the preferred alternative will cross 146 waterbodies and will impact natural resources that are important to the political integrity, economic security, and the health and welfare of the Lummi Nation. Our review of this document is primarily concerned with the impacts of the project on water, wildlife, and aquatic resources and special status species. The Lummi Nation Cultural Resources Department has participated in the scoping process for this DEIS and may have additional comments.

We have the following comments:

NAT2-1

- We are concerned about the projected low likelihood of success (60%) of the Horizontal Directional Drill (HDD) crossing of the North Fork Nooksack River and especially the potential impacts of the alternate method of a wet-open cut. As recognized by the DEIS, the wet-open cut method would have effects on surface water quality and fish habitat including dislodging of channel bed sediments, increased turbidity, decreased dissolved oxygen, potential spills of toxics fluids (e.g., hydraulic fluids, petroleum fuels) and movement of pollutants in sediments.

NAT2-2

- As a fishery co-manager and a federally recognized Indian Nation with whom FERC has a trust responsibility, the Lummi Nation Natural Resources Department must be included in consultations required by FERC for finalization of the site-specific waterbody crossing plans, the conceptual waterbody crossing mitigation plan, and the conceptual compensatory wetland mitigation plan, particularly for the Sumas loop and the crossing of the North Fork Nooksack River.
  - o The limitations of compensatory mitigation for replacing ecological function should be considered in the development of the compensatory mitigation plans. These limitations include varying degrees of success experienced for different functions and wetland types (Mockler et al. 1998, NRC 2001, Johnson et al. 2002, Sheldon et al. 2003)<sup>1</sup> and the inability of created wetlands to provide

<sup>1</sup> Mockler A, Casey L, Bowles M, Hansen J. 1998. Results of Monitoring King County Wetland and Stream Mitigations. Seattle, WA: King County Department of Development and Environmental Services. Available from [www.metrokc.gov](http://www.metrokc.gov).

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## Native American Tribes

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NAT2-1

An analysis of alternative methods to cross the North Fork Nooksack River is presented in section 4.3.2.3. Section 4.3.2.3 has been revised to state that the WDFW noted that the North Fork Nooksack River is highly dynamic and alternative methods for crossing the river would be based on river conditions as close to the time of the work as possible. Section 4.3.2.3 has also been revised to include additional discussion of Northwest's plan to install LWD at appropriate areas in waterbodies within the construction right-of-way to mitigate for potential short-term impacts on aquatic species. The effectiveness of LWD as a mitigation measure and additional details regarding Northwest's proposed placement of LWD in streams and on streambanks are discussed in section 4.6.2.3. The specific locations where Northwest would install LWD are included in the draft Mitigation Plan for Waterbody Crossings that is provided in Appendix S. In addition, Northwest would participate in projects that specifically target the creation or enhancement of spawning and other requisite habitats for salmonids. As discussed at a meeting at the COE office in Seattle, Washington on June 23, 2005 and in the revised sections 4.3.2.3 and 4.3.2.4, Northwest is evaluating the WDFW's, the Nooksack Indian Tribe's, and the Lummi Nation's request that Northwest lower the existing pipelines in the Jim Creek area to a sufficient depth to allow natural channel processes to restore off-channel habitats. If feasible, in whole or in part, Northwest has stated that it is willing to work with the Nooksack Indian Tribe, the Lummi Nation, the COE, the WDOE, and the WDFW to develop a contingency mitigation proposal if the HDD fails at the North Fork Nooksack River and a wet open-cut crossing is necessary. The requirement to implement the contingency mitigation proposal if the wet open-cut crossing is necessary would be included as a condition of the section 404 permit that would be issued by the COE. Section 4.3.2.4 has been revised to include a discussion of the existing conditions in the Jim Creek area and Northwest's coordination with the agencies and tribes.

NAT2-2

As discussed in section 4.10.3.1, Northwest, the FERC, and other agencies have sought input from the tribes regarding the proposed project and suitable mitigation opportunities on multiple occasions. This includes a project kick-off meeting on August 3, 2004 at the Northwest Indian Fisheries Commission office in Mount Vernon with representatives from Northwest, the FERC, the COE, the Lummi Nation, and the Nooksack Indian Tribe. This also includes a meeting on June 23, 2005 at the COE office in Seattle, Washington to discuss the draft EIS and tribal comments on the document. Representatives of the FERC, the COE, the WDOE, the WDFW, and Northwest were present at this meeting, which was attended by the Nisqually Tribe and the Lummi Nation.

Section 4.3.2.3 has been revised to provide the most current information regarding Northwest's proposed Mitigation Plan for Waterbody Crossings. Appendix S contains the April 2005 draft of this plan. As discussed at the meeting on June 23, 2005 and in the revised sections 4.3.2.3 and 4.3.2.4, Northwest is evaluating the WDFW's, the Nooksack Indian Tribe's, and the Lummi Nation's request that Northwest lower the existing pipelines in the Jim Creek area to a sufficient depth to allow natural channel processes to restore off-channel habitats. If feasible, in whole or in part, Northwest has stated that it is willing to work with the Nooksack Indian Tribe, the Lummi Nation, the COE,

# Native American Tribes

NAT2-2 (cont'd) the WDOE, and the WDFW to develop a contingency mitigation proposal if the HDD fails at the North Fork Nooksack River and a wet open-cut crossing is necessary. The requirement to implement the contingency mitigation proposal if the wet open-cut crossing is necessary would be included as a condition of the section 404 permit that would be issued by the COE. Section 4.3.2.4 has been revised to include a discussion of the existing conditions in the Jim Creek area and Northwest's coordination with the agencies and tribes.

Because Northwest is still in the process of consulting with other federal, state, and local agencies and applicable Native American tribes to finalize its waterbody crossing mitigation requirements, section 4.3.2.3 has been revised to include the FERC staff's recommendation that Northwest continue these consultations and file the final site-specific waterbody crossing plans and final Mitigation Plan for Waterbody Crossings with the Secretary for the review and written approval of the Director of OEP before construction at each applicable waterbody (see also mitigation measure number 17 in section 5.4). These final plans may incorporate new information that may become available as Northwest continues consultations with the COE, the WDOE, the WDFW, various county agencies, and Native American tribes. The FWS and NOAA Fisheries may impose additional mitigation as well as part of their Biological Opinions (see section 4.7) that also should be included in Northwest's Mitigation Plan for Waterbody Crossings. The FERC staff believes these continued consultations will result in the development of acceptable site-specific crossing plans and mitigation requirements for the waterbodies that would be crossed by the Capacity Replacement Project. Section 4.3.2.3 also explains how the public and other agencies can view the final plans once they are filed.

Section 4.4.4 has been revised to provide the most current information regarding Northwest's compensatory wetland mitigation plan. Northwest is still in the process of consulting with other federal, state, and local agencies and applicable Native American tribes to finalize this plan. Section 4.4.4 has been revised to include the FERC staff's recommendation that Northwest continue consultations with the applicable agencies and Native American tribes and file the final compensatory wetland mitigation plan with the Secretary before construction (see also mitigation measure number 18 in section 5.4). Section 4.4.4 also explains how the public and other agencies can view the final plan once it is filed.

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- NAT2-3 (cont'd) equivalent functions to those of natural wetlands (Sheldon et al. 2003). Suggestions from the literature for improving functional success should also be considered, including the use of a landscape scale approach for assessing functional needs and establishing proper hydrologic conditions (Zedler 1996, NRC 2001, Sheldon 2003)<sup>2</sup>.
- NAT2-3
- The Environmental Analysis of the DEIS is based on a baseline of current environmental conditions. It is the Lummi Nation's position that the baseline for cumulative impacts analysis is the pre-development or "pristine" environmental conditions rather than current conditions. When assessing cumulative impacts of the alternatives, FERC and Northwest should use the more accurate baseline rather than the more convenient current conditions baseline.
- NAT2-4
- Alternate locations should be considered for the Nooksack pipe storage and contractor yard because the proposed location has not been previously disturbed, contains hydric soils with the potential for soil compaction and flooding, has a high water table, is on prime farmland, and is crossed by a tree lined creek.
- NAT2-5
- Although comments from it appear to be incorporated in the DEIS, the August 13, 2004 letter from the Lummi Nation Natural Resources Department on the EIS scoping process is not recognized in Table 4.10.3-1 on page 4-209. A copy of this letter, which was mailed before the end of the comment period, is attached.
- NAT2-6
- Whatcom County is in the process of updating its Critical Areas Ordinance in compliance with Washington State's Growth Management Act. Although the ordinance has not yet been adopted by the County, the updated maps of critical areas, which are based on best available science, should be consulted to ensure accurate accounting of critical areas crossed by the project. The regulations and mitigation requirements from the revised CAO must be followed upon its adoption.
    - The slope stability models recommended in our comment letter during the EIS scoping process were used for assessment of potential geological hazards designated by the updated CAO.
- NAT2-7
- The hydrostatic test water discharge location at milepost 1468.9 appears to discharge to a wetland and is likely to drain to the Nooksack River. This appears to go against the statements in the DEIS that "Northwest would discharge all hydrostatic test water to upland locations at a significant distance from wetlands and waterbodies" and

National Research Council (NRC). 2001. *Compensating for wetland losses under the Clean Water Act*. Washington DC: National Academy Press

Johnson P et al. 2002. *Washington State wetland mitigation evaluation study: Phase 2; evaluating success*. Lacey, WA: Washington State Department of Ecology, Shorelands and Environmental Assistance Program.

Sheldon D, Hruba T, Johnson P, Harper K, McMillan A, Stanley S, Stockdale E. August 2003 draft. *Freshwater Wetlands in Washington State Volume 1: A Synthesis of the Science*. Washington State Department of Ecology Publication #03-06-016. Available from <http://www.ecy.wa.gov/biblio/0306016.html>

<sup>2</sup> Zedler JB. 1996b. Coastal Mitigation in Southern California: The Need for a Regional Restoration Strategy. *Ecological Applications* 6(1):84-93.

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- NAT2-3 The FERC staff believes that the purpose of the EIS is to analyze the potential direct, indirect, and cumulative impacts the project would have on the current natural and human environment.
- NAT2-4 The proposed Nooksack Yard is located on a relatively narrow strip of land between Highway 9 and the Burlington Northern Railroad right-of-way in the town of Nooksack. Being adjacent to these transportation corridors makes the site a good location for a pipe storage and contractor yard because of the good access it provides for construction-related vehicles and materials. In response to this comment, the WDFW conducted a field review of the proposed yard in late June 2005 to determine the status of disturbance at the site. According to the WDFW, the northern part of the proposed yard has been highly disturbed over a long period of time and has a rail siding already constructed. The southern part of the proposed yard contains a mowed hay field. Although the field is currently only being mowed, it was likely plowed for a long period of time. The site contains prime farmland soils; however, it is unlikely the site would be converted to farmland or farmed for anything other than hay due to its location in town between two busy transportation corridors. With the possible exception of minor grading activities and surfacing, soils at the yard would not be disturbed. If soil compaction is observed, scarification would be performed to loosen compacted layers. Although the site is bisected by a tree-lined creek, Northwest would not clear any of the trees or conduct construction activities near the creek. For these reasons, and because the site would be used only temporarily to support construction activities and would be returned to its preconstruction conditions, the FERC staff believes its use would be environmentally acceptable.
- NAT2-5 Table 4.10.3-1 has been revised to include the August 13, 2004 letter from Merle Jefferson (Lummi Natural Resources Department) providing scoping comments in response to the *Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Capacity Replacement Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings*. In addition, the comments that were provided in this letter are summarized in table 1.3-1.
- NAT2-6 Designated critical areas affected by the Capacity Replacement Project are identified and discussed in the applicable resource sections in section 4.0. As indicated in table 1.5-1, a critical areas ordinance review would apply to the project in Whatcom County. During this review, a more site-specific analysis of the areas crossed would be conducted based on the version of the ordinance in place at that time.
- NAT2-7 Sections 2.3.1, 4.3.1.4, and 4.3.2.7 have been revised to clarify that all discharges would be conducted in accordance with the requirements for hydrostatic test water discharges included in Northwest's National Pollutant Discharge Elimination System (NPDES) Individual Permit for Stormwater Discharges that would be issued by the WDOE. These revised sections state that WDOE staff would conduct field reviews of Northwest's proposed hydrostatic test water discharge locations, as required, as part of the WDOE's NPDES permit review process. Based on this field review, modifications to the discharge locations would be made as necessary to ensure that the test water would infiltrate the ground before reaching sensitive areas.

NAT2-7  
(cont'd)

"Northwest would not discharge the water directly into surface waters" (page 4-75). An alternate location that is not in a wetland and is further away from the Nooksack River should be considered for this discharge.

NAT2-8

- The Facility Location Maps in Appendix A should include Milepost 1478 in the Sumas loop and the locations of the construction and the pipe storage and contractor yards.

We appreciate the opportunity to provide comments on the Draft Environmental Impact Statement for this project and look forward to working on acceptable crossing plans for waterbodies and mitigation plans for these crossings and for wetland impacts. If you have any questions about our comments, please contact Leroy Deardorff (360-384-2272) or Jeremy Freimund (360-384-2212) of my staff.

Sincerely,



Merle Jefferson, Executive Director  
Lummi Natural Resources Department

cc: Leroy Deardorff, Director Environmental Program, Lummi Natural Resources  
Mary Rossi, Lummi Tribal Historic Preservation Office

## Native American Tribes

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NAT2-8 Figure B-1 has been revised to depict MP 1478 of the Sumas Loop. Because most of the pipe storage and contractor yards are located off of the pipeline right-of-way, the scale of the maps in figures B-1 to B-4 do not always cover the location of the proposed yards. Therefore, the pipe storage and contractor yards have been added as a separate figure (figure B-9) in Appendix B.



**LUMMI INDIAN BUSINESS COUNCIL**

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DEPARTMENT \_\_\_\_\_ EXT. \_\_\_\_\_

August 13, 2004

Magalie R. Salas, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE, Room 1A  
Washington, DC 20426

**Subject: Northwest Pipeline Corporation Capacity Replacement Project (Docket No. PF04-10-000)**

Dear Ms. Salas,

The purpose of this letter is to provide comments from the Lummi Nation's Natural Resources Department regarding the Notice of Intent to Prepare an EIS for the Northwest Pipeline Corporation's Capacity Replacement Project. As you know, the project crosses numerous rivers and creeks and will impact these natural resources that are important to the political integrity, economic security, and the health and welfare of the Lummi Nation. Our review and comments are concerned with all of the issues in the preliminary list except for cultural resources and include one addition to this list (Environmental Justice). The Lummi Nation Cultural Resources Department has participated in the scoping process and may have additional comments.

Regarding the list of "currently identified environmental concerns" in the Notice of Intent, we have the following comments:

- **Geology and Soils**
  - Use slope stability models (e.g., Montgomery and Dietrich 1994, Dietrich and Montgomery 1998<sup>1</sup>) to assess potential geological hazards/landslide risk and either avoid locating the pipeline and associated access roads in unstable areas or identify specific mitigation measures that will be taken to promote slope stability.
  - Consider erosion from wind and water in planning for erosion and sedimentation control.
- **Water Resources**
  - Ensure a focus on avoidance and minimization of impacts before considering compensatory mitigation measures during assessment of wetland mitigation options.
  - Prepare and implement a spill prevention and response plan for the construction and operations phase as part of the special measures for creek and river crossings.

<sup>1</sup> Montgomery, D.R. and W.E. Dietrich. 1994. A physically based model for the topographic control on shallow landsliding. *Water Resources Research*, Vol.30, No.4, April 1994. Pages 1153-1171.

Dietrich, W. E., and Montgomery, D. R., SHALSTAB: A digital terrain model for mapping shallow landslide potential. *Report of the National Council for Air and Stream Improvement*. in press, 1998.

- **Fish, Wildlife, and Vegetation**
  - Maintain and enhance wildlife migration corridors during and after construction.
- **Land Use, Recreation and Special Interest Areas, and Visual Resources**
  - Include plans and programs of the Lummi Nation's Natural Resources Department such as the Flood Damage Reduction Plan and the Multi-Hazard Mitigation Plan in the evaluation of the project's consistency with regional and local land use plans.
- **Socioeconomic**
  - In addition to the socio-economic effects of the construction phase of the project, describe the effects of the expanded pipeline capacity on the natural gas distribution system overall and the associated effects on employment opportunities that can be retained or created by the provision of natural gas.
- **Reliability and Safety**
  - When assessing the hazards associated with natural gas pipelines, explicitly identify the specific safety features available and the safety features chosen for the project.
- **Alternatives**
  - Thoroughly consider and evaluate each alternative including the use of the existing ditch for the new pipeline.
- **Cumulative Impacts**
  - It is the Lummi Nation position that the baseline for cumulative impacts analysis is the pre-development or "pristine" environmental conditions rather than current conditions. When assessing cumulative impacts of the propose project, use the more accurate baseline rather than the more convenient current conditions baseline.
- Add consideration of **Environmental Justice** as required by Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". Executive Order 12898 of February 11, 1994 requires federal agencies to achieve environmental justice by addressing "disproportionately high and adverse human health and environmental effects on minority and low-income populations." The impacts of the project, both negative and positive, on minority and low-income populations must be analyzed. Environmental Justice issues include potential impacts on the physical and natural environment as well as social, cultural, and economic effects of the project.

We appreciate the opportunity to provide comments during the scoping process for this EIS. If you have any questions about our comments, please contact either Leroy Deardorff (360-384-2272) or Jeremy Freimund (360-384-2212) of my staff.

Sincerely,

  
Merle Jefferson, Executive Director  
Lummi Natural Resources Department

cc: Al Scott Johnnie, Lummi Schelangen Department  
Leroy Deardorff, Director Environmental Program  
Henry Cagey, Economic Development Department Director  
Mary Rossi, Tribal Historic Preservation Office



**Nooksack Indian Tribe ORIGINAL**  
**Natural Resources Department**

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FEDERAL ENERGY  
REGULATORY COMMISSION

April 22, 2005

Magalie R. Salas, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE, Room 1A  
Washington, DC 20426

Reference: Docket # CP05-32-000, 001

Attn: Gas Branch 2, DG2E

Dear Secretary;

The Nooksack Tribe Natural Resources Department is pleased to have the opportunity to comment on the Draft Environmental Impact Statement for the Northwest Pipeline Corporation Capacity Replacement Project (FERC/EIS -00178D). We have reviewed the draft EIS, toured portions of the pipeline route with representatives of the Northwest Pipeline Corporation (Northwest), and examined certain river crossings in detail. In general we find the FERC and Northwest have done an exemplary job of identifying the potential impacts of pipeline construction, and in designing the pipeline expansion to minimize adverse environmental consequences wherever possible. However, the potential impacts of a catastrophic pipeline rupture were not even discussed, a situation which should be remedied before the project is permitted. The 1999 Whatcom Creek pipeline disaster is still fresh in our minds, and we need to be confident that Northwest Pipeline has put in place sufficient safety features to prevent such wholesale destruction to the human and natural environment. We also have concerns about the effects of pipeline construction on our treaty-reserved rights to fish and other resources, pursuant to the Treaty with the Dwamish, Suquamish, etc. of 1855 (Point Elliot Treaty, Jan. 22, 1855, 12 Stat. 927). Our small reservation was identified in the EIS as the Deming High Consequence Area, so pipeline safety is of the utmost importance to the tribe. However, the ten pages of text discussing pipeline safety legislation and procedures are not equivalent to discussing the environmental impacts of a catastrophic pipeline failure. We can find no such discussion in the EIS, and we recommend this situation be remedied.

NAT3-1

NAT3-2

We were pleased with Northwest's decision to pursue horizontal directional drilling (HDD) where the pipeline crosses the North Fork of the Nooksack River, and are troubled to even consider the open cut method if the HDD fails. The HDD has the advantage of minimizing construction impacts, and will allow for greater depths and widths where the river can migrate. An expanded river migration zone has important long-term consequences for the aquatic

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NAT3-1 As discussed in the revised section 4.12.2, if a pipeline rupture were to occur after pipeline operation has begun, natural gas would percolate through the soil and rapidly dissipate into the atmosphere. The potential outcome would depend on the volume of natural gas released and whether an ignition source is available. A pipeline break could result in soil and debris being thrown from the area of the break, destruction of nearby vegetation, and, in the case of ignition, explosion or fire causing injury or property damage. Additional discussion of the effect of a pipeline rupture on aquatic resources is presented in section 4.6.2.3. As described in section 1.1, the CAO and amendment issued by the DOT were in response to ruptures that occurred along Northwest's existing 26-inch-diameter pipeline on May 1, 2003 and December 13, 2003. The purpose of the proposed project is to abandon the 26-inch-diameter pipeline and replace its required delivery capacity with new pipeline loops that would be constructed in accordance with current government and industry specifications. These specifications include requirements for pipe wall thickness, material specifications, and manufacturing process. The loops would be hydrostatically tested to ensure the system is capable of withstanding the operating pressure for which it was designed. Any leaks would be repaired and that section of pipe would be retested until specifications are met. These measures and the operation and maintenance procedures described in the revised section 4.12.1 that Northwest would implement are designed to prevent natural gas facility accidents and failures. In addition, the revised section 4.12.1 states that Northwest has developed an emergency plan that includes procedures to respond to and minimize the hazards from a natural gas pipeline emergency along its system. The procedures in Northwest's emergency plan would be applicable to the proposed loops.

NAT3-2 An analysis of alternative methods to cross the North Fork Nooksack River is presented in section 4.3.2.3. Section 4.3.2.3 has been revised to state that the WDFW noted that the North Fork Nooksack River is highly dynamic and alternative methods for crossing the river would be based on river conditions as close to the time of the work as possible. Section 4.3.2.3 has also been revised to include additional discussion of Northwest's plan to install LWD at appropriate areas in waterbodies within the construction right-of-way to mitigate for potential short-term impacts on aquatic species. The effectiveness of LWD as a mitigation measure and additional details regarding Northwest's proposed placement of LWD in streams and on streambanks are discussed in section 4.6.2.3. The specific locations where Northwest would install LWD are included in the draft Mitigation Plan for Waterbody Crossings that is provided in Appendix S. In addition, Northwest would participate in projects that specifically target the creation or enhancement of spawning and other requisite habitats for salmonids.

As discussed at a meeting at the COE office in Seattle, Washington on June 23, 2005 and in the revised sections 4.3.2.3 and 4.3.2.4, Northwest is evaluating the WDFW's, the Nooksack Indian Tribe's, and the Lummi Nation's request that Northwest lower the existing pipelines in the Jim Creek area to a sufficient depth to allow natural channel processes to restore off-channel habitats. If feasible, in whole or in part, Northwest has stated that it is willing to

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# Native American Tribes

NAT3-2 work with the Nooksack Indian Tribe, the Lummi Nation, the COE, the WDOE, and the WDFW to develop a contingency mitigation proposal if the HDD fails at the North Fork Nooksack River and a wet open-cut crossing is necessary. The requirement to implement the contingency mitigation proposal if the wet open-cut crossing is necessary would be included as a condition of the section 404 permit that would be issued by the COE. Section 4.3.2.4 has been revised to include a discussion of the existing conditions in the Jim Creek area and Northwest's coordination with the agencies and tribes.

Because Northwest is still in the process of consulting with other federal, state, and local agencies and applicable Native American tribes to finalize its waterbody crossing mitigation requirements, section 4.3.2.3 has been revised to include the FERC staff's recommendation that Northwest continue these consultations and file the final site-specific waterbody crossing plans and final Mitigation Plan for Waterbody Crossings with the Secretary for the review and written approval of the Director of OEP before construction at each applicable waterbody (see also mitigation measure number 17 in section 5.4). These final plans may incorporate new information that may become available as Northwest continues consultations with the COE, the WDOE, the WDFW, various county agencies, and Native American tribes. The FWS and NOAA Fisheries may impose additional mitigation as well as part of their Biological Opinions (see section 4.7) that also should be included in Northwest's Mitigation Plan for Waterbody Crossings. The FERC staff believes these continued consultations will result in the development of acceptable site-specific crossing plans and mitigation requirements for the waterbodies that would be crossed by the Capacity Replacement Project. Section 4.3.2.3 also explains how the public and other agencies can view the final plans once they are filed.

NAT3-2  
(cont'd)

environment. As is clearly described in the EIS, the North Fork is home to the Nooksack chinook salmon, and the pipeline vicinity is an important spawning and rearing area for this (ESA) threatened species, as well as many others. By restoring fish access to these off-channel habitats, which have been blocked by bank stabilization to protect the existing pipelines, Northwest could easily mitigate the adverse effects of pipeline construction and operation in the Nooksack River basin. Specifically, the right bank of the North Fork, in the vicinity of the pipeline right-of-way, formerly provided extensive off-channel spawning and rearing areas for salmon, and could again with the cooperation of Northwest Pipeline. Extensive research in the North Fork and elsewhere indicates that these off-channel spawning and rearing areas (which are separated from the mainstem by forested islands and vegetated gravel bars) are likely the most productive salmon habitats left on the North Fork, and are crucial to recovery of the Nooksack spring chinook. We strongly support the mitigation proposal in Section 4.3.2.3 occurring at the North Fork Nooksack pipeline crossing site.

We do not wish to even contemplate the open cut method of crossing the North Fork, and would oppose the procedure under any circumstances. Open cut construction, aside from water quality effects, could interrupt salmon migration and alter spawning activity for the entire North Fork. Not only is the North Fork considered critical habitat, as described above, but the channel bed in the vicinity of the crossing is highly unstable. Excavation in the North Fork channel is complicated by the high natural sediment load carried by the river. The extensive bars and braiding upstream are testimony to the channel instability, incohesive bed and banks, and the frequent channel shifting that characterizes most of the North Fork. In these unstable river beds, the swift current and loose cobble fill any excavation as rapidly and as certainly as air filling a vacuum. Extensive excavation will be required to bury the pipeline to the prescribed depths, and extensive adverse impacts to the *upstream* river bed and downstream water quality would result. The dry open-cut method might work better, since the channel has shifted substantially since Northwest completed their evaluation, but neither situation is acceptable because of extensive impacts to fish habitat. The wetted channel of the Nooksack River shifts frequently within the active channel area, which would suggest that a deliberate shifting of the main channel, as in the dry open cut method, might be designed to mimic natural channel processes. In any case, locating the temporary extra workspace upstream of the crossing, which will require the destruction of substantial floodplain forest and an incipient channel island with established woody cover, is not acceptable. The mitigation suggested for an open cut crossing (Section 4.3.2.3), that of stockpiling LWD for use in WDFW projects elsewhere, while welcome from a wood utilization standpoint, amounts to a minor contribution, and is not proportional to the damage that can be expected in an open cut crossing.

NAT3-3

We do not concur with the assertion, made in section 4.3.2.2, that the greatest potential impact on surface water would be from temporary suspension of sediment. Rather, our understanding of the Nooksack River and its dynamic nature leads us to conclude the greatest impact of the pipelines will be to restrict channel migration. As channels migrate across the floodplain they leave in their path back channels, oxbows, and meander cutoffs that are the most productive habitats for juvenile salmon, and frequently provide stable spawning habitat as well. The groundwater interception that occurs in these channels contributes to the cool, clear water conditions that support juvenile rearing. Once a functional riparian zone has become established, these shallower, slower, shaded channels provide functions that are becoming rare in the basin,

NAT3-3

Section 4.3.2.2 has been revised to clarify that the greatest potential impact of pipeline construction on surface waters would result from the temporary suspension of sediments caused by in-stream construction or by erosion of cleared streambanks and rights-of-way. Section 4.3.2.2 has also been revised to include the statement that the potential impacts of pipeline operation include long-term scour, channel profile changes, and restricted channel migration.

Section 4.3.2.4 has been revised to include a discussion of the various comments regarding the substandard condition of some of the waterbody crossings and includes a specific discussion of the Jim Creek area and Northwest's commitment to work with the Nooksack Indian Tribe, the Lummi Nation, the COE, the WDOE, and the WDFW to develop a contingency mitigation proposal if the HDD fails at the North Fork Nooksack River and a wet open-cut crossing is necessary. The revised section 4.3.2.4 states that Northwest is working with the WDFW to identify areas where repairs are necessary and, where feasible, would attempt to complete the repairs concurrently with the work associated with the Capacity Replacement Project. See also the response to comment NAT3-2.

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## Native American Tribes

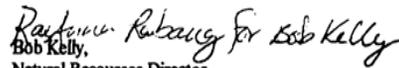
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NAT3-3 (cont'd) and are extraordinarily difficult to create or mitigate. One potential mitigation site is the area where the pipeline currently crosses the North Fork. Levees and bank stabilization that currently protect the existing pipelines prevent even small channels, such as Jim Creek, from supporting healthy fish populations. Northwest could mitigate damage caused by the Capacity Replacement Project partly by assuring that all pipelines in the corridor can withstand shallow side-channel flows, and allowing off-channel restoration in the area to proceed.

NAT3-4 In addition to the North Fork, the Sumas loop of the pipeline will cross many streams, several of which are used by threatened chinook salmon, as well as other salmonids. We have reviewed the notes and comments provided by WDFW in their on-site investigation of each of these pipeline crossings, and concur with the comments provided by WDFW on these streams. In particular, where the streams have been re-aligned and channelized in the past to accommodate the existing pipelines, they should now be restored to their original alignments. With the new stream alignments the pipelines should be buried to sufficient depth to prevent any pipeline exposure, prevent fish migration barrier, or impede the natural routing of sediment, wood, and water in the channels.

In summary, we contend that the open cut method of crossing the North Fork Nooksack River carries unacceptable impacts to fish and the aquatic environment, and should not be permitted as proposed. The horizontal directional drilling for the new pipeline appears to carry acceptable mitigation for the environmental impacts. In addition, we would like to see the existing pipelines in the Jim Creek vicinity, and elsewhere on the Sumas Loop, buried to a sufficient depth to allow natural channel processes to create and maintain fish habitat. Fortification of the pipelines in the Jim Creek area (if necessary) should allow for limited channel inundation to restore fish habitat where it has been blocked by past pipeline construction. Finally, the EIS should include a thorough discussion of the environmental (and social) impacts of a catastrophic pipeline failure, which has happened here recently, and which could substantially overshadow any impacts caused by careful and deliberate construction.

Sincerely,

  
Bob Kelly,  
Natural Resources Director

cc:  
Kurt Buchanan, WDFW  
Olivia Romano, ACOE  
Patricia Olsen, WDOE  
Janet Curran, NOAA Fisheries  
Merle Jefferson, Lummi Tribe

NAT3-4 See the responses to comments NAT3-2 and NAT3-3.

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