



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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Oct 6, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

RE: Comments on NEPA Draft EIS for Oregon LNG (Docket No. CP09-6, CP09-7) and
Washington Expansion Project (Docket No. CP13-507)

Dear Secretary Bose:

Thank you for the opportunity to comment on the Federal Energy Regulatory Commission's (FERC) Draft Environmental Impact Statement (DEIS) for the proposed Oregon Liquefied Natural Gas (OLNG) and Washington Expansion Project (WEP).

The Department of Ecology (Ecology) has reviewed the information provided and submits the following comments.

The comments focus primarily on WEP, but also OLNG as the pipeline component (Oregon Pipeline) enters Washington and several aspects of the OLNG project may have impacts to Washington State resources.

Ecology serves as the State's primary environmental agency, with programs addressing water quality and quantity, air quality, solid, hazardous and nuclear waste, oil spill prevention and response, and shoreline and wetland protection. Through its programs' administration and implementation, Ecology carries out Washington State's interests in: (1) protecting the State's aquatic resources; (2) protecting the quality of the State's air, land, waters, and wetlands, as well as cultural resources; (3) securing the benefits of these resource protections so that tourism and recreation are enhanced and the economic stability of the industries that rely on the Columbia River is promoted.

Ecology's enclosed DEIS comments center around those issues which should be addressed in the upcoming federal Final Environmental Impact Statement (FEIS), and provide specifics relating to several permitting issues. Ecology's comments are linked to the requirements of Washington's

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State Environmental Policy Act (SEPA) and those applicable requirements should be addressed in the federal FEIS. SEPA allows for lead-agency adoption of a federal EIS providing that it addresses all applicable state elements. The clear benefits of state and federal environmental review embodied in one document include: 1) enhanced clarity for public review; 2) increased efficiency and lower costs; and 3) reduced delay in working through the permitting processes. Again, thank you for the opportunity to comment on the DEIS. If you have any questions please contact Kerry Carroll at (360)407-7503 or via email at kerry.carroll@ecy.wa.gov.

Sincerely,



Gordon White, Program Manager
Shorelands and Environmental Assistance Program

Enclosure:

cc: Sally Toteff, ECY SWRO
Josh Baldi, ECY NWRO
Sonia Wolfman, ECY A.A.G

Attachment

Washington Department of Ecology Comments on OLNG/WEP DEIS

General Comments:

Table of Contents: is off at p. 100-102 section 2.1.1

Page ES-7, fourth line from top: Wildlife will be displaced to “adjacent habitats” – are these “habitats” presumed to be available, and can they be identified?

Page ES-7, second paragraph, fourth line down: What does the term “generally avoiding” mean in this context?

Critical areas v. area: Be consistent in their uses. The Draft Environmental Impact Statement (DEIS) switches back and forth from “area” to “areas.”

Air Quality

Page 1-28, Table 1.5.4-2: The table incorrectly lists Northwest Clean Air Agency as the regulatory authority to revise PSD Permits for any additional source of air pollution at the Sumas Compressor Station and the Mount Vernon Compressor Station. In addition, the Southwest Clean Air Agency is listed as the regulatory authority to revise PSD Permits for any additional source of air pollution at the Chehalis Compressor Station. The table should be revised to reflect that it is the Washington Department of Ecology that has the authority to issue or revise PSD permits in the state of Washington.

Coastal Zone Management Act (CZMA)

Page ES-7, last paragraph, last sentence: To be more accurate, the project needs to be consistent with Oregon’s CZM Program.

Page 1-17: The project needs to be consistent with the two states’ Coastal Zone Management Programs to show consistency with the CZMA.

Page 1-17, last paragraph: Washington’s coastal zone extends three nautical miles from the Pacific Coast.

Page 1-28, Table 1.5.4-2: A project must demonstrate consistency with the WCZMP not the “CZMA Program.”

Page 4-573: For clarification purposes, the following three paragraphs should be substituted for that in the DEIS:

4.2.9.5 Coastal Zone Management Act

“Approved by the federal government in 1976, Washington’s Coastal Zone Management Program (WCZMP) is the authority that the Washington State Department of Ecology’s Shorelands and Environmental Assistance Program relies on when reviewing a project for

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federal consistency. As described in section 1.5.1.9, the WCZMP applies to all 15 coastal counties that front salt water, extending three nautical miles from shore on the Pacific Coast. The WEP would be within Washington's coastal zone for activities in Thurston, Pierce, King, Snohomish, Skagit, and Whatcom Counties.

To receive a consistency determination with the WCZMP, the WEP must demonstrate compliance with the following state laws and their implementing regulations (WACs):

- SEPA (see section 4.1.9.2; Ecology is the SEPA Lead Agency for the WEP);
- Shoreline Management Act (RCW 90.58);
- Water Pollution Control Act (RCW 90.48);
- Washington Clean Air Act (RCW 70.94)

WA Ecology has requested that Northwest prepare an overview Consistency Analysis Document to summarize how the WEP would comply with enforceable policies within coastal zone counties. This document, in addition to the relevant regulatory documents for CZMA consistency demonstrating compliance with the laws listed above, would be used by Ecology to make a single CZMA determination for the WEP. If the WEP is authorized by FERC, Northwest would need to demonstrate that its project is consistent with the CZMA before FERC would allow any construction activities to begin.”

Page 1-20, SEPA: Note that Ecology could also opt to complete a Supplemental DEIS should it find the current DEIS lacking in important areas.

Page 1-26, Table 1.5.4-1: To be consistent, cite Section 402 of the Clean Water Act as was done for the applicable Oregon laws as in Table 1.5.4-2.

Page 2-61, first sentence: Is the word “collocated” correct here?

Page 4-1, first paragraph, last sentence: From where was the definition of “significant impact” derived?

Page 4-358, second paragraph from bottom: Who ensures that OLN/WE is making “all reasonable efforts?”

Page 4-361: Who determines whether a noise complaint is “legitimate,” and why might restriction of hours of operation not apply to dredging operations?

Page 4-368:

- First bullet-Who ensures that the noise survey gets done?
- Noise Conclusions, first paragraph- Rather than saying “noise environment,” say “Potential changes to the environment caused by project noise would be...” Is there such a thing as a “noise environment?”
- Noise Conclusions, second paragraph- Is 48 months (four years) of construction considered “temporary”? The above paragraph mentions “temporary noise increases”

Page 4-463, second paragraph from top: Impacts are not administered, the law is administered. Say “...under RCW 90.44, which are...”

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Page 4-495: Need a general statement about what Aquatic Resources are. What else is there beyond fish? The intro paragraph says nothing about other resources beyond federally-listed fish.

Page 4-498, bottom of page: Has Northwest filed its “Fish Salvage Plan” prior to the close of the comment period, as noted in the DEIS? Whose responsibility is it to confirm that these requirements have been met?

Page 4-551: This section would be easier to follow if you identified up front what land uses will be affected prior to discussing the impacts.

Page 4-564: Table 4.2.9-5 should read “Sumner” not “Sumer.”

Page 4-661, Cumulative Effects: This is not the Cumulative Impacts definition used in Washington State. Are the three bullets lifted directly from the CEQ and EPA? Bullet three is very confusing as written.

For the definition of “Reasonably foreseeable future actions,” the definition is not that which Washington relies on; i.e. a project does not have to have “applied for a permit” or be “publicly known.”

Page 5-51, Conclusions: How are all the recommendations carried out? Are the “shalls” the same as the “shoulds” within the document? How likely is it that FERC will include the specific conditions? What is the course of action or consequence if it does not?

Environmental Justice

Page 1-30: The DEIS environmental justice analysis identifies tracts with elevated low-income and minority populations. Census tract analysis indicates numerous areas in Oregon and Washington where populations exceed the comparative area (county & state) for Hispanic/Latino population percentage. For example, WA Tract 9523.02 is 31.5% Hispanic/Latino (WA 11.7%, Skagit 16.9%).

- Please document the public involvement methods used to increase participation from minority and low-income populations. This includes effective public participation strategies designed to address linguistic, cultural, institutional, geographic, and other barriers.
- The DEIS should present the methods used to involve community, document the comments received, and show how this input was used in the decisions made for this project.
- The impacts assessments of the OLNG and WEP projects should reflect coordination with these affected populations.

Page 2-71: Please provide demographic characteristics of potentially impacted residential areas either throughout the document or as part of the environmental justice sections. Identify disproportionately impacted populations and mitigation proposed if appropriate.

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Page 4-266: Suggest demographic and linguistic isolation analysis for all potentially impacted schools, and mitigation proposed for disproportionately impacted populations.

Page 4-297: Requesting clarification on the parameters for “as appropriate” regarding FERC’s work in accordance with Executive Order 12898.

Page 4-299:

- We suggest providing demographic information for an appropriate radius around the LNG terminal (e.g., one mile radius) in order to identify potentially impacted low-income and minority populations.
- Provide data and analysis to support the statements that: 1) “...there are no disproportionately high percentages of low-income or minority populations along the waterway or near the terminal,” and 2) “...the LNG terminal would not cause a high and disproportionate adverse effect on environmental justice populations.”
- Please strike the sentence: “Therefore, the project would impact minority or low-income individuals in the same manner as other individuals.” “Individual” based conclusions are unsupported in this DEIS. Suggest referencing only “populations” or “communities.” (For same edit see also p. 4-314 (pdf p. 544), and p. 4-608 (pdf p. 838)).

Page 4-312: Please document any Spanish language outreach used in areas identified as a comparatively high Hispanic/Latino population (e.g., WA census block 3016 within census tract 001502).

Page 4-314:

- The DEIS provides demographic analysis but does not provide analysis on the potential for disproportionately high and adverse human health or environmental effects on these populations (per EO 12898). The Environmental Justice analysis should include the environmental and human health effects identified in the DEIS in relation to the minority and low-income populations identified in the demographic analysis.
- When possible, the environmental justice analysis should characterize/describe the direct, indirect, and cumulative effects of the proposed action for the affected population.
- Consider including a summary conclusion for the environmental justice analysis that identifies any environmental justice concerns, and describes whether and how impacts have been appropriately avoided, minimized, or mitigated.

Page 4-607

- The DEIS identifies census tracts along the pipeline route that have greater minority and low-income populations in comparison to surrounding tracts, counties, and the state. The Environmental Justice analysis should include the environmental and human health effects identified in the DEIS and present this in relation to the minority and low-income populations identified in the demographic analysis.

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- Sentence stating the pipeline "...would not be a threat to public safety" is not supported by the previous sentence about risk level. We suggest editing to say "...would be a low threat to public safety."

Page 4-608: Please provide demographic analysis of the populations surrounding the OLNG and WEP compressor stations. Include any potential environmental or human health effects identified by the DEIS in relation to low-income and minority populations. As appropriate, discuss mitigation measures.

Page 5-24, 5.1.10.1, Oregon LNG Project:

- The DEIS demographic analysis of census tracts documents low-income and minority population percentages that exceed comparative tract, county, state percentages. Data and analysis are not currently provided in this DEIS that support the statement that "...there are no predominantly low-income or minority populations in the vicinity of the of the project facilities," and that "construction and operation of the terminal and pipeline would not cause a high and disproportionate adverse effect on environmental justice populations."
- Additional disproportionate impact analysis is needed that identifies minority and low-income populations potentially affected by the environmental and human health effects identified in the DEIS. (Same comment for **p. 5-24, 5.1.10.2 WEP**. The determination of "no disproportionate effect" is not supported by the current analysis. Please summarize environmental and human health impacts identified in the DEIS in relation to the minority and low-income populations potentially affected by the WEP.)

General Comments

- The demographic information provided in the DEIS is robust. However, to better align with EO 12898 and CEQ guidance on addressing environmental justice in NEPA, the DEIS should provide analysis that evaluates the findings of the Environmental Analysis in relation to the Environmental Justice demographic analysis. Because there are low-income and minority areas identified in the DEIS study area, there is a potential for disproportionately high and adverse effects on minority and low-income populations. The DEIS should summarize the identified environmental impacts (e.g., socioeconomic, air quality, noise, etc.) of the proposal and provide an analysis in terms of the demographics of the affected population. This text should be included in the Environmental Justice sections.
- Geospatial analysis and mapping of the study area and demographic data are recommended (e.g., terminal, pipeline, and compressor locations with census tract demographic overlay).

Greenhouse Gas

Page ES-12: States that emissions expected during operation of the pipeline would be relatively minor. It is not clear whether this refers to the specific pipelines within the distribution system

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or the system itself. The title for Table 4.2.12-13, Estimated WEP Pipeline fugitive and Venting Emissions, on page 4-633 implies that the ‘pipeline’ is the system including compressor stations. If that were the case, then the GHG emissions data on page 4-634, Table 4.2.12-14, suggests that the emissions are not minor.

Page 4-627: A brief discussion of EPA’s GHG reporting program is mentioned; however, Washington’s GHG reporting program should be referenced or included in this section.

Page 4-630: There is a short paragraph that references Washington’s GHG reporting requirements. The percent change in GHG emissions from reporting Compressor Stations are mentioned in table 4.2.12-14 on page 464; however, current emissions should be provided allowing for more transparency.

Page 4-633: This page states that “Emissions expected during operation of the pipeline would be relatively minor,” yet table 4.2.12-13 indicates that 95,988 tpy CO₂e would be released from pipeline fugitive and venting sources.

Page 4-634, table 4.2.12-14: There should be a discussion regarding percent change over existing emissions and mitigation strategies, either in this section or within an appendix.

General Comments

- Ecology appreciates the analysis of greenhouse gas (GHG) emissions that is included in the DEIS for both OLN (Air Quality, section 4.1.12, starting p. 4-323) and WEP (Air Quality, section 4.2.12, p. starting 4-615), as well as in the Cumulative Effects section (Section 4.2, starting p. 4-661). However, we note that the scope of the DEIS (Section 1.4.8, p. 1-12) limits consideration of potentially important emissions that could result as a consequence of the proposals. The EIS should more broadly consider the upstream and downstream impacts associated with the LNG export proposal¹. The DEIS states that a life-cycle analysis is not considered the EIS. In other recent NEPA EISs, other federal agencies have completed life-cycle analysis for proposal that could result in the export of fossil fuels². While FERC has included important analysis of the GHG emissions associated with gasification of the natural gas and some of the shipping emissions, those emissions are smaller percentage when compared with upstream and downstream emissions (such as combustion). Given those larger emissions that are not accounted for in the DEIS, we would encourage a broader life-cycle analysis of the GHG associated with the proposals.

¹ *Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews* (Council on Environmental Quality 2014): “...emissions from activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for the agency action (often referred to as upstream emissions) and as a consequence of the agency action (often referred to as downstream emissions) should be accounted for in the NEPA analysis (40 CFR § 1508.8).”

² Surface Transportation Board’s DEIS for the Tongue River Railroad www.tonguerivereis.com/draft_eis.html and U.S. Department of State’s FEIS for the Keystone Pipeline keystonepipeline-xl.state.gov/finaleis/

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- Where the DEIS does identify GHG emissions, no identification is made of potential mitigation measures. This is contrary to the Council on Environmental Quality's (CEQ) guidance on NEPA, which states that, "All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies."³

Shoreline Management Act

Page 4-504: The DEIS discusses efforts to avoid exposure of the pipeline in or surrounding streambeds by locating the utility a minimum of 5-feet below finished grade. The report notes that additional depth of cover may be required for specific crossings, which will be based on a scour analysis. In regard to local SMP review, avoiding future exposure of the utility will be critically important, as future shoreline stabilization in the form of rip-rap is strongly discouraged and should not be assumed to be a feasible maintenance action (to protect the utility line) in the future. Therefore, we recommend that the utility line be placed at a conservative depth to avoid the need for any shoreline stabilization in the future. As recommended in the DEIS, we suggest that a detailed scour analysis be submitted as part of a local shoreline permit to help inform an adequate depth to bury the utility.

Page 4-510: In addition to following a number of well-established BMP's, the DEIS recommends that a "Vegetation Restoration and Monitoring Plan" be developed in coordination with a number of state and federal agencies to adapt to the variety of habitat types that may be effected throughout the corridor. As may be implied by the reference to "other applicable agencies" this effort should include local government/state agencies to make sure that Critical Areas and SMP standards are considered through the development of this plan.

Page 4-574, section 4.2.9.6: This section provides an adequate description of the Shoreline Management Act (SMA), acknowledging the likely need for local shoreline permit review to consider impacts/mitigation for work within shoreline jurisdiction (i.e., waterbody crossing). However, it is too brief. Add the following:

A list of which waterbodies (streams, wetlands) in shoreline jurisdiction (Appx K5 has a table for Fish and Waterbodies; shoreline streams are identified there, but does not contain enough information).

- Maps and figures.
- State which waterbodies are under the authority of which local jurisdictions.
- Details on how they will be consistent with the SMA and local SMPs.
- Discussion of mitigation specific to shoreland environments, which include riparian/buffer and water body impacts, and both permanent and temporary impacts.

³ Council on Environmental Quality, Executive Office of the President, Memorandum to Agencies: Forty Most Asked Questions Concerning CEQ's national Environmental Policy Act Regulations, 46 Fed. Reg. 18026 (March 23, 1981) As amended; FAQ 19b.

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Page 4-574, section 4.2.9.6, last sentence in section: “Impacts on these designated shorelines and wetlands, including activities at waterbody crossings, and associated mitigation are discussed in sections 4.2.3 and 4.2.4.” This is misleading, as the referenced sections only provide a general description of the CZMA and SMA and do not specifically describe anticipated mitigation for the project. In fact according to the following recommendation from section 5.1.9.2, local SMP requirements (including mitigation) are not included in the DEIS, but will be determined through individual (local) permit reviews, as a condition of the FERC authorization.

Page 4-574: “Impacts on these designated shorelines and wetlands, including activities at waterbody crossings, and associated mitigation are discussed in sections 4.2.3 and 4.2.4.” Water bodies are discussed in sections 4.2.3 and 4.2.4, but I don’t see anything that lists or discusses which water bodies are in shoreline jurisdiction. Analysis of impacts and mitigation under the SMA is absent from the document.

General Comments

- The DEIS should clarify the timing and effect of the related regulatory processes under the CZMA and the SMA to help the different regulatory bodies understand their role in reviewing this proposal. I would also recommend that the local governments that will be reviewing shoreline permits be included in mitigation, monitoring, and adaptive management discussions related to this proposal, so that local standards can be considered early in the process to ensure compliance during the later (local) permit review.
- “Northwest will not conduct vegetation maintenance over the full width of the permanent ROW in wetlands and waterbody riparian areas. Vegetation maintenance adjacent to waterbodies will allow a riparian strip at least 25 feet wide, as measured from the mean high water mark of the waterbody, to permanently re-vegetate with native plant species across the entire construction ROW if permitted by the landowner (page 5-9, Appendix J).” Neither the DEIS or the *WEP Monitoring and Mitigation Plan* (Appendix J) recognize SMP buffer or setbacks that may limit vegetation removal and maintenance of the pipeline corridor. We understand that these zones may differ between jurisdictions, but highly recommend that coordination with local contacts be established to ensure that these local provisions are incorporated into the project plans. For example, the following protocol listed in section 5.18 in Appendix J allowing “vegetation maintenance” as close as 25-feet from a waterbody, is probably not consistent with local SMP standards, for which a larger riparian buffer protection zone may need to be maintained.

Water Resources

Page ES-15, Major Conclusions: Wetland Mitigation Plan should be added to both project bullets and add WQ monitoring plan to the first bullet.

Pages 2-42 and 2-43:

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- Fish bearing or not, work in all waterbodies must not exceed the water quality standards for that waterbody. The point of compliance for turbidity may be different for each waterbody per WAC 173-201A.
- The project should consider using the construction technique that will generate the least amount of turbidity and minimize disturbance to the waterbody.
- Water quality monitoring will be required for all water crossings in Washington.

Page 2-49: Where it says “Oregon LNG would conduct training for its construction personnel regarding proper field implementation of its Plan and Procedure, SWPPP, and other mitigation measures.” Water quality monitoring for Washington should be added to the training conducted.

Page 2-67:

- First paragraph-Mats should be used when construction equipment are working in all wetlands, not just when saturated.
- Waterbody Crossings-Construction methods in combination with its procedures should also be designed to minimize turbidity, not just changes in waterbody flow characteristics.
- Dry Open-cut- This method is considered in-water work if the channel is not dry prior to installing a flume or dam and pump. Water quality monitoring will be required during installation and removal of these methods.
- Wet Open-cut- This method will require strict water quality monitoring and depending on the width of the waterbody, could require a boat to monitor.

Page 2-17:

- The first word of the top paragraph should be mitigation rather than “*conservation*”. It goes on to say that “. . . measures would be to compensate for unavoidable impacts on listed species and their habitats. . .” This is the wetland and habitat mitigation section, but the way this sentence is worded, it seems to ignore wetlands. Compensating for wetland loss is not necessarily related to listed species or their habitats.
- The second paragraph says, “Oregon LNG has identified the following five primary actions to mitigate for expected impacts on listed and proposed species and their habitats, including wetlands.” Wetlands are not a subset of listed/proposed species and their habitats. This needs to be re-phrased.

Page 2-19: Ensure that sufficient credits are available at the CRWMB. Credits from the CRWMB can be used only for wetland impacts within its service area.

Page 2-41:

- “During crossing of saturated wetlands where the soils are too wet . . . topsoil disturbed by trenching would not be segregated.” If the topsoil is not segregated, the soil that is returned to the top layer of the trench the will not likely be the hydric soil that was there

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prior to trenching. This may be considered a permanent wetland impact and would require compensatory mitigation. (This is also discussed on page 2-67 and in other parts of the DEIS.)

- “Temporary erosion and sedimentation control measures would be installed immediately after the initial disturbance of wetland soils.” Why would wetland soils be disturbed before the erosion control is in place?
- “Following construction, all wetlands would be rehabilitated to preconstruction soil and hydrology conditions, and revegetated.” This is inconsistent with the statement that topsoil in saturated wetlands disturbed by trenching would not be segregated.

Page 2-59, Chehalis Compressor Station—Lewis County: “Northwest would modify the existing Chehalis Compressor Station at MP 1289.5 by installing a new Taurus 60 compressor to increase compression by about 7,700 horsepower.” It doesn’t say whether this will be in the same footprint as the existing development. There is an on-site wetland mitigation area associated with the Capacity Replacement Project. Any work at this compressor station needs to avoid the mitigation area.

Page 2-67: “Vegetation clearing in wetlands would be limited to trees and shrubs, which would be cut flush with the surface of the ground and removed from the wetland.” There may be instances when cut trees should be left in the wetland for habitat and organic input. They may need to be looked at on a case-by-case basis.

Page 2-68, 4-479, and 4-499 (and maybe others): Wet open cut trench crossing of the Toutle River is concerning. The DEIS states that “the trench would be dug with a dragline bucket or large excavators.” The crossing width would be approximately 200’ to 250’ at the time of construction, and that the crossing would take seven days of continuous in-water work. This would be extremely detrimental to water quality and would require justification why other methods would not be reasonable or effective. The DEIS also states that the trench surface would be armored with gravel in the river. Please provide more detail about the gravel (e.g., washed or not, size, angular or not, expected to wash downstream, etc.). Why are 49 acres of temporary workspaces needed on either side of the river? What will be the impacts from these work spaces?

Page 4-475: “The WEP would need to obtain federal and state permits before beginning waterbody crossings.” Add local permits here.

Page 4-478:

- “The WEP would cross seven major waterbodies (i.e., greater than 100 feet wide) including the Kalama, Toutle, Cowlitz, Newaukum, Puyallup, Snohomish, and South Fork Nooksack Rivers. Northwest has prepared site-specific drawings for these and four intermediate waterbody crossings that are environmentally sensitive.” All Washington streams and waterbodies are considered environmentally sensitive. Why are four particular crossings called out?
- ATWS on or near river banks should be located where the least amount of native vegetation will be disturbed.

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Page 4-483, section 4.2.4, last two lines:

- “These regulations include critical area designations for some wetlands in the project corridor.” All wetlands are critical areas.
- “each county has a separate setback requirement.” These are buffers rather than setbacks. This occurs in the following sentence too.

Page 4-484:

- First full paragraph- “This provided additional data where setback buffers may include a distance of over 200 feet.” Delete “setback”.
- “Multiple wetland delineations previously conducted by Northwest within and adjacent to the survey corridor for other projects provided additional wetland data outside the 200-foot survey corridor.” New delineations may be required for some waterbodies.
- Third full paragraph- Specify that it’s the 2004 rating system. Change “ranks” to “rates.” Two instances of i.e. (meaning “that is”) need to be changed to e.g. (meaning “for example”). Otherwise, the sentences says in effect that only Category 1 wetlands are higher-value wetlands, and only Category 4 wetlands are lower-value wetlands.

Page 4-485:

- First paragraph- change ranked, ranking, and rankings to rate, rating, and ratings, respectively.
- First paragraph- wetland mitigation banks may not be available in all areas of the pipeline.
- Second paragraph: “Wetlands in the project area can be generally grouped into four categories.” Categories implies rating system categories. The text needs to make this clear. Because this section is talking about Cowardin classes, it would be best to just say that, and note that farm fields are a subset of PEM wetlands. Then the first part of the next sentence wouldn’t be necessary: “Each of these categories corresponds to a Cowardin group ...” “Group” should be changed to “class.”
- Under Palustrine Forested Wetlands: PFO are not typically dominated by western red-cedar. More often we see Oregon ash and Pacific willow. At the end of the first sentence, does this mean in the understory?

Page 4-486: In the first sentence of the last paragraph, what is meant by “contain Category 3 features?” If it means they are Category 3 wetlands, say that.

Page 4-487, Table 4.2.4-2: Distinguish between permanent wetland fill impacts and permanent conversions of FO to SS or EM or of SS to EM.

Page 4-488 and many others: “Pipeline stringing and fabrication may occur in non-saturated wetland areas.” What are the methods to prevent soil contamination by whatever chemicals that may be used in this process?

Page 4-489:

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- The DEIS states that “Some impacts on high quality wetlands (Categories I and II) and wetlands adjacent to flowing surface waters would be minimized but would not be avoided due to site-specific alignment restrictions. In most cases, these wetlands are in the existing right-of-way and have recovered from the previous disturbance sufficiently to fall into Category I or II. Avoidance of these impacts would require creation of a new pipeline right-of-way and additional clearance of high quality wooded or shrub upland habitat.” Ecology will need to evaluate these proposed impacts in detail to ensure that all measures for avoidance and minimization have been evaluated and implemented to the extent possible.
- The DEIS states that “Northwest would cross Queen’s Bog (MP 1379.1) and the unnamed bog at MP 1381.3 using the push/pull technique described in section 2.1.4.2.” The plan sheets in Appendix K for Queen’s Bog and the unnamed bog state that the crossings are to be done using a wet open-cut method. These statements need to be reconciled. State with consistency what the planned crossing method is for the bogs. Also, very little information is given about the push/pull technique. If this method will be used, Ecology will need detailed information on this technique in order to evaluate the proposed bog crossings.

Page 4-490:

- First paragraph- How far apart are trench plugs within wetlands? How is the determination made? Does slope play a part in making this determination?
- 4.2.4.3, first paragraph- “Northwest would mitigate unavoidable permanent impacts on PSS, PFO, and Category I and II wetlands through off-site wetland mitigation banking sites.” All wetland impacts, regardless of category, need to be offset with compensatory mitigation. Also, not all areas of the pipeline are within the service area of wetland banks or ILF programs.
- 4.2.4.4, first paragraph-“Northwest requested approval for certain areas where a wider construction right-of-way would be necessary in Category I and II wetlands based on site-specific conditions. Northwest depicted these locations on aerial photo-based Environmental Construction Alignment Sheets and provided a sites-specific explanation of the conditions that would require a wider right-of-way.” Ecology will need to evaluate all of these, along with those requested for Category 3 and 4 wetlands. This will be part of our 401 permit review. Ecology may request changes to these proposed wider ROWs based on our review.

Page 4-493: “Prior to the close of the draft EIS comment period, Northwest should file with the Secretary site-specific justification for Category III and Category IV wetlands identified in table 4.2.4-2 of the EIS, where it proposes to use a construction right-of-way width greater than 75 feet.” When will Ecology have an opportunity to review this?

Page 5-9, third paragraph, first sentence: “Oregon LNG would mitigate construction-related wetland impacts by implementing its SWPPP, Plan and Procedures, and by complying with the USACE’s Section 404 and ODSL’s Section 401 permit conditions.” Ecology’s 401 permit also needs to be added here.

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General Wetland Comments

- All wetlands identified in the WEP are waters of the state and subject to the applicable requirements of state law (see RCW 90.48 and WAC 173.201A) and Section 401 of the Clean Water Act (33 USC §1341) and 40 CFR Section 121.2.
- Ecology is concerned that the mitigation sequence of avoidance and minimization as listed in *Wetland Mitigation in Washington State, Part I-Agency Policies and Guidance* was not followed. Although the DEIS states that avoidance and minimization measures were considered, we believe more could be done.
- More information on alternatives that avoid permanent impacts to Queens Bog at milepost (MP) 1379.1 and an unnamed bog at MP 1381.3 in the Sumner North B Loop will be needed. It is unlikely that permanent impacts to these Category I bogs would be permitted if there are alternatives available and because a mitigation bank is not available.
- It is not clear how temporal wetland losses from temporary construction impacts will be mitigated. Restoration of these areas may not mitigate for the length of time it takes before the plant community returns to its original condition.
- How will hydrology be maintained when excavating trenches through wetlands? Include measures to prevent dewatering a wetland from puncturing a confining soil layer.
- Ecology will need wetland ratings for all wetlands that will be impacted, including those for which property access has not yet been granted, prior to issuance of permits.
- The DEIS only discusses mitigation for wetland and water body impacts, but Ecology also is concerned with buffer functions and values. A buffer restoration plan will be required to mitigate for all impacts to wetland and water body buffers. The extent of each restored area should be based on the buffer widths required in the critical area ordinance of each city or county where the impacts occur.
- In order to use mitigation banks that are within an approved service areas, the applicant will need to submit a detailed Bank Use Plan to Ecology for review and approval. This plan should follow the mitigation banking guidance such as that found in *Credit Guide for Wetland Mitigation Banks* (Ecology Publication #12-06-014).
- A mitigation plan will be needed for areas where there are no banks or ILF programs.
- Some of the wetlands within the project area may also be shoreline-associated wetlands regulated under the state Shoreline Management Act (RCW 90.58) and County Shoreline Master Programs. While the applicant may not have to obtain formal shoreline approval for work within shoreline jurisdiction, in order to comply with one of Washington's Coastal Zone Management Program's enforceable policies, the project will need to meet the requirements of RCW 90.58 and applicable regulations (WACs).
- Send Ecology the jurisdictional determination from the Corps stating whether the delineated wetlands are under federal jurisdiction.

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Construction Stormwater

- To avoid project delays, the applicant is encouraged to submit a completed NPDES Construction Stormwater Permit application form (Notice of Intent) and publish public notices more than 60 days before the planned start of the project.
- If there are known soils/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted for review prior to issuance of the permit.
- You may apply online or obtain an application from Ecology's website at: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/> - Application.
- Stormwater Best Management Practices (BMPs) must be consistent with the Stormwater Management manual for Western Washington (most recent edition).

Water Rights

- Any surface water diversion requires that an Application for a Water Right Permit be submitted to Ecology. The permit for such diversion must be issued by Ecology prior to use of the water.
- The proponent can apply for a short term surface water right permit for a one-time, two-to three-month duration project. It is highly recommended that the proponent go through the Pre-Application Consultation process as many surface water systems are closed to consumptive appropriations in the State of Washington. Submitting a Pre-Application form will put the proponent in contact with a permit writer who knows the watershed. Here is a link to Ecology's Water Resources Program web page that has the Pre-Application Consultation form: <http://www.ecy.wa.gov/programs/wr/rights/newrights.html>
- Apply for a short-term permit at least 2 to 3 months in advance of when the water is anticipated to be diverted and used.

Toxics Cleanup

If contamination is suspected, discovered, or occurs during the proposed action, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily apparent, or is revealed by testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator in the Southwest Regional Office (SWRO) at (360) 407-6300 for Pierce, Lewis, Cowlitz, and Clark Counties, or the Northwest Regional Office at (425) 649-7000 for Whatcom, Skagit, Snohomish, and King Counties. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact the Toxics Cleanup Program at the phone numbers given above.

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Appendix F Comments

8.1.4, Frac-Out Notifications: Department of Ecology, Kerry Carroll, Federal Permit Manager, Lacey, 360-407-7503 needs to be added to Table 4.

Appendix G Comments

Page G1-13, Table G1-3: Add the Designated Uses for the Washington waterbodies as has been done for the Category for Oregon waterbodies.

Appendix J Comments

Page 2-2, 2.3.2: “During any prolonged period of inactivity ... the soils will be temporarily stabilized with a combination of a thick layer of mulch, soil binders, and tackifiers, and then temporarily seeded.” Do not use polyacrylamide in wetlands or their buffers, as it can be toxic to aquatic organisms.

Page 3-4, 3.1.8.1, third paragraph: “Northwest will use temporary construction bridges during all phases of construction to cross intermittent waterbodies. Temporary construction bridges will be designed according to FERC’s Wetland and Waterbody Procedures as well as according to conditions required by the U.S. Army Corps of Engineers, WDFW, and local jurisdictions.” Ecology needs to be added here.

Page 3-5:

- 3.1.8.2, second paragraph-“Sediment barriers will be installed immediately after initial disturbance of the waterbody or adjacent upland.” Sediment barriers need to be installed **prior** to any disturbance not after.
- 3.1.8.2, fifth paragraph-“The duration of construction-related disturbance within wetlands will be minimized and construction equipment operating in wetland areas limited to that needed to clear the ROW, dig the trench, remove the pipe, fabricate and install the pipe, backfill the trench, and restore the ROW. All other construction equipment will use access roads located in upland areas to the maximum extent practicable. Where there is no upland access road available, Northwest will limit all other construction equipment to one pass through the wetland using the ROW if the area is not properly matted and stabilized.” Construction equipment should not be driving through the wetland if the area is not properly matted and stabilized, not even once.

Page 3-8, 3.2.1: “Trench breakers will consist of foam or approved sacks filled with a minimum 0.6 cubic feet of sand.” Ecology will need additional information on using foam trench breakers to ensure that water quality will not be affected. Also, more information is needed on the effectiveness of foam and sand vs bentonite trench breakers.

Page 4-1, 4.2, third paragraph: “If the EI determines that a discharge is occurring, the receiving water will be visually monitored for turbidity.” The NPDES Construction Stormwater Permit will need to be followed for discharges of hydrostatic testing water.

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Page 5-4, Table 5.10-1:

- Seed Mixture 3a and 4- Use only native species in wetland seed mixes. *Lolium multiflorum* and *Agrostis stolonifera* are not native.
- Temporary Seed Mixtures- These need to be sterile.

Page 5-6, Table 5.13-1: Both species of elderberry should be in dry sites rather than moist sites.

Page 5-9, 5.18: “Repairs or remedial actions could include additional seeding or transplanting, installing more robust erosion/sediment control materials, maintaining or replacing the initial erosion control features, placing boulders or LWD, slope armoring, additional mulching, or matting.” Northwest must consult with Ecology and obtain written approval prior to placing boulders or installing slope armoring in wetlands or water bodies or their buffers.

Page 5-10, 5.18.2.1: “A criterion for establishing adequate vegetation recruitment will be defined in the final Construction, Restoration, and Monitoring Plan following consultation with WDFW and DNR.” Ecology needs to be added here.

Appendix K Comments

There are no plan sheets in Appendix K for the Category 1 wetland crossings. Ecology will need to evaluate these proposed impacts in detail to ensure that all measures for avoidance and minimization have been evaluated and implemented to the extent possible. Bogs are especially sensitive to disturbance and must be avoided whenever possible. Bogs are rare wetland types in Washington and cannot be recreated through mitigation.

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