

Public Comment on DSL APP0060697 (Jordan Cove Energy Project and Pacific Connector Gas Pipeline) Application for Removal-Fill Permit – January 30, 2019

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775 Summer St. N.E., Ste 100
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January 30, 2019

RE: Public Comment on DSL APP0060697 (Jordan Cove Energy Project and Pacific Connector Gas Pipeline) Application for Removal-Fill Permit

Dear Mr. Lobdell:

Please accept these comments regarding the Department of State Lands (DSL) removal-fill permit application (APP0060697) submitted by the applicants, Jordan Cove Energy Project, L.P., for the Jordan Cove Energy Project (“JCEP”) and the Pacific Connector Gas Pipeline (“PCGP”). We respectfully request that the Department deny the removal-fill permit for the JCEP and PCGP, hereafter referred to as the “project,” because the project does not comply with the State’s removal-fill law (*See* ORS 196.795-990).

We submit these comments on behalf of Rogue Riverkeeper, Rogue Climate, Beyond Toxics, Bold Alliance, Cascadia Wildlands, Center for Biological Diversity, Columbia Riverkeeper, Citizens for Renewables, Food & Water Watch, Friends of Living Oregon Waters (FLOW), Greater Good Oregon, Hair on Fire Oregon, Honor the Earth, Klamath-Siskiyou Wildlands Center, Oregon Coast Alliance, Oregon Physicians for Social Responsibility, Oregon Shores Conservation Coalition, Oregon Wild, Pipeline Awareness Southern Oregon, Rogue Fly Fishers, Sierra Club, UO Climate Justice League, Waterkeeper Alliance, Western Environmental Law Center, 350 Corvallis, 350 Eugene, and 350 Seattle hereafter referred to as the “Commenters.”

Commenters have direct and personal interests in the proceeding, including rights to property, clean water, safety, and to a livable environment, and these interests would be directly and adversely impacted by project approval. Commenters here have been recognized as parties to the proceeding and have submitted lengthy, detailed comments on previous rounds of the proposed project including, but not limited to, the Draft Environmental Impact Statement (“DEIS”) in 2008 and Final Environmental Impact Statements (“FEIS”) in 2009 submitted for the import project round 1 and the DEIS and FEIS in 2015 for the export project round 2, local land use proceedings in Douglas and Coos Counties, scoping comments on the current third round of the project to the Federal Energy Regulatory Commission (“FERC”), and comments on the Joint Permit Application (“JPA”) to the Oregon Department of Environmental Quality (“DEQ”) for the Clean Water Act Section 401 state water quality certification and the U.S. Army Corps of Engineers (“the Corps”) for the Clean Water Act Section 404 removal-fill permit. Comments submitted for both the Clean Water Act 404 and 401 permits are incorporated by reference and attached as appendices.

Summary of Commenters’ Position: It is the commenters’ position that the applicants have failed to provide reasonable assurances that the project will comply with Oregon’s removal-fill law and related regulations and policies for the following reasons:

Chapter 1. Introduction

Chapter 2. Application Completeness: The Department must deny the permit because the application is not complete. ORS 196.825(12)(b)). Specifically, the applicants fail to provide essential information and analysis of wetland and/or water impacts in areas where the applicants have been denied access by landowners; the application does not appear to contain cross-section drawings for fill and/or removal where the pipeline crosses jurisdictional waters; the presumed obstruction hazards identified by the Federal Aviation Administration will require termination or re-design of the project; the application fails to address deficiencies identified by DEQ in the 401 Water Quality Certification Joint Permit Application; the application fails to include referenced mitigation plans; and the application fails to include the necessary contaminant studies regarding the marine slip dock and access channel area.

Chapter 3. Public Need: The Department must affirmatively determine that the project would address a public need consistent with *Citizens for Resp. Devel. In the Dalles v. Walmart* 295 Or App 310 (2018). For a privately-sponsored project of this scale and complexity, the Department must consider public need in a transparent and comprehensive analysis that weighs all of the relevant impacts and alleged benefits of the project. The Department cannot find there is a predominate public need for the project because the project is unnecessary and there is no evidence of demand for it, and the public need identified by the applicants is outweighed by the loss to Oregon's waters.

Chapter 4. Consistency with Protection, Conservation, and Best Use of Water

Resources of the State: The project would likely do immense damage to water quality in Oregon, and it is not consistent with the protection, conservation and best use of the water resources of this state. The proposed project will likely impair designated beneficial uses, threatening drinking water supplies and fish habitat. It will also likely further degrade stream segments that are already water quality impaired for temperature, dissolved oxygen, pH, turbidity, mercury, and sedimentation. Because the applicants have not demonstrated that the state's waters' will be protected, the Department must deny the permit because the project is not consistent with the protection and conservation of Oregon's waters under ORS 196.825(1)(a).

Chapter 5. Interference with Navigation, Fishing, and Public Recreation: The Director must conduct a weighing of the public benefits of the project against interference with factors including navigation, fishing, and public recreation (See *Citizens for Resp. Devel. In the Dalles v. Walmart*, 295 Or App 310 (2018)).¹ As part of this weighing of benefits, the legislature has clearly demonstrated that it is the State's "paramount policy" to preserve Oregon waters for navigation, fishing, and public recreation. ORS 196.825(1). The applicants have failed to demonstrate that the project will not unreasonably interfere with navigation, fishing, and public recreation and, therefore, the Department must deny the permit. ORS 196.825(1)(b).

¹ ORS 196.825(1)(b).

Chapter 6. Independent Utility: The Department must comprehensively review clearly connected actions to the application, including but not limited to the Coos Bay Channel Modification project. The applicants would be the primary benefactors from the proposed widening and deepening of the federal navigation channel as part of the CBCM project or similar efforts to expand the navigation channel. Further, there are serious questions about the feasibility of LNG vessels transiting the federal navigation channel under the dredging currently proposed as part of this application. The Department should question the full scope of the applicants' plan to develop an LNG export terminal in Coos Bay. The applicants have failed to demonstrate in the application that the project has independent utility as required under OAR 141-085-0565(3)(a) and, therefore, the Department must deny the permit.

Chapter 7. Availability of Alternatives: The applicants have failed to demonstrate a comprehensive analysis of alternatives to the project, and therefore, the Department does not have the information to consider the availability of alternatives both for the project and for proposed fill sites, and to determine that the project is the practicable alternative with the least adverse impacts on the water resource, as required under Oregon law. Consequently, without the information necessary to determine whether the applicant has considered a reasonable range of alternatives, the Department must deny the removal-fill permit.

Chapter 8. Sound Policies of Conservation and Interfering with Public Health and Safety: In summary, the Department is required to consider whether the project conforms to the sound policies of conservation and whether the project would not interfere with public health and safety. ORS 196.825(3)(e). The applicants have failed to demonstrate compliance with the Clean Water Act, as discussed in detail in Appendix A. Clean Water Act 401 Comments and Chapter 4 *infra*. The Department must not approve the permit without consultation with NOAA Fisheries and U.S. Fish and Wildlife as required under the Endangered Species Act. Further, the applicants have failed to demonstrate compliance with state conservation policies, including but not limited to the Oregon Conservation Strategy and the Oregon Plan for Salmon and Watersheds. Additionally, the applicants have failed to demonstrate that the project will not interfere with public health and safety. Potential risks to public health and safety include natural hazards, such as floods, tsunamis, wildfires, landslides, and earthquakes identified under Statewide Planning Goal 7. The potential for high flow events that expose the pipeline or frac-outs at proposed stream crossings may result in increased risks to public health and safety. The Department should consider the airport hazard identified by the FAA, navigation safety hazards discussed in Chapter 5 *infra*, and rock dredging and blasting impacts in Coos Bay.

Chapter 9. Conformance with Land Uses: The applicants have failed to demonstrate that the project conforms with existing land uses designated in applicable comprehensive plan and land use regulations. Moreover, the applicants have failed to provide the Department with the information necessary to make the determinations required by ORS 196.825(3)(g) that the applicants' proposed fill or removal is compatible with the requirements of the comprehensive plan and land use regulations for the area in which it will take place. Finally, because the applicant has failed to obtain land use permits for the project in Coos Bay, the Department cannot conclude that the project is compatible with

land use regulations and acknowledged comprehensive plans. Further, because the reasons adopted by LUBA in remanding the prior land use application are directly related to the inconsistency of the proposed dredge and fill in wetlands and in the Coos Bay estuary with the Coos Bay Estuary Management Plan, the project cannot be conditioned on a future land use approval to meet this criterion. In January 2019, the Douglas County Circuit Court Judge reversed the Douglas County extensions from December 2016 and 2017 that approved the Pacific Connector Gas Pipeline as a conditional use. Because the pipeline will require a new application for conditional use permit and utility facility necessary for public service, the applicant has not met its burden to demonstrate to the Department that the project conforms to Douglas County's acknowledged comprehensive plan and land use regulations. The applicant has failed to meet its burden of providing the Department with the information necessary to make the evaluations under ORS 196.825(3)(g); therefore, the Department must deny the permit.

Chapter 10. Mitigation: The Department should carefully evaluate practicable alternative restoration alternatives of that location that do not involve as much fill, as well as alternatives that ensure fill is not contaminated (*See Chapter 8 infra*). The applicants have not provided sufficient information, have not demonstrated that adverse impacts have been avoided or minimized, and have proposed the least preferable type of mitigation; therefore, the Department must deny the permit.

Chapter 11. Conclusions

In summary, the applicants have failed to provide reasonable assurances that the project will comply with Oregon's removal-fill law and related regulations and policies and the Department must deny the permit.

Chapter 1. INTRODUCTION

1.1 Project History

A. The Jordan Cove Energy Project and Pacific Connector Pipeline (2004-2017)

A detailed project history is included in Section I of Appendix A. Clean Water Act 401 Comments).

In summary, in 2004 the project was first proposed to import natural gas and Jordan Cove filed an application for the project with FERC in 2006. In 2009, FERC initiated the Environmental Impact Statement ("EIS") process under NEPA for the project. The second round of the project began in July 2011 when Jordan Cove applied to the Department of Energy for authorization to export LNG, in violation of its Douglas County CUP import only restriction. In April 2012, FERC vacated its approval of the December 17, 2009 order to construct pipeline facilities. In May 2013, Jordan Cove filed an application under Section 3 of the Natural Gas Act ("NGA") for the JCEP and the PCGP to export natural gas. FERC initiated the EIS process under NEPA between 2014 and 2015. On 30 September 2015, FERC issued the FEIS for the Jordan Cove Energy Project and the Pacific Connector Pipeline (CP13-483-000 and CP13-492-000). After

multiple information requests, FERC issued an order denying applications for certificate and Section 3 NGA authorization on 11 March 2016.²

In its denial, FERC stated:

We find the generalized allegations of need proffered by Pacific Connector *do not outweigh the potential for adverse impact* on landowners and communities... Because the record does not support a finding that the public benefits of the Pacific Connector Pipeline outweigh the adverse effects on landowners, we deny Pacific Connector's request for certificate authority to construct and operate its project³

In April 2016, Jordan Cove appealed FERC's decision. On 9 December 2016, FERC upheld its decision to deny the certificate for the project.

The third and current round of the project began in January 2017 when Jordan Cove submitted a pre-filing request to FERC for the Jordan Cove Energy Project and Pacific Connector Pipeline project. In June 2017, FERC initiated the scoping period for the project. On 24 September 2017, Jordan Cove submitted the final application to FERC. On 23 October 2017, Jordan Cove submitted a Joint Permit Application ("JPA") to the U.S. Army Corps of Engineers ("the Corps") for the Clean Water Act and, to the best of our knowledge, emailed the Oregon Department of Environmental Quality ("DEQ") a copy of the application. On 6 February 2018, Jordan Cove submitted "a combined electronic Section 401 Water Quality Package to DEQ for JCEP and PCGP as a "supplement to the Section 404/10 permit application provided to the U.S. Army Corps of Engineers on October 23, 2017."⁴ This package included materials submitted in October 2017 and additional materials.

On 3 November 2017, Jordan Cove submitted a removal-fill permit application to the Department of State Lands ("DSL"). On 1 December 2017, DSL found that the application was incomplete. On 8 May 2018, Jordan Cove submitted current and new materials to DEQ. On 22 May 2018, the Corps and DEQ initiated a public comment period for Jordan Cove's application for a Clean Water Act Section 404 removal-fill permit and Clean Water Act Section 401 state water quality certification. On 7 November 2018, Jordan Cove submitted a removal-fill permit application to DSL. The Department determined that the application was "complete" on 6 December 2018 and initiated a 60-day public comment period for the removal-fill application until 3 February 2019.

B. The Jordan Cove Energy Project ("JCEP") in 2018

² On 20 May 2015, FERC sent a third data request to Pacific Connector, stating that: *The Commission's Certificate Policy Statement requires the Commission to balance the public benefits of a pipeline proposal against its potential adverse impacts, and that Pacific Connector must show that the public benefits of its proposal outweigh the project's adverse impacts.* Federal Energy Regulatory Commission. ORDER DENYING APPLICATIONS FOR CERTIFICATE AND SECTION 3 AUTHORIZATION. 11 March 2016. P. 8.

³ Federal Energy Regulatory Commission. ORDER DENYING APPLICATIONS FOR CERTIFICATE AND SECTION 3 AUTHORIZATION. 11 March 2016. P. 18. Emphasis added.

⁴ David Evans and Associates letter to Oregon DEQ. SUBJECT: Jordan Cove Energy Project / Pacific Connector Gas Pipeline - 401 Water Quality Package (NWP-2017/41). 6 February 2018.

Jordan Cove proposes to site, construct, and operate a Liquefied Natural Gas (LNG) terminal that would receive a maximum of 1.2 million dekatherms per day of natural gas and produce a maximum of 7.8 million tons of LNG for export each year. The LNG terminal will cool natural gas into its liquid form in preparation for export from Coos Bay.⁵

The LNG terminal is composed of Ingram Yard, South Dunes site, the Access and Utility Corridor, and the Roseburg Forest Products property. The LNG terminal and associated facilities would cover 538-acres of land, including 5.2 acres of open water and 169-acres of wetlands.⁶ At the LNG terminal site, the Ingram Yard will store LNG tanks and liquefaction equipment. The South Dunes site includes the Workforce Housing Facility, metering station, administrative building, and the Southwest Oregon Regional Safety Center (“SORSC”). The Roseburg Forest Products property will be used as a temporary construction staging area and for upland dredge disposal, contained with an on-site berm. The LNG terminal itself consists of a connection to the Pacific Connector Pipeline metering station, gas inlet facilities, a gas conditioning plant, liquefaction facilities, two full-containment LNG storage tanks, an LNG loading line, LNG loading facilities, and a marine slip and access channel for LNG carriers. According to the applicants, construction and operation of the LNG terminal may impact water quality through upland site preparation and facilities construction, placement of permanent infrastructure, construction and operational stormwater runoff, potential construction and operational fuel and chemical spills, hydrostatic testing, wastewater discharge, dredge soil disposal and dewatering/decanting, and operation of construction vehicles and equipment.⁷

Construction of the marine slip would require excavating 38-acres from uplands. The slip and access channel combined would equal 60-acres and result in the permanent loss of 14.5-acres of shallow subtidal and intertidal habitat, 0.6-acres of estuarine saltmarsh habitat, and 1.9 acres of submerged aquatic vegetation habitat. Additionally, the applicants propose to dredge 5.7 million cubic yards of material to create the slip basin and access channel. Dredged material would be disposed of at the LNG terminal, Roseburg Forest Products Site, South Dunes Site, or Kentuck Site. Dredging for the temporary berth would require dredging approximately 45,000 cubic yards of material. Dredging of the existing navigation channel would remove 700,000 cubic yards of material and would construct a temporary pipeline on the bottom of the channel over 8.3 miles to remove the dredged material. Widening of the Transpacific Parkway/Highway 101 intersection would require permanently filling in 0.51 acres of intertidal habitat. Future maintenance dredging at the slip, access channel, and navigation channel (NRI areas) would require dredging of between 34,600 – 37,700 cubic yards of material annually and additional dredging of the navigation channel of between 27,900 – 49,800 cubic yards of material every three years.⁸

By constructing the Kentuck mitigation site, applicants propose to reconstruct 100-acres of tide channels, mudflats, saltmarsh, and freshwater wetlands. At the eelgrass mitigation site, the applicants propose establishing approximately 9-acres of eelgrass beds at different densities.

⁵ Betz, Sarah and Derik Vowels. Technical Memorandum. Water Quality Considerations – Implications for Clean Water Act Sections 401 and 404 Permitting. 2 February 2018. 8 May 2018 Pacific Connector Pipeline. P. 1.

⁶ U.S. Army Corps of Engineers. Public Notice Application for Permit to Alter Federally Authorized Projects. 22 May 2018. NWP-2017-41. P. 3

⁷ Betz, Sarah and Derik Vowels. Technical Memorandum. Water Quality Considerations – Implications for Clean Water Act Sections 401 and 404 Permitting. 2 February 2018. 8 May 2018 Pacific Connector Pipeline. P. 3.

⁸ U.S. Army Corps of Engineers. Public Notice Application for Permit and to Alter Federally Authorized Projects. 60-day notice. NWP-2017-41. 22 May 2018. P. 3-6.

Maintenance dredging of the access channel, marine slip, and NRI area will involve dredging between 34,600 cubic yards and 37,700 cubic yards of material from the access channel and slip every year and dredging between 27,900 cubic yards and 49,800 cubic yards of material from the NRI area every three years.

Back of the envelope calculations indicate that construction alone of the slip and access channel, NRIs, MOF, temporary material barge berth, eelgrass mitigation site, and the Kentuck mitigation site will require dredging approximately 6.4 million cubic yards of material from Coos Bay.

C. The Pacific Connector Gas Pipeline (“PCGP”) in 2018

Jordan Cove also proposes to construct a 36-inch underground 229-mile natural gas pipeline from Malin, Oregon to the coast at Coos Bay, Oregon. As noted by DEQ and the Corps in the Public Notice, the pipeline will necessitate direct impacts to waters at 485 locations, including 326 perennial and/or intermittent waterways, seven lakes and/or ponds, two estuarine waters, and 150 wetlands.⁹ It is unclear whether all impacted waterways have been identified by the applicants.

Over the 229-mile pipeline route, the applicants propose to cross Coos Bay, the South Coast watershed (Coos and Coquille Subbasins), the Umpqua watershed, the Rogue watershed, and the Klamath watershed (Upper Klamath and Lost Subbasins). Overall pipeline construction would impact 30,778-feet (5.83 miles) of wetlands and 3,028-feet of waterways. Approximately 48,675 cubic yards of material would be excavated and discharged into wetlands and 9,519 cubic yards of material would be excavated and discharged into waterways.¹⁰

Horizontal Directional Drilling is proposed for Coos Bay, the Coos River, the Rogue, and the Klamath Rivers. Within Coos Bay, Jordan Cove proposes to install the 36-inch pipeline across the bay using two horizontal directional drills (“HDD”) of 5,200 and 9,000 feet each. This is a significant change from the prior proposal, in both alignment and construction method. The prior proposed route would have crossed through Haynes Inlet at the north of Coos Bay and away from the navigation channel, constructed using an open wet cut method, after the applicants rejected the use of HDD for the Coos Bay crossing. It is unclear how the applicants have altered the proposal in a way that two proposed HDD crossings are now determined to be feasible. The currently proposed pipeline alignment would require not one but two HDD crossings of Coos Bay, for a total of over 14,000 feet.¹¹ All other waterways will be crossed using a dry open-cut method. Construction right-of-ways at each crossing would require clearing a 75-foot buffer.

1.2 Oregon’s Removal-Fill Statute

Under Oregon's Removal-Fill Law, any person who plans to “remove or fill” material within “waters of the state” must obtain a certification from the Department of State Lands stating that

⁹ Public Notice Application for Permit and to Alter Federally Authorized Projects. U.S. Army Corps of Engineers. P. 7

¹⁰ Public Notice Application for Permit and to Alter Federally Authorized Projects. U.S. Army Corps of Engineers. P. 7 – 8.

¹¹ GeoEngineers Memorandum, Coos Bay West HDD Crossing (Sept. 14, 2017) at 2.

the removal and/or fill will comply with the requirements of the removal-fill law. *See* ORS 196.795-990.

The purpose of the removal-fill law is to ensure the protection and best use of Oregon's water resources for home, commercial, wildlife habitat, public navigation, fishing and recreational uses. An applicant must minimize or avoid adverse impacts to state waters. ORS 196.805.

Under ORS 196.825, the Director of the Department of State Lands shall issue a permit applied for under ORS 196.815 (Application for permit) if the director determines that the project described in the application:

- (a) Is consistent with the protection, conservation and best use of the water resources of this state as specified in ORS 196.600 (Definitions for ORS 196.600 to 196.655) to 196.905 (Applicability); **and**
- (b) Would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation.¹²

Further, in determining whether to issue a permit, the Director must consider:

- (a) The public need for the proposed fill or removal and the social, economic or other public benefits likely to result from the proposed fill or removal. When the applicant for a permit is a public body, the director may accept and rely upon the public body's findings as to local public need and local public benefit.
- (b) The economic cost to the public if the proposed fill or removal is not accomplished.
- (c) The availability of alternatives to the project for which the fill or removal is proposed.
- (d) The availability of alternative sites for the proposed fill or removal.
- (e) Whether the proposed fill or removal conforms to sound policies of conservation and would not interfere with public health and safety.
- (f) Whether the proposed fill or removal is in conformance with existing public uses of the waters and with uses designated for adjacent land in an acknowledged comprehensive plan and land use regulations.
- (g) Whether the proposed fill or removal is compatible with the acknowledged comprehensive plan and land use regulations for the area where the proposed fill or removal is to take place or can be conditioned on a future local approval to meet this criterion.
- (h) Whether the proposed fill or removal is for streambank protection.
- (i) Whether the applicant has provided all practicable mitigation to reduce the adverse effects of the proposed fill or removal in the manner set forth in ORS 196.800 (Definitions for ORS 196.600 to 196.905). In determining whether the applicant has provided all practicable mitigation, the director shall consider the findings regarding wetlands set forth in ORS 196.668 (Legislative findings) and whether the proposed mitigation advances the policy objectives for the protection of wetlands set forth in ORS 196.672 (Policy).¹³

¹² ORS 196.825(1)

¹³ ORS 196.825(3)

The burden is on the applicant to demonstrate compliance with these requirements. OAR 141-085-0565(5) states:

The Department will issue a permit only upon the Department's determination that a fill or removal project is consistent with the protection, conservation and best use of the water resources of this state and would not unreasonably interfere with the preservation of the use of the waters of this state for navigation, fishing and public recreation. The Department will analyze a proposed project using the criteria set forth in the determinations and considerations in Sections (3) and (4) above (OAR 141-085-0565). ***The applicant bears the burden of providing the Department with all information necessary to make this determination.***¹⁴

A. Definition of the “Project”

For purposes of OAR Chapter 141, Division 85, OAR 141-085-0010(169) defines “project” to mean “the primary development or use intended to be accomplished (e.g. retail shopping complex, residential development).” In addition, OAR 141-085-0010(170) defines “project area” to mean “the physical space in which the removal-fill takes place including any on site or off-site mitigation site,” which encompasses “the entire area of ground disturbance, even though not within waters of the state, including all staging areas and access ways, both temporary and permanent.”

Commenters are cognizant of the limited view of the scope of “the project” under the DSL removal-fill statute, as explained in *Coos Waterkeeper v. Port of Coos Bay*, 363 Or. 354, 423 P.3d 60 (2018). In *Coos Waterkeeper v. Port of Coos Bay*, the Oregon Supreme Court held that the Department was correct in authorizing a permit to the Port of Coos Bay to construct a deep water marine terminal and properly considered the criteria under ORS 196.825. Further, the Court concluded that the Department’s interpretation of the “project” to include fill, removal, and construction, but not operation of the completed terminal, was correct.¹⁵ We attempt to focus on those impacts and effects directly pertaining to the removal-fill over which the Department has jurisdiction.

1.3 Environmental Justice and Tribal Sovereignty

Tribal interests are held and asserted most importantly and fundamentally by tribes themselves. Commenters insist, however, that our government respect tribal sovereignty and give those interests their due regard, and give them heavy weight in the Department’s analysis. In this regard, we call attention to the recent findings of the Oregon Environmental Justice Task Force (*See* Appendix A. Clean Water Act 401 Comments). Tribal leaders from four tribes testified to Oregon’s Environmental Justice Task Force Committee on June 8, 2018 in Klamath Falls about their concerns regarding the negative impacts of building and operating the Pacific Connector Gas Pipeline and the Jordan Cove LNG Export Terminal. Each tribe is a sovereign nation with corresponding rights of their own. Those rights do not rely on this legal process, much less on non-tribal public commenters. Rather, state and federal governments have obligations to honor those rights and interests. We stand in solidarity with these tribes as they assert their rights, and agree with the Environmental Justice Task Force that this project is not in the public interest

¹⁴ OAR 196-085-0565(5). Emphasis added.

¹⁵ *Coos Waterkeeper v. Port of Coos Bay*. 363 Or 354 (2018). P. 363.

because of its disproportionate negative impacts on tribes. A project cannot be in the “public interest” if it violates fundamental obligations to tribes.

The project appears to be inconsistent with SB 420, codified as ORS 182.538 *et. seq.*, which established Oregon’s EJTF, as well as Executive Order 12,898 signed by President Clinton in 1994 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*). Executive Order 12,898 specifically directs federal agencies to ensure that their actions address human health or environmental effects that adversely impact low-income and minority populations.¹⁶ Under ORS 182.545, it is the responsibility of Oregon’s natural resource agencies “In making a determination whether and how to act, consider the effects of the action on environmental justice.”¹⁷

This project has the potential to disproportionately impact minority and low income populations. For example, the proposed pipeline route and terminal site will likely impact traditional homelands and cultural resources of federally recognized tribes, including but not limited to the Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians of Oregon, the Coquille Indian Tribe, the Cow Creek Band of Umpqua Tribe Indians, and the Klamath Tribes. As will be discussed throughout these comments, the considerable risks to public health and safety as well as impacts to cultural resources will likely disproportionately impact communities identified by the EJTF, specifically low-income and minority communities.

Chapter 2. APPLICATION COMPLETENESS

2.1 The Department Must Deny the Permit because the Application is Not “Complete” (ORS 196.825(12)(b)).

DSL must deny the permit because the application is not “complete” consistent with Oregon’s removal-fill statute. ORS 196.825(12)(b) defines a “completed application” to:

- ... contain[] all necessary information for the director to determine whether to issue a permit, including:
- (A) A map showing the project site with sufficient accuracy to easily locate the removal or fill site;
- (B) A project plan showing the project site and proposed alterations;
- (C) The fee required under ORS 196.815;
- (D) Any changes that may be made to the hydraulic characteristics of waters of this state and a plan to minimize or avoid any adverse effects of those changes;
- (E) If the project may cause substantial adverse effects on aquatic life or aquatic habitat within this state, documentation of existing conditions and resources and identification of the potential impact if the project is completed;
- (F) An analysis of alternatives that evaluates practicable methods to minimize and avoid impacts to waters of this state;
- (G) If the project is to fill or remove material from wetlands, a wetlands mitigation plan; and

¹⁶ William J. Clinton: “Memorandum on Environmental Justice,” February 11, 1994, http://www.epa.gov/compliance/ej/resources/policy/clinton_memo_12898.pdf.

¹⁷ ORS 182.545.

(H) Any other information that the director deems pertinent and necessary to make an informed decision on whether the application complies with the policy and standards set forth in this section.¹⁸

Relevant substantive criteria of ORS 196.825 include the following:

3) In determining whether to issue a permit, the director shall consider all of the following:

(a) The public need for the proposed fill or removal and the social, economic or other public benefits likely to result from the proposed fill or removal ...

(e) Whether the proposed fill or removal conforms to sound policies of conservation and would not interfere with public health and safety.

(f) Whether the proposed fill or removal is in conformance with existing public uses of the waters and with uses designated for adjacent land in an acknowledged comprehensive plan and land use regulations.

In order to be able to apply these standards, the application must include, among other things: 1) a complete design of the project with enough detail to satisfy application requirements; 2) a detailed analysis of the wetland and water impacts along the entire pipeline route; 3) a demonstration of how the applicant will mitigate the permanent impacts; and 4) a demonstration of how the applicant will rectify temporary impacts.

In summary, the Department must consider the application incomplete and deny the permit because:

- The application fails to provide essential information and analysis of wetland and/or water impacts in areas where access has been denied by landowners;
- The application does not contain cross-section drawings for fill and/or removal where the pipeline crosses jurisdictional waters that are specifically required by the project drawings criteria;
- Presumed obstruction hazards identified by the Federal Aviation Administration (FAA) will require termination or re-design of the project;
- The application fails to address deficiencies identified by DEQ in the 401 state water quality certification application (JPA);
- The application fails to include referenced mitigation plans; and
- The application fails to include the necessary contaminant studies regarding the marine slip dock and access channel area.

Each of these points is discussed in further detail below. The Department must consider the application incomplete under ORS 196.825(12)(b) and deny the permit.

¹⁸ ORS 196.825(12)(b)

A. The Application Fails to Provide Essential Information and Analysis of Wetland and/or Water Impacts in Areas Where the Applicants Have Been Denied Access by Landowners

DSL must deny the permit because the application is incomplete due to the lack of information provided by the applicants regarding the documentation of existing conditions and resources and identification of the potential impacts to aquatic life or aquatic habitat if the project is completed as required under sub-part (E) of ORS 196.825(12)(b)). Critically, the application includes survey data from only some of the proposed water and wetland crossings. Without surveys on every parcel, DSL cannot find the application complete because it does not provide the information required by sub-part (E) of ORS 196.825(12)(b).

1. The Wetland Survey is Insufficient

First, the wetland survey is insufficient because there are at least 83 un-surveyed parcels along the proposed pipeline route for a total of 20.88 miles impacted by the pipeline.¹⁹ Coos County has 29 un-surveyed parcels, for a combined estimated 6.86 miles impacted. There are 37 un-surveyed parcels in Douglas County for a combined 10.89 miles. In Jackson County, there are 9 un-surveyed parcels, or 0.65 miles impacted, and in Klamath County there are 8 un-surveyed parcels with a combined impact of 2.48 miles.²⁰ DSL should not consider the wetland survey to be complete because of these parcels where access has been denied (*See Appendix C. Table 2.3-1 “Wetland Survey – Parcels Where Access Was Denied up to June 13, 2017”*). As one example, at MP 56.69 there is a large wetland excavation proposed by the applicants to remove an estimated 693 cubic yards of material to construct a 415-foot wide crossing where the landowner has denied access.²¹ Without complete surveys of the potentially impacted wetlands neither the Department nor the public can properly assess the true impact of the proposed project.

2. The Flowing Water Survey is Insufficient

Second, the flowing water survey is insufficient. There are un-surveyed proposed pipeline crossings of creeks and streams in the proposed pipeline route, which are identified in Table A of Application Attachment F.1 They are numbered 01-16, although 02-04, 10, and 15 are missing (*See Appendix D. Excerpts from Attachment F.1 Table A.*). They amount to a combined crossing width of 29.87 feet and 52.24 cubic yards excavated. We have identified more landowners that are classified in the company’s maps in Application Attachment F.5 as having denied survey access, although they are not marked as such in Table A.²²

¹⁹ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 2 PCGP: ATTACHMENT C.2, Table 2.3-1, p. 2564-2566 of 3638.

²⁰ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 2 PCGP: ATTACHMENT C.2, Table 2.3-1, p. 2564-2566 of 3638.

²¹ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 2 PCGP: Appendix A.2, Table A.2-3, p. 1477 of 3638

²² Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 1 JCEP: ATTACHMENT F.5, Map Series 3, p. 1795-2119 of 3638

For example, although the Lost River crossing has not been marked as “Denied Access” like others, the note in the Crossing Method Rationale indicates that it too has not been permitted to be surveyed. Specifically, the applicants state:

An HDD and conventional bore are likely probable at the approximate crossing location based on the topography, geometry and expected geotechnical conditions. ***Landowner restricted access for geotechnical investigations.*** Significant costs, time requirements were the determinants for the proposed dry open-cut method.²³

Similarly, there is a crossing on a tributary to Shields Creek which is referenced in Table B3.4 that has been denied survey access and lists no ESA, anadromous, or EFH species present, even though the same crossing appears in Table A and states that the site has assumed ESA and EFH species present. The rest of the un-surveyed crossings are listed as having no ESA, anadromous, or EFS species present although this information is not verified by survey. There are un-surveyed crossings on tributaries to Steele Creek that are classified as having no ESA, anadromous, or EFH species present, though Steele Creek was surveyed, and has a confirmed presence of all three.

3. Un-surveyed Water Crossings

Third, the applicants’ assessment of un-surveyed water crossings is also incomplete because of sites where it is unknown whether or not water is present because the landowners have denied survey access. The applicant has only provided detailed maps of some segments of the pipeline route. Map Series 2 shows the overview of which parcels have denied survey access, and also which segments the company has provided an alignment map for. We have provided two examples in Appendix E. Excerpts from Map Series 1. DSL should deem the application incomplete and deny the permit because the applicants have provided insufficient wetland and flowing water surveys along the pipeline route.

B. The Application Does Not Contain the Cross-Section Drawings for Fill and/or Removal Where Pipeline Crosses Jurisdictional Waters Which Are Specifically Required by the Project Drawings Criteria.

According to DSL’s Removal-Fill Guide, the project drawing required to process the application must include:

Cross section drawings are required to illustrate the vertical extent of removal and fill activities relative to existing elevations. To be meaningful, the location of cross sections on the plan view should be in the area of greatest extent of removal-fill activity. Cross sections must be of a scale sufficient to evaluate proposed removal-fill activities and must include:

- o A vertical and horizontal scale
- o The existing and proposed ground elevations
- o Jurisdictional boundaries (e.g., OHW or wetland boundary)
- o The proposed water elevation, if applicable

²³ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>PART 1 JCEP:
ATTACHMENT F.1, Table A., p. 1054 of 3638 (emphasis added).

- o Any structures or construction limits²⁴

The application includes only generic Best Management Practice (BMP) drawings to describe construction practices at crossings categorized as “Yellow Management.” These are not sufficient to meet this requirement as they do not include the requisite detail described above.²⁵

1. Oregon’s Department of Environmental Quality Rejects BMPs as Inadequate

Further, DEQ consistently makes the case that the use of BMPs by the applicants throughout the Joint Permit Application (“JPA”) is not sufficient detail to allow for a comprehensive environmental review, as required under DEQ’s authority under both Oregon law and the Clean Water Act. For example, regarding the construction of the pipeline route, DEQ notes in its 20 December 2018 letter to Jordan Cove that:

Citing potential BMPs by themselves is insufficient. DEQ recognizes BMPs as one part of a broader strategy that must also consider existing water quality, local environmental conditions, the anticipated magnitude of project-related effects, and appropriate engineering controls to mitigate negative effects on water quality. Proposed BMPs must be well-supported using quantitative analyses such as modeling, manufacturer’s technical specifications, results of pilot tests, or other quantitative data to support their site-specific use to effectively achieve water quality objectives. Please provide a plan that demonstrates how proposed BMPs or other engineering controls will protect water quality at each location where project actions may directly or indirectly affect waters of the state. The plan should provide a site-specific analysis of each proposed activity and technical justification for each proposed remedy as discussed more fully in the following section.²⁶

DSL should review the concerns expressed by DEQ regarding the lack of site-specific information for the project. DSL should deem the application incomplete and deny the permit because the application fails to provide site-specific cross-section drawings.

C. Presumed Obstruction Hazards Identified by the Federal Aviation Administration (FAA) will Require Termination or Re-design of the Project to Avoid Negatively Interfering with Public Health and Safety

The FAA issued thirteen (13) separate Notice(s) of Presumed Airport Hazard(s) to Jordan Cove LNG on May 7, 2018.²⁷ Nine (9) of these FAA Presumed Airport Hazards involve transiting LNG tanker ships at various points within the Coos Bay Estuary.

²⁴ https://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf Chapter 5, p. 20

²⁵ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailF&id=60697> PART 2 PCGP: ATTACHMENT C.16 ADDENDUM, Appendix B, p. 3228-3244 of 3638

²⁶ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 1. (emphasis added).

²⁷ http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20180510-5165 Part 8 pp 281-326 of 326

Presumed Airport Hazards are included in this document in Appendix F. Notice of Presumed Hazards as follows:

- LNG Carrier Vessel - Stack, Transit Point 6 - 2018-ANM-720-OE
- LNG Carrier Vessel - Stack, Transit East Point - 2018-ANM-719-OE
- LNG Carrier Vessel - Stack, Transit West Point - 2018-ANM-718-OE
- LNG Carrier Vessel - Stack, Transit Point 5 - 2018-ANM-8-OE
- LNG Carrier Vessel - Stack, Transit Point 4 - 2018-ANM-7-OE
- LNG Carrier Vessel - Stack, Transit Point 3 - 2018-ANM-6-OE
- LNG Carrier Vessel - Stack, Transit Point 2 - 2018-ANM-5-OE
- LNG Carrier Vessel - Stack, Transit Point 1 - 2018-ANM-4-OE
- LNG Carrier Vessel - Stack - 2017-ANM-5418-OE
- Amine Regenerator - 2017-ANM-5389-OE
- Oxidizer - 2017-ANM-5388-OE
- LNG Tank North - 2017-ANM-5387-OE
- LNG Tank South - 2017-ANM-5386-OE

In each incidence, the FAA has instructed Jordan Cove LNG to resolve the Traffic Pattern Airspace penetration by lowering the structure height, terminating the project, or requesting further study by the FAA.

Pertaining to LNG Tank North and LNG Tank South, the applicants have explicitly stated their refusal to lower the structure heights, citing “economic viability” as its rationale:

10.4.2 LNG Storage Tank Design Alternatives

JCEP considered whether the LNG storage tanks could be reduced in height or placed underground for greater safety and to reduce their visual impacts. Tanks with lower heights would be less of an obstruction to aircraft landing or taking off from the Southwest Oregon Regional Airport, whose runways are located about 1.1 miles from the proposed LNG storage tank locations.

<...>The required 320,000 m³ in total LNG storage capacity necessary for the economic viability of the Project established the tank aspect ratio (height to diameter). <...>The two 160,000 m³ LNG storage tanks have been designed to fit within the long and narrow Ingram Yard site.²⁸

In response, the Federal Energy Regulatory Commission (FERC) has recently requested that Jordan Cove provide information concerning the height and elevation of the LNG storage tanks as pertains to FAA Determination per 14 C.F.R. § 77.²⁹

On 20 December 2018, Jordan Cove responded to FERC’s request for information with the following:

²⁸ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 1 JCEP: ATTACHMENT B.1 Resource Report 10, p. 240 of 3638.

²⁹ https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20181130-3028 p. 3 of 16.

- a) The FAA has been notified of the LNG storage tanks and elevation. Form 7460s were filed with the FAA in December 2017 and Notices of Presumed Hazards were received on May 7, 2018, and filed with FERC on May 10, 2018. JCEP is currently working on further analysis to conclude the process in 2019 as required by 14 C.F.R. Part 77.
- b) <...>
- c) The FAA has been notified of LNG carrier operations and heights. Form 7460s were filed with the FAA in December 2017 and Notices of Presumed Hazards were received on May 7, 2018, and filed with FERC on May 10, 2018. JCEP is currently working on further analysis to conclude the process in 2019 as required by 14 C.F.R. Part 77.³⁰

Given that major revisions to the LNG Terminal site plan and the Carrier Vessel stack points will be necessary, the project design is incomplete until all presumed hazards identified by the FAA are resolved. Moreover, given the FAA’s determination, the current application cannot be deemed complete until a further study is conducted and submitted because DSL will not be able to properly assess the public health and safety impacts of the dredge and fill proposal without such a study.

D. Applicants Have Failed to Address Deficiencies in Information Submitted in Support of this Application that Were Identified as Inadequate by DEQ in Jordan Cove’s 401 Water Quality Certification Application

In the related review, DEQ noted the following deficiencies in the information the applicant submitted in support of its 401 Certification application.³¹ The information DEQ notes is missing from those materials is also relevant to DSL’s fill and removal permit because both applications rely on largely the same materials.

1. Temporary Access Roads (“TARs”) and Permanent Access Roads (“PARs”)

Regarding the proposed use of new and existing roads, DEQ identifies multiple areas where the information provided by the applicants is not sufficient:

Please provide the location of the propose<sic> 25 miles of new Temporary and Permanent Access Roads <...> Additionally, please provide detailed best management practices and design standards for DEQ review and approval for decommissioning the Temporary Access Roads.³²

And further:

³⁰ http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20181220-5255 p. 5 of 57

³¹ Department of Environmental Quality. RE: Additional Information Request Jordan Cove Energy Project (FERC Project No. CP17-494) Pacific Connector Gas Pipeline (FERC Project No. CP17-495) U.S. Army Corps of Engineers (Project No. NWP-2017-41). 7 September 2018. <https://www.oregon.gov/deq/FilterDocs/jcairrequest.pdf>

³² Department of Environmental Quality. RE: Additional Information Request Jordan Cove Energy Project (FERC Project No. CP17-494) Pacific Connector Gas Pipeline (FERC Project No. CP17-495) U.S. Army Corps of Engineers (Project No. NWP-2017-41). 7 September 2018. <https://www.oregon.gov/deq/FilterDocs/jcairrequest.pdf>. P. 8-9 of 15.

<...> Please provide a post-construction stormwater management plan <...> for all the road stream crossings that Cove Energy Project and Pacific Connector Gas Pipeline will:

- Replace or improve to construct and/or operate the gas pipeline and
- Result in an increase in impervious surface area during the replacement/improvement process.³³

DEQ specifically raises concerns regarding the lack of quantitative analysis of water quality impacts from new or existing roads, stating:

Jordan Cove must include quantitative and/or engineering support for the proposed controls or best management practices. For example, DEQ suggests using models such as Geomorphic Road Analysis and Inventory Package (GRAIP) and XDRAIN to provide DEQ with the requested evaluation of potential water quality impacts from PCGP's proposal to use existing roads and to build new roads. Adequate quantitative analysis is necessary to demonstrate that current and future erosion control planning will not "cause or contribute to a violation of in-stream water quality standards" as required in Schedule A.10.a of the NPDES 1200-C General Permit and OAR 340-048-0042(2)(a).

Jordan Cove's response does not include estimates of sediment discharge from the construction and post-construction right-of-way.³⁴

2. Proposed Dredging Activities

In its 20 December 2018 letter to Jordan Cove (*See* Appendix G), DEQ specifically identifies the lack of detailed plans and reliance upon conceptual designs as problematic, stating:

To ensure compliance with Oregon's turbidity standard (OAR 340-041-0036), JCEP must demonstrate in the pollution control plan requested in Comment 39 that "all practicable turbidity controls have been applied" during JCEP's dredging activities. JCEP's information in the references noted in its response provide a conceptual approach to minimize turbidity and other pollutant discharges. JCEP has not fully developed the details of all its proposed controls and this creates uncertainty regarding their efficacy. For example, PCGP's proposed pollution control plan for dredging must clearly identify:

- The type of pollution controls JCEP will use including its design and specifications.
- The specific applications for these controls.
- The specific location where JCEP will employ these controls relative to sensitive sites as well as other landscape features (e.g., drainage pattern, vegetation, etc.).
- The maintenance schedule for each control.

³³ Department of Environmental Quality. RE: Additional Information Request Jordan Cove Energy Project (FERC Project No. CP17-494) Pacific Connector Gas Pipeline (FERC Project No. CP17-495) U.S. Army Corps of Engineers (Project No. NWP-2017-41). 7 September 2018. <https://www.oregon.gov/deq/FilterDocs/jcairrequest.pdf>. P. 10-11 of 15.

³⁴ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove's October 8, 2018 Information Filing. P. 1-2 of 92.

- A monitoring plan for evaluating the efficacy of all proposed controls and compliance with the turbidity standard.³⁵

3. Slope Stability and Landslide Risk

DEQ also identifies multiple deficiencies in Jordan Cove’s analysis of slope stability, landslides, and fill slope design on steep and unstable slopes. For example, DEQ states:

In Resource Report 6 (Geologic Resources), PCGP provides few specifics regarding controls to stabilize slopes to prevent landslides. Moreover, as noted in DEQ’s review of PCGP’s response to Comment 35 below, PCGP provides no engineering designs and the technical support for these designs for stabilizing fill slopes on steep, unstable slopes greater than 30% including slopes with highly erosive soils. PCGP identifies this deficiency on page 35 of Section 4.6.2 of Resource Report 6 by stating the following:

Steep side slope Pipeline construction segments will be identified during the final design phase of the Pipeline project. Fill slope construction details and specifications will be designed for the identified steep side slope Pipeline segments.

In Section 11.0 (Steep and Rugged Terrain), PCGP provides only a qualitative description of how it may approach fill slopes on steep, unstable slopes starting at the bottom of page 47. However, this mostly qualitative discussion does not consider terracing on erosive soils nor does it thoroughly address the management of stormwater on a terraced fill slope. The management of drainage on these steep slopes, the use of geotextiles or other engineering techniques to support terracing, and the need to reinforce the toe of slope are also not addressed in PCGP’s submittal. These are issues typically addressed in technical references developed to construct linear infrastructure such as roads on steep slopes. However, PCGP does not discuss or address these issues in PCGP’s submittal.³⁶

4. Waterbodies Crossed by or Within 100 Feet of Pipeline

Further, DEQ emphasizes the potential impacts to water quality and designated beneficial uses beyond the waterbodies crossed by or within 100 feet of the pipeline. Specifically, DEQ states:

Moreover, DEQ questions PCGP’s proposal to focus BMPs on water bodies crossed by or within 100 feet of the pipeline. BMPs are required to protect water quality from

³⁵ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 82 of 92.

³⁶ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 18 of 92.

impervious surfaces throughout all portions of the construction and permanent right-of-way that are hydrologically connected to water bodies.³⁷

To the knowledge of the Commenters, the applicants have not met this request for information from DEQ. In addition, DEQ has repeatedly identified Jordan Cove's reliance upon BMPs and qualitative analysis with no site-specific information as insufficient. All of the information discussed in sub-sections (1) through (4) above that has been found to be deficient by DEQ is also necessary for the Department to adequately evaluate the impacts of fill and removal activities at those locations

E. The Application Fails to Include the Required Mitigation Plans

The application fails to include compensatory mitigation plans from the Forest Service and the Bureau of Land Management ("BLM"). These plans include mitigation for activities in riparian reserves and other wetlands on federal lands. The applicants claim that "[t]he BLM and Forest Service have proposed a suite of off-site mitigation projects which are intended to be responsive to BLM RMP and Forest Service LRMP objectives."³⁸

The Department should deem the application incomplete and deny the permit because the application fails to provide mitigation plans for wetland disturbances on Federally-owned lands, as required under ORS 196.825(12)(b)(G).

F. The Application Fails to Include the Necessary Contaminant Studies Regarding the Marine Slip Dock and Access Channel Area

According to the former Environmental Inspector for the JCEP Kiewit \$15 million exploratory test program conducted at the LNG terminal site on the North Spit of Coos Bay,³⁹ the applicant has not conducted adequate contaminate studies in the Marine Slip dock and access channel area.

The contamination at the JCEP terminal site occurs well outside of the range of where the previous testing was conducted. Much more testing is needed at the overall site to fully understand the extent. Contaminated soil was exposed virtually everywhere excavation occurred in Ingram Yard and along the shoreline during the Kiewit exploratory test program conducted for the project in the spring of 2014. While the types of contaminants are somewhat understood, their extent is not.⁴⁰

Dredging could release into the Coos Estuary harmful compounds from past industrial activities that are likely to be found buried in the tidal sediments. Without this information, DSL is not able to effectively determine if the dredge activity will further degrade water quality and harm marine life in the Estuary. DSL should deem the application incomplete and deny the permit because the application fails to provide contaminant studies for the Marine Slip dock and access channel area.

³⁷ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove's October 8, 2018 Information Filing. P. 32 of 92.

³⁸ <https://www.oregon.gov/deq/FilterDocs/jcairrequest.pdf> pages 2586 and 2666 of 3638.

³⁹ http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20141218-5020 p. 1 of 8

⁴⁰ http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20150212-5193 p. 1 of 3

G. Conclusions

For the above stated reasons, the application that JCEP filed for the DLS removal-fill permit does not contain the information necessary for DLS to “make an informed decision on whether the application complies with the policy and standards set forth in [the relevant substantive criteria]. ORS 196.825(12)(b) and (b)(H).

Chapter 3. PUBLIC NEED

3.1 The Department Must Deny the Permit because the Applicants Have Failed to Demonstrate Public Need for the Project (ORS 196.825(3)(a)).

Under ORS 196.825(3)(a), DSL is required to consider the “public need” for the proposed removal fill:

(3) In determining whether to issue a permit, the director shall consider all of the following:

(a) The public need for the proposed fill or removal and the social, economic or other public benefits likely to result from the proposed fill or removal. When the applicant for a permit is a public body, the director may accept and rely upon the public body’s findings as to local public need and local public benefit.⁴¹

According to DSL’s removal-fill guide:

The Department will consider whether a public need has been demonstrated in the application and what benefits the public may derive from the proposed removal-fill activity. When the applicant is a public body (including federal, state or local government agency, port, or other entity defined in ORS 174.109) the Department will generally accept the public body's rationale as to local public need and benefit without further consideration.⁴²

This project has an imbalance between the benefits, which accrue almost exclusively to a private company, and detrimental effects, which fall entirely on the public and other private landowners. There is no demonstration of *public* need for this project at all. In fact, FERC approval was recently denied for exactly that reason.⁴³ The Department cannot find there is a predominate public need for the project because the project is unnecessary, there is no evidence of demand for it, and the public need identified by the applicants is outweighed by the loss to Oregon’s waters.

Critically, as discussed by the Oregon Court of Appeals in *Citizens for Resp. Devel. In the Dalles v. Walmart*, 295 Or App 310 (2018), the Department must do more than merely consider the public need for the proposed project. Specifically, the Court states:

⁴¹ ORS 196.825(3)(a).

⁴² A Guide to the Removal-Fill Permit Process. Oregon Department of State Lands. December 2016. P. 6-13.

⁴³ FEDERAL ENERGY REGULATORY COMMISSION, ORDER DENYING APPLICATIONS FOR CERTIFICATE AND SECTION 3 AUTHORIZATION 18 (2016).

Thus, the legislative history demonstrates that the legislature intended to codify *Morse*'s construction of the statute, which ***required DSL to find that the public need predominates over the loss to the waters of the state*** caused by the proposed project.⁴⁴

Further, the Court holds that:

The court's conclusion in *Coos Waterkeeper* that *Morse* does not bear on the construction of the term "project" in ORS 196.825 does not affect the core principle recognized in *Morse* and codified by the legislature in 1979, which requires DSL to find that the public need for a proposed project predominates before DSL has the authority to issue a wetland fill and removal permit for the project. ***Because DSL found that it was inconclusive whether the project would address a public need, DSL lacked authority to issue the permit. Hence, DSL erred by granting the permit.***⁴⁵

Consistent with *Citizens for Resp. Devel. In the Dalles v. Walmart* 295 Or App 310 (2018), the Department must affirmatively determine that the project would address a public need. For a privately-sponsored project of this scale and controversy, the public need determination will require a thorough and transparent analysis that weighs all of the relevant impacts and alleged benefits of this project.

Any evidence that this project serves a public need must be weighed against the overwhelming evidence that developing the Jordan Cove LNG Export Project, and all of its associated developments (construction and operation of the Pacific Gas Connector Pipeline, significant physical modifications of Coos Bay, upstream impacts from gas fracking, direct and downstream GHG emissions, disruption of navigation, etc.) will cause significant public harm as explained in this letter and throughout the public record for this matter. This is reflected in FERC's rejection of the application for the applicant's LNG export terminal in March 2016, where FERC stated:

We find the generalized allegations of need proffered by Pacific Connector ***do not outweigh the potential for adverse impact*** on landowners and communities... Because the record does not support a finding that the public benefits of the Pacific Connector Pipeline outweigh the adverse effects on landowners, we deny Pacific Connector's request for certificate authority to construct and operate its project.⁴⁶

The Department has a responsibility to protect the public interest and should not frame the public need question in a way that avoids that responsibility to find a predominate public need for the project as a whole in light of all the relevant impacts.

A. The Project is Unnecessary and There is No Evidence of Demand for it.

The proposed crossing of Coos Bay and numerous other water bodies will impair recreation, navigation, fishing, and other water-dependent activities, causing economic harms that must be considered in the Department's review of public need under ORS 196.825(3)(a). The project will

⁴⁴ *Citizens for Responsible Development in the Dalles v. Walmart*. 295 Or App 310 (2018). P. 317

⁴⁵ *Id.* at 321 (emphasis added).

⁴⁶ Federal Energy Regulatory Commission. ORDER DENYING APPLICATIONS FOR CERTIFICATE AND SECTION 3 AUTHORIZATION. 11 March 2016. P. 18. Emphasis added.

likely have numerous adverse impacts relating to the impairment of commercial and recreational use of Coos Bay and environmental degradation caused by increased sedimentation and other impacts to water quality throughout the project area. Meanwhile, there is no evidence of an actual need for the project, or that the project will actually enter operation—and an idle pipeline and terminal do not provide meaningful economic benefits. If the Department follows the holding in *Coos Waterkeeper v. Port of Coos Bay*, 363 Or 354 (2018), and chooses to exclude consideration of the operational impacts of this project, they should also exclude the operational economic benefits touted by applicants.

More broadly, the applicants’ discussion of economic benefits is one-sided and ignores adverse impacts such as job displacement, opportunity cost, economic harm, and boom-bust cycles (described below). Similarly, although the federal Department of Energy recently published a renewed report on the macroeconomic impacts of exports, this report ignored distributional issues and the fact that many Americans will be made worse off by increased North American gas exports.

The Department must not adopt a simplistic view that evidence of demand for gas as an indication of public benefit. First, DSL has made prior findings that “While there may be a market demand for the products and services offered by [the applicant], the desire of [the applicant] to enter the market does not necessarily constitute a public need.”⁴⁷ Second, demand for gas is really demand for energy and there are many competitive alternative sources of energy. Third, fossil fuels have many serious adverse externalities that shift costs from the applicant to the general public, including but not limited to global climate change and ocean acidification.

Finally, the project proponents have failed to show that anyone wants to buy the LNG they propose to sell. In 2016, FERC denied the prior applications because, in large part, applicants had provided “little or no evidence” that any third party was interested in purchasing gas delivered by the pipeline or liquefied natural gas made available by the terminal.⁴⁸ Although this denial was without prejudice, and applicants have since re-filed, they have not corrected this fundamental flaw. They have provided *no* evidence of commitments for the liquefied natural gas sales that are the ultimate purpose of the related projects. Instead, applicants submit only two press releases stating that applicants *hope* to negotiate agreements for some sales, but even this hope only amounts to *less than half* of the terminal’s proposed capacity.⁴⁹ Those press releases were hastily issued after FERC denied the prior proposal, and there is no evidence indicating that now, over two years later, these negotiations have meaningfully progressed—despite the fact that the applicants and any potential customers clearly understand the need to demonstrate market support for these projects.

B. The Applicants’ Analyses Ignores Economic Costs and Overstate Economic Benefit.

Even if the project moves forward, it will not provide meaningful economic benefits that outweigh public harm. The applicants argue that the project will benefit the Oregon economy

⁴⁷ DSL Findings in the permit underlying the *Citizens v Wal-Mart* (2018) case.

⁴⁸ 154 FERC ¶ 61,190, PP39-40 (Mar. 11, 2016), <https://www.ferc.gov/CalendarFiles/20160311154932-CP13-483-000.pdf>.

⁴⁹ Jordan Cove Energy Project, Application to FERC at 15 n.16 & n.19.

because of direct spending and employment associated with project construction and operation, and because of the indirect impact of these expenditures.⁵⁰ However, the applicants' arguments rely on a modeling approach that is fundamentally flawed in ways that overstate potential benefits and that ignore adverse impacts. Crucially, this analysis ignores displacement effects—e.g., the fact that some of the people working in these jobs would work other jobs if the project does not go forward—or the counterfactual of how the economy might have grown without the project.⁵¹ Indeed, in discussing nationwide macroeconomic impacts of LNG exports, DOE has acknowledged that such displacement is an important factor that cannot be ignored.

Separate from this modeling, the applicants' other assertions regarding socioeconomic impact are misleadingly one-sided. For example, the applicants only consider ways in which the project might *increase* property values, entirely ignoring the likelihood that properties encumbered by a pipeline easement will suffer a decline in value, or that harmful impacts of the project will decrease demand for property and property values in the affected regions.⁵²

Applicants also fail to account for the adverse social and economic effects related to “boom-bust” economics. Project construction will lead to a temporary economic boom that has known adverse effects related to housing shortages, housing inflation, drugs and prostitution associated with so-called “man camps,” shortages of accommodations available for industries other than construction. The boom is followed by a rapid and dramatic bust that includes high unemployment, related social problems, housing deflation and disrepair, etc.⁵³

More broadly, the applicants ignore the adverse economic impacts of fill-removal and harm to the environment and other uses of Coos Bay, such as adverse impacts to navigation, recreation, commerce, quality of life as a magnet for economic activity, and habitat for economically important species like Dungeness crab, salmon, oysters, clams, and others.⁵⁴

1. The U.S. DOE General Analysis of LNG Export Ignores Important Impacts

⁵⁰ JCEP RR5, *supra* note 358, at Appendix B.5.

⁵¹ See, e.g., Amanda Weinstein & Mark Partridge, *The Economic Value of Shale Gas in Ohio* at 11 (2011), https://aede.osu.edu/sites/aede/files/publication_files/Economic%20Value%20of%20Shale%20FINAL%20Dec%202011.pdf. The Jordan Cove Project threatens to degrade Oregon's quality of life which serves as a foundation for economic development. Lehner, J. 2015. “Migration (In Defense of Californians).” Oregon Office of Economic Analysis. 9-8-2015. <https://oregoneconomicanalysis.com/2015/09/08/migration-in-defense-of-californians/>. Schmidt, L. and P. N. Courant (2006). “Sometimes Close is Good Enough: The Value of Nearby Environmental Amenities.” *Journal of Regional Science* 46(5): 931-951. <https://ideas.repec.org/p/wil/wileco/2003-07.html>. Sonoran Institute, Prosperity in the 21st Century West - The Role of Protected Public Lands. <http://web.archive.org/web/20070105005615/http://sonoran.org/pdfs/Prosperity%20Report.pdf>.

⁵² JCEP RR5, *supra* note 358, at 17.

⁵³ Seydlitz, R. and S. Laska. 1993. Social and Economic Impacts of Petroleum “Boom and Bust” Cycles . Prepared by the Environmental Social Science Research Institute, University of New Orleans . OCS Study MMS 94-0016 . U.S . Dept . of the Interior, Minerals Mgmt . Service, Gulf of Mexico OCS Regional Office . New Orleans, La . 131 pp. <https://www.boem.gov/ESPIS/3/3441.pdf>. Grant D. Jacobsen and Dominic P. Parker 2016. The Economic Aftermath of Resource Booms: Evidence from Boomtowns in the American West. *Economic Journal*, 126.593 (2016) 1092-1128. <https://pages.uoregon.edu/gdjaco/Booms.pdf>.

⁵⁴ *Supra* part G.1.

The Department must not simply rely on the Department of Energy’s assertion that increasing LNG exports generally provides macroeconomic benefits. DOE has published studies of exports’ macroeconomic impacts in 2012, 2015, and most recently in 2018.

Similar to the project applicants’ analysis, DOE’s economic analysis ignores the environmental impact of increasing LNG exports. The DOE analysis fails to account for the significant negative externalities associated with fossil fuel use. These externalities effectively shift costs from the few that own stock in the corporations that are advancing this project to the public at large who will suffer real costs associated with climate change, ocean acidification, and other ecosystem services that are destroyed or degraded by this project. Expanding export infrastructure will increase gas production, in turn increasing emissions of both conventional and greenhouse gas pollutants. These emissions have public health, environmental, and ultimately economic consequences. For greenhouse gas emissions in particular, available tools such as the social cost of carbon protocols can be used to provide monetary estimates of the impacts of emissions. Because these impacts have consistently been omitted from DOE’s analyses, those analyses do not provide a basis for the Department to conclude that there is a predominate public need for the project that outweighs public harms.

Even as to more traditional economic impacts, the DOE studies do not show that increasing exports will benefit the general public. Instead, these studies indicate that exports will make most Americans economically worse off, because of higher energy prices, while regressively redistributing wealth to the minority of Americans who own shares of gas production companies.⁵⁵ Although DOE has generally predicted a small net increase in gross domestic product as a result of exports, in the face of the regressive distributional impacts, this net increase is not enough to demonstrate a public benefit. And while DOE has contended that gas companies’ increased profits will accrue to the public at large because of shares in these companies are ultimately owned by individuals, DOE has uniformly failed to provide any analysis of how share ownership is distributed.⁵⁶ LNG exports, by increasing energy prices for everyone while principally increasing profits for shareholders in gas companies, will affect a large and regressive redistribution of wealth. Simply moving money from gas consumers—including households that rely on gas for heat and cooking, or who will face higher electric bills because of increased energy prices—to gas producers is not an effect that furthers the public interest.

2. The Project’s Social, Environmental, and Economic Costs Outweigh the Purported Economic Benefits.

This project will likely increase public hazards in many ways, as discussed in further detail in Chapter 8 *infra*. Much of the project will be built in an area subject to tsunami hazards and will modify the way tsunami waves bounce around the bay. This will increase public exposure, and infrastructure exposure, to tsunami hazards. Much of the project is located in an area with limited access for emergency vehicles and emergency personnel via the TransPacific Parkway which is built on a narrow berm near sea level. This project is located near an airport which increases hazards from accidental or intentional acts. The LNG tankers must have large safety buffers that

⁵⁵ See, e.g., 2015 LNG Export Study at 15 Figure ES3, C-1

⁵⁶ See, e.g., NERA Economic Consulting, *2018 Macroeconomic Study* 67 (2018), <https://www.energy.gov/sites/prod/files/2018/06/f52/Macroeconomic%20LNG%20Export%20Study%202018.pdf>.

will hamper navigation within Coos Bay, at the bar, and near offshore. This will expose people and watercraft to increased risks throughout the area and especially crossing the bar during restricted windows of opportunity. Construction of the PCGP will increase risks associated with landslides, forest fires, degraded water quality, trespassing, and loss of biodiversity. Climate change, caused in part by emissions related to this project, is also associated with many natural hazards, such as sea level rise, floods, droughts, intense precipitation events, fires, human disease, and crop failure.

C. Significant Changes in Project Design Have Occurred since DSL Approval of Removal-Fill Permit for Coos Bay Multi-Use Marine Slip

Significant changes in the project design have occurred since the time that the Department approved the removal fill permit for the excavation of the marine slip in Coos Bay. Specifically, the original proposal reviewed and approved by the Department included the LNG import facility as a component of a multi-use marine slip proposed by the Port of Coos Bay. *See SOPIP, Inc. v. Coos County*, 57 Or LUBA 301, 302 (2008) (explaining that, “[t]he proposed slip would be excavated and designed to be large enough to accommodate two berths, one of which would be dedicated to large ocean-going LNG tankers.”). The Port’s use of the terminal (as additional to and separate from the LNG project) was found to provide “considerable benefits” to the public that outweighed negative impacts to public trust resources. *Id.* at 314 n.6. The current project no longer anticipates a multi-use function, but instead will be totally dedicated to the LNG terminal facility. Rec. 10393.

Several of the previously asserted public benefits no longer apply given the narrowing of the project to a single, LNG-only marine terminal. There are no broad public benefits from attracting general new port activity and shipping activities because the proposed use no longer includes the Port’s multi-use marine slip. The county’s prior determinations of the benefits that would accrue to the county from the two-ship terminal, including number of jobs and increased marketability of the port, are no longer relevant to this proposal. These outdated analyses should be excluded from the record. Finally, this much more limited project purpose is a major consideration which provides additional support for a finding of no public need for this project.

C. Conclusions

In summary, the Department must affirmatively determine that the project would address a public need consistent with *Citizens for Resp. Devel. In the Dalles v. Walmart* 295 Or App 310 (2018). For a privately-sponsored project of this scale and complexity, the Department must consider public need in a transparent and comprehensive analysis that weighs all of the relevant impacts and alleged benefits of the project. The Department cannot find there is a predominate public need for the project because the project is unnecessary and there is no evidence of demand for it, the public need identified by the applicants is outweighed by the loss to Oregon’s waters, discussed below, and significant changes in project design have occurred which further limit any public benefit.

Chapter 4. CONSISTENCY WITH PROTECTION, CONSERVATION, AND BEST USE OF WATER RESOURCES OF THE STATE

4.1 The Department Must Deny the Permit because the Application Fails to Provide Reasonable Assurances that the Project is Consistent with the Protection, Conservation, and Best Use of the Water Resources of the State (ORS 196.825(1)(a)).

The Oregon legislature has declared that the protection of the state’s water resources is a state policy of the highest order. These policy goals are embodied in statute:

The protection, conservation and best use of the water resources of this state are matters of the utmost public concern. Streams, lakes, bays, estuaries and other bodies of water in this state, including not only water and materials for domestic, agricultural and industrial use but also habitats and spawning areas for fish, avenues for transportation and sites for commerce and public recreation, are vital to the economy and well-being of this state and its people.

ORS 196.805.

Under this statute, no person may remove any material from the “bed or banks” of state waterbodies, or fill any such waters, without a permit issued by DSL. ORS 196.810, ORS 196.815. In order to lawfully grant such a permit, DSL must determine that:

the project described in the application: (a) is consistent with the protection, conservation and best use of the water resources of this state [...]; and (b) would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation.⁵⁷

The Department’s failure to carefully consider the relevant statutory criteria is grounds for reversal. *See, e.g., Morse v. Oregon Div. of State Lands*, 285 Or. 197, 207 (1979) (agency lacked authority to issue removal-fill permit in Coos Bay because it failed to make necessary statutory findings); *1000 Friends of Oregon v. Division of State Lands*, 46 Or. App. 425, 430 (1980) (setting aside permit for failing to make findings on a statutory factor).

Before the Department may issue a permit it must affirmatively determine that the project is consistent with the protection, conservation and best use of the water resources of this state. ORS 196.825(1)(a)). The permit applicant has the burden of proof to demonstrate compliance with this standard.⁵⁸ Given the significant impacts across more than 485 waterways of the proposed removal-fill activities and construction, combined with the inadequate information provided by the applicants regarding those impacts, DSL cannot reasonably make such a finding.⁵⁹

Although the statute does not define what it means by “protection, conservation and best use of the water resources,” the policy behind the fill and removal statutes states:

⁵⁷ ORS 196.825(1).

⁵⁸ *In re Coyote Island Terminal LLC and Port of Morrow*. OAH Case Nos. 1403883 and 1403884. Rulings on Motions for Summary Determination. 11 August 2016.

⁵⁹ Commenters also incorporate by reference the comments they submitted to USACE and DEQ on the Clean Water Act § 404 permit and § 401 certification which discuss these issues in additional detail. These comments are included as Appendices A and B.

Unregulated removal of material from the beds and banks of the waters of this state may create hazards to the health, safety and welfare of the people of this state. Unregulated filling in the waters of this state for any purpose, may result in interfering with or injuring public navigation, fishery and recreational uses of the waters. In order to provide for the best possible use of the water resources of this state, it is desirable to centralize authority in the Director of the Department of State Lands, and implement control of the removal of material from the beds and banks or filling of the waters of this state.

(2) The director shall take into consideration *all beneficial uses of water* including streambank protection when administering fill and removal statutes.⁶⁰

Section 303 of the Clean Water Act requires states to establish water quality standards that consist of designated beneficial uses of waterbodies, criteria to protect designated uses, and antidegradation requirements to protect existing uses and high quality waters. Under the Environmental Protection Agency’s implementing regulations, states are required to specify designated beneficial uses that are “appropriate water uses to be achieved and protected” that “must take into consideration the use and value of water for public supplies, protection and propagation of fish, shellfish, and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation.”⁶¹ For all waters, the “[e]xisting in stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.”⁶²

Beneficial designated uses are defined under Oregon’s regulations for the impacted watersheds and are summarized in the table below.

Table 1. Basin-Specific Criteria Designated Beneficial Uses

Basin-Specific Criteria	Beneficial Uses
South Coast Watershed	<i>Estuaries and Adjacent Marine Waters:</i>
OAR 340-041-0300	Industrial water supply Fish and aquatic life Wildlife and hunting Fishing Boating Water contact recreation Aesthetic quality Commercial navigation and transportation <i>All streams and tributaries thereto:</i> Public domestic water supply Private domestic water supply Industrial water supply Irrigation Livestock watering Fish and aquatic life Wildlife and hunting

⁶⁰ ORS 196.805 (emphasis added).

⁶¹ 40 C.F.R. § 131.10.

⁶² 40 C.F.R. § 131.12(a)(1); 40 C.F.R. § 131.3(e) (“Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.”).

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	<p>Fishing Boating Water contact recreation Aesthetic quality Hydropower</p>
<p>Umpqua Watershed OAR 340-041-0320</p>	<p><i>Umpqua R. Main from Head of Tidewater to Confluence of N. & S. Umpqua Rivers</i> <i>North Umpqua River Main Stem</i> <i>South Umpqua River Main Stem</i> <i>All Other Tributaries to Umpqua, North & South Umpqua Rivers</i></p> <p>Public domestic water supply Private domestic water supply Industrial water supply Irrigation Livestock watering Fish and aquatic life Wildlife and hunting Fishing Boating Water contact recreation Aesthetic quality Hydropower (<i>does not apply for Umpqua R. Main from Head of Tidewater to Confluence of N. & S. Umpqua Rivers</i>)</p>
<p>Rogue Watershed OAR 340-041-0271</p>	<p><i>Rogue River main stem from estuary to Lost Creek dam</i></p> <p>Public domestic water supply Private domestic water supply Industrial water supply Irrigation Livestock watering Fish and aquatic life Wildlife and hunting Fishing Boating Water contact recreation Aesthetic quality Hydropower Commercial navigation and transportation</p>
<p>Klamath Watershed OAR 340-41-0180</p>	<p><i>Klamath River from Klamath Lake to Keno Dam (RM 255 to 232.5)</i></p> <p>Public domestic water supply Private domestic water supply Industrial water supply Irrigation Livestock watering Fish and aquatic life Wildlife and hunting Fishing Boating Water contact recreation Aesthetic quality Hydropower (RM 255-232.5) Commercial navigation and transportation (RM 255-232.5)</p>

As a result of dredging, damming, and trenching waterways, and of the use of HDD, the removal of riparian vegetation, the creation of temporary and permanent roads, and other proposed activities, the project would likely result in a lowering of water quality for at least the following parameters: Narrative Criteria; Biocriteria; Dissolved Oxygen; Temperature; Toxic Substances; and Turbidity. This lowering of water quality, together with loss of habitat and food sources, will adversely impact the existing designated beneficial uses of: Anadromous Fish Passage; Salmonid

Fish Rearing; Salmonid Fish Spawning; Resident and Aquatic Life; Wildlife and Hunting; Fishing; and Aesthetic Quality in the various waterbodies impacted by the project. The Department should deny the permit because the project would likely lower water quality and result in impairment of beneficial designated uses that is inconsistent with the “protection, conservation and best use of the water resources” under Oregon’s removal-fill law and the applicants have not provided reasonable assurances that designated beneficial uses will not be impaired.

A. Use and Value of Water for Public Supplies Will Not Be Protected

All of the impacted watersheds include public domestic water supply and private domestic water supply as a beneficial designated use. The Department should require the applicants to identify and analyze all direct, indirect, and cumulative impacts to drinking water sources from the removal-fill activities and construction of the pipeline before it can evaluate whether this designated use will be impaired.

The project will likely impair public and private domestic water supply by:

- Contaminating sources through a frac-out as a result of Horizontal Directional Drilling proposed for rivers such as the Rogue that are a source of public drinking water;
- Increasing sedimentation through the construction of stream crossings, increased use of roads, and increased risk of landslides;
- Increasing temperature by removing riparian vegetation;
- Withdrawing large volumes of freshwater for activities such as hydrostatic testing, as part of the construction of the project, that will also impair water quality and quantity; and
- Interfering with groundwater sources.

For example, according to the Coos Bay North Bend Water Board (CBNBWB), the residents of Coos Bay and North Bend rely primarily on the Upper Pony Creek and Merritt Reservoirs, as well as the Joe Ney Reservoir, to supply municipal drinking water. CBNBWB also relies on groundwater from 19 wells in the Dunes National Recreation Area that can supplement industrial needs and municipal use.⁶³ Resource Report 2 for the LNG terminal does not provide substantive detail regarding impacts to municipal sources. DSL should require additional information from the applicants to fully assess potential impacts to the drinking water protection area from construction, operations, and maintenance of the LNG terminal and related facilities.

Similarly, the Medford Water Commission is identified by the applicants as one of the Drinking Water Source Areas that would be impacted by the project. The Medford Water Commission provides drinking water to approximately 91,100 people in the City of Medford, as well as the cities of Eagle Point, Central Point, Jacksonville, Phoenix, Talent, and Lake Creek Learning Center. Big Butte Springs, which is part of the Rogue watershed, is the source of the Medford Water Commission’s drinking water supply.⁶⁴ Not only do the applicants propose to cross at least 88 waterways within the Rogue watershed, including the Rogue River, but they propose to bore underneath the Medford Aqueduct. The 31-inch Medford Aqueduct pipeline was constructed in 1927 and carries approximately 40 cubic feet per second of drinking water from

⁶³ 2016 Consumer Confidence Report. Coos Bay-North Bend Water Board. http://cbnbh2o.com/assets/Reports/2016_ccr.pdf.

⁶⁴ Medford Water Commission. <http://www.medfordwater.org/SectionIndex.asp?SectionID=5>.

Big Butte Springs to the City of Medford and communities within the Bear Creek watershed.⁶⁵ The applicants provide very minimal information regarding construction of this crossing. DSL should require more information regarding the depth of the bore and site-specific details to evaluate the potential direct, indirect, and cumulative impacts of the proposed pipeline crossing the main source of the City of Medford’s drinking water.

According to Resource Report 2 for the Pacific Connector Pipeline, the applicants state that the pipeline will cross 12 Public Drinking Water Surface Water Source Areas (DWSAs).⁶⁶ At a minimum, this would impact approximately 156,000 people. Further, the report identifies multiple sites where a potable water intake is located less than three miles downstream from the proposed pipeline crossings. There are also a number of private potable water intakes less than three miles downstream from proposed pipeline crossings.⁶⁷ The applicants also identify eight proposed Temporary Access Roads (“TARs”) and ten Permanent Access Roads (“PARs”) within the identified Public Drinking Water Surface Water Source Areas that would be impacted by construction of the project.⁶⁸

Critically, as DEQ points out in its 20 December 2018 letter to Jordan Cove, “PCGP’s pipeline right-of-way is functioning as a primitive road.”⁶⁹ Therefore, not only are there at least 18 temporary and permanent access roads that lie within the identified Public Drinking Water Surface Water Source Areas, but the pipeline in its entirety will function effectively as a road itself, with the potential to impact at least the 12 DWSAs identified by Jordan Cove. In its letter, DEQ raises significant concerns regarding potential sediment pollution from identified roads within the project area and from the pipeline itself:

PCGP has not demonstrated in the Erosion Control and Revegetation Plan or Transportation Management Plan that PCGP will avoid discharging road drainage water into headwalls, slide areas, high landslide hazard locations, or steep erodible fill slopes. Moreover, PCGP has not addressed any of the ODF requirements noted below regarding forest road maintenance. ODF established FPA rule OAR 629-625-0600 to comply with water quality standards by timely maintenance of all active and inactive roads.⁷⁰

Additionally, the proposed activities have the potential to impact groundwater supplies. Due to the potential interactions between groundwater and surface water systems that provide public and private domestic drinking water supplies, DSL should require identification of public groundwater supply wells that are within 400 feet of the construction right-of-way and associated construction facilities and assess impacts to additional groundwater wells that may be directly or indirectly impacted. DSL should also require the applicants to identify the presence of drain tiles or other factors that may increase the potential for contamination of groundwater resources.

⁶⁵ “Big Butte Creek.” Eagle Point Irrigation District. <https://www.eaglepointirrigation.com/big-butte-creek.html>.

⁶⁶ See Pacific Connector Gas Pipeline Project Resource Report 2: Water Use and Quality, Table 2.2-6, DSL p. 2519; Table 2.2-6. Pacific Connector Pipeline Resource Report 2 Water Use and Quality. P. 12. PCP A-B Part 6. P. 223.

⁶⁷ Pacific Connector Pipeline Resource Report 2 Water Use and Quality. P. 12. PCP A-B Part 6. P. 223.

⁶⁸ See Pacific Connector Gas Pipeline Project Resource Report 2: Water Use and Quality, DSL p. 2521.

⁶⁹ Department of Environmental Quality. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. 20 December 2018. P. 14.

⁷⁰ Department of Environmental Quality. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. 20 December 2018. P. 15.

The Department may only issue a permit if it is able to affirmatively determine that the project is consistent with the protection, conservation and best use of the water resources of this state. ORS 196.825(1)(a)). Because the applicants have not provided the Department with critical information regarding the potential for project activities to negatively impact drinking water supplies, they have failed to meet their burden of proof to demonstrate compliance with this standard, and thus DSL cannot reasonably make such as finding.⁷¹

B. Protection and Propagation of Fish, Shellfish, and Wildlife Uses Will Not Be Protected

All of the impacted watersheds include fish and aquatic life, wildlife and hunting, and fishing as designated beneficial uses. The proposed activities for the project will likely impair these designated uses by degrading aquatic habitat for fish and shellfish.

1. LNG Terminal

Construction of the LNG terminal and related construction and maintenance activities will significantly impair habitat for fish and shellfish, thus harming designated beneficial uses protected under the Clean Water Act. Construction of the terminal itself would cover 538 acres of land, including 5.2 acres of open water and 169 acres of wetlands.⁷² Additionally, the applicants propose construction of a 38-acre marine slip from uplands and a 22-acre access channel (2,200 feet wide at its intersection with the Coos Bay Channel). A 3-acre marine offloading facility would also be constructed. Construction of the slip and access channel would require dredging 5.7 million cubic yards of material and would result in the permanent loss of 14.5 acres of shallow subtidal and intertidal habitat, 0.06- acre of estuarine saltmarsh habitat, and 1.9-acres of submerged aquatic vegetation habitat (eelgrass). Dredged material would be transported to the LNG terminal, South Dunes site, Roseburg Forest Products site, or the Kentuck mitigation site.

Construction of the temporary berth would require dredging another 45,000 cubic yards of material. Dredging of the existing navigation channel would remove 700,000 cubic yards of material and would construct a temporary pipeline on the bottom of the channel over 8.3 miles to remove the dredged material. Widening of the Transpacific Parkway/Highway 101 intersection would require permanently filling in 0.51 acres of intertidal habitat. Future maintenance dredging at the slip, access channel, and navigation channel (NRI areas) would require dredging of between 34,600 – 37,700 cubic yards of material annually and additional dredging of the navigation channel of between 27,900 – 49,800 cubic yards of material every three years.⁷³

In summary, the proposed activities at the LNG terminal will impact aquatic resources and therefore harm designated beneficial uses by:

⁷¹ Commenters also incorporate by reference the comments they submitted to USACE and DEQ on the Clean Water Act § 404 permit and § 401 certification which discuss these issues in additional detail. These comments are included as Appendix A and B.

⁷² U.S. Army Corps of Engineers. Public Notice Application for Permit and to Alter Federally Authorized Projects. 60-day notice. NWP-2017-41. 22 May 2018. P. 2.

⁷³ U.S. Army Corps of Engineers. Public Notice Application for Permit and to Alter Federally Authorized Projects. 60-day notice. NWP-2017-41. 22 May 2018. P. 3-6.

- Permanently destroying at least 1.9-acres of eelgrass beds that provide habitat and food base for fish and invertebrate species including juvenile crab, juvenile lingcod, salmonids, starry flounder, and English sole;
- Impairing water quality by decreasing dissolved oxygen, changing salinity levels, increasing temperature, and increasing sedimentation as a result of dredging and other related activities;
- Activities related to the marine terminal and north spit facilities, including discharge of maintenance dredging spoils causing turbidity plumes, LNG vessel wake strandings, engine cooling water intake entrainment, dredging of the access channel and construction of the pipeline across Coos Bay could all jeopardize the survival of aquatic species;
- Dredging would directly remove benthic organisms, such as worms, clams, starfish, and vegetation from the bottom of the bay. Crabs, shrimp, clams, oysters, and fish could become entrained in the operation of the dredging equipment;⁷⁴ and
- Degrade habitat and aquatic resources used by threatened and endangered species such as Coho salmon (*Oncorhynchus kisutch*), green sturgeon (*Acipenser medirostris*) and eulachon (*Thaleichthys pacificus*) by permanently converting 6.8 acres of highly productive intertidal habitat to low productive deep-water habitat; by failing to adequately mitigate for the permanent loss of freshwater and estuarine wetlands including eelgrass beds, and by permanently removing coastal riparian vegetation that is an essential component of the food chain for fish and aquatic life, among other impacts.

Consequently, the applicants have failed to provide reasonable assurances that the project will not impair designated beneficial uses for fish and aquatic life, wildlife and hunting, and fishing because the proposed activities at the terminal and in Coos Bay will permanently destroy habitat and degrade water quality for fish and shellfish. More detailed discussion of impacts to fish and shellfish is provided in Chapter 5 *infra*. Therefore, the Department must deny the permit.

2. Pacific Connector Pipeline

In addition to the proposed activities for the LNG terminal, the project would also involve construction of the 229-mile Pacific Connector Pipeline. The pipeline will dam, divert, trench, or use Horizontal Directional Drilling technology to cross approximately 485 waterways. Construction of the pipeline will affect at least 30,778-feet (5.83 miles) of wetlands and 3,028-feet of waterways. Approximately 48,675 cubic yards of material will be discharged into wetlands and 9,519 cubic yards of material will be discharged into waterways to construct the pipeline. Additionally, a 75-foot clear-cut buffer around waterways crossings would be constructed.⁷⁵ As stated by the applicants, impacts from stream crossings include:

Clearing and grading of streambanks, removal of riparian vegetation, instream trenching, trench dewatering, and backfilling could result in modification of aquatic habitat; increased sedimentation; turbidity; increase in temperature, decreased dissolved oxygen concentrations; releases of chemical and nutrient pollutants from sediments; and introduction of chemical contaminants, such as fuel and lubricants. An increase in soil

⁷⁴ DEIS 2014 at 4-569 to 4-570.

⁷⁵ U.S. Army Corps of Engineers. Public Notice Application for Permit and to Alter Federally Authorized Projects. 60-day notice. NWP-2017-41. 22 May 2018. P. 8.

compaction and vegetation clearing could potentially increase runoff and subsequent stream flow or peak flows.⁷⁶

In summary, construction and operation of the proposed Pacific Connector Pipeline will impact aquatic resources and therefore harm designated beneficial uses for fish and aquatic life, wildlife and hunting, and fishing by:

- Permanent loss of vegetative shading at corridors for pipeline stream crossings construction and operation;
- Permanent loss of base flows from pipeline;
- Stream width increases from sedimentation related to pipeline construction and operation;
- Soil, vegetation, bank destabilization and increased sedimentation from pipeline construction and implementation;
- Permanent degradation of riparian areas in pipeline corridors at stream crossings;
- Permanent loss of Large Wooded Debris areas from degradation of riparian areas and increased sediment transport in stream and river channels;
- Deforestation in pipeline corridors combined with wetlands damage and long-term soil compaction and new road creation and use, plus decreases in hydrologic connectivity due to all of the above; and
- Increased, prolonged sedimentation of waterways.

The Department cannot approve the permit because the applicants have failed to demonstrate that the proposed activities related to construction and operation of the pipeline will not impair designated beneficial uses for fish and aquatic life, wildlife and hunting, and fishing.

3. Impacts to listed aquatic species.

The project would likely jeopardize the continued existence of species listed as endangered or threatened under the Endangered Species Act (“ESA”), or result in the destruction or adverse modification of critical habitat under the ESA.⁷⁷

The project would impact threatened and endangered species by degrading habitat and aquatic resources used by species such as Coho salmon (*Oncorhynchus kisutch*), green sturgeon (*Acipenser medirostris*) and eulachon (*Thaleichthys pacificus*) by permanently converting 6.8 acres of highly productive intertidal habitat to low productive deep-water habitat, by failing to adequately mitigate for the permanent loss of freshwater and estuarine wetlands including eelgrass beds, and by permanently removing coastal riparian vegetation that is an essential component of the food chain for fish and aquatic life, among other impacts.

Expansive wetland fill and the dredging of millions of cubic yards of material from the Coos Bay estuary will result in the permanent loss of salmon habitat. Modifying the river flow and hydrology of Coos Bay; wake stranding of juvenile fish; discharge of warm engine cooling water and ballast water; long-term pile driving and dredging; and destruction of riparian and upland habitat along the entire pipeline will further impact threatened and endangered species listed

⁷⁶ Pacific Connector Pipeline Resource Report 2 Water Use and Quality. P. 35. PCP Part 6 P. 245.

⁷⁷ Impacts to fish and wildlife are discussed extensively in Appendix B. Clean Water Act 404 Comments

under the ESA. Local, state, and federal management plans all concede that dredging impedes salmon recovery and estuarine habitat restoration.

a. Coho salmon – Southern Oregon/Northern California Coast ESU

The project area includes two major river systems known to support SONCC Coho: the Rogue River and the Klamath River. The project is likely to adversely affect SONCC Coho due to numerous impacts to feeding, loss of hatching and rearing habitat from substrate removal and turbidity at stream crossings, barriers to migration during stream crossing construction, potential swim bladder rupture due to blasting activities, injury and mortality during fish salvage, and long term habitat deterioration due to reductions in large woody debris.⁷⁸ Stream crossing construction and removal of riparian vegetation are the two primary contributors to these impacts.

The pipeline construction will disrupt fish passage by damming the streams during the trenching and pipeline placement processes. It is unclear for how long fish passage would be interrupted. The mitigation of capturing and removing fish behind dams is historically ineffective, and in this case would likely result in the take of threatened salmonids. This is particularly troubling for large crossings proposed on the Coquille and Umpqua, and for potential crossings of the Rogue and Coos if proposed HDDs fail.⁷⁹

Within the Rogue Basin, Trail Creek and Little Butte Creek have long been identified as major producers of SONCC coho.⁸⁰ The proposed pipeline route would cross the West Fork of Trail Creek, the North and South Forks of Little Butte Creek, as well as numerous smaller tributaries within this watershed. Prevost highlighted upper South Fork Little Butte Creek and West Fork Trail Creek as core areas in the Upper Rogue River watershed that are critical to the survival of SONCC coho in the region.⁸¹

The Upper Rogue section of the 2014 Southern Oregon/Northern California Coast (SONCC) Coho Recovery Plan notes that this watershed already has severely impaired water quality and degraded riparian forest conditions, concluding that future coho survival would be further threatened roads and timber harvest.⁸² These stresses and threats would be increased by actions described in the application. In fact, the 2014 Southern Oregon/Northern California Coast (SONCC) Coho Recovery Plan identifies impaired water quality as one of the key limiting stressors for the Upper Rogue River population.⁸³ The Recovery Plan identifies increasing Large Woody Debris as one of six high priority recovery actions. The proposed pipeline route would

⁷⁸ 2015 FEIS, *supra* note 49, at 4-629 - 31.

⁷⁹ See discussion of HDD failure, *supra* at 22-24.

⁸⁰ Jerry Vogt, *Upper Rogue Smolt Trapping Project, 2001* (2001), <https://nrimp.dfw.state.or.us/nrimp/information/docs/fishreports/smolt01.pdf>.

⁸¹ Marc Prevost, et al., *Southwest Oregon Salmon Restoration Initiative* 65 (1997), <https://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/5029/Vol.2Chapter17F.pdf>

⁸² NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, SOUTHERN OREGON NORTHERN CALIFORNIA COHO SALMON RECOVERY PLAN (2014), http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/southern_oregon_northern_california_coast/SONCC_recovery_plan.html.

⁸³ NOAA FISHERIES, UPPER ROGUE RIVER POPULATION:SOUTHERN OREGON/NORTHERN CALIFORNIA COAST (SONCC) COHO RECOVERY PLAN 32-1 (2014) hereinafter Coho Recovery Plan.

cross waterbodies that support threatened SONCC or have high intrinsic potential to support habitat.⁸⁴

The pipeline crossings would also threaten SONCC recovery in the Klamath Basin. While the Upper Klamath Basin is currently unavailable to anadromous fish, resource agencies face a court mandate to restore fish passage to this area, whether or not PacifiCorp's main-stem dams on the Klamath are removed. Manual reintroduction of imperiled spring Chinook, and natural recolonization of imperiled steelhead and ESA threatened Southern Oregon/Northern California Coast ESU (SONCC) coho, will occur in the Klamath Basin at an unknown time in the next 10 years. The DEIS does not address the need to coordinate construction through the Upper Basin with habitat used by returning anadromous fish as described in ODFW's *Plan for the Reintroduction of Anadromous Fish in the Upper Klamath Basin*⁸⁵ approved by the Oregon Fish and Wildlife Commission in July of 2008. The DEIS acknowledges that despite Pacific Connector's best management practices and mitigation measures, other effects to salmonid habitat elsewhere in the project area could include increased turbidity, frac-out from HDD, nutrient loading, decreased fish access, reduction of benthic organisms and large woody debris ("LWD"), and surface runoff.⁸⁶ These impacts apply to reintroduced fish populations as well.

Spencer Creek is recognized as a tributary used by coho and spring Chinook before implementation of the Klamath Hydro Project.⁸⁷ As such, it is a likely site for natural recolonization of these fish. The Department should recognize this resource value, as recolonizing endangered coho and imperiled spring Chinook will be part of the beneficial uses associated with Spencer Creek watershed and its TMDLs.

The main-stem Klamath will also be a migration corridor for returning anadromous fish. The Coalition's comments in the following section regarding endangered sucker Critical Habitat also apply to imperiled spring Chinook, ESA threatened coho, and imperiled steelhead which may be using the main-stem Klamath by the time the proposed pipeline crosses it.

b. Coho salmon – Oregon Coast ESU

The project area includes designated critical habitat for the federally threatened Oregon Coast Coho: the South Umpqua Subbasin, Coquille Subbasin, and the Coos Subbasin (which includes the Coos Bay estuary). The DEIS acknowledges that the project is likely to adversely affect Oregon Coast Coho and its critical habitat.⁸⁸

Activities related to the marine terminal and north spit facilities, including discharge of maintenance dredging spoils causing turbidity plumes, dredging of the access channel, and construction of the pipeline across Coos Bay could all jeopardize the survival of this species. Moreover, cooling water intake is likely to entrain and impinge many food sources for Coho,

⁸⁴ *Id.* at 32-3.

⁸⁵ OREGON DEPARTMENT OF FISH AND WILDLIFE, DRAFT PLAN FOR THE REINTRODUCTION OF ANADROMOUS FISH IN THE UPPER KLAMATH BASIN (2008), https://www.dfw.state.or.us/agency/commission/minutes/08/07_july/Exhibit%20B_Attachment%204.pdf [hereinafter ODFW 2008].

⁸⁶ DEIS 2014, *supra* note 73, at 4-577, 4-605 - 06, 4-644.

⁸⁷ (Hamilton et. al. 2004).

⁸⁸ DEIS 2014, *supra* note 73 at 4-644 - 45.

such as juvenile stages of crab, shrimp, other zooplankton, and eggs and larval fish. Pipeline-related activities including stream crossing construction or failures of those operations, blasting, mortality during fish salvage operations, and loss of large woody debris for habitat also have the potential to cause jeopardy to the Oregon Coast Coho and adversely affect its designated critical habitat.⁸⁹ Therefore, if this project were to go through, an ESA Section 9 taking of the Coho salmon would likely occur and an ESA Section 7 consultation will be required.

The Department should require additional information from the applicants regarding direct mortality impacts to listed fish from dredging in Coos Bay. As discussed, the proposed hydraulic cutterhead dredge method will entrain juvenile fish, including threatened salmonids, as well as benthic organisms critical to salmon diets.⁹⁰ Mechanical dredging would not have the same fish entrainment impacts, but Jordan Cove has not seriously considered this alternative dredge method.

The Department must analyze the impacts of fish entrainment due to dredging, particularly for listed salmonids. The Department should also consider cumulative impacts on aquatic life, including the impacts from dredging, terminal construction, pipeline construction, and dredging and maintenance dredging to deepen the channel.

c. North American Green Sturgeon – Southern Distinct Population Segment

Both Northern and Southern population segments of the North American Green Sturgeon are known to exist within Coos Bay for feeding, growth, and thermal refuge. The DEIS from the previous iteration of the project admits that the project is likely to adversely affect Green Sturgeon as a result of bottom disturbance and reduction of benthic food supply from construction and maintenance dredging as well as dredge spoils disposal, and the potential for dredge spoils disposal to bury sub-adult Green Sturgeon.⁹¹ Likewise, the project is likely to adversely affect critical habitat for the species, violating Section 9 of the Endangered Species Act.⁹² The Department must consider the effect dredging and dredge spoils disposal would have on food sources for the threatened green sturgeon.

d. Pacific Eulachon – Southern Distinct Population Segment

Pacific Eulachon (also known as candlefish) utilize Coos Bay for habitat, and may be present in the estuary during construction and operation of the project. Eulachon typically spend three to five years in saltwater before returning to freshwater to spawn in late winter through mid-spring. Eulachon are a small fish that are rich in calories and important to marine and freshwater food webs, as well as commercial and recreational fisheries and indigenous people from Northern California to Alaska. The application does not adequately assess potential impacts to this species as a result of the dredge and fill operations proposed in ocean waters, Coos Bay, and coastal tributaries.

e. Lost River Sucker

⁸⁹ *Id.* at 4-645.

⁹⁰ DEIS 2014, *supra* note 73 at 4-644.

⁹¹ DEIS 2014, *supra* note 73 at 4-647.

⁹² 16 U.S.C. § 1538.

The Lost River sucker is a federally listed endangered species that spawns in freshwater streams. The Pacific Connector Pipeline will cross the Lost River upstream of known spawning areas. The pipeline will also cross the Klamath River, another basin where Lost River suckers live. The DEIS acknowledges that the project is likely to kill Lost River suckers and injure its designated critical habitat through fish salvage or through the release of drilling muds from frac-out during HDD of the Klamath River.⁹³

f. Shortnose Sucker

The shortnose sucker is another endangered fish species whose populations have been severely impacted by dam construction, water diversions, overfishing, water quality problems, loss of riparian vegetation, and agricultural practices. Shortnose sucker critical habitat includes the Klamath River within the project area. The DEIS states that the project is likely to adversely affect shortnose suckers in the same manner that it will harm the Lost River sucker.⁹⁴

g. Spencer Creek Redband Trout

The Upper Klamath Basin redband trout is considered by the state of Oregon to be a “vulnerable” species, and is currently classified as “at risk” by the Oregon Department of Fish and Wildlife. Due to extensive dam building and habitat modification, Spencer Creek is now the only known spawning area and source of juvenile recruitment in the upper Klamath River basin upstream of J.C. Boyle dam and is a highly productive spawning ground for the Lower Klamath population of redband trout that migrates to the Keno Reach of the Klamath River. Migratory and resident redband trout are known to use the mainstem of Spencer Creek and are also thought to use smaller tributaries including ephemeral streams.⁹⁵ Redband spawning in Spencer Creek is thought to occur from February through June and biologists have recorded counting in excess of 300 redds in Spencer Creek.⁹⁶ The applicants have not provided sufficient information regarding construction timing in relation to redband trout spawning in Spencer Creek. Given that Spencer Creek’s dominant land uses to date (grazing and logging) have degraded the watershed so heavily that it is listed for sediment and temperature pollution, additional industrial degradation plus undetermined long term impacts to water quality and hydrology will likely only bring more harm to Spencer Creek’s spawning and juvenile redband trout, which require cold, clear streams for successful recruitment and maturation.

h. Marine Mammals and Sea Turtles

The LNG terminal and the tankers will likely cause or contribute to the harm of marine mammals due to habitat destruction and vessel strikes. In addition, multiple ESA-listed mammals and turtles are present, including the green turtle, leatherback, olive ridley, and loggerhead. In 2012, NMFS designated critical habitat for the leatherback, including nearshore areas around Coos Bay

⁹³ DEIS 2014, *supra* note 73 at 4-650.

⁹⁴ *Id.* at 4-652.

⁹⁵ (USFS 1995)

⁹⁶ Steven J. Starcevich & Steven E. Jacobs, *Effects of Dams on Redband Trout Life History in the Upper Klamath River: A Summary and Synthesis of Past and Recent Studies*, 4 (2006).

and areas that are part of the proposed LNG tanker routes.⁹⁷ All of these ESA-listed species, as well as the non-ESA-listed species, will be adversely affected by the proposed project.

Marine mammals, especially pinnipeds, are also sensitive to noise disturbances. Jordan Cove would install steel piles for the LNG vessel berth and a loading platform on the east side of the marine slip. According to the applicant's modeling, sound levels greater than 65 dB will extend less than 0.25 miles from pile driving operations. Jordan Cove has not yet developed a plan to protect pinnipeds from noise impacts associated with the construction of the marine slip and berth. The Department should consider whether these potential impacts can be adequately addressed.

Based on all of the potential impacts to listed aquatic species, marine mammals, and fish associated with the proposed action, the applicants have failed to demonstrate that the project is consistent with the protection and conservation of Oregon's waters under ORS 196.825(1)(a) and the Department must deny the permit.

C. The Project Will Not Protect Other Beneficial Uses

In addition to the specific beneficial used discussed above, the project will like harm other water uses by lowering water quality below the established water quality standards.

1. Temperature (OAR 340-041-0028)

The purpose of Oregon's statewide numeric criteria for temperature is to "protect designated temperature-sensitive, beneficial uses, including specific salmonid life cycle stages in waters of the State."⁹⁸ The proposed project would likely violate Oregon's water quality standard for temperature by removing riparian vegetation that shades streams, causing stream heating along a minimum 75-foot wide construction easement. Removing riparian vegetation will increase water temperature by decreasing shade in numerous streams identified as having salmon and steelhead spawning use, having core cold water habitat use, having salmon and trout rearing and migration use, or having migration corridor use.

The proposed action would impact:

- 1) Streams identified as having salmon and steelhead spawning use (South Coast, Umpqua, and Rogue);
- 2) Streams identified as having core cold water habitat use (South Coast, Umpqua, and Rogue);
- 3) Streams identified as having salmon and trout rearing and migration use (South Coast and Umpqua); and
- 4) Streams identified as having migration corridor use (South Coast).

Table 3. Fish Use Designations for Impacted Watersheds

⁹⁷ 77 Fed Reg 4170 (Jan. 2012).

⁹⁸ OAR 340-041-0028(3).

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Watershed	Salmon and steelhead spawning	Core coldwater habitat	Salmon and trout rearing and migration use	Migration corridor use	Redband or Lahontan cutthroat trout
South Coast ^{99,100}	X	X	X	X	
Umpqua ^{101,102}	X	X	X		
Rogue ^{103,104}	X	X			
Klamath ¹⁰⁵					X

Additionally, numerous stream segments that would be impacted by the proposed action already are impaired for high temperatures that violate State water quality standards. Many of these streams are on the State’s list of water quality limited waters under Section 303(d) of the CWA. Therefore, any temperature increases in these streams attributable to the proposed action would result in exacerbations of existing violations of state water quality standards. Even where waterways are not already impaired for temperature, stream temperature increases cause acute stress that has an immediate impact on salmon and other temperature-dependent fish. The applicants have not provided reasonable assurance that the proposed activities will not result in significant adverse effects to aquatic ecosystems as a result of increased stream temperature, and that the proposed activities will not violate Oregon’s numeric criteria for temperature. Therefore, the Department must not issue the permit.

2. Turbidity (OAR 340-041-0036)

A violation of Oregon's water quality standard for turbidity occurs when an activity causes a more than 10% increase in natural turbidity levels, unless the activity is necessary to accommodate essential dredging, construction or other legitimate activities and all practicable turbidity control techniques have been applied.¹⁰⁶ The activities proposed by the applicants are likely to result in a more than 10% increase in natural turbidity levels from pipeline stream crossings, potential HDD failure and frac-out, removal of riparian vegetation around stream crossings, increased landslide risk as a result of pipeline construction, dredging of Coos Bay, and construction and operation of roads. For example, if silt fences are 90-95 percent efficient in trapping sediment post-construction during intense rainfall, this means that up to 10% of the

⁹⁹ See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 300A: Fish Use Designations, South Coast Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure300a.pdf>

¹⁰⁰ See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 300B Salmon and Steelhead Spawning Use Designations, South Coast Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure300b.pdf>.

¹⁰¹ See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 320A Fish Use Designations, Umpqua Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure320a.pdf>.

¹⁰² See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 320B Salmon and Steelhead Spawning Use Designations, Umpqua Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure320b.pdf>

¹⁰³ See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 271A, Rogue Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure271a.pdf>.

¹⁰⁴ See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 271B Salmon and Steelhead Spawning Use Designations, Rogue Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure271b.pdf>.

¹⁰⁵ See Subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Figure 180A, Klamath Basin. <https://www.oregon.gov/deq/Rulemaking%20Docs/figure180a.pdf>.

¹⁰⁶ OAR 340-041-0036.

sediment generated during intense rainfall will reach streams.¹⁰⁷ Ten percent delivery of sediment from a large disturbance area is likely to be significant, particularly for threatened salmonids, in violations of the State’s numeric turbidity standard.

a. Stream Crossings

The applicants propose dry open-cut methods, including both flume and dam and pump methods, for the stream crossings where HDD or Direct Pipe technology is not proposed. HDD is proposed for Coos Bay, the Coos River, the Rogue River, and the Klamath River and Direct Pipe technology is proposed for the South Umpqua.

In addition to the potential for increased erosion, channel migration, avulsion, and/or scour as a result of pipeline crossings, many of the proposed crossings cut through waterbodies that are already impaired for sedimentation. Channel modifications that increase sedimentation can decrease the depth and frequency of pools, which decreases the assimilative capacity for thermal loading of a stream.¹⁰⁸ Proposed activities to conduct dry open cut technology have the potential to increase sedimentation, modify habitat, decrease dissolved oxygen, and impair the aquatic habitat.

The application includes a Stream Crossing Risk Analysis Addendum from 6 April 2018 that builds on the 2017 Pacific Connector Gas Pipeline Stream Crossing Risk Analysis (GeoEngineers, 2017a). In the analysis, the report identifies 98 stream crossings identified as Yellow (moderate risk) or Orange (high risk) of pipeline exposure due to stream instability.¹⁰⁹ However, the report specifically states that pre-construction surveys occurred on only “a portion of the sites.”¹¹⁰ Specifically, only 48 stream crossings were physically observed because “access to the remaining sites has not been granted by the property owners as of the date of this report.”¹¹¹ This indicates that, yet again, the applicants have failed to include site-specific information that is required by the Department to review the application. The application has failed to provide information sufficient to demonstrate that their proposed discharges associated with stream crossings necessitated by pipeline construction will not violate State water quality standards for turbidity.

Further, DEQ raised significant concerns regarding the inadequacy of information for stream crossing BMPs provided by the applicants in the agency’s 20 December 2018 letter. Specifically, DEQ states:

¹⁰⁷ 2014 DEIS, *supra* note 73, at 4-74, citing Robichaud et al (2000).

¹⁰⁸ “Chapter 2: Temperature.” Rogue River Basin TMDL. Oregon DEQ. December 2008. P. 2-20.

¹⁰⁹ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. Stream Crossing Risk Analysis Addendum. 6 April 2018. P. 5. P. 3168.

¹¹⁰ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. Stream Crossing Risk Analysis Addendum. 6 April 2018. P. 5. P. 3168.

¹¹¹ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. Stream Crossing Risk Analysis Addendum. 6 April 2018. P. 5. P. 3168.

Given the potential for pollutant discharge at stream crossings, DEQ is requesting the engineering designs and technical support for each water quality BMP proposed for each stream crossing that PCGP proposes to identify in a future update to Table A.2-6 in Q4 2018. DEQ will not accept a qualitative description of a treatment practice in lieu of these engineering designs and their technical support. Even for a simple stormwater treatment control such as a grass swale, several design variables influence the performance of a grass swale. For example, a simple statement that PCGP will use a grass swale to treat the roadside ditch runoff prior to discharge to a stream provides DEQ no information regarding the pollutant removal performance for this swale.¹¹²

Further, DEQ adds:

PCGP provides none of the detailed information provided in the example above for how PCGP will manage and treat the stormwater discharge from slope breakers at stream crossings. Without additional information, PCGP is essentially asking DEQ to accept – without any engineering analysis or technical support – that the soils and vegetation in between the slope breaker’s discharge point and the stream will treat this stormwater discharge.

In the absence of this detailed information, DEQ can only assume that PCGP does not sufficiently treat the runoff from the permanent right-of-way at stream crossings once discharged from the slope breaker to the stream.¹¹³

Due to the inadequate information supplied by the applicants, particularly regarding stream crossing risk assessments and stream crossing BMPs, the applicants have failed to demonstrate that the turbidity standard will be met. Therefore, the Department must not approve the permit.

b. Horizontal Directional Drilling

Specific to crossings where HDD technology is proposed, there is also an increased risk of frac-out where a large release of sediment, bentonite clay, and drilling chemicals may occur. HDD technology is proposed for Coos Bay, the Coos River, the Rogue River, and the Klamath River. Bentonite clay is highly detrimental to salmon spawning habitat. In addition, the prior DEIS states that drilling mud “can include additional additives specific to each drilling operation” and “Pacific Connector would approve any additive compounds” but does not disclose what these additives might include.¹¹⁴ The State of Oregon has specifically requested a list of the additives used in drilling fluids and their potential effects on the aquatic environment.¹¹⁵

¹¹² Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 63.

¹¹³ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 67-68.

¹¹⁴ 2014 DEIS, *supra* note 73, at 4-387.

¹¹⁵ 2017 State of Oregon Scoping comments at 18.

The Oregon Department of Fish & Wildlife (“ODFW”) has described some of their concerns regarding frac-outs several times, first in 2008:

Between August and October of 2003, MasTec North America Inc. was cited by DEQ for a series of water-quality violations which occurred between August and October of 2003. The violations were a result of frac-outs during the horizontal drilling work for the construction of a natural gas pipeline under the North Fork of the Coquille River in Coos County. If similar frac-out related turbidity discharge impacts were to occur at the proposed Rogue River crossing, they would likely impact last known significant spawning habitat for Spring-run Chinook salmon in the Rogue River Basin. This EIS should include analysis of the potential environmental impacts of a frac-out related turbidity discharge due to the proposed action and alternatives.¹¹⁶

And again in 2015:

Pipeline crossings using HDD or other subsurface methodologies can be expected to cause frac-outs in Coos County geology and possibly throughout the project. The Applicant should be prepared for construction stoppages, cleanup, and remediation of damages caused by frac-outs.

HDD and other subsurface boring or drilling crossing design locations should proactively address the risks associated with the potential for a “Frac out” or inadvertent loss of drilling fluid...¹¹⁷

In the region, many HDD attempts along the 12-inch Coos County pipeline failed, resulting in frac-outs and release of sediment and bentonite clay into the Coquille River. More recently, the Rover LNG Pipeline in Ohio released 50,000 gallons of drilling fluid from HDD operation into a wetland in Richland County, Ohio in April 2017. A second spill as a result of HDD operation for the Rover Pipeline released an estimated 2 million gallons of drilling fluid into the Tuscarawas River.¹¹⁸

Due to the potential risk of frac-out and likely increase in turbidity as a result of all stream crossing methods, the applicants have failed to provide reasonable assurances that the project will not violate the numeric criteria for turbidity. Specific concerns regarding HDD crossings in each impacted waterway are discussed in Appendix A. Clean Water Act 401 Comments.

c. Removing Riparian Vegetation

Pipeline clearing and severe soil disturbance from excavation result in impacts similar to those from road construction. Roads undergo elevated erosion for years. In addition, the soil compaction from pipeline construction activities is likely to persist for decades, and even longer in soil with high clay content. Soil compaction contributes to elevated surface erosion potential

¹¹⁶ STATE OF OREGON, *Jordan Cove Draft Environmental Impact Statement* 24 (2008) hereinafter Oregon 2008 DEIS.

¹¹⁷ STATE OF OREGON, *Jordan Cove Draft Environmental Impact Statement* 102 (2015) hereinafter Oregon 2015 DEIS.

¹¹⁸ Letter from Buffy Thomason to Aaron Wolfe and Kurt Kollar, Ohio EPA. (April 17, 2017), <https://www.scribd.com/document/345647356/Notice-of-Violation-Rover-Pipeline-LLC>.

by degrading surface and subsurface hydrology in several ways, including hindering the ability of soils to absorb, store, and slowly release water, and increasing erosion and sediment delivery through surface runoff. The removal of ecologically important vegetation for pipeline construction and operation will also accelerate bank erosion and reduce bank stability at stream crossings, because trees and deep-rooted vegetation are critically important to bank stability. Decreased bank stability contributes to both stream sedimentation and channel widening.

DEQ raises concerns about removing riparian vegetation and potential violations of temperature standards in its 20 December 2018 letter, stating:

PCGP should identify all the impacts to riparian vegetation that PCGP did not consider in its August 31, 2017 draft Thermal Impact Assessment. PCGP should also account for the effects of all cleared areas (e.g., TEWA, parallel stream-pipeline alignment, etc.) that were not previously included in the thermal load analysis.¹¹⁹

d. Landslides

There are many areas along the pipeline route that include steep terrain and unstable land. The risk of landslides in these areas is high, particularly when disturbed by construction and other activities related to the project. A single landslide event could result in significant deposits of sediment into stream reaches, impacting fish habitat and water quality. Response and control of continued sediment deposition could be difficult and time consuming in remote areas of the pipeline route. These risks are exacerbated by wildfires, which leave soils exposed and without the complex structure necessary to withstand landslide events.

DEQ in its 20 December 2018 letter expressed significant concerns regarding potential increased landslide risk and resulting sediment pollution from the project, stating:

PCGP is proposing to clear ridgetops of trees and other vegetation in Tye Core Area, other locations with mapped landslide features, steep slopes, and slopes with soil that has a high erosion potential. PCGP is also proposing to level these ridgetops to install a gas pipeline. These activities dramatically alter the interception of rainfall from trees and the movement of stormwater on these ridgetops. These alterations will result in a substantial increase in stormwater generated on these ridgetops relative to their undisturbed condition. However, PCGP has not provided DEQ with specific information for how PCGP will manage the stormwater generated on these ridgetops supporting the permanent right-of-way.

As highlighted in references DEQ presented above, stormwater discharge has the potential to cause landslides. Landslides caused by stormwater discharge from pipeline construction activities and the operation of the permanent pipeline right-of-way have the potential to migrate into stream channels affecting water quality.¹²⁰

¹¹⁹ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove's October 8, 2018 Information Filing. P. 60.

¹²⁰ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove's October 8, 2018 Information Filing. P. 69.

The Department should fully evaluate the landslide risk associated with the project, particularly in relation to water quality and public health and safety. Specific concerns regarding landslide risk related to public health and safety are discussed in Chapter 8 *infra*.

e. Roads

The increased use of unpaved roads associated with the construction and operation of the pipeline will also elevate sediment delivery to streams, resulting in potentially significant violations of the State turbidity standard. Studies have consistently documented that elevated use of unpaved roads vastly elevates sediment delivery from roads to streams, particularly near and at stream crossings, where it is impossible to eliminate the delivery of sediment from road runoff.

U.S. EPA describes the impacts of roads as follows:

Stormwater discharges from logging roads, especially improperly constructed or maintained roads, may introduce significant amounts of sediment and other pollutants into surface waters and, consequently, cause a variety of water quality impacts. ... [S]ilviculture sources contributed to impairment of 19,444 miles of rivers and streams [nationwide]. ... forest roads can degrade aquatic ecosystems by increasing levels of fine sediment input to streams and by altering natural streamflow patterns. Forest road runoff from improperly designed or maintained forest roads can detrimentally affect stream health and aquatic habitat by increasing sediment delivery and stream turbidity. This can adversely affect the survival of dozens of sensitive aquatic biota (salmon, trout, other native fishes, amphibians and macroinvertebrates) where these species are located. Increased fine sediment deposition in streams and altered streamflows and channel morphology can result in increased adult and juvenile salmonid mortality where present (e.g., in the Northwest and parts of the East), a decrease in aquatic amphibian and invertebrate abundance or diversity, and decreased habitat complexity. The physical impacts of forest roads on streams, rivers, downstream water bodies and watershed integrity have been well documented but vary depending on site-specific factors. Improperly designed or maintained forest roads can affect watershed integrity through three primary mechanisms: they can intercept, concentrate, and divert water (Williams, 1999).¹²¹

The application is incomplete without complete and accurate maps of roads that will be constructed or improved for the project. Road construction is likely to cause turbidity impacts to wetlands, streams, and rivers throughout the 229-mile path of the PCGP, significantly increasing the number of impacted waterbodies beyond the 485 listed in the May 22, 2018 USACE and DEQ public notice.

The application inadequately addresses the turbidity impacts from road use, road modifications (including but not limited to Key Watersheds), temporary extra work area (“TEWA”) construction and temporary and permanent access roads. In order to use heavy equipment on these roads, significant road modifications will be necessary, including blading/grading,

¹²¹ EPA 2012. Notice of Intent To Revise Stormwater Regulations Federal Register. May 23, 2012.

widening, drainage improvements, and the construction of turnouts and roadside TEWAs. The application does not include detailed descriptions of what activities will be occurring that could cause turbidity impacts to wetlands, streams, and other waters. Rather, the application relies on blanket statements about the application of best management practices to avoid such impacts to streams.

By not specifying the location and nature of construction activities associated with all access roads, the application provides an inadequate description of the project. On steep slopes, particularly in rainy winter months, similar BMPs have failed in the past to prevent turbidity impacts to streams, creeks and ditches. Not only is road construction inadequately described, but the measures to prevent significant sedimentation and turbidity in streams are neither site-specific nor reliable. As a result, the Department lacks sufficient information to determine whether the proposed project will comply with State turbidity standards.

DEQ also expressed significant concerns regarding the increased new and existing road use proposed for the project. In its 20 December 2018 letter, DEQ states:

PCGP's qualitative analysis of compliance with water quality standards does not even list the more than 660 miles of access roads as a source of sediment. The scientific literatures clearly shows roads as a major source of sediment and soil erosion in forested watersheds. The scientific literature identifies road maintenance practices, road construction decisions, road construction and maintenance standards, road improvements, and decommissioning standards as key elements in protecting soil and water quality.¹²²

The increased use of unpaved roads associated with the construction and operation of the pipeline will also elevate sediment delivery to streams, impairing designated beneficial uses. Studies have consistently documented that elevated use of unpaved roads vastly elevates sediment delivery from roads to streams, particularly near and at stream crossings, where it is impossible to eliminate the delivery of sediment from road runoff.¹²³

3. Toxics OAR 340-041-0033(2)

By disturbing and re-suspending contaminated material in and around waters of the state, the proposed project will likely result in violations of Oregon's water quality standards for toxics. Toxic substances may not be introduced above natural background levels in concentrations that may be harmful to aquatic life.¹²⁴ Potential violations of the toxics standard and Clean Water Act Section 307 violations are discussed in detail in Appendix B. Clean Water Act 404 Comments.

¹²² Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove's October 8, 2018 Information Filing. P. 12.

¹²³ See e.g. Jim Doyle, Where the Water Meets the Road. Available at <http://web.archive.org/web/20070325061623/http://www.fsl.orst.edu/geowater/RRR/jim/aquahab/index.html>; Noss, Reed; The Ecological Effects of Roads. Available at <http://www.wildlandscpr.org/ecological-effects-roads>; Michael Derrig. Road Improvements for Watershed Restoration. Available at <http://www.fsl.orst.edu/geowater/PEP/calFed/derrig/indexhtml>.

¹²⁴ OAR 340-041-0033(1)

There is known contamination at the terminal site that, if disturbed as a result of project activities, could impact waters of the state. Both the Ingram Yard property and the location of the proposed South Dunes site on the former Weyerhaeuser North Bend Containerboard Mill are listed in the DEQ’s Environmental Cleanup Site Information (“ECSI”). The Ingram Yard property (ECSI 4704) was used for spreading contaminated materials from the late 1970s to 1994 and contains “low levels of potentially bioaccumulating chemicals and must not be placed in waters of the state.”¹²⁵ More recently, during construction of the Industrial Wastewater Pipeline by Jordan Cove, the contractor discovered black soils in March 2015 on the site. The results of the sampling confirmed that the black soil contained contaminants, including, but not limited to, mercury, arsenic, dioxins, and petroleum products.¹²⁶

In addition to known contamination at the terminal site, there is a significant potential for toxic contaminant disturbance and release at the proposed stream crossings. Many of the waterways that would be crossed by the pipeline are already impaired for toxic chemicals.

Proposed Stream Crossings Impaired for Priority Pollutants under Section 307¹²⁷

Watershed	Waterbody	Impaired for Priority Pollutants
Coos	Coos Bay	Lead, nickel, zinc, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), copper
Coquille	Middle Creek	Cadmium, chromium, copper, barium, arsenic, antimony, nickel, selenium, silver, thallium, and zinc
Umpqua	Olalla Creek	Antimony, arsenic, cadmium, copper, iron, lead, nickel, selenium, and silver
Umpqua	South Umpqua River	Arsenic, cadmium, copper, lead, nickel, selenium, silver, thallium, and zinc
Rogue	Little Butte Creek	Lead, nickel, selenium, silver, zinc
Rogue	Upper Rogue River	Selenium, silver, zinc, nickel, mercury, lead, copper, chromium, cadmium
Klamath	Klamath River	Arsenic, cadmium, toxics, copper, lead, nickel, selenium, silver, and zinc

For example, the proposed pipeline would cross the Klamath River, Hwy 97 and Southern Pacific Railroad, just after wrapping around a 660-acre industrial facility with known contamination. A frac-out during the HDD under the Klamath River would likely impact the riverbed immediately adjacent to the contaminated facility, exposing riverine sediment that could contain high levels of arsenic, chromium, copper, mercury, polycyclic aromatic hydrocarbons and/or petroleum from the Weyerhaeuser site or from other industrial facilities upstream. Additionally, the Klamath River is already listed as water quality impaired for toxics.¹²⁸ The 2014 DEIS and application do not include studies or test cores of potential contaminants at this HDD crossing. Further, the 2014 DEIS includes no discussion of what efforts, if any, would be made to analyze toxicity or properly dispose of fill removed through the HDD. The Department must require additional information from the applicants to identify and analyze the potential for

¹²⁵ Weyerhaeuser – Ingram Yard. Environmental Cleanup Site Information Database, OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY (Nov. 11, 2007) hereinafter Weyerhaeuser. <http://www.deq.state.or.us/Webdocs/Forms/Output/FPController.ashx?SourceId=4704&SourceIdType=11>.

¹²⁶ Black Soil Summary Report, *supra* note 123, at 2.

¹²⁷ Oregon DEQ, Oregon’s 2012 Integrated Report Assessment Database and 303(d), <https://www.deq.state.or.us/wq/assessment/rpt2012/search.asp>.

¹²⁸ *Id.*

contamination at the Klamath River crossing site and other sites where appropriate, in violation of Oregon’s standard for toxics.

Based on the presence of these pollutants, the numerous waterbodies listed as impaired for these pollutants, and the potential that the pollutants would be discharged into waters of the United States as a result of the proposed activities, the applicants have not provided reasonable assurances that the proposed project will not violate the toxics standard and therefore, the Department must deny the permit.

4. Dissolved Oxygen (OAR 340-041-0016)

OAR 340-041-0016 sets out the State’s water quality standard for Dissolved Oxygen (“DO”). DO is essential for maintaining aquatic life. Depletion of DO in waterways is a significant pollution problem, affecting fish and aquatic species in a variety of ways at different life stages and life processes. DO levels can be influenced by several factors including pH changes, temperature increases, groundwater inflow and hyporheic exchange, decaying material or algae blooms, and sedimentation. Construction dredging lowers DO levels in estuarine waters both by re-suspending sediment and by deepening an estuarine channel where hypoxic conditions can occur due to reduced circulation in deeper waters.

The proposed action involves dredging that will decrease DO in Coos Bay. Dredging increases the oxygen demand by disturbing sediments and releasing oxygen-demanding materials (decomposing organic materials contained within the sediments). In its 2008 DEIS comments, Oregon DEQ previously expressed strong concerns about lowered DO levels that resuspension of sediments during dredging activities would cause:

Total organic carbon, acid volatile sulfides, and nutrient sampling should be conducted to quantify the potential for adverse impact to oxygen levels caused by resuspension of sediments during dredging activities. Impacts should then be evaluated utilizing hydro dynamic modeling which can capture real time tidal conditions and simulate real time tidal exchanges during the period of the project.¹²⁹

Once the dredging is completed, there also is the potential for reduced circulation in the deeper portions of the approach channel. In combination with other factors, reduced circulation has the potential to result in lower DO levels in the deeper waters. The applicants must demonstrate that actual hydrodynamic conditions in Coos Bay would not result in a 0.1 mg/L decrease in DO levels caused by reduced circulation in the deeper channel.¹³⁰

5. Conditions deleterious to aquatic life OAR 340-041-0007(10)

The project would also create many conditions that are deleterious to fish and/or other aquatic life that may not be allowed under OAR 340-041-0007(10). The construction and operation of the terminal and pipeline will cause immediate, severe, deleterious impacts to salmon, critical habitat, and essential fish habitat. The impacts to aquatic life, particularly threatened and endangered species, are discussed in more detail in Chapter 4(3) *infra*. In general, the proposed

¹²⁹ Oregon 2008 DEIS, *supra* note 95, at 63.

¹³⁰ OAR 340-041-0016.

project would likely create many conditions that are deleterious to fish and/or other aquatic life that are not allowed by this narrative water quality standard, including to Coho salmon (*Oncorhynchus kisutch*), green sturgeon (*Acipenser medirostris*) and eulachon (*Thaleichthys pacificus*). Dredging millions of cubic yards of material from the Coos Bay estuary in salmon habitat and expansive wetland fill creates a condition deleterious to fish due to permanent loss of habitat.

Benthic organisms that are vital to the aquatic ecology of Coos Bay reside in high-quality, intertidal land that would be permanently altered by the proposed action. Dredging in Coos Bay would also degrade the habitat of the native mud shrimp. The shrimp are especially sensitive to the kind of disturbance caused by installing the pipeline through the bay. Mud shrimp are already impacted by an introduced parasitic isopod called *Orthonoe griffenis*.¹³¹ Mud shrimp are filter feeders and filter as much as 80 percent of bay water every day.¹³² As a result, degrading habitat for mud shrimp could further trigger reduced water quality in Coos Bay.

The LNG terminal and the tankers would likely harm marine mammals due to habitat destruction and vessel strikes. The Department must assess the impact of these strikes to individuals and populations. The Department should require additional information from the applicants to fully review the tanker route to Jordan Cove and the tanker routes in the Exclusive Economic Zone.

In addition, Jordan Cove would likely introduce or allow the proliferation of invasive species to Coos Bay, the terminal site, and along the pipeline route. First, ships from foreign ports transport exotic species on multiple surfaces and in water releases from ballast or engine cooling water. These species may harm the aquatic ecosystem. Second, the removal of vegetation, along with other long-term disturbances at the site, would allow the introduction and proliferation of exotic species, which would harm native ecosystems and may require herbicides and pesticides to manage. Third, exotic species that harm native ecosystems, forestland, and farmland would thrive in the large swath of clearing and ground disturbance across Oregon due to the pipeline. These impacts would significantly affect fish, wildlife, and special aquatic sites. The Department must determine whether the direct, indirect, and cumulative impacts of exotic and invasive species from the construction of the LNG terminal and related facilities will result in conditions deleterious to aquatic life that violate this State narrative water quality standard.

6. Biocriteria Standard (OAR 340-041-0011)

Oregon's Biocriteria standard is intended to assess the total impact to a biological community, including multiple stressors and cumulative effects. OAR 340-041-0011 provides that "Waters of the State shall be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities." DEQ's regulations define "without changes in the resident biological community" to mean "no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region."¹³³ "Ecological integrity" means "the summation of chemical, physical and biological integrity capable of supporting and maintaining

¹³¹ Jolene Guzman, *Invader Kills Off Mud Shrimp*, THE WORLD (February 27, 2009), https://theworldlink.com/news/local/invader-kills-off-mud-shrimp/article_fa08c2d9-47e9-5cb6-83d3-6bad07ec3bdf.html hereinafter Guzman 2009.

¹³² Eric Wagner, *Mud Shrimp Meets Invasive Parasite, High Drama for Northwest Estuaries* (2006), available at http://depts.washington.edu/nwst/issues/index.php?issueID=winter_2006&storyID=782 hereinafter Wagner, 2006..

¹³³ OAR 340-041-0002.

a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat for the region.”¹³⁴ In this way, the Biocriteria standard complements the other parameter-specific water quality standards.

While the applicant suggests that all impacts would be temporary and localized, the significant re-shaping of Coos Bay and at least 485 waterway crossings from the pipeline, together with ongoing operations and related discharges, would result in permanent and/or chronic detrimental changes in the resident biological communities. The proposed activities would likely cause negative impacts that do not comply with the Biocriteria standard, including but not limited to:

- Permanent loss of vegetative shading at corridors for pipeline stream crossings construction and operation;
- Permanent loss of base flows from pipeline;
- Stream width increases from sedimentation related to pipeline construction and operation;
- Soil, vegetation, bank destabilization and increased sedimentation from pipeline construction and implementation;
- Permanent degradation of riparian areas in pipeline corridors at stream crossings;
- Permanent loss of Large Wooded Debris areas from degradation of riparian areas and increased sediment transport in stream and river channels;
- Deforestation in pipeline corridors combined with wetlands damage, long-term soil compaction, and new road creation and use, plus decreases in hydrologic connectivity due to all of the above; and
- Increased, prolonged sedimentation of waterways.

D. Conclusions

The project would do immense damage to water quality in Oregon, and it is not consistent with the protection, conservation and best use of the water resources of this state. The proposed project will threaten drinking water supplies and fish habitat. It will also likely cause significant temperature increases in numerous stream segments, as well as significant decreases in dissolved oxygen levels in Coos Bay. Moreover, it will likely further degrade stream segments that are already water quality impaired for temperature, dissolved oxygen, pH, turbidity, mercury, and sedimentation. The proposed project would also likely violate Oregon's water quality standard for turbidity by causing a more than 10% increase in natural turbidity levels in Coos Bay and stream segments impacted by pipeline installations. Construction of the pipeline and dredging of Coos Bay would be likely to violate Oregon's numeric criteria for dissolved oxygen. The proposed project would also likely violate Oregon's toxics standard by disturbing and re-suspending contaminated material in and around waters of the state. Because the applicants have not demonstrated that the state's waters' will be protected, the Department must deny the permit because the project is not consistent with the protection and conservation of Oregon's waters under ORS 196.825(1)(a).

Chapter 5. INTERFERENCE WITH NAVIGATION, FISHING, AND PUBLIC RECREATION

¹³⁴ OAR 340-041-0002.

5.1 DSL must deny the permit because the application fails to provide reasonable assurance that the project will not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation... (ORS 196.825(1)(b)).

A. Introduction

According to the statute, and as explained clearly in the recent *Wal-Mart* decision, the Director must conduct a weighing of costs and benefits of, on the one hand, the project public benefits; and on the other, interference with the factors including navigation, fishing, and public recreation. The legislature has put a thumb on the scales in favor of the “paramount policy” to preserve Oregon waters for navigation, fishing, and public recreation. ORS 196.825(1)(b)). The impacted waterways are public resources. Commenters here, which represent thousands of citizens, consider this project’s interference with navigation, fishing and recreation to be unreasonable and the balance tilts strongly in favor of denying the permit.

B. The Project Unreasonably Interferes with Navigation

1. Coos Estuary is important for Navigation

Coos Bay, with its international port, several large and small docks, and unique location on the Pacific Ocean, is important for maritime navigation. According to the application:

Coos Bay is the second largest estuary in Oregon and is used by deep-draft commercial ships and barges, a commercial fishing fleet, and recreational boats. The FNC adjacent to the LNG Terminal site, which is maintained by the U.S. Army Corps of Engineers (USACE), is generally 300 feet wide and currently has a navigational depth of -37 Mean Lower Low Water (MLLW). Annual commercial ship traffic into and out of the Oregon International Port of Coos Bay (the “Port”) has declined in recent years from a high of 310 deep-draft vessel calls at the Port in 1988 to 52 in 2016. The Port is also visited, by conservative estimates, by 50 tug/barge units per year, with 14 tug/barge units requesting pilotage during 2016 as per data from the Coos Bay Pilots Association.¹³⁵

Additionally, the applicants state:

Loaded LNG carriers departing the LNG facility could have a sailing draft approaching or exceeding the current channel navigation depth of -37 MLLW, thus requiring the use of tidal advantage and associated scheduled departure (i.e., loaded vessels would need to transit at slack high tide). As a LNG carrier is in transit through the bay, USCG will impose a moving safety/security zone of 500 yards around the carrier or up to the shoreline, whichever is less. Current USCG law restricts all recreation activities from within the Coos Bay FNC during all marine vessel transits. Recreational crabbing within the bay, which also typically occurs at slack high tide throughout the year, may be further limit access to crabbing areas within the safety/security zone, in two areas of the lower bay. The two areas are located immediately north of Charleston Marina and along the northwest side of the bay from approximately RM 2.5 to RM 5. Crab pots or traps placed

¹³⁵ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. [§(4)1.]

outside of the FNC could feasibly be deployed prior to and remain during LNG carrier transit and subsequently retrieved following vessel safety zone passing. JCEP estimates that it will take an LNG carrier approximately 90 minutes to make the full transit of the waterway from the Coos Bay jetty entrance to the LNG Terminal at speeds between 4 and 6 knots. The maximum period for an LNG carrier to pass through the safety and security zone would be 30 minutes, meaning recreational crabbers would not have access to their pots or traps for up to 30 minutes, but the pots or traps would be “soaking” during this time. The sum of the periods in which LNG carriers would have a potential impact on recreational and other boating activity is about 7 hours per week or about 8 percent of all daylight hours (see Appendix C.5 to Resource Report 5).

Once navigation safety stakeholders gain experience and familiarization with the transit (after the first few months), the USCG will allow LNG carrier transits to occur on a 24-hour basis. This will allow night transit, which will lessen potential impacts on recreational and commercial fishermen to about 4 percent of all hours when LNG carriers can potentially transit LNG carrier transits will be prioritized during nighttime hours to reduce the impact of the moving safety/security zone on recreational and commercial fishing activities in the bay. The USCG and Oregon State Marine Board will continue to remind boaters of their obligation not to impede the safe transit of deep-draft ships, regardless of the cargo.¹³⁶

a. Applicable Maritime Law

We are concerned that the applicants assert the presumption that the Coast Guard “will allow night transit” after “navigation safety stakeholders gain experience,” but do not appear to provide any law or policy to support this assertion. In fact, the Coast Guard has specifically restricted LNG operations to daylight hours, in their 2018 Letter of Recommendation.¹³⁷ If night-time transits become the priority, then that presents a whole new set of risks and issues that would need to be considered, and have not been adequately addressed by the applicants. The Department should consider impacts particularly to smaller vessels.

b. The USCG Letter of Recommendation (“LOR”)

Critically, the Coast Guard’s LOR serves as comments of the Coast Guard in a NEPA process. The State’s perspective here is likely different from the Coast Guard, and while the views in the LOR are certainly persuasive and important, they are only the beginning of the analysis for the State.

It would be premature for the Department to rely upon the LOR because the draft EIS under NEPA has not yet been prepared for the project. Even for those items where there is authority and the requirements are foreseeable, the LOR generally asserts the *applicant* is “expected to

¹³⁶ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. [Part 1, (4)3. , Insert page number of document]. [Insert page number in actual PDF].

¹³⁷ USCG June 1, 2018, Letter of Recommendation for the Jordan Cove LNG Project (including attached May 10, 2018 LOR; 2018 LOR Analysis; April 24, 2009 LOR; and 2008 Waterway Suitability Report).

examine the feasibility of implementing such mitigation measures” in consultation with others.¹³⁸ The Department should not rely on such speculative mitigation measures in its analysis to ensure that the removal-fill mandates regarding protection of navigation, protection of health and safety, and implementation of full mitigation are fulfilled.

As indicated in paragraph 2 of the LOR itself, it appears that the Coast Guard assumed that the applicant is capable of doing everything it hopes to do, that actual conditions at the port are perfectly described, and that the applicant will fully meet all regulatory requirements. The Coast Guard recommendation is “contingent” on the perfect application of everything in the WSA.¹³⁹ The Department should do its own analysis of impacts to navigation, in consultation with the Coast Guard.

Additionally, Coos Bay is subject to a pilotage requirement, illustrating the challenging nature of navigation at the port. There are only two pilots in Coos Bay. They have never piloted LNG tankers before, and currently only handle a load of fifty vessels per year. Further, the LOR also reveals that the Coast Guard itself will be playing a very minimal role, reflecting its limited capacity here. The Captain of the Port is far distant in Portland. The LOR states the Coast Guard will not require any safety inspections for visiting vessels beyond the minimum required.¹⁴⁰

To address emergency response, the applicants claim to have established an “emergency response planning group” that is tasked with education and preparedness for the facility. *See* USCG 2018 LOR p.2 ¶10. Despite efforts to do so, Commenters have been unable to take part in this group. This process does not appear to be part of any official prevention, preparedness and response under the National Response Framework or National Contingency Plan. Further, the Limited access areas for this project have yet to be established.¹⁴¹ This has hindered meaningful public engagement regarding impacts to navigation.

c. Recent Changes to Vessel Size

According to the application following recent simulations, the Coast Guard has deemed that the channel is suitable for LNG carriers up to 299.9 length, 49 meters breadth, and 11.9 draft. This is a reduction in all three parameters.¹⁴² This change has important implications for DSL’s review here.

First, it suggests that the application is premature and incomplete. When these types of fundamental parameters are still being changed, neither the Department nor the public can fully review the impacts of the project. The application should be considered incomplete without the expected Coast Guard clarification, and full disclosure of the cited internal report: JCEP, KSEAS, and Amergent Techs, 2017 Waterway Suitability Assessment Review JCLNG Doc

¹³⁸ USCG June 1, 2018, Letter of Recommendation for the Jordan Cove LNG Project (including attached May 10, 2018 LOR; 2018 LOR Analysis; April 24, 2009 LOR; and 2008 Waterway Suitability Report).p.2.

¹³⁹ USCG June 1, 2018, Letter of Recommendation for the Jordan Cove LNG Project (including attached May 10, 2018 LOR; 2018 LOR Analysis; April 24, 2009 LOR; and 2008 Waterway Suitability Report).at 6, ¶11.

¹⁴⁰ USCG June 1, 2018, Letter of Recommendation for the Jordan Cove LNG Project (including attached May 10, 2018 LOR; 2018 LOR Analysis; April 24, 2009 LOR; and 2008 Waterway Suitability Report).p.2.

¹⁴¹ *Id.* p.2 ¶3.

¹⁴² Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. [Part 1(5)], [pdf p.19].

Control #J1-000-MAR-RPT-KSE-00008-00. This analysis should be released for public review and must be considered by the Department.

Second, the applicants provide a 2017 reference (JCEP, KSEAS, and Amergent Techs, 2017 Waterway Suitability Assessment Review JCLNG Doc Control #J1-000-MAR-RPT-KSE-00008-00) that cannot adequately explain the 2018 changes, which appear to include additional studies and different conclusions. This analysis and these changes are critical information to the removal-fill application.

Third, the new information raises questions about the project purpose and effects. The application says that its design parameters included an “average 36 ft draft for an average” 135,000 m³ LNG carrier. Part 1§(5). While the mean draft of a subset of LNG vessel isn’t a relevant consideration,¹⁴³ assuming these are typical vessel drafts, the application presents mathematical challenges. Translating the given 36 feet back into its metric measure (10.9728 meters) then applying the 10% underkeel clearance required by the Coast Guard (1.09728 m.), we arrive at 12.07 meters, which is over the just-stated maximum of 11.9 meters, and at 39 ½ ft., which is more than the actual 37 ft. channel depth.

The Department should require additional information to clarify the changes to vessel size and inform its analysis of whether the currently proposed vessel sizes would safely navigate the channel.

d. Shipping Descriptions in Application

According to the application, the NRI dredging would not change allowable vessel dimensions, but would allow navigation of the FNC at higher windspeeds. The application says that, according to JCEP modeling, the navigation reliability improvements would increase the volume of LNG that is shipped by about 38,000 tonnes/ year.¹⁴⁴

The Coast Guard has said that LNG shipping can only be done safely at high slack tide during daylight.¹⁴⁵ The application, however, asserts that the Coast Guard will allow transit at night, and furthermore asserts that “LNG carrier transits will be *prioritized* during nighttime hours to reduce the impact of the moving safety/security zone on recreational and commercial fishing activities in the bay.”¹⁴⁶ We are concerned that the applicants appear to propose shipping practices that are not aligned with Coast Guard recommendations.

e. Navigational Servitude Assessment

The applicant has provided a new technical memorandum as Attachment A.5, dated September 18, 2018, evaluating the dredge and fill construction and maintenance activity impacts on navigation in the estuary. The following are specific comments regarding this memorandum.

¹⁴³ What we are concerned with here are typical and maximum drafts.

¹⁴⁴ citing Schisler, V. 2015. LNG Carrier Transit and Maneuvering Simulation Report. Vallejo, CA, JCLNG Doc Control # J1-000-MAR-RPT-KSE-00003-00.)

¹⁴⁵ See USCG June 1, 2018 Letter of Recommendation packet, including May 10, 2018 LOR; June 1, 2018 Analysis in Support; April 2009 LOR, and 2008 Waterway Suitability Report.

¹⁴⁶ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. []. [pdf p.10].

Case law such as *Coos Waterkeeper* notwithstanding, the analysis is flawed in that it fails to address actual operation of the project, either as part of “the project” or by being aware of the reasonably foreseeable indirect impacts. The significant difference the dredging here makes for navigation in Coos Bay is primarily that it introduces a whole new sort of user (LNG tankers) that are more complex and hazardous than other forms of commercial navigation.

The effects of operation should be considered by the Department because the application raises those effects on operation as the core purpose of the channel dredging.

The standards used by the applicants in their memo are:

- Construction and/or maintenance dredging activities may not create navigational constraints to the existing commercial operations in the FNC of Coos Bay, some accommodations may be required during construction but the safe passage of vessels may not be impeded.
- Construction and/or maintenance dredging activities may not impact the US Coast Guard’s (USCG) functionality or operation within Coos Bay,
- Construction and/or maintenance dredging activities may not impact the USACE’s ability to maintain the existing FNC.¹⁴⁷

First, the applicants do not specifically address applicable law regarding navigation. The applicants should clearly state the relevant legal standards.

Additionally, the applicants assert the dredging won’t interfere with the FNC use by large vessels. The Department should question this assertion because dredging will be located immediately adjacent to the channel and dredge plans involving cables crossing the whole channel are proposed. While large vessels may be able to routinely navigate around active dredging, this adds an additional hazard and strain on resources that should be comprehensively assessed. Accommodations for smaller vessels are burdensome for mariners, especially recreational users and commercial fishers.

The proposed dredging will require additional maintenance dredging outside of annual timing windows, with adverse impacts to water quality and fish species (*see* Chapter 4 *infra*). While the Corps may conduct maintenance dredging year-round, the applicants are limited to annual work windows. This may push Corps dredging outside of work windows and increase impact to fish and state waters.

Of most concern, the applicants’ analysis found no potential concerns for navigation:

Construction and maintenance of the JCEP Project does not present navigational servitude concerns that cannot be effectively eliminated or managed through coordinated design, implementation of typical industry construction practices, and communication during construction.

¹⁴⁷ Department of State Lands APP0060697. 7 November 2018, Part 1 Appendix A.5 @pg.4.

Dredging within and adjacent to waterways is common practice. The proposed dredging activities do not include means and methods, or operations, which would create conflicts with navigational servitude that are unique or problematic to the industry or this area. Navigational servitude and safety on the project will be insured through typical practices including:

- Implementation and oversight of regulations and requirements related to navigational servitude and safety
- Implementation of an approved communications and coordination plan including the Pilots, USCG, USACE, OIPCB, and waterway users to help insure navigational servitude and safety
- Appropriate marking and lighting of all dredge plants and equipment
- Movement and/or location of dredge equipment to provide for safe vessel passage
- Appropriate location and management of temporary dredge lines and unloading facilities.¹⁴⁸

Here, the applicants assert that safety is ensured through “Implementation and oversight of regulations and requirements related to navigational servitude and safety.”¹⁴⁹ However, the application fails to identify any specific regulations or requirements. Additionally, it is not clear what “communications and coordination plan” exists between the Pilots, USCG, USACE, OIPCB, and waterway users. Although rules and regulations exist regarding “appropriate marking and lighting” of dredge plants and equipment, the Department should carefully evaluate potential risks. Further, the applicants have failed to provide a site-specific analysis of “Movement and/or location of dredge equipment to provide for safe vessel passage” or “Appropriate location and management of temporary dredge lines and unloading facilities.”¹⁵⁰ It is likely that under normal dredging operations, (1) small vessels would have to make way and adjust their operations to avoid interference with the dredge (in effect, the dredge would occupy part of the channel, making it unavailable for navigation by others) and (2) when larger ships pass through the FNC, the dredge would be required to make specific maneuvers to move anchoring lines and dredge lines out of the way to allow safe passage. These situations rely upon placing the burden on other mariners to curtail and adjust their navigation of the estuary and assuming that the dredge will be able to safely maneuver out of the way to allow uninterrupted use of the FNC.

i. Vessel Casualties

As with any major marine endeavor, this proposal in the Coos Bay estuary poses a risk of vessel casualties. Casualties occur for a large variety of reasons.¹⁵¹ For example, the interplay with recreational users is especially important.¹⁵² On August 30, 2016, three kayakers were injured when a ferry collided with their group in the Hudson River, highlighting the dangers of

¹⁴⁸ Department of State Lands APP0060697. 7 November 2018. Appendix A.5, (Gerken 2018) @ pg.14.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ See e.g. NTSB Safer Seas Digest 2017, Lessons Learned from Marine Accident Investigations. Available online at: <https://www.nts.gov/investigations/AccidentReports/Reports/SPC1802.pdf>

¹⁵² See e.g. NTSB Safety Recommendation Board, Safety Recommendation Report *Shared Waterways: Safety of Recreational and Commercial Vessels in the Marine Transportation System*. MSR-17/01. Available online at: <https://www.nts.gov/investigations/AccidentReports/Reports/MSR1701.pdf>.

recreational and commercial vessels operating on the same waterways. This led to a major effort by NTSB, which found that the most critical safety factor was cooperation between recreational and commercial users at established ports.¹⁵³ The Department should comprehensively evaluate whether this type of cooperation has occurred for the project.

3. NRI Dredging Impacts to Shipping

a. Applicants Fail to Demonstrate Public Benefits to Navigation from NRI Dredging

The applicants have not demonstrated that the NRI dredging will meaningfully improve navigation conditions for any vessels other than the LNG tankers proposed by the applicants. The application includes two letters of support from the Coos Bay Pilots Association and Roseburg Forest Products that provide no independent analysis and rely heavily upon information from the applicants. The Department should consider the direct, personal, and financial interests at stake in reviewing these letters. The improvements here are a response to a private need for channel dredging, not a public one. When security zones for additional use by LNG tankers is taken into account, it is likely that the public will routinely be prohibited from the area by operation of law.

Further, the applicants fail to demonstrate the independent utility of the project (*see* Chapter 6 *infra*).

b. Safety Margins from NRI Dredging

It is not clear that dredging the deeper channel wider at the turns will increase safety margins for pilots transiting the channel in LNG tankers. Pilots will make crossings using the same margins of safety as before; the difference is that those margins could be achieved in higher wind conditions than before. So while the turns are wider, they will be taken at higher wind speeds, resulting in the same margin of safety from the pilot's perspective. The Department should evaluate whether allowing bar crossings by LNG vessels under windier conditions would result in safer navigation.

Inherent in the purpose of the project, however, is that the proposed dredging will result in new and extensive LNG tanker traffic. The precise locations and extent of NRI and channel dredging in the Coos Bay estuary has immediate and direct implications for shipping safety. Vessel routing from the open ocean over the bar, up the estuary to the marine slip is a hazardous maneuver that impairs navigation for all other users under the best circumstances. The route itself contains numerous important turns and components, and there is very little room for error. The entrance and first river bend, as well as the entrance to the marine slip, are both precise maneuvers.

For example, at the first proposed NRI, after a ship makes a 95-degree turn, it must center itself in the channel to make a 21-degree starboard turn into the Coos Bay Range, and do that within a distance of about two ship lengths, "which is much less than the minimum of 5.0 ship lengths recommended by normal industry guidance (USACE EM 1110-2-1613, chapter 8-2). The

¹⁵³ NTSB 2017 @ p.81. ("Cooperation is needed because shared waterway safety issues are a function of geography, vessel types, predominant weather, and other local factors. Local stakeholders working cooperatively are in the best position to address local issues through mutual respect and a shared commitment to safety.")

dredging proposed here would widen the inside range channel from 300 to 450 feet, lengthening the corner cutoff from 850 feet to 1,400 feet from the turn’s apex. This expansion will still require vessels to make their turns in a shorter distance than normal industry guidance.

Additional safety concerns include:

i. Waterway Conditions

Waterway conditions adjacent to the facility, and along the shipping route, make the introduction of LNG tankers hazardous. *See* JCEP 2007 WSA; USCG 2018 LORA. The bay is subject to currents, tides and winds under normal conditions.

ii. Timing Restrictions

The bar channel is another hazard that is particularly significant. In fact, tankers only propose to cross it and the LOR only applies when it is crossed at slack high tides during daylight. This limitation, combined with security measures (like the 500-yard exclusion zone, *see* USCG July 1, 2008 WSR) specific to tankers combined with ordinary navigation rules creates specific harm to navigation. With only 120 vessel calls per year, that means LNG tankers will rely on using 240 out of the 365 available daylight high tides in the year. Having claimed the safest crossing times for themselves, all remaining vessels will have to use the remaining 115 available daylight slack high tides. If there are fifty other vessels, such as tank barges or export ships, using the port in a year, then it is likely that other mariners will no longer be able to use the safest bar crossing time at all. Outgoing vessels would have to hold up just inside the bar while the LNG ship passes, or leave earlier under time pressure. Both of these situations are likely to increase safety risks to vessels and directly impair navigation.

Relying on the high slack tides raises another concern for navigation by creating potential bottlenecks. Ships will have to time their entrance precisely on a chance that only comes once a day. This situation greatly increases the chances of LNG ships having to hold up offshore. According to current guidance, which recognizes the hazard posed by waiting tank vessels along this navigation route and unprotected coastline, vessels holding up are directed to stay fifty nm from shore. There is no suitable anchorage for large vessels near shore, and certainly none well off the continental shelf. That means that if a bar crossing is missed for any reason, it adds a roughly 100 nm to the journey at a hazardous location where vessels will burn additional fuel and increase the chances for accidents to happen.

The 2008 Waterway Suitability Report, issued July 1, 2008 by the Coast Guard, contains numerous risk mitigation measures that are required, as well as numerous resource gaps. These restrictions, particularly those related to navigation, should be carefully weighed in evaluating impacts to navigation. Critically, decisions on almost all of those mitigation measures remain to be made, and cannot be known in time for the decision. Draft requirements, safety/security zones and the vessel traffic management measures peculiar to LNG traffic are especially important. In addition to the numerous *operational* measures (e.g. meetings of port, FBI, coast guard and escort tugs in advance of every vessel arrival; VTIS installation; tractor tugs; navigational aids; and training; USCG facilities; fire-fighting; notification; gas detection) that have yet to be developed, there are *fundamental* decisions regarding facility siting, purpose, alternatives and mitigation that impact directly on the purpose, need, and consequences of “the project” under the DSL dredge and fill rules.

iii. Shipwrecks

The applicants should fully identify shipwrecks and possible human remains in and near the navigation channel. We are concerned that historic wrecks are not adequately surveyed for and identified by the applicants.

c. Interference with Public Access

The availability of public boat ramps is an essential to use of waterways for navigation and for recreation. Smaller vessels like fishing vessels, kayaks, and river rafts rely on access to these areas.

While the issue is not addressed by the applicants, the location of the project will likely interfere with a number of different boat ramps. For example, the BLM boat ramp on the Coos Bay estuary is only 0.75 miles from the proposed JCEP. This is the only public marine access on that side of the estuary and would be closed during project construction. It is uncertain whether long-term access would be restored. The proposed South Umpqua River crossing also is located right at a public boat ramp.

The application does not appear to address effects to boat ramps at all. The Department should require the applicants to address effects to boat ramps before analyzing this application.

3. Navigation on Inland Rivers

The navigation uses on the inland rivers here also are significant. The Department should comprehensively evaluate impacts to river users along all waterways impacted by the project, such as the Rogue. At each of the major river crossings, operations would likely disturb recreational rafters, kayakers, and sport fishers. At times, navigation will be impaired completely. The application does not appear to include any kind of mitigation to facilitate portage around construction. At minimum, the Department should require the applicants to provide assurance that recreational boaters would be able to freely navigate all of the rivers and streams. Further, as discussed in Chapter 4 *infra*, pollution and similar disturbance from work on smaller streams also would impair use of the rivers and streams for recreational fishing.

5.2 DSL must deny the permit because the application fails to provide reasonable assurance that the project will not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for fishing (ORS 196.825(1)(b)).

A. Introduction

1. Coos Bay

The natural environment of the Coos estuary is habitat for a diversity of plants and animals. The extensive shallow tidal flats provide habitat for shellfish as well as feeding and spawning habitat for many native fish. The Coos Bay supports a variety of beneficial uses as designated in the

South Coast Basin as a whole.¹⁵⁴ These include fish and aquatic life, wildlife & hunting, fishing, boating, water contact recreation, aesthetic quality, and commercial navigation & transportation. According to Resource Report 3 for the Jordan Cove LNG terminal, there are nine representative anadromous fish species in the terminal project area: Chinook salmon, chum salmon, coho salmon, Pacific lamprey, green sturgeon, steelhead trout, striped bass, threespine stickleback, and white sturgeon.¹⁵⁵ Federally listed Oregon Coast coho and Southern Oregon/Northern California Coast under the Endangered Species Act (ESA) are both present in the project area. The 2014 DEIS noted that submerged aquatic vegetation (including eelgrass, macrophytic algae) as well as other food web components such as phytoplankton, zooplankton, detritus, and epiphyton, are all important in supplying habitat and food base for EFH species within Coos Bay.¹⁵⁶

Historically, Native Olympic oysters were abundant in the Coos estuary, but became locally extinct as a result of basin-wide changes in sedimentation. The Coos Bay aquatic habitat has been degraded by cumulative effects of sedimentation, bark decay, dredging, diking, filling, domestic and industrial pollution and by colonization of non-indigenous aquatic species. Despite this habitat degradation, over the past two decades, water column and sediment have improved to a level that is conducive to recovery and re establishment of *O. conchaphila* in the low intertidal and shallow subtidal zones of the Coos estuary.

A 2008 SEACOR (Shellfish and Estuarine Assessment of Coastal Oregon) study conducted by Marine Resources Program of ODFW sampled three areas in the Coos Bay estuary for clam species and distribution. Areas sampled include Clam Island, Pigeon Point, and South Slough. Butter clams were found in high densities in Coos Bay, particularly in areas with high sand bars and little algae. Cockle clam populations were considerably lower than butter clams and were found near the surface in areas with oxygenated sediment and abundant algae. Gaper clams were abundant in low tidal areas with eelgrass (*zostera marina*). Native littleneck clams were found infrequently and were present in low tide areas with eelgrass and oxygenated sediments. A significant portion of the Coos estuary bottom is covered in beds of eelgrass (both native *Zostera marina*, and the introduced *Zostera japonica*). Eelgrass beds, along with deeper tidal channels in the estuary, provide habitat to a number of fish and invertebrate species including juvenile crab, juvenile ling cod, salmonids, starry flounder, and English sole. Eelgrass also provides attachment area for algae, planktonic larvae, and snails.

The 2014 DEIS noted that submerged aquatic vegetation (including eelgrass, macrophytic algae) as well as other food web components such as phytoplankton, zooplankton, detritus, and epiphyton, are all important in supplying habitat and food base for EFH species within Coos Bay.

For example, submerged grasses or SAV are important habitat for small prey species of adult lingcod (in Appendix B-2 of PFMC 2008). Forage items that are habitat components for the managed species do depend to some extent on estuarine systems. Many species of groundfish

¹⁵⁴ See Table 300A (OAR 340-041-0300).

¹⁵⁵ According to Resource Report 3 for the Jordan Cove LNG terminal, there are nine representative anadromous fish species in the terminal project area: Chinook salmon, chum salmon, coho salmon, Pacific lamprey, green sturgeon, steelhead trout, striped bass, threespine stickleback, and white sturgeon (RR3 at 2). Federally listed Oregon Coast coho and Southern Oregon/Northern California Coast under the Endangered Species Act (ESA) are both present in the project area.

¹⁵⁶ 2014 Draft EIS at 4-562.

and salmonids occupy inshore areas of the lower bay during juvenile stages (e.g., Chinook salmon, Coho salmon, English sole) where they feed on estuarine-dependent prey, including shrimp, small fishes, and crabs. As they mature and move offshore, their diets in many cases change to include fish, although estuarine-dependent species (e.g. shrimp, crabs) can still constitute an important dietary component. DEIS at 4-562.

Coos Bay is central to Oregon's commercial fishing industry, whose economic contribution is equivalent to about 10,000 jobs. Economic contributions from commercial fishing go beyond harvesting and seafood-processing, and include visitors and tourism, boat building and gear manufacturing, safety, research and education.¹⁵⁷ Recreational fisheries, including shellfish harvest and crabbing, are also important resources in Coos Bay. Several of the most important shellfish beds are located in close proximity to the LNG transit route along the edge of the North Spit.

2. Oregon Rivers

Oregon rivers that would be impacted by the project, notably the Klamath, Rogue, Coos, and Umpqua, as well as numerous of the smaller creeks and streams (e.g. Days Creek) also provide important habitat supporting fisheries. Coho and King salmon, and Steelhead are particularly significant resources on the inland rivers. Specific impacts to each watershed are provided in detail in Appendix A. Clean Water Act 401 Comments. Impacts to fisheries related to impacts from PCGP are discussed in Chapter 4 *infra*.

3. Summary of Impacts to Fisheries

In summary, the proposed activities associated with the terminal will likely impact aquatic resources by:

- Permanently destroying at least 1.9-acres of eelgrass beds that provide habitat and food base for fish and invertebrate species including juvenile crab, juvenile lingcod, salmonids, starry flounder, and English sole;
- Impairing water quality by decreasing dissolved oxygen, changing salinity levels, increasing temperature, and increasing sedimentation as a result of dredging and other related activities;
- Activities related to the marine terminal and north spit facilities, including discharge of dredging spoils causing turbidity plumes, LNG vessel wake strandings, engine cooling water intake entrainment, dredging of the access channel and construction of the pipeline across Coos Bay could all jeopardize the survival of aquatic species;
- Dredging would directly remove benthic organisms, such as worms, clams, starfish, and vegetation from the bottom of the bay.
- Crabs, shrimp, clams, oysters, and fish could become entrained in the operation of the dredging equipment;¹⁵⁸ and
- Degraded habitat and aquatic resources used by threatened and endangered species such as Coho salmon (*Oncorhynchus kisutch*), green sturgeon (*Acipenser medirostris*) and eulachon (*Thaleichthys pacificus*) by permanently converting 6.8 acres of highly

¹⁵⁷ See Oregon Commercial Fishing Industry Year 2016 Economic Activity Summary at 5 (April 2017).

¹⁵⁸ DEIS 2014 at 4-569 to 4-570.

productive intertidal habitat to low productive deep-water habitat; by failing to adequately mitigate for the permanent loss of freshwater and estuarine wetlands including eelgrass beds, and by permanently removing coastal riparian vegetation that is an essential component of the food chain for fish and aquatic life, among other impacts.

Construction and operation of the proposed Pacific Connector Pipeline will impact aquatic resources and therefore harm designated beneficial uses for fish and aquatic life, wildlife and hunting, and fishing by:

- Permanent loss of vegetative shading at corridors for pipeline stream crossings construction and operation;
- Permanent loss of base flows from pipeline;
- Stream width increases from sedimentation related to pipeline construction and operation;
- Soil, vegetation, bank destabilization and increased sedimentation from pipeline construction and implementation;
- Permanent degradation of riparian areas in pipeline corridors at stream crossings;
- Permanent loss of Large Wooded Debris areas from degradation of riparian areas and increased sediment transport in stream and river channels;
- Deforestation in pipeline corridors combined with wetlands damage and long-term soil compaction and new road creation and use, plus decreases in hydrologic connectivity due to all of the above; and
- Increased, prolonged sedimentation of waterways.

Impacts to fisheries in each impacted watershed are discussed in detail in Appendix A. Clean Water Act 401 Comments. Additionally, overall impacts to fisheries are discussed in Chapter 4 *infra*. Commenters are particularly concerned about impacts to Dungeness crab fisheries and provide more detail below.

B. Project Impacts to Dungeness Crab Fisheries

1. Fishery, Landings, Catch Value, and Fleet

In 2009, the Oregon House of Representatives designated the Dungeness crab as Oregon’s official state crustacean.¹⁵⁹ The Dungeness crab fishery is consistently the most valuable single species commercial fishery in Oregon, making the crustacean’s well-being of special significance to the economy of Coos Bay and the State of Oregon itself.¹⁶⁰

Overall, Dungeness crabs make for a lucrative fishery. In a good year, landings can yield \$100 million to the Oregon economy.¹⁶¹ The ex-vessel value of Oregon’s Dungeness crab fishery fluctuates yearly, based on the size of the harvest and prevailing market conditions.¹⁶² In the

¹⁵⁹ See H.R.J. Res. 37, 75th Leg., Reg. Sess. (Or. 2009) available at <https://web.archive.org/web/20110611123205/http://www.leg.state.or.us/09reg/measures/hjr1.dir/hjr0037.en.html>.

¹⁶⁰ See Erik Knoder, Or. Emp’t Dep’t, “Oregon’s Commercial Fishing in 2017,” <https://www.qualityinfo.org/-/oregon-s-commercial-fishing-in-2017> (“Dungeness crab is usually Oregon’s most valuable fishery, and it was again in 2017”).

¹⁶¹ Yamada Statement at 2:17:36, available at <https://www.youtube.com/watch?v=aRQATTbaE6k>.

¹⁶² Or. Dungeness Crab Comm’n, “Catch Value,” <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

most recent 10-year period, the to-the-boat catch value ranged from \$5 million to \$74 million dollars¹⁶³

Since the establishment of the fishery over a century ago, Oregon has consistently been one of the largest producers of Dungeness crab on the west coast.¹⁶⁴ Dungeness crabs harvested in the Charleston/Coos Bay vicinity accounted for almost one quarter of total pounds landed in Oregon during the 2017-2018 season (5.2 million pounds), with the Coos Bay region coming second only to the Newport area.¹⁶⁵ In the 2017-2018 season, Dungeness crabs were valued at an average price of \$3.22/lb, with prices of approximately \$5 to \$7/lb between the months of April 2018 to August 2018.¹⁶⁶ In other words, the Dungeness crab fishery is a substantial economic driver for Coos Bay.

In 1995, Oregon imposed a limited entry permit system on the Dungeness crab fishery, which capped the number of vessels allowed to participate.¹⁶⁷ Initially, 465 permits were issued based on prior participation, with the number subsequently dropping to 424 permits in June 2014 due to non-renewal.¹⁶⁸ Today, an average of 315 permits fish for Dungeness crab each year, with 2018 recording 318 active permit holders.¹⁶⁹

There are in excess of 350 vessels presently engaged in the crab fishery.¹⁷⁰ The types of vessels range from the small wooden troller with its two-man crew to large steel combination vessels with a four-man crew capable of fishing around the clock for extended periods of time.¹⁷¹

2. Ocean Commercial, Bay Commercial, and Recreational Fisheries¹⁷²

Oregon has three targeted fisheries for Dungeness crab: the ocean commercial crab fishery, the bay commercial crab fishery, and the recreational crab fishery (which occurs in both the ocean and estuaries).¹⁷³ The ocean commercial fishery is the largest, and is discussed in the next

¹⁶³ Or. Dungeness Crab Comm'n, "Catch Value," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁶⁴ Or. Dep't of Fish and Wildlife, "About the Dungeness crab fishery," <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019).

¹⁶⁵ Or. Dep't of Fish and Wildlife (ODFW), Marine Resources Program, "Dungeness Crab Fishery Newsletter," 1, 2 (Nov. 2018) *available at* https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/docs/Crab%20Newsletter_2018_final.pdf [hereinafter ODFW Dungeness Newsletter 2018].

¹⁶⁶ ODFW Dungeness Newsletter 2018 at 2.

¹⁶⁷ Or. Dep't of Fish and Wildlife, "About the Dungeness crab fishery," <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019).

¹⁶⁸ Or. Dungeness Crab Comm'n, "Vessels," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019); ODFW, "About the Dungeness crab fishery," <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019); ODFW, Oregon Dungeness Crab Research and Monitoring Plan 4 (2014) *available at* https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/docs/ODFW_DungenessCrabResearchMonitoringPlan_updated2014_Final_081414.pdf.

¹⁶⁹ Or. Dep't of Fish and Wildlife, "About the Dungeness crab fishery," <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019); ODFW Dungeness Newsletter 2018 at 1.

¹⁷⁰ Or. Dungeness Crab Comm'n, "Vessels," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁷¹ Or. Dungeness Crab Comm'n, "Vessels," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁷² Or. Dungeness Crab Comm'n, "Seasons," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁷³ Or. Dep't of Fish and Wildlife, Marine Resources Program, Oregon Dungeness Crab Research and Monitoring Plan 4 (2014) *available at*

paragraph. Relative to the ocean commercial crab fishery, the bay commercial crab fishery is smaller, in terms of both the number of participants and total harvest.¹⁷⁴ The fishery is typically restricted to a three to four-month season (September through December, annually), harvesting is not permitted on holidays or on weekends, and no more than 15 rings per vessel may be used.¹⁷⁵ Oregon's recreational crab fishermen target Dungeness crab in the ocean and within the state's many bays.¹⁷⁶ Per the Oregon Department of Fish and Wildlife's Dungeness Crab Research and Monitoring Plan:

Participation and harvest in the recreational crab fishery peaks in the summer months and is estimated to harvest an average of five and half percent of the total targeted harvest of Dungeness crab statewide (average from 2010 and 2011 estimates to compare seasons of the same length (Dec-Oct.15)).¹⁷⁷

The ocean crab season along the Oregon coast begins on December 1 (when crab shells have hardened, indicating that they have filled out with firm meat) and continues through August 14, annually.¹⁷⁸ Crabbing in the ocean is closed for Dungeness crab from Oct. 16 to Nov. 30, annually.¹⁷⁹ Although Oregon estuaries (including Coos Bay) provide year-round opportunities for crabbing, fall is typically recognized as the best time for harvesting.¹⁸⁰ Coos Bay Dungeness crab shells usually harden in the beginning of September after their summer molt, and are in peak condition for consumption between October and November.¹⁸¹

The peak ocean and bay harvest typically occurs during the first eight weeks of each respective season (i.e. between December and through the end of January for ocean fishery, and between September and October for bay fishery), with up to 75 percent of the annual production landed during this period.¹⁸² In 2017-2018 season, 91 percent of the annual harvest was harvested within the first two months of fishery.¹⁸³ Ocean harvesting effort traditionally decreases in the spring as fishermen gear up for other coastal fisheries, but fresh crab continues to be available throughout the summer months, thanks to a small number of boats that fish up to the closure in August.¹⁸⁴

https://www.dfw.state.or.us/MRP/shellfish/commercial/crab/docs/ODFW_DungenessCrabResearchMonitoringPlan_updated2014_Final_081414.pdf [hereinafter ODFW Oregon Dungeness Crab Research and Monitoring Plan].

¹⁷⁴ See ODFW Oregon Dungeness Crab Research and Monitoring Plan at 4-5.

¹⁷⁵ ODFW Oregon Dungeness Crab Research and Monitoring Plan at 4-5.

¹⁷⁶ ODFW Oregon Dungeness Crab Research and Monitoring Plan at 5.

¹⁷⁷ ODFW Oregon Dungeness Crab Research and Monitoring Plan at 5 citing Ainsworth et. al. 2012.

¹⁷⁸ Or. Dungeness Crab Comm'n, "Seasons," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019); ODFW, "About the Dungeness crab fishery," <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019).

¹⁷⁹ Or. Dep't. of Fish and Wildlife, "How to Crab," <https://myodfw.com/articles/how-crab> (last visited Jan. 18, 2019).

¹⁸⁰ Or. Dep't. of Fish and Wildlife, "How to Crab," <https://myodfw.com/articles/how-crab> (last visited Jan. 18, 2019).

¹⁸¹ Or. Dep't. of Fish and Wildlife, "How to Crab," <https://myodfw.com/articles/how-crab> (last visited Jan. 18, 2019); Comments of Professor Janet Hodder for DSL Application APP0060697 (Jan. 12, 2019), App. H, 18-19. [hereinafter Hodder Comment]

¹⁸² Or. Dungeness Crab Comm'n, "Seasons," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁸³ ODFW Dungeness Newsletter 2018 at 1, 2.

¹⁸⁴ Or. Dungeness Crab Comm'n, "Seasons," <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

The Coos Bay region is renowned for its recreational Dungeness crab fishery. Estimates from the 2007-2011 period found a minimum of 10,661 to a maximum of 15,023 crabbing trips were made in Coos Bay from April to October per year.¹⁸⁵ Crabbing in Coos Bay is one of the most valuable recreational opportunities in the region and draws considerable number of people to the area. The commercial and recreational Dungeness crab fishery is of considerable economic significance (as detailed above), especially for the community of Charleston.

The applicant generally acknowledges the economic importance of the commercial Dungeness crab fishery to Coos Bay, Charleston, and surrounding areas, stating

Oregon Department of Fish and Wildlife (ODFW) data on pounds and values of commercially caught fish and shellfish landed in Charleston, Oregon in 2016 indicate that shellfish fisheries (predominantly crab, shrimp, and clams) are of substantial economic importance to the Coos Bay area, exceeding \$18.8 million in value in 2016¹⁸⁶

The applicant similarly acknowledges the general economic importance of recreational fishery to the area, as well as highlighting some popular recreational fishing locations, stating

Recreational crabbing and clamming bring year-round tourist income to the region. Crabbing occurs in the main channel areas, largely from the BLM boat ramp on the North Spit (west of the JCEP Project Area) to the mouth of the bay, and typically is done around slack tides. The main areas for recreational clamming and crabbing in the bay are located along the west side of the South Slough near Charleston, along the North Spit; at Fossil and Pigeon points; near Haynes Inlet, North Slough, and Glasgow; and along the east side of the upper bay. The west shore of the bay at Jordan Cove contains sand/mudflats, eelgrass beds, and a fringe of salt marsh that provide habitat for recreationally important ghost shrimp and mud shrimp. These shrimp are recreationally harvested at a number of locations throughout the bay, and are popular among fishermen for use as bait.¹⁸⁷

Despite this initial recognition of crucial commercial and recreational fisheries in the vicinity of proposed project activities, the applicant largely fails to provide the the necessary data to assess the impacts of said activities on protected shellfish harvesting uses and in one instance provided incorrect information. A discussion of both of these matters follows below. Without adequate and accurate information about the extent to which proposed project activities will interfere with ocean and bay Dungeness crab fisheries in Coos Bay, DSL must deny the fill and removal permit.

3. Harvest Methods – Ocean, Bay, and Recreational Fishery¹⁸⁸

Ocean Dungeness crabs are caught in circular steel traps commonly called pots. Weighing anywhere from 60 to 125 lbs. and measuring 36” to 48” in diameter, each pot has a length of line

¹⁸⁵ Hodder Comment at 18, citing “The Oregon Recreational Dungeness Crab Fishery, 2007-2011 54, (July 2012) available at <https://www.dfw.state.or.us/MRP/shellfish/docs/2012-04.pdf>.

¹⁸⁶ JPA Part 1, Sec. 4 (Description of Resources in Project Area)(emphasis added).

¹⁸⁷ *Id.*

¹⁸⁸ Or. Dungeness Crab Comm’n, “Harvest Method,” <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

and a buoy attached to mark its position for retrieval.¹⁸⁹ The pots are baited with squid or razor clams to attract the bottom-dwelling crabs, and set on the ocean floor following the contour of the adjacent coastline.¹⁹⁰ The pots are then allowed to “soak” for a one to four-day period, depending on the fishing conditions, weather and time of year.¹⁹¹ The average boat fishes 300-500 pots in depths of 5-100 fathoms (30 to 600 feet) of water.¹⁹² After being brought to the surface by a hydraulic power-block, the crabs are sorted and kept alive on-board the vessel in circulated seawater until they are delivered to shore-side processing plants.¹⁹³

Most recreational and all commercial crab fishing in Coos Estuary is undertaken using rings.¹⁹⁴ In contrast to recreational fishery in the bay using traps or the use of commercial ocean crab pots (which may be allowed to soak for up to two hours or up to four days, respectively), the success of capture using crab rings depends upon the frequency with which the rings, once deployed, are brought rapidly to the surface.¹⁹⁵ Because crab rings do not retain crabs while the ring is at rest on the [bay] bottom, the only way to capture crabs using rings is to bring them rapidly to the surface while actively feeding crabs are present on the baited ring.¹⁹⁶ For bay crabbing, it is important to check rings on a more frequent basis as the tide approaches slack high water, since this coincides with the greatest crab movement and feeding activity.¹⁹⁷

Commercial crabbers in the ocean and bay only harvest mature male crabs measuring 6 ¼” across the shell (carapace width).¹⁹⁸ This assures that the crab will have at least one year of reproduction, but often ensures at least two years.¹⁹⁹ The legal standard for recreational harvest for mature male crabs is legal at 5 ¾” carapace width.²⁰⁰ Juvenile males and all females are immediately returned to the water to ensure healthy stocks for future harvests.²⁰¹ Females crabs are left to reproduce throughout their lifespan.²⁰²

4. Dungeness crabs and the lucrative fishery associated with the crustacean in Coos Bay will accrue numerous harms as a result of the proposed fill and removal activities associated with Jordan Cove.

¹⁸⁹ Or. Dungeness Crab Comm’n, “Harvest Method,” <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² Or. Dungeness Crab Comm’n, “Harvest Method,” <http://oregondungeness.org/fishery/> (last visited Jan. 18, 2019).

¹⁹³ *Id.*

¹⁹⁴ Comments of Michael Graybill on DSL permit 60697, (submitted Jan. 15, 2019), App. I, 64. [hereinafter Graybill Comment]

¹⁹⁵ Graybill Comment at 64.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ Or. Dep’t of Fish and Wildlife, “About the Dungeness crab fishery,” <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019).

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² Or. Dep’t of Fish and Wildlife, “About the Dungeness crab fishery,” <https://www.dfw.state.or.us/mrp/Shellfish/commercial/crab/index.asp> (Last updated Jan. 4, 2019).

In order to grant a fill and removal permit, DSL must determine that the project described is consistent with the protection, conservation, and best uses of the water resources of this state.²⁰³ “Water resources” as used in Oregon’s fill and removal statutes includes “not only water itself but also *aquatic life and habitats therein* and all other natural resources in and under the waters²⁰⁴ of this state.”²⁰⁵ Coos Bay is a crucial “nursery” habitat for the Dungeness crab. In her statement given to DSL at the Public Hearing for Jordan Cove in Salem, Oregon, Professor Sylvia B. Yamada²⁰⁶ expressed her concern that the construction of the Jordan Cove Energy Project could negatively impact this important nursery habitat for the native species of Coos Bay and its estuary, including the Dungeness crab.²⁰⁷ According to Professor Yamada, the highest number of juvenile crabs are found in soft sediments and eel grass beds of estuaries, where the young crabs find food and shelter from predators.²⁰⁸ Indeed, Professor Yamada stated that she herself has consistently trapped an average of 15 young Dungeness crabs per trap in her Coos Estuary study site, located along the Trans Pacific Parkway (adjacent to Jordan Cove).²⁰⁹

DSL must consider the Coos estuary’s importance as a nursery habitat when determining whether to allow removal-fill in Coos Bay and in upland areas to create a berth for ocean going vessels. The applicant’s construction timeline for the components associated with the LNG terminal estimates a project start date for the “1st half of 2020” with an estimated project completion date for the “1st half of 2024.”²¹⁰ In other words, Dungeness crabs and other estuarine organisms (whose use of Coos Bay is protected under Oregon statute²¹¹ and administrative rules²¹²) would face multiple exposures to the proposed activities over a four-year period.

Not only would the turbidity during the construction phase of the LNG terminal’s components negatively impact the ecological community, the ongoing dredging to maintain the berth and shipping channels will continue to be a disturbance to the ecosystem. In [an ongoing] study conducted by Professor Yamada and designed to simulate a dredging operation, she found that between 45 to 85 percent of the Dungeness crabs [exposed to the operation] died.²¹³ Over the four year estimated construction period, Dungeness crabs would face repeated exposure to

²⁰³ See ORS 196.825(1)(a).

²⁰⁴ “Waters of this state” refers to “all natural waterways, tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands, that portion of the Pacific Ocean that is in the boundaries of this state, all other navigable and nonnavigable bodies of water in this state and those portions of the ocean shore, [...], where removal or fill activities are regulated under a state-assumed permit program as provided in 33 U.S.C. 1344(g) of the Federal Water Pollution Control Act, as amended.” ORS 196.800(15).

²⁰⁵ ORS 196.800(14), emphasis added.

²⁰⁶ Professor Sylvia B. Yamada is an Assistant Professor of Senior Research in the Department of Zoology at Oregon State University. See [University Web Page](#). She has been studying crabs in Oregon estuaries, including Coos Bay, for over 20 years. See [Representative Publications](#); See also [Older Publications](#).

²⁰⁷ *Public Hearing for Jordan Cove Removal-Fill Permit Application – Salem, OR: Before the Or. Dept. of State Lands* (1.15.2019) at 2:17:07, 2:17:19 (statement of Sylvia B. Yamada, Assistant Professor, Senior Research; Dep’t of Zoology, Oregon State Univ.), available at <https://www.youtube.com/watch?v=aRQATTbaE6k> [hereinafter *Yamada Statement*].

²⁰⁸ *Yamada Statement* at 2:17:46, available at <https://www.youtube.com/watch?v=aRQATTbaE6k>.

²⁰⁹ *Id.* at 2:17:58, available at <https://www.youtube.com/watch?v=aRQATTbaE6k>.

²¹⁰ JPA Part 1, Sec. 6 (Project Description).

²¹¹ See ORS 196.805(2).

²¹² See OAR 340-041-0300.

²¹³ See *Yamada Statement* at 2:18:47, available at <https://www.youtube.com/watch?v=aRQATTbaE6k>.

dredging activities that could substantially increase their rates of mortality. The NEPA documents of earlier iterations of this project have recognized direct impacts to crabs from dredging.²¹⁴

Apart from acknowledging the existence of a commercial ocean-going Dungeness crab fishery in Coos Bay²¹⁵, the applicant fails to make any mention of the crabs, let alone address any impacts to their habitat as a result of proposed activities. At the very least, DSL must deny this fill and removal permit until the applicant provides adequate information to make a determination on impacts to Dungeness crab nursery habitat in Coos Bay.

Professor Yamada concluded that the “construction and maintenance of the Jordan Cove LNG terminal will result in habitat loss for native species, including valuable nursery habitat for the Dungeness crab.”²¹⁶ The applicant’s proposed activities will cause harmful habitat loss for the valuable Dungeness crab, a species of critical importance to the region’s lucrative recreational and commercial crab fisheries. This warrants denial of the fill and removal permit.

5. DSL must deny the permit because the work proposed will result in unreasonable interference with the use of state waters for commercial and recreational Dungeness crab fishery.

In order to lawfully grant a fill and removal permit, DSL must determine that the project described in the application “would not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation.”²¹⁷ ORS 196.805 sets out the policy behind the Oregon’s fill and removal statutes.²¹⁸ The statute states that the “protection, conservation and best use of the water resources of [Oregon] are matters of the *utmost public concern*.”²¹⁹ In implementing the policy, the director shall take into consideration “all beneficial uses of water...when administering fill and removal statutes.”²²⁰ Again, designated beneficial uses for all streams and tributaries to Coos Bay include, amongst a number of other criteria, fish and aquatic life, wildlife and hunting, fishing, boating, water contact recreation, [and] aesthetic quality.²²¹ Potential impacts to beneficial uses are discussed in substantive detail in Chapter 4 *infra*. Water contact recreation and shellfish harvesting are designated uses for Coos Bay.²²² This means:

Coastal water contact recreation use is to be protected in all South Coast Basin marine waters and in coastal waters designated in Figures 300C and 300D...

²¹⁴ See Draft EIS 4-569 to 4-570.

²¹⁵ See JPA Part 1, Sec. 4 (Description of Resources in Project Area).

²¹⁶ See *Yamada Statement* at 2:18:56, available at <https://www.youtube.com/watch?v=aRQATTbaE6k>.

²¹⁷ ORS 196.825(1)(b); See also OAR 141-085-0565(3)(b)(detailing department determinations in evaluating a permit application).

²¹⁸ *In re Coyote Island Terminal LLC*, OAH Case No. 1403883, 21 (2016) (OR Dep’t of State Lands) (Rulings on Mot. for Summ. Determination).

²¹⁹ ORS 196.805(1), emphasis added.

²²⁰ ORS 196.805(2).

²²¹ *Id.*

²²² See OAR 340-041-0300(3)-(4, Figure 300C & 300D (Water Contact Recreation and Shellfish Harvesting Designated Uses – Coos Bay, South Coast Basin, Oregon) available at <https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=68924>

Shellfish harvesting use is to be protected in all South Coast Basin marine waters and in coastal waters as designated in Figures 300C and 300D...²²³

As mentioned above, “[w]ater quality in the South Coast Basin...must be managed to protect [designated] beneficial uses...”²²⁴

6. The Data Required to Evaluate the Extent of Restriction of Access to Lower Coos Bay Crabbing Sites is Omitted²²⁵

The permit indicates that LNG carrier transits will increase time periods of restricted access to lower bay crabbing sites.²²⁶ The proposed fill and removal activities are to be undertaken for the purpose of allowing LNG Carrier transit between the LNG Terminal the open sea. As an LNG carrier transits through the bay, the Coast Guard will “impose a moving safety/security zone of 500 yards around the carrier or up the shoreline, whichever is less.”²²⁷ Current USCG law restricts all recreation activities within the Coos Bay Federal Navigational Channel (FNC) during all marine vessel transits.²²⁸ Recreational Dungeness crabbing within the bay:

which typically occurs during slack high tide year-round, may be further limited in access to crabbing areas inside the “safety/security zone” in two areas of the lower bay. The two areas are located immediately north of Charleston Marina and along the northwest side of the bay from approximately RM 2.5 to RM 5.²²⁹

The permit states that “[t]he sum of the periods in which LNG carriers would have a potential impact on recreational and other boating activity is about 7 hours per week or about 8 percent of all daylight hours (see Appendix C.5 to Resource Report 5).”²³⁰ However, this claim cannot be effectively evaluated with the information provided in the revised permit application. First, a search of the PDF using “Resource Report 5” and “Resource Report” as inputs fails to yield any relevant results. In addition, Appendix C.5 is a Wetland Delineation Concurrence Letter dated Nov. 8, 2013,²³¹ and does not appear to contain any information regarding the potential impact of LNG carrier transit safety/security zones on recreational Dungeness crab fishery. Finally, the input of the specific time impacts stated by the applicant (“7 hours,” “8 percent,” “daylight hours”) also fail yield data to corroborate said assumptions. Without adequate and accurate information about the extent to which the safety/security zone associated with LNG carrier transit may impact access for recreational Dungeness crab fishery in Coos Bay, DSL must deny the fill and removal permit.

²²³ *Id.*

²²⁴ OAR 340-041-0300(1).

²²⁵ Hodder Comment at 18.

²²⁶ JPA Part 1, Sec. 4 (Description of Resources in Project Area)(emphasis added).

²²⁷ *Id.*

²²⁸ *Id.*

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ See JPA Part 1, Attach. C.5 (Wetland Delineation WD #2014-0116 Concurrence Letter Nov. 8 2013).

7. The applicant incorrectly identifies the preferred Dungeness harvest method for Coos Bay, resulting in an inaccurate assessment of impacts on bay Dungeness fishery.²³²

As though seeking to minimize the aforementioned impact of restricted access to two Dungeness crabbing locations in the lower bay, the applicant suggests that “crab pots or traps placed outside the FNC could feasibly be deployed prior to and remain during LNG carrier transit and subsequently retrieved following vessel safety zone passing.”²³³ This is because:

JCEP estimates that it will take an LNG carrier approximately 0- minutes to make the full transit of the waterway from the Coos Bay jetty entrance to the LNG Terminal at speeds between 4 and 6 knots. The maximum period for an LNG carrier to pass through the safety and security zone would be 30 minutes, meaning recreational crabbers would not have access to their pots or traps for up to 30 minutes, but the pots or traps would be “soaking” during this time.²³⁴

Professor Janet Hodder²³⁵ stated in her comment that it was “obvious from this statement that the permit writer [had] never crabbed in Coos Bay.”²³⁶ Contrary to the assertion of the applicant regarding the deployment of “pots or traps,” most recreational and all commercial Dungeness crab fishing in Coos Estuary is undertaken using crab “rings.”²³⁷ Unlike commercial crab pots (frequently used in Ocean commercial Dungeness fishery) and traps (used in bay recreational commercial fishery), using rings to harvest crabs does not require “soaking.”²³⁸ Recall that because crab rings do not retain crabs while at rest on the bay floor, the only way to capture crustaceans using rings is to bring them rapidly and frequently to the surface while actively feeding crabs are present on the baited ring.²³⁹

Deploying a string of baited crab rings and then requiring crabbers to vacate the deployment area (leaving the rings unattended for 30 minutes around slack high tide) while an LNG tanker and its associated safety zone pass will diminish the effectiveness of one of the most important methods used to capture crabs in the Coos Estuary.²⁴⁰ Requiring rings to “soak” for a period of 30 minutes or more, as the applicant implies would be feasible, will not improve their capture success rate.²⁴¹ If transiting LNG carriers require recreational fishers to leave deployed rings unattended for 30 minutes, it will likely render the ring harvest method infeasible and impractical

²³² Hodder Comment at 19.

²³³ JPA Part 1, Sec. 4 (Description of Resources in Project Area).

²³⁴ *Id.*

²³⁵ Professor Janet Hodder is a Senior Lecturer and the Academic Coordinator at the Oregon Institute of Marine Biology at the University of Oregon. She teaches courses on Marine Birds and Mammals and Marine Environmental Issues. See [Faculty Page](#).

²³⁶ Hodder Comment at 19.

²³⁷ Graybill Comment at 64.

²³⁸ *Id.*

²³⁹ *Id.*

²⁴⁰ Graybill Comment at 64.

²⁴¹ *Id.*

in Coos Bay.²⁴² Hence, the proposed activities would unreasonably interfere with an existing and important method of recreational Dungeness crabbing in Coos Bay.

All boat-based recreational crab fishing takes place within a two-hour time period centered over slack high water.²⁴³ Depending on the number of fishers aboard, it is common for boat-based recreational fishers in Coos Bay to deploy a string of rings or traps consisting of 6, 9, or 12 rings or traps per vessel.²⁴⁴ It typically takes several minutes to recover, clear, and redeploy each crab ring or trap in a string.²⁴⁵ Recreational fishers often deploy a string of rings or traps one hour before the slack tide, and monitor individual rings and traps continuously during the ensuing lead up to slack high water and during the hour following the slack high water.²⁴⁶ This type of fishing has a 2 hour feasible timeframe centered over high tide.²⁴⁷ A 30-minute interruption caused by a transiting LNG carrier in this peak period of activity would constitute a *major* disruption of one of the most important (and valuable) recreational uses of the Coos Estuary.²⁴⁸

8. Impacts to Dungeness crab fishery in the lower bay are not considered.

This recreational and commercial crab fishery will also be impacted by the passage of LNG carriers transiting the bay. Specifically:²⁴⁹

A commercial crab fishery exists in the lower portion of the bay including the area between the north and south Jetties. Again, recall that this fishery uses commercial crab “rings.”²⁵⁰ Unlike commercial crab traps, deployed crab rings lie flat on the bottom permitting both legal and sub-legal sized crabs unimpaired freedom to enter and depart the ring while deployed.²⁵¹ For rings to capture crabs, they must be regularly pulled swiftly to the surface requiring regular tending to fish effectively.²⁵²

The in-bay commercial crab fishery is currently limited to weekdays.²⁵³ Recall that the recreational crab fishery is permitted year-round, all days of the week.²⁵⁴

9. LNG vessel traffic in Coos Bay will interfere with ocean-based fisheries.²⁵⁵

²⁴² Graybill Comment at 64.

²⁴³ *Id.* citing <http://www.scod.com/cities/crabs/crabbing.html> (“[t]he best time of the day for crabbing is one hour before and after high tide”).

²⁴⁴ Graybill Comment at 64.

²⁴⁵ *Id.*

²⁴⁶ Graybill Comment at 64-65.

²⁴⁷ *Id.* at 65.

²⁴⁸ *Id.*

²⁴⁹ Graybill Comment at 65.

²⁵⁰ Graybill Comment at 66.

²⁵¹ *Id.*

²⁵² *Id.*

²⁵³ Graybill Comment at 66.

²⁵⁴ Graybill Comment at 66.

²⁵⁵ Graybill Comment at 66.

According to Michael Graybill,²⁵⁶ individual boats involved in commercial fisheries including but not limited to the Dungeness crab, salmon and pink shrimp work as a fleet.²⁵⁷ When Dungeness crab season opens and weather conditions are agreeable, most of the boats in the fishery head toward the sea in unison.²⁵⁸ Particularly in winter, during commercial crab season, boats at sea tend their crab pots while monitoring decline in weather conditions and the limitations these may impose on the bar.²⁵⁹ Members of the fleet are communicating, and paying attention to bar conditions and the tides.²⁶⁰ Mr. Graybill states:

Particularly in declining and marginal weather conditions, the previous outbound parade of boats reverses direction and the whole fleet heads for the bar. It can take the entire window of suitable incoming high tide conditions on the bar for the fleet to get back into the harbor. When the tide reverses and begins to ebb, conditions on the bar degenerate rapidly and in a matter of minutes the bar conditions can change from marginal to impassable. Boats that miss this window are forced to ride out the storm at sea until the next high flood tide.²⁶¹

Adding the proposed LNG ship transit to this scenario negatively impact the existing use of the navigation channel by crab fishery.²⁶² The bar being closed for a half an hour over the high flood tide to accommodate passage of an LNG carrier risks stranding one of the fishery “fleet” boats at sea in bad weather conditions.²⁶³ The applicant states the total time required for an LNG carrier to transit between the harbor entrance and the proposed berth is 90 minutes and that no individual location in the estuary will be impacted for more than 30 minutes.²⁶⁴ Mr. Graybill discusses the issues with this with this proposed activity in more detail:

Roughly one third to one half of the LNG carrier’s total transit time will occur when LNG vessels transit the lower portion of the bay that is also used by commercial and recreational vessels based in the Charleston harbor. Taking a half hour chunk out of the extremely limited time that the commercial fleet uses to cross the bar to enable an LNG tanker to transit the bar will only have negative impacts on fisheries.²⁶⁵ Those impacts are serious and potentially life threatening.²⁶⁶

The Dungeness crab fishery in Oregon has been characterized as a “derby fishery”. During the first days and weeks of the season, a substantial portion of the total annual commercial crab landings are caught in the first days and weeks of the season. Having gear in the water for “the first pull” is critically important. In the days just prior to the start of the commercial crabbing season, fisheries management agencies provide a very

²⁵⁶ Mr. Graybill is the former manager of the South Slough National Estuarine Research Reserve and a current resident of Coos Bay.

²⁵⁷ *Id.*

²⁵⁸ Graybill Comment at 66.

²⁵⁹ *Id.*

²⁶⁰ Graybill Comment at 66.

²⁶¹ *Id.*

²⁶² *Id.*

²⁶³ Graybill Comment at 66.

²⁶⁴ Graybill Comment at 66-67.

²⁶⁵ *Id.*

²⁶⁶ *Id.*

narrow window of time for commercial fishers to set out their gear before the first pull of the season. Smaller vessels in the fleet must make multiple trips to sea in order to get all their gear in the water. Thus, in the days leading up to the opening of the commercial crab season and in the days and weeks immediately following the season opening, there are hundreds of commercial vessel crossings over the Coos Bay Bar by boats loaded to capacity with crab pots and live crab. The restrictions imposed by LNG carriers transiting the lower portion of the Coos Bay federal navigation channel will result in significant, quantifiable, negative impacts on use of the channel by commercial fishing vessels.²⁶⁷

Despite places where the applicant fails to furnish adequate information, there is strong evidence to suggest the proposed fill and removal permit could result in a substantial reduction in commercial and recreational Dungeness crabbing opportunities in Coos Bay. This constitutes an unreasonable interference the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation,²⁶⁸ and is a basis for under the Oregon fill and removal statute.

5.3 DSL must deny the permit because the application fails to provide reasonable assurance that the project will not unreasonably interfere with the paramount policy of this state to preserve the use of its waters for public recreation (ORS 196.825(1)(b)).

A. The Applicants Have Failed to Provide Reasonable Assurances that the Use of Oregon’s Waters for Public Recreation Will Be Protected

All of the impacted watersheds include fishing, boating, water contact recreation, and aesthetic quality as designated beneficial uses.²⁶⁹ The potential for the project to impair designated beneficial uses is discussed in Chapter 4 *infra*.

The construction of the LNG terminal and the Pipeline in the South Coast Basin will likely impact aquatic resources and therefore harm designated beneficial uses for fishing, boating, water contact recreation, and aesthetic quality by:

- Impacting or limiting public access for recreational boaters, fishermen, crabbers, and clambers as a result of dredging activity in the waterways to the terminal;
- Increasing sediment pollution at stream and rivers crossings, which impairs habitat for fish;
- Dredging associated with the NRI portion of the project will occur concurrently with recreational salmon fishery for approximately one month [October] annually during construction, which is expect to take over three years [check time] [Revised JPA Part 1, Description of Resources in Project Area]; and
- Altering aesthetic value of Coos Bay as a result of the 75-foot clearcut buffer around each stream crossing, dredging of Coos Bay, and construction of the terminal and related facilities.²⁷⁰

²⁶⁷ Graybill Comment at 67.

²⁶⁸ Hodder Comment at 18.

²⁶⁹ 404 Coalition Comment at 30.

²⁷⁰ *Id.*

Furthermore, the applicant fails include sufficient information to assess the impacts of proposed project activities to a number of protected uses in Coos Bay. These include commercial and recreational crabbing and clamming, as discussed in Chapter 5 Section 5.2 *infra*.

According to the FEIS from a previous iteration of the project, the Coast Guard would likely impose a moving safety/security zone extending 500 yards around any LNG vessels entering or leaving the port.²⁷¹ In some places, the navigable channel of Coos Bay is less than 1,000 yards across, meaning that the entire channel would be subsumed by the safety zone. This could effectively exclude all other marine traffic and activity within areas of Coos Bay that are narrower than the total security zone. The record also shows that several important areas of shellfish harvest are located in narrow portions of the Coos Bay that would be impacted by the 500-yard LNG tanker security zone. The 2015 FEIS notes “if crabbing and clamming activities were to occur within the established security zones, those activities would be required to cease and temporarily move out of the way.”²⁷² “Recreational boaters using the bay at the same time as an LNG vessel is in transit within the waterway may encounter delays due to the moving security zone requirements around an LNG vessel...”²⁷³

In summary, the proposed activities for the project will likely unreasonably interfere with the use of Oregon’s waters for public recreation by harming habitat and water quality for fish, impacting recreational access, and altering the aesthetic values of Coos Bay and the other waterways crossed by the pipeline. The applicants have failed to provide reasonable assurance that the project will not unreasonably interfere with public recreation because the project will require damming, trenching, blasting, and diverting waterways to build pipeline stream crossings; cutting down 75-foot buffers around stream crossings; dredging sections of Coos Bay; filling in wetlands; and permanently destroying habitat, such as eelgrass beds.

1. Recreational Vessel Use

²⁷¹ USCG Waterway Suitability Report at 2 (July 1, 2008) (incorporated by reference in the 2018 USCG Letter of Recommendation).

²⁷² 2015 FEIS, *supra* note 49, at 4-737.

²⁷³ *Id.* at 4-738.

The Coos Bay estuary generally, and areas at and in the immediate vicinity of the NRI dredging and dredge lines, is used extensively by “recreational” boaters, including for fishing.²⁷⁴ In 2005, recreational boaters took 30,996 boat trips in Coos Bay and engaged in 36,547 use-days of boating activity. Approximately 88% of these use days were related to fishing. According to State data, nearly 90 percent of the boat use-days [in Coos Bay] involved fishing (including angling, crabbing, and clamming). Coos County local recreation expenditures, including hunting, fishing, wildlife, viewing, and shellfishing totaled \$6.2 million dollars in 2008. Travel-generated expenditures for these activities in Coos County generated \$33.5 million dollars in 2008.²⁷⁵

According to analysis in RR5, App.C5, LNG carriers in Coos Bay would potentially impact on other recreational vessels about 7 hours per week, or about 8% of all daylight hours.²⁷⁶ Assuming all daylight hours are available fails to account for inclement weather, which is a common limiting factor for recreation and navigation in the estuary. Further, this estimate fails to account for the potentially significant impacts of actual dredging and construction work.

Also falling under the “recreational” vessel umbrella are subsistence fishers, for whom the activity is an established cultural tradition, and a matter of direct economic livelihood. Subsistence use is almost universally recognized as a highest and best use of waterways, and it warrants more careful attention here. Tribal consultation is an important part of that consideration, but that does not capture all subsistence users or interests so the broader public issue should be considered as well.

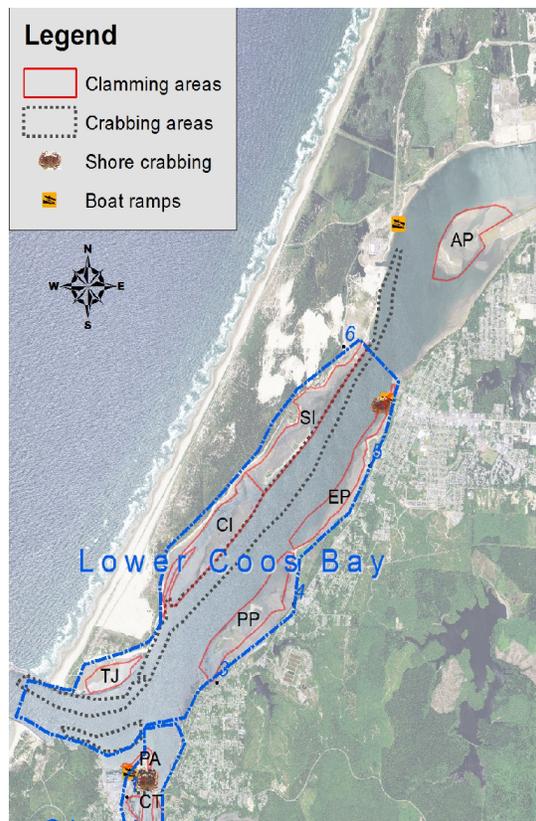


Figure 1 Oregon Department of Fish and Wildlife

The estuary is popular for clamming and crabbing, two fisheries that are particularly disturbed by dredging, and that are particularly vulnerable to chemical changes in the water.

²⁷⁴ Image Source: http://www.dfw.state.or.us/mrp/shellfish/maps/images/coos_shellfish_areas2.jpg. See also e.g. <http://oregonfishinginfo.com/Coos%20Bay.html> (“Good fishing for salmon extends over a wide area outside of Coos Bay” “Fishing for rockfish is excellent...” “Feeder salmon enter lower Coos Bay during the summer usually in July feeding from Charleston to Fossil Point north to Jordan Cove”); http://www.dfw.state.or.us/mrp/shellfish/maps/images/coos_shellfish_areas2.jpg;

²⁷⁵ “Fishing, Hunting, Wildlife Viewing, and Shellfishing in Oregon - 2008 State and County Expenditure Estimates”; Prepared for the Oregon Department of Fish and Wildlife - Travel Oregon; Dean Runyan Associates; May 2009, available at [http://www.dfw.state.or.us/agency/docs/Report 5 6 09--Final%20%282%29.pdf](http://www.dfw.state.or.us/agency/docs/Report%205%2009--Final%20%282%29.pdf)

²⁷⁶ Department of State Lands APP0060697. 7 November 2018 [Part 1] [pdf p.10]

All four of the dredge areas are located at or adjacent to areas specifically used for fishing and/or crabbing, ensuring navigation conflicts. These and other areas also are used for fishing other species, notably salmon.²⁷⁷

2. Surfing

The description of impacted resources fails to identify the lower bay on the inside of the North Jetty as a popular recreational surfing spot, particularly during high and near slack outgoing tides, commonly in the winter months or periods of high ocean surf conditions. Surfers access this location by off highway vehicles via the North Spit or by paddling across the estuary from shore points in Charleston. Surfing in the lower bay is typically associated with winter periods of large ocean swells and strong fresh water runoff. Transiting LNG tank vessels will likely negatively impact surfing in this location.

5.4 Conclusions

In summary, the Director must conduct a weighing of the public benefits of the project against interference with factors including navigation, fishing, and public recreation (See *Citizens for Resp. Devel. In the Dalles v. Walmart*, 295 Or App 310 (2018)).²⁷⁸ As part of this weighing of benefits, the legislature has clearly demonstrated that it is the State’s “paramount policy” to preserve Oregon waters for navigation, fishing, and public recreation. ORS 196.825(1). The applicants have failed to demonstrate that the project will not unreasonably interfere with navigation, fishing, and public recreation and, therefore, the Department must deny the permit. ORS 196.825(1)(b).

Specifically, the application fails to accurately describe impacts to navigation in Coos Bay, including a transparent analysis of applicable maritime law, the Coast Guard Letter of Recommendation, recent changes to vessel size, shipping descriptions, and vessel casualties. The proposed NRIs would impact shipping, the applicants fail to demonstrate public benefits from the proposed NRI dredging, there are serious concerns with safety margins identified by the applicants, and the project would likely interfere with boat ramps and access.

Additionally, the applicants fail to provide reasonable assurances that the project will not interfere with fishing. Removal-fill activities and construction of the pipeline would likely result in permanent loss of vegetative shading, loss of base flows, increased sedimentation, permanent degradation of riparian areas, and permanent loss of Large Woody Debris that would harm fish habitat. Removal-fill activities and construction of the terminal would likely result in permanent destruction of at least 1.9 acres of eelgrass beds that provide habitat, decreased dissolved oxygen, altered salinity, increased temperature, increased sedimentation, entrainment of fish and shellfish by dredging activities that would directly or indirectly harm fish and shellfish. In particular, the Department should comprehensively evaluate potential impacts to the Dungeness crab fishery, which are discussed in detail in this chapter.

²⁷⁷ Image Source: http://www.dfw.state.or.us/mrp/shellfish/maps/images/coos_shellfish_areas2.jpg. See also e.g. <http://oregonfishinginfo.com/Coos%20Bay.html> (“Good fishing for salmon extends over a wide area outside of Coos Bay” “Fishing for rockfish is excellent...” “Feeder salmon enter lower Coos Bay during the summer usually in July feeding from Charleston to Fossil Point north to Jordan Cove”);

²⁷⁸ ORS 196.825(1)(b).

Finally, the applicants have failed to provide reasonable assurances that the use of Oregon’s waters for public recreation will be protected. Specifically, the Department should evaluate impacts to recreational vessel use, surfing, and other recreational uses.

Chapter 6. INDEPENDENT UTILITY

6.1 The application does not demonstrate that the project has “independent utility.”

The Department may issue a permit if it determines that the project has “independent utility” (OAR 141-085-0565). “Independent utility” as defined under OAR 141-085-0510(43) means “that the project accomplishes its intended purpose without the need for additional phases or other projects requiring further removal-fill activities.” In the application, applicants must demonstrate independent utility by including “all phases, projects or elements of the proposed project which will require removal-fill activities.”²⁷⁹

The applicants have failed to demonstrate that the project has independent utility, primarily because the project before the Department relies upon the widening and deepening of the navigation channel beyond what is described in the application.

A. Coos Bay Channel Modification Project

On 18 August 2017, the Corps initiated the scoping process under the National Environmental Policy Act (“NEPA”) for the Coos Bay Channel Modification (“CBCM”) project. The current federal navigation channel (“FNC”) where it meets the ocean is 300 feet wide and 47- feet deep, then transitions to 37- feet deep for 15 miles. From river mile 9.2 to 15, the channel widens to 400 feet. The proposed channel modification, a part of the CBCM project, would widen and deepen the ocean entrance to 1,280 feet wide and 57- feet deep. From the ocean entrance to river mile 8.2, the channel would be deepened to 45- feet and widened to 450 feet. From river mile 7.3 to 7.8, a vessel turning basin would be constructed with a width of 1,100 feet, length of 1,400 feet, and depth of 37- feet. In total, the Corps estimates that 18 million cubic yards of dredged material would be removed and disposed of 2 miles offshore over 1,850 acres under the proposed modification.

The proposed channel modification would likely have significant direct, indirect, and cumulative impacts to Coos Bay, from increased tsunami risk to degradation of habitat for threatened and endangered species to impaired water quality. Many commenters submitted comments in the scoping period regarding the CBCM project and, in particular, its connection to the project currently before the Department (*See Appendix J*). Under 40 CFR 1508.25(a), a programmatic EIS may be necessary where actions may be connected, cumulative or similar. Under 40 CFR 1502.4(a), related proposals that are part of a single course of conduct must be evaluated together in a single EIS. NEPA requires a programmatic EIS for broad Federal actions, where the failure to do so would be arbitrary & capricious. See 40 CFR § 1502.4(b).

B. The Applicants Have Not Demonstrated That the Project Has Independent Utility

²⁷⁹ OAR 141-085-0550.

The proposed deepening and widening of the federal navigation channel as part of the CBCM project is clearly connected to the application before the Department. Coos Bay will only accommodate vessels up to 148,000 cubic meters, while Jordan Cove wants to accommodate LNG carries up to 217,000 cubic meters.²⁸⁰ As currently proposed in the application before the Department, it is not feasible for LNG vessels to transit the navigation channel at any time other than during tides greater than 6' 3" above MLLW. Therefore, the existing navigation channel is *unsuitable* for LNG vessel traffic most of the time because the tide height is *lower* than 6' 3" most of the time. Jordan Cove will be a major benefactor of modifying the navigation channel to allow access to LNG vessels. Further, the scoping notice for the CBCM project includes maps for channel dredging that point to the Jordan Cove LNG as a "terminal to benefit with project condition." This is in itself misleading because in actuality there is no Jordan Cove LNG terminal, only a proposal for one.

In scoping comments to FERC for the JCEP and PCGP in August 2017, ODFW acknowledged the connected nature of the two projects:

The 2015 DEIS briefly described but did not analyze the cumulative impacts from the "Coos Bay Channel Deepening/Widening Project" ("Pilots' Channel Modification Project", proposed by the Port of Coos Bay). ODFW understands that the current proposal moving forward is to deepen the channel to a navigation depth of 45 feet and widen the channel over 100 feet, which will result in removal of 12.0+ million cubic yards of additional material from Coos Bay. This material will require an open ocean disposal site over 2,000 acres in size that will be buried to a depth of ~15.0 feet.

Since JCEP will create the terminal, own the terminal, and be a primary benefactor of the channel modification that is proposed to River Mile ~ 8.0, ODFW believes the Pilots' Channel Modification Project is a connected action to the JCEP/PCGP project. ODFW recommends the DEIS include a full analysis of the Port's proposed "Pilots Channel Modification Project."²⁸¹

Further details regarding concerns about the CBCM project are included in Appendix J. Scoping Comments on Coos Bay Channel Modification Project.

Additionally, Jordan Cove has contributed financially to the Port of Coos Bay to support development of a plan to widen and deepen the navigation channel. Specifically, Jordan Cove contributed part of \$4.1 million to the Coos Bay Channel Modification Study as part of a project reimbursement agreement.²⁸² Finally, the Oregon International Port of Coos Bay (OICB) budget

²⁸⁰ Resource Report 1. Sept 2017. Jordan Cove. Page 22.

²⁸¹ Oregon State Agency Scoping Comments on FERC's Notice of Intent to Prepare an Environmental Impact Statement for Docket No. PF 17-4-000 (Jordan Cove Energy Project LP and Pacific Connector Gas Pipeline LP) DOJ File No.: 0ES456-ES456. 15 August 2017 at 15.

²⁸² Oregon International Port of Coos Bay. Port of Coos Bay FY 2017/2018 Budget Message. 19 May 2017. <https://static1.squarespace.com/static/569e6f1176d99c4f392858c4/t/594affd4ff7c50974dc3044d/1498087382779/Adopted+Budget+2017-18.pdf>. P. 9.

report from FY 2017/2018 specifically states that the Port Operations Department primary focus will be to “support operational objectives for the Jordan Cove LNG project.”²⁸³

C. Conclusions

The Department must comprehensively review clearly connected actions to the application, including but not limited to the CBCM project. The applicants would be the primary benefactors from the proposed widening and deepening of the federal navigation channel as part of the CBCM project or similar efforts to expand the navigation channel. Further, there are serious questions about the feasibility of LNG vessels transiting the federal navigation channel under the dredging currently proposed as part of the project application before the Department. The applicants have failed to demonstrate in their application that the Jordan Cove terminal project has independent utility. In other words, the applicants have not demonstrated that their project can accomplish its intended purpose without the need for other projects requiring further removal-fill activities, as required under OAR 141-085-0565(3)(a). Therefore, the Department must deny the permit.

Chapter 7. AVAILABILITY OF ALTERNATIVES

7.1 The Department Must Deny the Permit because the Applicants Have Inadequately Addressed the Availability of Alternatives for the Project and Alternative Sites for the Proposed Fill or Removal (*ORS 196.825(3)(c) and (d)*).

The applicants have failed to present a comprehensive analysis of alternatives to the project, as required under Oregon state law. OAR 141-085-0550(5), ORS 196.825(3)(c) and (d). Oregon law calls on the Director to consider “the availability of alternatives to the project,” as well as “the availability of alternative sites for the proposed fill or removal” when deciding whether to issue a removal-fill permit. To ensure a full review of available alternatives, administrative rules require a removal-fill permit applicant to describe alternative sites that could avoid or minimize adverse impacts to state waters, and to explain why such alternatives are not “practicable” in light of the project’s purpose and need.

Specifically, OAR 141-085-0550(5) requires that a removal-fill application include the following information regarding alternatives:

(f) A description of the project purpose and need for the removal or fill. All projects must have a defined purpose or purposes and the need for removal or fill activity to accomplish the project purpose must be documented. The project purpose statements and need for the removal or fill documentation must be specific enough to allow the Department to determine whether the applicant has considered a reasonable range of alternatives.

²⁸³ Oregon International Port of Coos Bay. Port of Coos Bay FY 2017/2018 Budget Message. 19 May 2017. <https://static1.squarespace.com/static/569e6f1176d99c4f392858c4/t/594affd4ff7c50974dc3044d/1498087382779/A/dopted+Budget+2017-18.pdf>. P. 9.

(o) An analysis of alternatives to derive the practicable alternative that has the least reasonably expected adverse impacts on waters of this state. The alternatives analysis must provide the Department all the underlying information to support its considerations enumerated in OAR 141-085-0565, such as:

- (A) A description of alternative project sites and designs that would avoid impacts to waters of this state altogether, with an explanation of why each alternative is, or is not practicable, in light of the project purpose and need for the fill or removal;
- (B) A description of alternative project sites and designs that would minimize adverse impacts to waters of this state with an explanation of why each alternative is, or is not practicable, in light of the project purpose and need;²⁸⁴

The Department, in determining whether to issue a Removal and Fill permit, is required to consider the availability of alternatives both for the project and for proposed fill sites, and to determine that the project is the practicable alternative with the least adverse impacts on the water resource. ORS 196.825(3).

A. Availability of Alternatives for the Project

ORS 196.825(12)(b)(F) requires that a “completed application” include “An analysis of alternatives that evaluates practicable methods to minimize and avoid impacts to waters of this state.”

In summary, the need for the removal-fill activities are inextricably linked to whether there is a need for the project as a whole. In this case, there is clearly *no need* for the proposed fill & removal, *but for* the entire Jordan Cove Energy Project and Pacific Gas Connector Pipeline.

In the application before the Department, the applicants submitted an alternatives analysis document, entitled “Resource Report No. 10, Alternatives,” (Resource Report 10) which it had previously submitted to the Federal Energy Regulatory Commission (FERC) for a separate regulatory proceeding. As described below, this document fails to comply with the state’s regulatory requirements for an acceptable alternatives analysis.

Specifically, the applicants have adopted an unreasonably narrow definition of the project’s purpose and need—a definition which, to all appearances, was specifically designed to restrict the consideration of viable alternatives to a single site selected over a decade ago for an entirely different project purpose. Additionally, the applicants have failed to assess a range of viable alternatives that meet the project’s fundamental purposes, and have ignored serious deficiencies associated with the proposed location and design of the project. Because the applicants’ alternatives analysis fails to provide complete and accurate information and to properly consider project alternatives that avoid and minimize impacts to Oregon state waters, as required by state law, the Department must deny the permit.

1. The Applicants’ Purpose and Need Statement Fails to Provide the Department with the Information Necessary to Determine Whether the Applicants Have Considered a Reasonable Range of Alternatives

²⁸⁴ OAR 141-085-0550(5)

JCEP’s Resource Report 10 sets out the following definition of the project’s “purpose and need”:

The overall Project purpose and need is to construct a natural gas liquefaction and deep-water export terminal capable of receiving and loading ocean-going Liquefied Natural Gas (LNG) carriers, in order to export natural gas *derived from a point near the intersections of the GTN Pipeline system and Ruby Pipeline system*. [Emphasis added.]²⁸⁵

The Department’s removal-fill guide specifies that project purpose statements should not be “overly narrow” lest they preclude “any other alternative but the selected one.”²⁸⁶ In direct contravention of this Department guidance, the geographic limit in JCEP’s purpose and need statement—namely, that the LNG facility must source gas “from a point near” a specific pipeline intersection—inappropriately narrows the alternatives analysis to locations in Oregon and Washington, and clearly favors a single site in Coos Bay. This unnecessary and arbitrary geographic restriction eliminates consideration of many economically viable alternative sites that meet the fundamental project purpose of exporting LNG sourced from Canada and the Rocky Mountains.

Furthermore, the applicants have not demonstrated the need for Rocky Mountain and Canadian gas export to be accommodated from the same location in the first place. The Department must closely examine this underlying premise of the purpose and need statement, because LNG export terminal projects that are already proposed or in development are viable alternatives able to fulfill the portion of the project purpose that seeks to connect fracked gas producers to end-use customers.

Specifically, there are a number of feasible alternative locations for both Canadian gas supplies to access overseas LNG markets. Two different LNG export terminal projects have begun to move forward on the coast of British Columbia. One of these, the Woodfibre LNG project, has received an initial final investment decision and preconstruction activities have already begun at the site. The other, the massive LNG Canada project in Kitimat, has received a final investment decision from a consortium of international backers led by Royal Dutch Shell. TransCanada has already begun preconstruction activities for the pipeline that would supply the Canada LNG project.

Similarly, gas sourced from the Rocky Mountain region can gain access to LNG export terminals on the US Gulf Coast. Cheniere Energy’s Sabine Pass LNG terminal is already operational, and the company is now expanding the facility. Construction has begun on three additional LNG plants along the Gulf, including one in Corpus Christi, TX and a second in Freeport, TX. Five additional Gulf Coast LNG terminals have been approved but are not yet under construction. These terminals are roughly the same distance from Rocky Mountain gas sources as Coos Bay. In addition, they have the additional economic advantage of not requiring significant new gas pipeline construction.

Finally, the Department should comprehensively evaluate the applicants’ assertion that:

²⁸⁵ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 1 JCEP: ATTACHMENT B1, Section 10.0 INTRODUCTION, p. 227 of 3638

²⁸⁶ Department of State Lands. A Guide to the Removal-Fill Permit Process. Oregon Department of State Lands. December 2016. Appendix. Preparing the Alternatives Analysis. P. 16.

[I]f developed, [those projects] could serve the same Asian markets as the proposed Project, [but] none are currently authorized, as required by U.S. Department of Energy (“DOE”) Order 3639 (2015), to export U.S.-sourced natural gas.²⁸⁷

In fact, a policy decision issued by the DOE on December 19, 2018 discontinues the practice of including an “end use” reporting provision in orders authorizing the export of domestically produced natural gas. Thus, all LNG Terminals in Canada are now authorized to export gas sourced in the United States.²⁸⁸

The applicants’ alternatives analysis improperly avoided a serious assessment of those alternatives by adopting an unnecessary and arbitrary geographic restriction, specifically a deep-water LNG facility near a particular gas pipeline intersection, in its purpose and needs statement. Because the applicants have failed to provide the Department a more robust alternatives analysis based on a purpose and needs statement that better reflects the realities of North American gas and LNG infrastructure, the Department should deny the permit. OAR 141-085-0550(2); ORS 196.825(3)(d).

2. The Applicants’ Purpose and Need Statement Arbitrarily Limits Evaluation of the No Action Alternative

According to JCEP’s Resource Report 10:

Under the No Action Alternative, the Project would not be constructed, and *the Project’s purpose and need would not be met*. [Emphasis added.]²⁸⁹

We are concerned that this assertion does not accurately reflect the No Action Alternative. As discussed above, it is likely that the core purposes of the project could be met by directing Canadian gas to Canadian export terminals that are currently under development and by shipping Rocky Mountain gas to existing and under construction Gulf Coast export terminals.

Of most relevance to the Department, the applicants also contend that the No Action Alternative would not eliminate adverse impacts to state waters, but could instead lead to even greater impacts than the proposed project, stating:

Whether the LNG Terminal is built or not, the site will likely be used for industrial purposes resulting in environmental impacts that could be similar to or greater than those that would be associated with the Project. Adoption of the No Action alternative would not eliminate the potential for environmental impacts as development of the proposed site for the LNG

²⁸⁷ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 1 JCEP: ATTACHMENT B1, Section 10.2.2.2 Canadian West Coast, p. 230 of 3638

²⁸⁸ US Department of Energy, 10CFR Part 590, *Eliminating the End Use Reporting Provision for the Export of Liquefied Natural Gas*, Federal Register Vol. 83, No. 243

²⁸⁹ Department of State Lands APP0060697. 7 November 2018.
<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 1 JCEP: ATTACHMENT B1, Section 10.1.1 No Action Alternative, p. 228 of 3638.

Terminal or an alternate development concept would likely occur—although possibly later in time, thereby delaying any environmental impacts.²⁹⁰

The project before the Department has a potentially high impact to waters of the state and speculating that other uses of the same site would require similar modifications to state waters should be considered outside of the scope of a reasonable alternatives analysis.²⁹¹ There is no reason to anticipate that additional environmental impacts from other infrastructure construction and/or expansion will occur if the No Action alternative is chosen for the project. Regardless, any expansions of alternative sites in Canada or the Gulf would have no direct impacts on the waters of the state of Oregon—the preservation of which constitutes Oregon’s “paramount policy.”²⁹² The Department should carefully consider this type of “Perfect Substitution” argument that is often used by the fossil fuel industry to claim that additional environmental impacts from other infrastructure construction or expansion will occur if the project is not built.²⁹³

B. Availability of Alternative Sites for Removal-Fill

In addition to evaluating the available of alternatives for the project, the Department must consider the availability of alternative sites. OAR 141-085-0550(5), ORS 196.825(3)(c) and (d). The applicants state that in their alternatives analysis, the reasonable site alternatives they selected to evaluate were Coos Bay, Astoria, Wauna, and Port Westward (in Oregon) and Grays Harbor (in Washington), using the following project criteria:

- (1) Land Availability
- (2) Channel Depth
- (3) Navigational Accessibility
- (4) LNG Vessel Travel Distance
- (5) Pipeline Length and Costs.

The Department should comprehensively evaluate the rationale provided by the applicants regarding the selection of the Coos Bay project site location. Specifically, the Department should consider whether the applicants have developed quantitative project criteria, such as physical site suitability characteristics and local land use consistency.²⁹⁴

1. Land Availability

Regarding the selection of the Coos Bay site, the Department should review the thirteen (13) separate Notice(s) of Presumed Airport Hazard(s) to Jordan Cove LNG on May 7, 2018.²⁹⁵ Nine

²⁹⁰ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailF&id=60697>. PART 1 JCEP: ATTACHMENT B1, Section 10.1.1 No Action Alternative, p. 228 of 3638.

²⁹¹ Department of State Lands. A Guide to the Removal-Fill Permit Process. Oregon Department of State Lands. December 2016. Appendix. Preparing the Alternatives Analysis. P. 16.

²⁹² ORS 196.825(1).

²⁹³ See *WildEarth Guardians; Sierra Club v. Bureau of Land Management*. D.C. No. 2:13-CV-00042-ABJ. (2017).

²⁹⁴ Department of State Lands. A Guide to the Removal-Fill Permit Process. Oregon Department of State Lands. December 2016. Appendix. Preparing the Alternatives Analysis. P. 17.

²⁹⁵ http://elibrary.FERC.gov/idmws/file_list.asp?accession_num=20180510-5165 Part 8 pp 281-326 of 326

(9) of these FAA Presumed Airport Hazards involve transiting LNG tanker ships at various points within the Coos Bay Estuary. The FAA issued these Notices due to the height of storage tanks and other facilities proposed for the Coos Bay location and called for either adjustment to the design that will resolve that problem or abandonment of the project. Although these notifications are not directly addressed by the applicants, they do acknowledge consideration of lowering tank heights to minimize obstruction to the airport. However, this approach has not been adopted because the size and configuration of the property where the storage tanks are to be located precludes widening the circumference of the tanks to allow their height to be lowered.²⁹⁶ The Department should consider whether the applicants have met their own criterion regarding land availability.

2. Channel Depth

The applicants acknowledge that their own channel depth criteria is not satisfied by the Coos Bay site.²⁹⁷ To address this issue, the applicants propose Navigation Reliability Improvements (NRIs) which involve dredging to a depth of 45- feet to ensure the economic feasibility of the project. Further, the applicants state that:

Modeling showed that without the NRIs in place, the greater delays imposed by the Pilots on LNG ship transits of the channel due to environmental conditions would result in a potential annual loss of production at the facility equal to about 38,000 tonnes of LNG. This would equate to a direct loss of revenue of about \$8.0 million per year for the facility.²⁹⁸

The Department should comprehensively review this criterion identified by the applicants that the project does not meet. Additionally, the Department should consider this criterion in light of the failure of the applicants to demonstrate independent utility for the project (*See* Chapter 6 *infra*). Specifically, even with the proposed NRIs, the project clearly relies upon the proposed deepening and widening of the federal navigation channel as part of the CBCM project.²⁹⁹

3. Pipeline Length and Costs

We are additionally concerned that the applicants do not provide quantitative analysis for defining the pipeline criterion to reflect distance to the Malin hub, rather than distance to any other hub(s) that could also access the Montney Basin and/or the Rocky Mountain region. This results in precluding the consideration of any of other sites or alternatives, and thus does not accurately reflect their viability as alternate sites that meet the project's purposes.

²⁹⁶ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 1 JCEP: ATTACHMENT B1, Section 10.4.2 LNG Storage Tank Design Alternatives, p. 240 of 3638.

²⁹⁷ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 1 JCEP: ATTACHMENT B1, Section 10.3.3.1 Proposed Site, p. 236 of 3638.

²⁹⁸ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 1 JCEP: REMOVAL FILL APPLICATION, (3) PROJECT PURPOSE AND NEED, p. 2 of 3638.

²⁹⁹ Resource Report 1. Sept 2017. Jordan Cove. Page 22.

C. Availability of Alternative Pipeline Routes

The Department must not issue a removal-fill permit for the project without a complete evaluation of all wetlands and/or water crossings as well as potential impacts to listed species.

1. Avoiding Wetlands and Waterway Crossings

As discussed in Chapter 2 *infra*, the applicants have been denied access by landowners to some parcels and have not provided adequate wetland or flowing water surveys. The applicants state that:

Wetland surveys have been conducted for approximately 89% of the Proposed Route where survey permission has been granted.³⁰⁰

The remaining cultural and wetland surveys will be completed as landowner permission is granted.³⁰¹

Further, the applicants state:

A revised HGM assessment for tidal wetlands of the Oregon Coast has not been completed due to reroutes to accommodate agency and landowner request. Surveys of the reroutes will be completed as landowners grant survey permission. The 2009 HGM assessment for the project only included two estuarine wetlands, also due to landowner restrictions on the entire route in the Coos Bay area.³⁰²

There are at least 83 un-surveyed parcels along the proposed pipeline route for a total of 20.88 miles impacted.³⁰³ Coos County has 29 un-surveyed parcels, for a combined estimated 6.86 miles impacted. There are 37 un-surveyed parcels in Douglas County for a combined 10.89 miles. In Jackson County, there are 9 un-surveyed parcels, or 0.65 miles impacted, and in Klamath County there are 8 un-surveyed parcels with a combined impact of 2.48 miles.³⁰⁴

³⁰⁰ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 2 PCGP, ATTACHMENT A.2, Section 1.3.1.1.7 Wetland Delineation Report, p. 2141 of 3638.

³⁰¹ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 2 PCGP, ATTACHMENT A.2, Section 1.3.1.2.3 Surveying and Staking, p. 2149 of 3638.

³⁰² Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 2 PCGP, ATTACHMENT C.3, Chapter 6 Summary, p. 2610 of 3638

³⁰³ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 2 PCGP: ATTACHMENT C.2, Table 2.3-1, p. 2564-2566 of 3638.

³⁰⁴ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697> PART 2 PCGP: ATTACHMENT C.2, Table 2.3-1, p. 2564-2566 of 3638.

At a minimum, the applicants should develop and evaluate an alternate route or routes where full delineation of all wetlands and survey of all stream crossings are possible. The Department should exercise its authority to deny the permit Remove and Fill permit for the PCGP based on the applicant's failure to provide complete and accurate information regarding alternative routes for the PCGP that minimize or avoid impacts to the waters of the State. OAR 141-085-0550(2)

2. Avoiding Listed Species

Additionally, the applicants should fully evaluate pipeline route alternatives that would better protect endangered species habitat need also be considered, specifically, Marbled Murrelet or Northern Spotted Owl occupied habitat.

The applicants acknowledge that:

A presumed occupied Marbled Murrelet stand occurs on the forested slopes immediately south of the river crossing and where TEWA 23.09-N is located. This stand has not been surveyed or assessed for suitable nesting habitat, because of denied property access.³⁰⁵

The applicant needs to develop an alternative route around the landowner, where potential impacts to Marbled Murrelet habitat can be thoroughly evaluated. Even where access to habitat has been granted, it is not possible to determine whether impacts to Marbled Murrelets could be reduced when no alternates are proposed. Table B3-4 lists 10 stream crossings where Jordan Cove's work will conflict with Murrelet nesting season restrictions. In each case the applicant proposes that:

Year Two daily timing restrictions during construction to minimize impacts to MAMU should be waived during the stream crossing installation to minimize the duration of instream work and the installation of flumes or dams/pumps.³⁰⁶

Each of the 10 stream crossings that endanger nesting Marbled Murrelets are located on Coos Bay Bureau of Land Management (BLM) land. On December 6 2018, BLM issued a memo requesting no mitigation for these impacts.³⁰⁷ Thus, any negative impacts to the stream crossings and/or Marbled Murrelet habitat will go unmitigated. Without an alternate route to consider, it is impossible to determine that impacts have been minimized.

D. Conclusions

In summary, because the applicants have failed to demonstrate a comprehensive analysis of alternatives to the project, the Department does not have the information to consider the

³⁰⁵ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 2 PCGP, ATTACHMENT C.11_4., Site Specific Plan For Open Cutting The North Fork Coquille River, Pre-Construction Schedule, p. 2715 of 3638

³⁰⁶ Department of State Lands APP0060697. 7 November 2018. <https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. PART 2 PCGP, Table B.3-4, Fish Utilization, EFH in, and Crossing Techniques and In-Water Work Windows for Waterbodies Crossed by the Proposed Route, pp. 1533-1541 of 3638.

³⁰⁷ <https://www.blm.gov/policy/im-2019-018>

availability of alternatives both for the project and for proposed fill sites, and to determine that the project is the practicable alternative with the least adverse impacts on the water resource, as required under Oregon law. Consequently, without the information necessary to determine whether the applicant has considered a reasonable range of alternatives, the Department must deny the removal-fill permit.

Chapter 8. SOUND POLICIES OF CONSERVATION AND INTERFERING WITH PUBLIC HEALTH AND SAFETY

8.1 The Department Must Deny the Permit because the Applicants Have Failed to Provide Reasonable Assurances that the Project Conforms to Sound Policies of Conservation and Would Not Interfere with Public Health and Safety (ORS 196.825(3)(e)).

Under ORS 196.825(3)(e), the Department is required to consider whether the project conforms to the sound policies of conservation and whether the project would not interfere with public health and safety in determining whether to issue a permit. The burden is on the permit applicant to provide the Department with sufficient information to demonstrate compliance with this standard. OAR 141-085-0565(5). The application does not contain the information necessary for the Department to make an informed decision on whether the application complies with the policy and standards set forth in ORS 196.825(3)(e). Therefore, the Department must deny the permit.

A. Conformance to Sound Policies of Conservation

According to the DSL removal-fill guide:

The Department will consider how the proposed action incorporates appropriate protection of and conservation measures for water resources. Sound policies of conservation are considered at the project scale and within the landscape. For example, a mitigation site should be located in an area that connects wildlife corridors, because that is a known conservation policy.³⁰⁸

Under its discretionary authority, the Department should consider “sound policies of conservation” provided for by existing state and federal laws and regulations that protect and conserve the waters of the state.

1. Compliance with the Clean Water Act

The purpose of the Clean Water Act (“CWA”), 33 U.S.C. § 1251 *et seq.*, is to restore and maintain the chemical, physical, and biological integrity of waters of the United States. We have included in Appendix A. Clean Water Act 401 Comments submitted to DEQ regarding the lack of reasonable assurances that the project will comply with state water quality standards and therefore must result in a denial of the Clean Water Act Section 401 state water quality certification. We have also included in Appendix B. Clean Water Act 404 Comments submitted to the Corps regarding the lack of reasonable assurances that the project is in compliance with

³⁰⁸ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 6. P. 6-14.

the Clean Water and the Corps' regulations regarding removal-fill activities. These comments provide substantial details and the key points are summarized below.

The applicants have not provided reasonable assurances that the proposed activities will not violate state water quality standards. More specifically:

- The application fails to contain the mandatory minimum information (*See* Section II in Appendix A);
- There is no reasonable assurance that the project will comply with Oregon's antidegradation implementation policy (*See* Section III in Appendix A);
- There is no reasonable assurance that designated beneficial uses will be protected (*See* Section IV in Appendix A);
- There is no reasonable assurance that numeric criteria will not be violated (*See* Section V in Appendix A); and
- There is no reasonable assurance that narrative criteria will not be violated (*See* Section VI in Appendix A).

Further, the applicants have failed to demonstrate that the project activities would comply with EPA's 404(b)(1) guidelines by:

- Failing to include practicable alternatives (*See* Section II A in Appendix B);
- Causing or contributing to violations of state water quality standards (*See* Section II B in Appendix B);
- Violating applicable toxic effluent standard or prohibition under Clean Water Act Section 307 (*See* Section II C in Appendix B);
- Jeopardizing the continued existence of species listed under the Endangered Species Act ("ESA") or adversely modifying or destroying designated Critical Habitat (*See* Section II D in Appendix B);
- Causing or contributing to significant degradation of the waters of the United States (*See* Section II E in Appendix B);
- Failing to minimize the potential adverse impacts of the discharge on the aquatic ecosystem (*See* Section II F in Appendix B);
- Negatively impacting wetlands (*See* Section IV in Appendix B);
- Interfering with access to or use of navigable waters (*See* Section V in Appendix B);
- Failing to obtain the required state or local authorizations or certifications (*See* Section VI in Appendix B);
- Impairing floodplain values (*See* Section VII in Appendix B);
- Harming Oregon's and the nation's economies (*See* Section VIII in Appendix B);
- Missing sufficient information to make a reasonable judgment (*See* Section IX in Appendix B); and
- Failing to be in the public interest (*See* Section III in Appendix B).

a. Compliance with Total Maximum Daily Loads

The Department should carefully review the impacts of the project that occur on state and federal lands that are subject to existing Total Maximum Daily Loads ("TMDLs"). For certain waterbodies that are listed as impaired for different pollutants under the Clean Water Act because they fail to meet State water quality standards, DEQ has developed TMDLs to achieve

compliance with those standards. In its 20 December 2018 letter regarding the Joint Permit Application for 401 state water quality certification for the project, DEQ specifically states:

PCGP has not demonstrated to DEQ that proposed activities such as right-of-way construction, road maintenance, and road construction will comply with USDA Forest Service, U.S. Department of Interior BLM, Bureau of Reclamation, Oregon Department of Forestry, and County Total Maximum Daily Load compliance plans and programs. DEQ developed these TMDL to achieve compliance with water quality standard in water bodies impaired by specific pollutants.³⁰⁹

Not only are numerous impacted waterways already 303(d) listed as impaired for pollutants, but many are also subject to TMDLs. For example:

- In 1994, DEQ established a TMDL for the Coquille River for dissolved oxygen.³¹⁰
- EPA approved TMDLs for bacteria, temperature, algae/aquatic weeds, dissolved oxygen, and pH for the Umpqua Basin in 2007.³¹¹
- The Rogue River has a TMDL for bacteria and temperature.³¹²
- The Upper Klamath has TMDLs for Dissolved Oxygen, Chlorophyll a, pH, and Ammonia Toxicity.³¹³
- The Lost River subbasin also has TMDLs for Dissolved Oxygen, Chlorophyll a, pH, and Ammonia Toxicity.³¹⁴

Throughout the 20 December 2018 letter, DEQ raises substantial concerns regarding compliance with TMDLs as a result of the project. As one example, the Oregon Department of Forestry (“ODF”) is a Designated Management Agency (“DMA”) and regulates pollution to waterways as a result of the establishment, management, or harvesting of trees on private and state forestlands under the Oregon Forest Practices Act (“OFPA”). ODF uses the OFPA to comply with Clean Water Act requirements and TMDLs. DEQ raises multiple concerns regarding the project’s compliance with the OFPA related to road use, stating:

Moreover, PCGP has not addressed any of the ODF requirements noted below regarding forest road maintenance. ODF established FPA rule OAR 629-625-0600 to comply with water quality standards by timely maintenance of all active and inactive roads.³¹⁵

³⁰⁹ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 10.

³¹⁰ Coquille River & Estuary Water Quality Report. Total Maximum Daily Load Program. Oregon DEQ. March 1994. <https://www.oregon.gov/deq/FilterDocs/scCoquilleRiverTMDL.pdf>. P. 3.

³¹¹ Umpqua Basin Report. Oregon DEQ. 2 June 2013. P. 145.

³¹² Rogue River Basin TMDL. Oregon DEQ. December 2008. <https://www.oregon.gov/deq/FilterDocs/rogueChapter1andExecutiveSummary.pdf>.

³¹³ Upper Klamath and Lost River Subbasins TMDL. Oregon DEQ. December 2017. <https://www.oregon.gov/deq/FilterDocs/UpperKlamathandLostRiverTMDL.pdf>.

³¹⁴ Upper Klamath and Lost River Subbasins TMDL. Oregon DEQ. December 2017. <https://www.oregon.gov/deq/FilterDocs/UpperKlamathandLostRiverTMDL.pdf>.

³¹⁵ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 14.

ODF uses road maintenance and building requirements associated with the Forest Practices Act to comply with Clean Water Act requirements such as those associated with Total Maximum Daily Loads and water quality standards. However, PCGP does not provide DEQ with information on how specifically PCGP will address OAR 629-625-0700 (Wet Weather Road Use).³¹⁶

The Department should comprehensively review the application under ORS 196.825(3)(e) in light of these concerns from DEQ regarding the project’s compliance with TMDLs in order to determine whether the project fails to conform to sound policies of conservation.

2. Lack of Endangered Species Act Consultation

The Department must not approve the application without consulting with NOAA Fisheries. A Draft EIS (“DEIS”) has not yet been released and there has been no formal consultation under the Endangered Species Act (“ESA”). Additional analysis is necessary to provide the Department and the public with adequate information about the fish exclusion technology to be used, complete with an analysis of the effectiveness of the plan, and the stormwater testing to be employed. Without addressing these issues, and without the many other missing studies, plans, and analyses, the application is wholly inadequate and legally insufficient.

In the previous iteration of the project, the National Marine Fisheries Service (“NMFS,” now NOAA Fisheries) together with multiple agencies expressed concern regarding the lack of information provided by the applicants in the Biological Assessment. For instance, NMFS requested further information and consultation for green sturgeon based on potential dredging impacts. NMFS informed FERC:

Disturbance of substrate from project construction and biennial maintenance dredging, along with disposal at the Coos Bay ocean dredged material disposal site (Site F), will modify habitat and reduce safe passage by causing direct adverse physical effects due to physical entrainment in the discharge plume.”³¹⁷

Additionally, according to the 2015 DEIS from the last iteration, the project is likely to adversely affect the following species listed under the ESA:³¹⁸

- Threatened Marbled murrelet;
- Threatened Northern spotted owl;
- Threatened Coho salmon (“SONCC”);
- Threatened Coho salmon (Oregon Coast Evolutionarily Significant Unit “ESU”);
- Threatened North American green sturgeon (Southern Distinct Population Segment “DPS”);
- Endangered Lost River sucker;

³¹⁶ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 19-20.

³¹⁷ NMFS Biological Assessment comments at 2.

³¹⁸ DEIS at 4-628.

- Endangered Shortnose sucker;
- Threatened Vernal pool fairy shrimp;
- Endangered Applegate’s milk-vetch;
- Endangered Gentner’s fritillary;
- Threatened Kincaid’s lupine; and
- Endangered Rough Popcornflower.

Again, this list is not the result of a final Biological Assessment or any formal consultation and review by the wildlife agencies NMFS and USFWS.

The lack of consultation for the project is also problematic because key mitigation measures for ESA-listed species have not been determined or vetted by key agencies, such as NOAA Fisheries. Information included in the application fails to provide an adequate assessment of how the impacts of the project to key listed species will be avoided or minimized. Due to the complexity and scale of the project, as well as the number of listed species that could be impacted, consultation for the project is clearly warranted. Until official consultation is initiated, it is impossible for the public to know what mitigation measures will be proposed and whether they will be effective. The lack of information regarding impacts to listed species further emphasizes the lack of conformance to sound policies of conservation as required under ORS 196.825(3)(e), and therefore the Department must deny the permit.

3. The Applicants Have Failed to Provide Reasonable Assurances that the Project Conforms to State Policies of Conservation

In addition to the Clean Water Act and the Endangered Species Act, the state of Oregon has multiple laws, regulations, and policies that pertain to protection of and conservation measures for water resources. The Department should fully evaluate whether the project is in compliance with all applicable laws, policies, and regulations. The following examples are not a comprehensive list, but rather highlight some of the state conservation policies that the Department should consider. The applicants have failed to demonstrate that this project would conform to the sound policies of conservation in both the Oregon Conservation Strategy and the Oregon Plan for Salmon and Watersheds, and therefore the Department should deny the permit.

a. Oregon Conservation Strategy

For example, the Department should consider the Oregon Department of Fish and Wildlife’s (ODFW) Oregon Conservation Strategy. The Oregon Conservation Strategy identifies the Klamath Mountains Ecoregion, which includes most of southwestern Oregon, as a key habitat where the loss of habitat connectivity and altered fire regimes as limiting factors. Oregon’s Nearshore Ecoregion is also identified as a priority where habitat alteration and water quality degradation as limiting factors. Wetlands, coastal dunes, flowing water and riparian habitats, and estuaries are all identified as strategy habitats.³¹⁹ The primary goals of the Oregon Conservation Strategy are identified as 1) maintain healthy fish and wildlife populations by maintaining and restoring functioning habitats; 2) prevent decline of at-risk species; and 3) reverse downturns in

³¹⁹ Oregon Conservation Strategy. 2016. Oregon Department of Fish and Wildlife, Salem, Oregon

fish and wildlife populations where possible.³²⁰ The Department should fully evaluate how the project would be consistent with these goals and the Oregon Conservation Strategy in light of the significant and harmful impacts to water quality and quantity, fish, wildlife, and habitats that would result.

b. Oregon Plan for Salmon and Watersheds (“The Oregon Plan”)

In 1997, the Oregon Legislature and Governor Kitzhaber established the Oregon Plan for Salmon and Watersheds with the goal to:

...restore the watersheds of Oregon and to recover the fish and wildlife populations of those watersheds to productive and sustainable levels in a manner that provides substantial ecological, cultural and economic benefits [ORS 541.405(1)(a)].³²¹

The Oregon Plan relies upon voluntary restoration actions; coordinated action by state and federal agencies and tribes; monitoring watershed health; and scientific oversight by the Independent Multidisciplinary Science Team (IMST).

As discussed in significant detail in Chapter 4 *infra*, this project will likely harm water quality and habitat for fish and wildlife in total opposition to the goals of the Oregon Plan. In many areas along the pipeline route, significant resources, both private and public, have been invested in the restoration and recovery of water quality and aquatic habitat as part of the Oregon Plan. As a result of the likely adverse impacts of this project, these restoration efforts will put at risk, in conflict with sound policies of conservation. The following examples from each of the impacted waterways demonstrate the significant investments in restoration activities that has occurred:

- **Coos (HUC 17100304):** The State of Oregon has invested significant funds in restoration activities designed to benefit water quality and salmon species within the Coos subbasin. The Oregon Watershed Enhancement Board (“OWEB”) has distributed restoration funds to a number of organizations. As of this writing OWEB has invested \$16.8 million dollars in activities including assessment work, watershed council support, education, technical assistance, monitoring and the hard costs of restoration work to restore the Coos subbasin.
- **Coquille (HUC 17100305):** The State of Oregon has invested significant funds in restoration activities designed to benefit water quality and salmon species within the Coquille subbasin. As of this writing, OWEB has invested \$18.2 million dollars in activities including assessment work, watershed council support, education, technical assistance, monitoring and the hard costs of restoration work to restore this subbasin. Additionally, DEQ must consider that any impacts in the Coquille subbasin would affect Coos Bay and the success of other restoration work downstream.
- **South Umpqua (HUC 17100302):** The State of Oregon has invested significant funds in restoration activities designed to benefit water quality and salmon species within the

³²⁰ Oregon Conservation Strategy. 2016. Oregon Department of Fish and Wildlife, Salem, Oregon. https://www.dfw.state.or.us/conservationstrategy/read_the_strategy.asp.

³²¹ Callens, Judith. Background Brief on Oregon Plan for Salmon and Watersheds. November 2006. <https://www.oregonlegislature.gov/lpro/Publications/2006OregonSalmonPlanF.pdf>. P. 1.

South Umpqua subbasin. As of this writing OWEB has invested \$11 million dollars in activities including assessment work, watershed council support, education, technical assistance, monitoring and the hard costs of restoration work to restore this subbasin. Additionally, DEQ must consider that any impacts in the South Umpqua subbasin would affect the Umpqua River and the success of other restoration work downstream.

- **Upper Rogue (HUC 17100307):** The State of Oregon has invested significant funds in restoration activities designed to benefit water quality and salmon species within the Upper Rogue subbasin. As of this writing, \$11.2 million dollars has been granted by OWEB for activities including assessment work, watershed council support, education, technical assistance, monitoring and the hard costs of restoration work to restore this subbasin. Additionally, DEQ should consider that any impacts in the Upper Rogue subbasin would affect the Rogue River and the success of other restoration work throughout the whole Rogue Basin. The Rogue River Watershed Council is in the process of removing seven fish passage barriers in Salt Creek downstream from the proposed pipeline crossing of the Rogue. According to the Rogue River Watershed Council:

Construction activities during pipeline placement and raw, exposed soil for several years after pipeline installation is likely to contribute sediment to Salt Creek. Such increased sediment load works directly against our proposed restoration work, which will allow summer and winter steelhead and threatened Coho Salmon to reach more spawning habitat in Salt Creek. Sedimentation will contribute injury to the redds (nests) of these fishes. Moreover, the right of way at the pipeline location will be exposed due to vegetation management, leading to increased water temperatures in Salt Creek. One of the reasons Salt Creek is a target for restoration for us is the cool stream temperatures all summer long.³²²

Further, the Upper Rogue Coho Salmon Strategic Action Planning group is focusing on West Fork Trail, Elk, parts of Big Butte, and parts of Little Butte Creeks. Careful review of the pipeline route show that impacts from erosion and sedimentation, streamside vegetation removal, and other associated impacts could work against restoration activities to be done in the future to enhance and protect Coho salmon habitat in these streams.

- **Upper Klamath (HUC 18010206):** The State of Oregon has invested significant funds in restoration activities designed to benefit water quality and salmon species within the Upper Klamath subbasin. Funds have been distributed to a number of organizations through OWEB. As of this writing, OWEB has invested \$5.4 million dollars in activities including assessment work, watershed council support, education, technical assistance, monitoring and the hard costs of restoration work to restore this subbasin. Additionally, DEQ should consider that any impacts in the Upper Klamath subbasin would affect the Klamath River and the success of other restoration work downstream. Impacts to the Klamath River may also impact waterways in the State of California and the beneficial uses and restoration activities found downstream. Oregon should consult with the California State Water Resources Control Board regarding potential impacts to California waters.

³²² Barr, Brian. Rogue River Watershed Council. Email communication. 29 June 2018.

Overall, it is likely that the proposed impacts from the pipeline undermine the Oregon Plan for Salmon and Watersheds that the State uses to restore wild salmon.

B. Interference with Public Health and Safety

The removal-fill statute specifically requires that the Director consider potential interference with public health and safety, as a result of the proposed removal and fill. ORS §196.825(3)(e). Specifically, the DSL removal-fill guide states:

The Department will also consider the potential positive and negative effects of the removal-fill on public health and safety. For example, positive effects might include removal-fill to protect a sewer line. Negative effects might include increased flood risk to nearby properties.³²³

The recent decision in *Citizens for Responsible Development In Dalles v. Wal-Mart Stores, Inc.*, 295 Or.App. 310 (2018), emphasizes that the Director must weigh effects on public health and safety against the project's public need. The court there also found that §825(e) factors require a balancing.³²⁴ Applying the analysis in that case to the public health and safety criterion, the same reasoning requires that the Department find that interference with public health and safety must not predominate over any arguable public need for the removal-fill.³²⁵

Some of the potential threats to public health and safety are inherently uncertain. It is impossible to know precisely when and where small fuel spills might occur during project construction, for example, though it is easy enough to foresee that they will occur and so need to be planned for. There is similar uncertainty regarding HDD drilling frac-outs, contamination of drinking water, and the effects of earthquakes and tsunamis. This implies that the applicants should have provided the Department with a risk analysis of threats and mitigation measures in order to enable it to weigh the probabilities of potential sources of interference. This sort of hazard risk analysis is routinely done in the pipeline industry in order to prioritize spending of maintenance dollars.

In addition, other effects on public health and safety resulting from this project are uncertain not because the effects are not knowable, but because the application is incomplete and premature (*See* Chapter 2 *infra*). The application does not contain information or analysis showing effects to a reasonable degree of certainty. This is in marked contrast with analysis that will be conducted for this project under NEPA, the CWA, the ESA, MMPA and MSA, among other authorities. The analysis the applicants include from contractors does not even purport to be an objective, scientific exploration of effects.³²⁶ Aside from quantity and quality of information, the application does not enable the Department to reasonably predict probable effects with any specificity because foundational decisions remain to be made regarding construction, timing, alternatives and mitigation.

³²³ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 6. P. 6-14.

³²⁴ ORS §196.825(3)(e).

³²⁵ *See Citizens for Responsible Development In Dalles v. Wal-Mart Stores, Inc.*, 295 Or.App. 310, (2018).

³²⁶ *See e.g.* App. D of Att. C.16 Addendum, at pdf page 3287, (disclosing that report limitations on use restrict it only to the pipeline company.) It would be inappropriate therefore for the DSL or another agency to incorporate or rely on that analysis. Because other entities are not able to check their incorporation with the authors for accuracy or changes, third-party use of the study results would not be reliable.

The removal-fill statute mandates that the Department consider effects of the removal-fill on public health and safety. The Department cannot possibly comply with this mandate where those effects are being evaluated and determined *after* the permit has been granted (in the context of the FERC process primarily). The applicant has needlessly created this problem with its timing of its application to DSL. The applicant has no actual need for a DSL removal-fill permit to build a gas pipeline and LNG terminal, until it also has permits from FERC and many others. We urge the Department to deny this permit application because the applicants have not met their burden to provide it with the information necessary to make the determination regarding public health and safety required by ORS 196.825(f).

Commenters are cognizant of the limited view of the scope of “the project” under the DSL removal-fill statute, as explained in *Coos Waterkeeper v. Port of Coos Bay*, 363 Or. 354, 423 P.3d 60 (2018). Commenters request the Department’s decision to be legally compliant beyond any reasonable question, and for that reason, focus here on only those impacts and effects directly pertaining to the removal-fill over which DSL has jurisdiction. A more comprehensive discussion of risks to public health and safety beyond the removal-fill activities and construction is included in Appendix B. Clean Water Act 404 Comments.

1. Natural Hazards

Statewide Planning Goal 7 requires land use planning to reduce risk to people and property from natural hazards.³²⁷ Regulated natural hazards include floods, landslides, earthquakes and related hazards, tsunamis, coastal erosion, and wildfire that all could be connected to the proposed removal-fill activities and construction of the project. The proposed LNG terminal would be located in an area subject to extreme risk from earthquake and tsunami inundation.³²⁸ In addition, the pipeline would cross several areas of steep terrain and heavily forested areas within the Coastal Zone, subject to landslide and wildfire risk. Scientists predict that there is a 40 percent chance of a major earthquake (magnitude 8.7 to 9.2) and tsunami on the Cascadia Subduction Zone off Coos Bay in the next 50 years.³²⁹ This type of event would cause violent ground motion, soil liquefaction, lateral spreading and subsidence. In turn, these land changes could cause pipe breaks and damage the LNG storage tanks proposed for the facility. In order to protect the site from tsunami inundation, Jordan Cove proposes to use sand to fill and elevate the property site above the projected inundation level, 40 feet or more about current land elevations.

The project’s proposed alterations of the shoreline at the project location could have severe and significant impacts to the communities of the Coos Bay/North Bend area in the event of a disaster. These types of risks to people and property must be accounted for in order to comply with Goal 7. In the likely case that there is no adequate mitigation or alternative (short of not building the project at all) for Goal 7 issues, this must be clearly stated so that officials deciding whether the project meets Statewide Planning Goals CZMA standards can weigh the true risks involved.

³²⁷ Oregon’s Statewide Planning Goals and Guidelines. Goal 7: Areas Subject to Natural Hazards. 1 June 2002. <https://www.oregon.gov/LCD/docs/goals/goal7.pdf>.

³²⁸ Cascadia Subduction Zone. Pacific Northwest Seismic Network. <https://pnsn.org/outreach/earthquakesources/csz>.

³²⁹ Cascadia Subduction Zone. Pacific Northwest Seismic Network. <https://pnsn.org/outreach/earthquakesources/csz>.

Effects related to earthquake, tsunami, wildfire, landslide risk as well as emergency response preparedness very clearly fall under the mandate to consider health and safety effects. ORS 196.825(3)(e). Also, comprehensive statewide land use planning Goal 7 requires local planning to address Oregon’s natural hazards, including earthquake and tsunami. Therefore, the project also is not in conformance with ORS 196.825(3)(f), and is not compatible with the comprehensive plan and land use regulations for the area, ORS 196.825(g).

a. Landslides

In addition to the potential sediment pollution in violation of state water quality standards, removal-fill activities and construction of the project will likely increase risks to public health and safety as a result of increased landslide risks. In the case of the 12-inch MasTec Coos County pipeline constructed in 2003 that crossed similar terrain to the proposed PCGP, erosion and sedimentation measures repeatedly failed. This resulted in massive erosion, landslides, and impacts to roads.

As discussed in Chapter 4 *infra*, the applicants provide little specific information to justify the assumption that, particularly in steep areas, BMPs will be adequate to prevent impacts to streams and further, to minimize risks to public health and safety. The Department should consider the risks of landslides in steep terrain prone to wildfires and should require additional information from the applicants regarding current conditions and future conditions, particularly in light of recent wildfire events.

Additionally, the Department should review the findings of the Joint Interim Task Force on Landslides and Public Safety that was established under SB 1211 in 1997 following the deaths of five people in Douglas County from landslides in 1996.³³⁰ Specifically, as stated by the Task Force:

...each occurrence of a landslide has the potential of causing loss: loss of natural resources, loss of wildlife habitat, destruction of migratory fish streams, loss of local, regional, and state economic bases, and loss of human life.³³¹

In its 20 December 2018 letter, DEQ cautions that the PCGP is proposed to cross through the Tyee Core Area, stating:

The Tyee Core Area is commonly associated with thick sandstone beds that have few fractures. These beds allow water to concentrate in shallow soils overlying these beds creating positive soil pressure and the hazard of shallow, rapidly moving landslides. Human-caused landslides diminish water quality when they discharge into surface waters.³³²

³³⁰ Joint Interim Task Force on Landslides and Public Safety. Report to the 70th Legislative Assembly. 7 October 1998. <https://www.oregongeology.org/Landslide/LandslideTaskForceResults.pdf>.

³³¹ Joint Interim Task Force on Landslides and Public Safety. Report to the 70th Legislative Assembly. 7 October 1998. <https://www.oregongeology.org/Landslide/LandslideTaskForceResults.pdf>. P. 22.

³³² Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 6.

Throughout the 20 December 2018 letter, DEQ frequently points to the potential for landslides from the project, particularly related to new and existing road use related to construction. For example, DEQ states:

Moreover, for public safety, under OAR 629-623-0000 – 0800, a forest harvesting operator must submit to ODF a detailed road design for all new or reconstructed roads crossing high landslide hazard locations. For water quality protection and compliance with OAR 340-041-0007(7), DEQ is requesting in Comment 31 that ***PCGP provide detailed road designs for new or reconstructed roads in landslide hazard areas and other locations where these roads are hydrologically connected to waters of the state.***³³³

It is clear that DEQ considers the applicants’ analysis of landslide risk related to public safety to be inadequate. The following excerpts provide examples of the serious concerns raised by DEQ:

- “With the current submittal, DEQ cannot determine if the proposed slope breakers highlighted in the Erosion Control and Revegetation Plan will prevent landslides due to pipeline construction and operation.”³³⁴
- “In Resource Report 6 (Geologic Resources), PCGP provides few specifics regarding controls to stabilize slopes to prevent landslides.”³³⁵
- “PCGP is proposing to site another proposed new road labeled as PAR-132.66 and shown in the map excerpt below. PCGP proposes to locate this PAR in a Potential Rapidly Moving Landslide Hazard Area. This proposed PAR is also near landslides identified from Aerial Photos and from LiDAR. Moreover, PCGP is proposing to reconstruct BLM’s Beaver Springs road (BLM Noninv 32-2-36.A) by widening it. According to PCGP’s Geologic Hazard Map, this BLM road identified for widening is located above a landslide area that drains to intermittent stream discharging into Dead Horse Creek. PCGP has not provided DEQ with design information regarding the need for the creation of fill slopes for this proposed new road in an area with unstable slopes. PCGP has not provided DEQ with design information for the reconstruction of the BLM road above unstable slopes. Has PCGP conducted a geotechnical investigation of this road widening project? If performed, does this geotechnical investigation indicate the need for reinforced fill for this road widening project? Where will PCGP discharge the post-construction stormwater for this PAR? Given the lack of design details, these questions surface for DEQ while reviewing PCGP’s submittal.”³³⁶

³³³ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 18-19.

³³⁴ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 16.

³³⁵ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 18.

³³⁶ Department of Environmental Quality. RE: Supplemental Information Request Response to October 8, 2018 Jordan Cove Correspondence. 20 December 2018. Attachment A: Response to Jordan Cove’s October 8, 2018 Information Filing. P. 49.

The Department should carefully review these concerns and the lack of information concerning them from the applicants. In addition to the concerns related to potential violations of state water quality standards, the Department should comprehensively evaluate the inadequate information provided by the applicants regarding increased risks to public health and safety as a result of landslides.

b. Wildfires

PCGP’s “Construction Procedures” indicate the 229-mile long, 36-inch pipeline would be buried at an average depth of 10 feet and cross 485 waterbodies and wetlands. Work would be done assembly-line style across each of at least five “spreads” of multiple miles each. The applicant plans for pipeline construction to begin in January 2021 and be completed in December 2022, with peak work during the summer of 2021. They anticipate a total of 1,500 workers across the five crews.³³⁷

As required by Oregon’s Fish Passage law, the applicants have proposed to confine pipeline construction activities in almost all water crossings to Oregon Department of Fish and Wildlife (“ODFW”) in-water construction windows. However, these time windows correspond in the vast majority of cases with southern Oregon’s fire season.³³⁸ Nearly 90% of the removal-fill activities in Coos, Douglas, and Jackson County is scheduled within fisheries windows that correspond with fire season.³³⁹ It is not clear under PCGP’s Construction Procedures when the applicants propose to conduct the out-of-water construction activities.

Construction of a buried pipeline requires the use of heavy equipment and explosives, activities that carry with them significant risk of starting wildfires. For example, to create a 95-foot-wide clear-cut right-of-way, trees would be felled using chain saws and feller-bunchers; brush would be cleared, including by bull-dozing across rocky ground; 10-foot-deep trenches would be dug, using where necessary rock-saws, rock drills, and blasting; and pipe would be laid and welded. After the pipeline is completed, water would be drawn from nearby sources to hydrostatically test for leaks. Any leaks found would be repaired, including with additional welding. Trenches would then be backfilled to bury the pipeline, again with heavy equipment in rocky terrain.

The past several years serve to highlight that the risk and incidence of accidental, human-caused fires getting quickly out of hand is increasing. The Department should comprehensively evaluate the proposed removal-fill activities and construction proposed by the applicants across fire-prone southern Oregon regarding potential increased risks of wildfire and impacts to public health and safety.

c. Earthquakes and Tsunamis

³³⁷ PCGP Joint USACE/DSL Permit Application, Part 2, PCGP, Attachment A.2 (RR1 General Project Description), Construction Procedures, p. 10, PDF pp. 2128-2171.

³³⁸ PCGP Joint USACE/DSL Permit Application, Part 2, PCGP, Attachment A.2 (RR1 General Project Description), Construction Procedures, Resource Report 1 (excerpt), p. 11.; ODFW, “Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources,” June 2008.

³³⁹ Application, Part 2, Table B.3-4, “Fish Utilization, EFH in, and Crossing Techniques and In-Water Work Windows for Waterbodies Crossed by the Proposed Route (revised April 2018), PDF pp. 1525-1585. Klamath in-water work windows are much broader than the other counties, but also include the months of fire season.

Direct exposure to earthquake and tsunami is a public health and safety hazard caused by this application. The Cascadia Subduction Zone (CSZ) is located off the Oregon coast and extends from Northern California to Vancouver, B.C, where the oceanic Juan de Fuca and Gorda Plates meet the North American Plate. A recent study based on 13 years of research finds that the Coos Bay area is more vulnerable than northern stretches of the CSZ, and concludes that there is a 40 percent chance of a major earthquake in the Coos Bay region during the next 50 years.³⁴⁰ The study also found that “major earthquakes tend to strike more frequently along the southern end – every 240 years or so – and it has been longer than that since it last happened.”³⁴¹ Forecasts predict that the CSZ is due for an earthquake similar in strength to the 9.0 magnitude earthquake felt off the coast of Japan in March 2011.³⁴² A high magnitude earthquake in this zone would create several different conditions that could severely impact the stability of the terminal and pipeline.³⁴³

Effectively all of the removal and fill work here will occur in a mapped tsunami inundation zone, and the on-water work will obviously be directly subject to tsunami risk. The fill associated with the APCO site, the trans-pacific parkway/Highway 101 interchange, and on the North Fill area are all in tsunami exposure zones. The Jordan Cove LNG Terminal will be constructed on dredged soils, and will thus be susceptible to earthquake liquefaction hazards, which occur when water-saturated sediment is exposed to strong seismic shaking.

Earthquake and/or tsunami response during dredging is not addressed in the application, imposing yet another public safety and navigation cost of the project. Anchored dredges and long slurry lines through the bay would be at risk during an event, and potentially pose additional hazard to others in the form of drifting debris and search and rescue burden. The estuary itself is an important safety feature in a tsunami or earthquake, providing both a refuge and navigation link.

i. Channel dredging would impact on tsunami behavior in unpredictable ways.

As a general rule, increasing the width and depth of the channel will tend to increase the amplitude of the tsunami as it strikes upstream facilities. It is likely that upstream areas would suffer from tsunami effects, specifically the docks and town of Coos Bay, and residences in the upper bay, the airport, highway 101 and both bridges, and the proposed LNG facility and fracked gas pipeline at Jordan Cove.

For these reasons, this project presents potentially extreme hazards to the local community. The project site on the North Spit is located at a bend in Coos Bay, where tidal energy is deflected. The elevation of the land at this location could significantly alter the direction and velocity of an incoming tsunami. For example, instead of running up onto the North Spit and inundating the

³⁴⁰ See Chris Goldfinger, et al., *Turbidite Event History – Methods and Implications for Holocene Paleoseismicity of the Cascadia Subduction Zone*, 1661 (Robert Kayen, ed. 2012); Chris Goldfinger, *13-Year Cascadia Study Complete – And Earthquake Risk Looms Large*, OREGON STATE UNIVERSITY NEWSROOM (Aug. 1, 2012), <http://oregonstate.edu/ua/ncs/archives/2012/jul/13-year-cascadia-study-complete-%E2%80%93-and-earthquake-risk-looms-large>

³⁴¹ *Id.*

³⁴² *Id.*

³⁴³ *Id.*

land there, the proposed sand wall, if it survives the liquefaction and lateral spreading effect of the earthquake, would deflect and redirect the force of a tsunami. The deeper channel could increase the amplitude of that deflected energy.

The proposed significant alteration of the shoreline at this location could have important effects on the inundation of other areas within the Bay Area communities. In other words, the risks of these types of hazards extend beyond just the inundation, liquefaction, and ground shaking at the project site. The project's proposed alterations of the shoreline at the project location could have significant impacts to the communities of the Coos Bay area.

The hydrodynamic analysis attached to the DSL application (Part 1 JCEP Attachment A.6, Document Number: J1-000-MAR-TNT-DEA-00008-00) does show that proposed dredging and fill associated with the project will change currents at various points in the estuary, generally increasing them.

However, this analysis leaves important gaps. As stated by Jesse Lopez doctoral student of Dr. Antonio Baptista with the Center for Coastal Margin Observation & Prediction in Appendix K:

The studies conducted by Moffatt & Nichol rely on the results of two-dimensional model simulations that are *inherently incapable* of representing the dynamics required to assess impacts on physics and subsequently biology and habitat in Coos Bay. All studies were critically limited in temporal scope representing a small subset of the conditions exhibited in the system.³⁴⁴

Further, the hydrodynamic analysis does not include the large dredging project, ostensibly proposed by the Port (the Coos Bay Channel Modification project discussed in Chapter 6 *infra*). It says nothing explicitly about behavior in tsunami. The access channel changes combined with a relatively large amount of erosion and deposit of sediment³⁴⁵ as well as the new slip and LNG facility, introduce new hydrologic features that could behave in unpredictable and potentially deadly ways in a tsunami.

Unconsidered channel dredging impacts to tsunami behavior represent a significant public health and safety impairment, that prevent the Department from being able to determine that the proposed removal-fill would not interfere with public health and safety, necessary to permit issuance.

ii. Impaired Stability of fill materials and dredged navigation channel in an earthquake and/or tsunami

Commenters are concerned about the behavior of the proposed soft, sandy fill materials, and of the dredged navigation channel and marine slips, in an earthquake and tsunami scenario. The upland fill of the LNG facility itself, the APCO site, and the mitigation area at Kentuck slough, constructed of dredged material, would be exposed to tsunami and earthquake. Other than discussing integrity of its operations, we do not see any information in the application that

³⁴⁴ Lopez, Jesse. Assessment of hydrodynamic studies by Moffat & Nichol for the Jordan Cove Liquefied Natural Gas Terminal Project LP Removal-Fill Permit. 20 January 2019.

³⁴⁵ See Attachment A.7, Sediment Transport Analysis),

discusses what effect the fill might have in an earthquake/tsunami scenario. A major earthquake could very easily cause liquefaction of fill, with associated destabilization of infrastructure constructed on top. (See Image: liquefaction causes collapse of Vine Rd. in Mat-Su valley in 2018 Alaska earthquake; *Anchorage Daily News*, Marc Lester, Nov. 30, 2018).



Stability of the FNC is also a major concern in both earthquake and tsunami situations. Tsunamis, especially large ones, can radically change the shape of estuaries and bays. The application appears to lack any information explicitly recognizing this risk, but does indicate enough to show likely impairment. Physically, a deeper channel would present more tsunami force, and more of a chance of channel instability in an earthquake. Sidewalls of a deeply cut channel could collapse. Moreover, it is foreseeable that the removal-fill purpose of bringing bigger ships into the port would itself create a situation where vessels tend to get stranded upriver if channel depth reduces, presenting yet another risk to public safety.

2. Stream Crossings

The potential for high flow events that expose the pipeline at proposed stream crossings may result in increased risks to public health and safety. Absent additional information related to stream crossings, including but not limited to site-specific analysis of each stream crossing, the Department cannot make the determinations regarding health and safety required for permit issuance.

In fact, the New York Department of Environmental Conservation (“NYSDEC”) denied 401 certification due to a LNG pipeline applicant’s failure to provide site-specific analysis of each stream crossing.³⁴⁶ In NYSDEC’s assessment, the agency denied 401 certification for the Constitution Pipeline in part because:

Without a site-specific analysis of the potential for vertical movement of each stream crossing to justify a burial depth, NYSDEC is unable to determine whether the depth of pipe is protective of State water quality standards and applicable State statutes and standards. In addition to impacts to water quality described above and without proper site-specific evaluations, ***future high flow events could expose the pipeline, resulting in risks to the health, safety, and welfare of the people*** of New York State. Pipe exposure would require more extensive stabilization measures and in stream disturbances resulting in addition degradation to environmental quality. We note that flooding conditions from

³⁴⁶ Joint Application: DEC Permit# 0-9999-00181/00024 Water Quality Certification/Notice of Denial. New York State Department of Environmental Conservation. 22 April 2016. P. 13.
http://www.dec.ny.gov/docs/administration_pdf/constitutionwc42016.pdf.

extreme precipitation events are projected to increase on the operational span of the pipeline due to climate change.³⁴⁷

Water quality concerns regarding stream crossings are discussed in detail in Chapter 4 *infra* as well as Appendix A. Clean Water Act 401 Comments. However, the Department should also consider potential public health and safety risks from stream crossings and require additional site-specific information from the applicants.

Regarding the proposed HDD crossings for larger waterways, concerns regarding water quality in each impacted watershed are discussed in Appendix A. Clean Water Act 401 Comments. HDD crossings, even when successful, have impacts in areas adjacent to waters where staging and construction areas occur. HDDs also require the disposal of materials extracted from the drill hole. HDD attempts frequently fail, causing drastic impacts to water quality and fish habitat. In 2015, DEQ noted that the DEIS fails to disclose and analyze the likelihood and frequency of frac-out events.³⁴⁸ The State re-iterated these concerns in its 2017 scoping comments.³⁴⁹

In recent history, many HDD attempts along the 12-inch Coos County pipeline failed, resulting in “frac-outs,” situations in which large amounts of sediment and bentonite clay (used as a drilling lubricant) were released into streams. Bentonite clay and sediment released through frac-outs can disrupt fish spawning habitat, increase turbidity, and potentially introduce other contaminants to impacted waterways.

In summary, the applicants rely upon qualitative analysis and fail to comprehensively disclose and analyze the likelihood and frequency of frac-out events that could interfere with public health and safety. Absent that analysis, the Department cannot make the determinations required by ORS 196.085(e) that this project will not interfere with public health and safety.

a. Coos Bay HDD Crossing Example

Significant detail regarding each of the proposed HDD crossings for Coos Bay, the Coos River, the Rogue River, and the Klamath River, as well as the Direct Pipe technology proposed for the South Umpqua is provided in Appendix A. Clean Water Act 401 Comments.

As just one example, the applicants propose to install the 36-inch pipeline across Coos Bay using two horizontal directional drills (HDD) of 5,200 and 9,000 feet each. This is a significant change from the prior proposal, in both alignment and construction method. The prior proposed route would have crossed through Haynes Inlet at the north of Coos Bay and away from the navigation channel, constructed using an open wet cut method, after rejecting the use of HDD for the Coos Bay crossing. In 2006, when an HDD crossing of Haynes Inlet was proposed, the applicant’s engineer concluded, “[a] crossing of this magnitude would not be considered routine and *the potential for failure would be substantial*.”³⁵⁰

³⁴⁷ Joint Application: DEC Permit# 0-9999-00181/00024 Water Quality Certification/Notice of Denial. New York State Department of Environmental Conservation. 22 April 2016. P. 13.

http://www.dec.ny.gov/docs/administration_pdf/constitutionwc42016.pdf. Emphasis added.

³⁴⁸ State of Oregon 2015 DEIS comments at 43 & 102.

³⁴⁹ State of Oregon 2017 Scoping comments at 15.

³⁵⁰ Geoenvironmental Engineers Memorandum to Lori Dalton, Williams Northwest Pipeline (Nov. 15, 2006). Emphasis added.

In the 2014 DEIS, FERC noted the high liquefaction and/or lateral spreading potential at Coos Bay:

Because the crossing of Coos Bay (Hayes Inlet) would have the greatest potential along the proposed route for liquefaction and lateral spreading in the event of an earthquake, Pacific Connector had a geotechnical consultant perform a site-specific analysis (GeoEngineers 2007a).

Pacific Connector also identified other measures that would reduce potential impacts on its pipeline in Haynes Inlet from liquefaction and lateral spreading. The route within the bay would keep the pipeline away from the navigation channel slope. In addition, Pacific Connector would bury the pipeline 5 feet below the estuary bottom within Haynes Inlet and use thicker wall pipe and concrete coating.³⁵¹

The prior route is noted as reducing risk because “The route within the bay would keep the pipeline away from the navigation channel slope.” As noted above, the current route proposal would cross the navigation channel in not one but two places.

In its 2017 scoping comments, DOGAMI noted that “geologic hazard evaluations and proper mitigation of hazards are needed.”³⁵² The State requested “a thorough geologic characterization of the project area and surrounding area and a comprehensive site-specific geologic hazard and geotechnical assessment . . . at the proposed facility and along the pipeline with supporting evidence to explain that the facility can be appropriately constructed and operated throughout its existence.”³⁵³ Without this information, the Department cannot evaluate the impacts of the proposed project on public health and safety.

In addition to the two HDD crossings proposed for Coos Bay, the applicants propose to use HDD technology to cross the Coos River at MP 11.13R. Due to the soft silts and clays located at the exit and entry points proposed for the Coos River crossing, the 2017 GeoEngineers report states:

The hydraulic fracture and drilling fluid surface release model indicates the risk of drilling fluid surface release is high along the first approximately 250 feet of the drill path. The risk becomes low from the northern edge of the Coos River Highway and across Coos River to approximate station 17+00. The risk becomes high within approximately 150 feet of the exit point.³⁵⁴

The 2017 GeoEngineers report describes how HDD alignment through fat clay soils is “typically more challenging than in other non-cohesive soils” and the potential for hydraulic fracture and drilling fluid surface release increases dramatically.³⁵⁵ The report further concludes that:

³⁵¹ 2014 DEIS at 4-264 to 4-265.

³⁵² State of Oregon 2017 Scoping comments at 8.

³⁵³ Id.

³⁵⁴ Coos River HDD Pacific Connector Gas Pipeline Project. GeoEngineers. 1 September 2017. P. ES-1. PCP Part 2 Appendix B. P. 1471.

³⁵⁵ Coos River HDD Pacific Connector Gas Pipeline Project. GeoEngineers. 1 September 2017. P. 13. PCP Part 2 Appendix B. P. 1484.

It is our opinion that there is a relatively high risk of hydraulic fracture and drilling fluid surface releases along the first 500 feet and last 300 feet of the HDD, respectively.³⁵⁶

The proposed Coos Bay HDD crossings provide just one example of the inadequate information provided by the applicants. Without additional information regarding the potential for a frac-out and other risks to public health and safety, the Department is once again unable to make the public health and safety determinations required, and should deny the permit.

3. Airport Hazard

The Federal Aviation Association (“FAA”) recently issued notices of presumed hazard for LNG Carrier vessels at Point 6, Transit East Point, Transit West Point, Transit Point 6, Transit Point 4, Transit Point 3, 2, and 1, the LNG Carrier Vessel Stack (in terminal), the Amine Regenerator, the Oxidizer, and the LNG Tanks North and South.³⁵⁷ According to FAA’s aeronautical study conducted under 49 U.S.C., Section 44718, heights above certain thresholds “exceed[] obstruction standards and/or would have an adverse physical or electromagnetic interference effect upon navigable airspace or air navigation facilities.”³⁵⁸ Their study disclosed a variety of problems at different locations, including penetration of 14 CFR Part 77 protected airspace at the airport. *Id.* This issue is discussed more extensively in Chapter 2 *infra*.

4. Navigation Safety Hazards

There are important health and safety implications of the navigation effects addressed in Chapter 5 *infra*, in terms of causing new hazards for mariners including with the removal-fill operation itself. Those navigation hazards should be considered under the statutory heading of public health and safety.

5. Additional Public Health and Safety Concerns

The Department should consider additional concerns regarding public health and safety, including but not limited to, process safety hazards, leak detection, incident response, chronic human health impacts, liability for damages, and compliance with U.S. Coast Guard requirements as well as the Coos Bay Geographic Response Plan. These issues are discussed in more detail in Appendix B. Clean Water Act 404 Comments.

C. Conclusions

In summary, the Department is required to consider whether the project conforms to the sound policies of conservation and whether the project would not interfere with public health and safety. ORS 196.825(3)(e). The applicants have failed to demonstrate compliance with the Clean Water Act, as discussed in detail in Appendix A. Clean Water Act 401 Comments and Chapter 4

³⁵⁶ Coos River HDD Pacific Connector Gas Pipeline Project. GeoEngineers. 1 September 2017. P. 13. PCP Part 2 Appendix B. P. 1484.

³⁵⁷ FEDERAL AVIATION ASSOCIATION, NOTICES OF PRESUMED HAZARD 60 (2018), <https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp>.

³⁵⁸ *Id.*

infra. Further, the applicants have failed to demonstrate compliance with Total Maximum Daily Loads (TMDLs). The Department must not approve the permit without consultation with NOAA Fisheries and other federal agencies as required under the Endangered Species Act. Further, the applicants have failed to demonstrate compliance with state conservation policies, including but not limited to the Oregon Conservation Strategy and the Oregon Plan for Salmon and Watersheds.

Additionally, the applicants have failed to demonstrate that the project will not interfere with public health and safety. The removal-fill statute specifically requires that the Director consider potential interference with public health and safety, as a result of the proposed removal and fill. ORS §196.825(3)(e). Potential risks to public health and safety include natural hazards, such as floods, tsunamis, wildfires, landslides, and earthquakes identified under Statewide Planning Goal 7. The potential for high flow events that expose the pipeline or frac-outs at proposed stream crossings may result in increased risks to public health and safety. The Department should consider the airport hazard identified by the FAA and the navigation safety hazards discussed in Chapter 5 *infra*.

The applicants have failed to demonstrate that the project will not conform to sound policies of conservation or interfere with public health and safety and, therefore, the Department must deny the permit.

Chapter 9. CONFORMANCE WITH LAND USES

9.1 The Department Must Deny the Permit because the Applicants Have Failed to Provide Reasonable Assurances that the Project is in Conformance with Coos County's acknowledged Comprehensive Plan and Land Use Regulations (ORS 196.825(3)(g)).

In determining whether to issue a removal-fill permit, the Department must determine that the proposed fill or removal is compatible with the acknowledged comprehensive plan and land use regulations for the area where the proposed fill or removal is to take place or can be conditioned on a future local approval to meet this criterion. ORS 196.825(3)(g); OAR 141-085-0565(4)(g). The applicant bears the burden of providing the Department with all information necessary to make the required determination that a fill or removal project is consistent with the protection, conservation and best use of the water resources of the state and would not unreasonably interfere with the preservation of the use of the waters of the state for navigation, fishing and public recreation. OAR 141-085-0565(5).

The revised application fails to address the requirements of the acknowledged comprehensive plans and land use regulations for the area where the fill and removal are proposed necessary for the Department to determine whether the proposed fill is in conformance with existing public uses of the waters and adjacent lands, as required by ORS 196.825(3)(f). The applicant has failed to meet its burden of providing the Department with the information necessary to make the evaluation required by ORS 196.825(3)(g). Moreover, even assuming that the applicant had provided the relevant and required information, the project does not comply with land use laws and comprehensive plans. The application should therefore be denied.

A. LNG Terminal is not Compatible with Land Use Regulations and Coos County Comprehensive Plan for the Area Where the Project is Proposed

1. Applicable Comprehensive Plan and Land Use Regulations.

The LNG terminal property is located within the Coos Bay Estuary and is therefore subject to the Coos Bay Estuary Management Plan (CBEMP). The CBEMP serves as the basis of land, water use, and community development regulations for lands lying within the Coos Bay estuary and its shorelands. The CBEMP is based upon the Oregon Statewide Planning Goals, state statutes, and Oregon’s Coastal Management Program. CBEMP § 1.2. The Coos County Zoning and Land Development Ordinance (“LDO”) implements the comprehensive plan including the CBEMP. Among other laws, the CBEMP implements the requirements of Statewide Planning Goal 16. Goal 16 recognizes and protects the estuaries of the state through classification (natural, conservation, development) and evaluation of impacts to the estuary resources. Within Coos Bay in the vicinity of Jordan Cove, the estuary is designated in part Development and in part Natural classification.

The application proposes dredging within Development Aquatic Management Units (5-DA, 6-DA). The applicable zoning provisions for the 5-DA (LDO Section 3.2.271) and 6-DA (LDO Section 3.2.281) state that dredging is allowed “subject to finding that adverse impacts have been minimized (see Policy #5); and to Policy #8 requiring mitigation.”

CBEMP Policy 5 governs estuarine fill and removal, and provides in pertinent part as follows:

- I. Local government shall support dredge and/or fill only if such activities are allowed in the respective management unit, and:
 - a. The activity is required for navigation or other water-dependent use that requires an estuarine location or, in the case of fill for non-water-dependent uses, is needed for a public use and would satisfy a public need that outweighs harm to navigation, fishing, and recreation, as per ORS 541.625(4) and an exception has been taken in this Plan to allow such fill.
 - b. A need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights.
 - c. No feasible alternative upland locations exist; and
 - d. Adverse impacts are minimized.
 - e. Effects may be mitigated by creation, restoration, or enhancement of another area to ensure that the integrity of the estuarine ecosystem is maintained.
 - f. The activity is consistent with the objectives of the Estuarine Resources Goal and with other requirements of state and federal law, specifically the conditions in ORS 541.615 and Section 404 of the Federal Water Pollution Control Act (P.L.92-500).³⁵⁹

The CBEMP requirements of Policy 5(I) implement and mimic the language of Statewide Planning Goal 16, Implementation Requirement 2:

“Dredging and/or filling shall be allowed only:

³⁵⁹ See Appendix L.

- a. If required for navigation or other water-dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this goal; and,
- b. If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights; and
- c. If no feasible alternative upland locations exist; and,
- d. If adverse impacts are minimized.

Other uses and activities which could alter the estuary shall only be allowed if the requirements in (b), (c), and (d) are met.”

2. Coos County land use approval for the LNG terminal found to be flawed.

In November 2017, the Land Use Board of Appeals (LUBA) determined that the Coos County land use approval for the LNG terminal (sometimes noted as the “omnibus” land use permit by the applicant) was flawed in numerous ways, many of which relate directly to the Coos Bay Estuary Management Plan policies which protect waters of the state in and around Coos Bay. *See* Appendix M. Subsequent appeals of that decision did not alter LUBA’s conclusion. Further, the pending “omnibus” application reflects the previous iteration of the project (the version that FERC denied). Since LUBA’s decision, no land use application has yet been submitted, let alone approved by Coos Bay, that reflects the current proposed configuration of the LNG terminal. Because the applicant has failed to obtain land use permits for the project in Coos Bay, the Department cannot conclude that the project is compatible with land use regulations and acknowledged comprehensive plans.

In addition, the project cannot be conditioned on a future land use approval to meet this criterion. The reasons adopted by LUBA in remanding the prior land use application are directly related to the inconsistency of the proposed dredge and fill in wetlands and in the Coos Bay estuary with the Coos Bay Estuary Management Plan, demonstrating that serious questions remain as to whether the project can comply with the acknowledged comprehensive plan policies and related land use regulations. The Department’s removal-fill guide provides that if a project is identified as being inconsistent with the local comprehensive plan, the Department will not authorize the project until a plan amendment or zone change is secured.³⁶⁰

a. Compliance with Coos Bay Estuary Management Plan Policy 5

LUBA found fault with Coos County’s findings interpreting CBEMP Policy 5(I)(b), which allow dredging only if it will (1) provide a “substantial public benefit” and (2) “not unreasonably interfere with public trust rights.” First, LUBA held that the “substantial public benefit” analysis “requires the county to evaluate the substantiality of the public benefits provided by the use that the proposed dredging serves, in this case the LNG terminal, or at least those components of the terminal that are properly viewed as water-dependent uses.” LUBA Order at 10. LUBA also held CBEMP Policy #5 requires that even if the proposed dredging “serves a water-dependent use allowed under the county’s code, the county can allow the dredging only if it also finds that the use provides a substantial public benefit.” *Id.* at 12. Second, LUBA held that the county had

³⁶⁰ Department of State Lands. A Guide to the Removal-Fill Process. December 2016.

failed to adequately support its conclusion that the project would not unreasonably interfere with public trust rights, specifically fishing and navigation uses in Coos Bay. Id. at 16.

b. The 5-DA (CCZLDO Section 3.2.271) and 6-DA (CCZLDO Section 3.2.281) zones

These zones allow dredging “subject to finding that adverse impacts have been minimized (see Policy #5); and to Policy #8 requiring mitigation.” CBEMP Policy #5 incorporates the requirements of Policy #4 – “Identification and minimization of adverse impacts as required in ‘d’ above shall follow the procedure set forth in Policy #4.” Appendix L. CBEMP Policy #4 provides that a decision to permit uses and activities (including fill in a development management unit) shall be “based upon a clear presentation of the impacts of the proposed alteration, as implemented in Policy #4a.” *See* Appendix L.

The plain language of Policy 4 requires an impact assessment at the time of permit application for dredging in a Development Aquatic Management Unit. CBEMP Policy 4 is consistent with and implements Goal 16 Implementation Requirement 1: “Unless fully addressed during the development and adoption of comprehensive plans, actions which would potentially alter the estuarine ecosystem shall be preceded by a clear presentation of the impacts of the proposed alteration. Such activities include dredging, fill, in-water structures”

Pursuant to CBEMP Policy 4a, the county “shall defer, until the time of permit application, findings regarding consistency of the uses/activities listed in Policy #4 with the resource capabilities of the particular management unit.” Policy #4 lists dredging in the development aquatic management unit as one of the uses/activities for which the County deferred the impacts assessment. Appendix L.

In its flawed approval of the land use application, Coos County did not adopt any findings applying the procedures set forth in CBEMP Policies 4 and 4a. In Policy #5 findings, the county specifically rejected the argument that the public need/benefit standard requires the County to balance need/benefit with (and weigh against) public detriments. The county failed to explain how this finding is consistent with the CBEMP Policy 4 and Goal 16 IR1. The county did not offer any reason why Goal #4 and the impact assessment has been satisfied or does not apply. LUBA found the county’s analysis inadequate, and remanded so that an impacts analysis under Policy #4 and #4a can be performed with input from the public. *See* Appendix M.

c. Development in the 6-WD and 7-D zones

Development in these zones requires compliance with CBEMP Policy 30. LDO 3.2.276, 3.2.286. Policy #30 restricts actions in beach and dune areas with “Limited Development Suitability” and requires that Coos County permit development within these areas “only upon the establishment of findings that shall include at least ... [m]ethods for protecting the surrounding area from any adverse effects of the development.” Policy 30(1)(c). Appendix L. This CBEMP language directly mirrors and implements the requirements of Goal 18 IR1(c).

The proposed dredge and fill in this area could have significant adverse impacts on the stability of the dunes. In reviewing the applicant’s “Geotechnical Investigation” prepared by GRI (rev. 2013), DOGAMI and the State’s geotechnical peer review raised concerns that the applicant had not adequately addressed potential subsidence from dewatering activities during construction of

the tank/slip area, located within the 6-WD zone. *See* Carlson Geotechnical, Geotechnical Peer Review – Jordan Cove LNG Project (Feb. 3, 2015). Rec. 7751, 8178. Appendix N. The State’s geotechnical peer review noted, “GRI does not include a discussion of groundwater relative to stability” and recommended “[d]iscuss groundwater relative to stability of project, as well as discussion of potential for subsidence during recommended dewatering within tank/slip area for grading.” *Id.* at 8. LUBA held that Coos County failed to assess whether subsidence from proposed dewatering could constitute an adverse effect of the development on the surrounding area within the meaning of CBEMP Policy 30(1)(c).

d. Fill in the 7-D zone

Fill in this zone is a conditional use, subject to general and special conditions. LDO 3.2.286. The special condition for fill activities provides: “The wetland in the southeast portion of this district can be filled for a development project contingent upon satisfaction of the prescribed mitigation described in Shorelands District #5.” *Id.* To demonstrate compliance with the 7-D zone, the land use application proposed: “Special Condition, Activities 5 applies to the proposed activity of fill in 7-D. The Application is proposing fill in the southeast portion of this district for a development project and will mitigate in accordance with all prescribed mitigation. The County can find the Application is compliant with this criterion.” Jordan Cove Energy Project Land Use Applications Coos County File Nos. HBCU-15-05/FP/15-09/CD-15-152 at 32 (Nov. 3, 2015).

Coos County found that fill is a conditional use in the 7-D zone, subject to general and special conditions, and adopted the following findings specific to proposed fill in the 7-D zone:

The Board finds that the application proposes fill in the southeast portion of this district for a development project and will mitigate in accordance with all prescribed mitigation. Therefore, the Board finds that the proposed fill is consistent with Special Condition 5.³⁶¹

LUBA found Coos County had failed to identify, explain, or address what the “prescribed mitigation” is and how it will be performed to meet the requirements for filling wetlands in the 7-D zone. For example, LDO 3.2.286 references prescribed mitigation described in Shoreland Unit #5, which allows restoration activities “in the portion of the site agreed on for mitigation as per the Henderson Marsh Mitigation Plan.” LDO 3.2.261. The county did not explain the requirements of the Henderson Marsh Mitigation Plan. The Plan is not addressed by the application, and does not appear in the record. No evidence, let alone substantial evidence, in the record supported the county’s finding that the project will comply with the mitigation requirements of the 7-D zone. LUBA remanded the decision for analysis of compliance with this land use regulation. The applicant has not demonstrated how the fill proposed in the southeast portion of the 7-D zone will comply with the mitigation requirements in the CBEMP.

3. Coos County’s Unjustified Reliance on FERC Permits to Satisfy Comprehensive Plan Criteria.

In its flawed approval of the prior land use application, Coos County expressly relied on the applicant obtaining FERC permits to satisfy applicable Coos County comprehensive plan

³⁶¹ Coos County Findings of Fact and Conclusions of Law HBCU-15-05 at 60 (Aug. 31, 2016).

criteria. At that time, FERC had already denied the application. LUBA held that, “given that the required FERC permit had, in fact, been denied during the proceeding before the county, the county erred in adopting findings of compliance with local approval standards that are unconditionally predicated on the applicant obtaining a FERC permit, without first addressing whether the denial means that JCEP is precluded, as a matter of law, from obtaining the FERC permit.” LUBA order at 28.

4. Outstanding Issues Related to Compatibility with Land Use Regulations

These holdings from LUBA indicate that multiple outstanding issues related to whether the dredge and fill is compatible with the comprehensive plan provisions and land use regulations in the area of the terminal development remain. Furthermore, the project has once again changed significantly since even Coos County’s last flawed approval that was rejected by LUBA. The applicant has not submitted new land use applications for the new project design. Therefore, the applicants have not presented no evidence that the new project proposal can comply with land use regulations and comprehensive plan provisions. Therefore, the Department cannot make the determinations required by ORS 196.825(3)(g) necessary to authorize the Project at this time.

C. Applicants Have Acknowledged that Other Elements of the Project are Inconsistent with Coos County Comprehensive Plan and Land Use Regulations by Seeking Post Application Submission Plan Modifications

The proposed alterations to the navigation channel are not consistent with the acknowledged Coos Bay Estuary Management Plan. The applicant is seeking approval for comprehensive plan amendments to change the estuary designation in areas proposed for dredging in order to make the comprehensive plan compatible with the proposal. See Coos County File AM-18-011/RZ-18—7/HBCU-18-003 (Nov. 21, 2018). These changes would require an exception to Statewide Planning Goal 16, which the current CBEMP requirements implement. In other words, by seeking these plan amendments, the applicants are acknowledging that their proposal is not compatible with the acknowledged comprehensive plan and land use regulations.

Similarly, for work related to the proposed HDD, the applicant is seeking a comprehensive plan amendment to allow subsurface “low intensity” utilities in the Development management unit of the CBEMP. See Coos County File No. AM-18-010/HBCU-18-002.

Finally, related to the Project’s proposal to widen the TransPacific Parkway, the applicant is seeking an amendment of the comprehensive plan and zone change. See Coos County File No. AM-18-009/RZ-18-007/HBCU-18-003 (Nov. 2, 2018).

Because the project is not consistent with the local comprehensive plan, the Department cannot authorize the project unless and until the necessary plan amendments and zone changes are actually secured.

D. Conclusions

The applicants have failed to demonstrate that its Project is in conformance with existing public uses of waters and land designated in applicable comprehensive plan and land use regulations. Moreover, the applicants have failed to provide the Department with the information necessary

to make the determinations required by ORS 196.825(3)(f) and (g) that the applicants' proposed fill or removal is compatible with the requirements of the comprehensive plan and land use regulations for the area in which it will take place. Finally, because the applicants have failed to obtain land use permits for the project in Coos Bay, the Department cannot conclude that the project is compatible with land use regulations and acknowledged comprehensive plans. Further, because the reasons adopted by LUBA in remanding the prior land use application are directly related to the inconsistency of the proposed dredge and fill in wetlands and in the Coos Bay estuary with the Coos Bay Estuary Management Plan, the project cannot be conditioned on a future land use approval to meet this criterion. Because the applicants have failed to meet its burden of providing the Department with the information necessary to make the evaluations under ORS 196.825(3)(f) and (g), the Department must deny the permit.

9.2 The Department Must Deny the Permit because the Applicants Have Failed to Provide Reasonable Assurances that the Project is in Conformance with Douglas County's acknowledged Comprehensive Plan and Land Use Regulations (ORS 196.825(3)(g)).

The pipeline will cross approximately 64 miles in Douglas County. A smaller portion of the pipeline (approximately 7 miles in length) in Douglas County also falls within the State's Coastal Zone. As a result, the pipeline is subject to review and must conform with Douglas County's land use regulations and acknowledged Comprehensive Plan. The application does not contain a Land Use Compatibility Statement from Douglas County. In any case, Pacific Connector's land use approvals from Douglas County are now void, as discussed below. The applicants have failed to demonstrate conformance with the Douglas County comprehensive plan and land use regulations.

Pacific Connector received approval from Douglas County for the pipeline as a conditional use to authorize the pipeline within the coastal zone in Timberland Resource, Farm Forest, and Exclusive Farm Use-Grazing Zoning Districts in 2009 (County File No. 09-045). At that time, the project was proposed to import natural gas (see project description Chapter 1). Since 2009, Pacific Connector has sought and received a series of 12-month extensions of the Douglas County authorization. In 2014, the applicants received an amendment of the conditional use permit to allow use for export consistent with the new project proposal.

In December 2016, Pacific Connector again sought an extension of the approval from Douglas County. However, Pacific Connector failed to request the extension prior to the expiration of the permit. After Douglas County's Planning Director approved the extension despite the late filing, affected landowners appealed the extension decision. The appeal was transferred from the Land Use Board of Appeals to Douglas County Circuit Court. While the appeal was pending, Douglas County again approved the extension request in December 2017. In January of this year, Douglas County Circuit Court Judge Kathleen Johnson held that "in issuing the extension of the permit on December 20, 2016, and subsequently on December 8, 2017, Douglas County injured a substantial interest of Petitioners and that it improperly construed the applicable law and in doing so exceeded its jurisdiction by improperly extending a permit that was void. I therefore reverse the County's extensions dated December 20, 2016 and December 8, 2017." *McLaughlin v. Douglas County*, 17CV32687 and 18CV04396 (combined) (January 23, 2019 email opinion J. Johnson).

A. Conclusions

As a result of this ruling, Pacific Connector does not have the required land use approval for the 7-mile segment of pipeline in Douglas County’s Coastal Zone. Because the pipeline will require a new application for conditional use permit and utility facility necessary for public service, the applicant has not met its burden to demonstrate to the Department that the project conforms to Douglas County’s acknowledged comprehensive plan and land use regulations.

Chapter 10. MITIGATION

10.1 The Department Must Deny the Permit because the Applicants have Failed to Provide All Practicable Mitigation to Reduce the Adverse Effects of the Proposed Fill or Removal (ORS 196.825(3)(i))

Under ORS 196.825(3)(i), in determining whether to issue a removal-fill permit, the Department must consider:

(i) Whether the applicant has provided all practicable mitigation to reduce the adverse effects of the proposed fill or removal in the manner set forth in ORS [196.800](#) (Definitions for ORS 196.600 to 196.905). In determining whether the applicant has provided all practicable mitigation, the director shall consider the findings regarding wetlands set forth in ORS [196.668](#) (Legislative findings) and whether the proposed mitigation advances the policy objectives for the protection of wetlands set forth in ORS [196.672](#) (Policy).³⁶²

In the Department’s weighing whether the applicant has provided all practicable mitigation to reduce the adverse impacts of the proposed fill and removal, the Department must consider the legislative findings regarding wetlands that:

- (1) Wetlands provide a natural means of flood and storm damage protection through the absorption and storage of water during high runoff periods, thereby reducing flood crests and preventing loss of life and property;
- (2) Wetlands provide essential breeding, spawning, rearing, feeding, nesting and wintering habitats for a major portion of this state’s fish and wildlife;
- (3) Wetlands provide essential habitat for waterfowl using the Pacific Flyway and for the rearing of salmon and other anadromous and resident fish;
- (4) Wetlands act as accumulation areas for sediments which retain nutrients and other pollutants that may prevent entry of the pollutants into other waterways;
- (5) Wetlands provide a valuable public service of maintaining clean water by retaining nutrients, metals and toxic materials from the water to protect water quality;
- (6) Wetlands provide significant opportunities for environmental and ecological research, public recreation and education and provide scenic diversity and aesthetic value as open space and areas of visual enjoyment;
- (7) Much of this state’s original wetlands have been diked, drained, filled, dredged, ditched or otherwise altered;
- (8) There is continuing development pressure on wetlands in Oregon;

³⁶² ORS 196.825(3)(i); OAR 141-085-0565.

- (9) There are often conflicts between wetland protection and other resource values and uses;
- (10) Uncoordinated regulation of wetlands by local, state and federal agencies can cause confusion, frustration and unreasonable delay and uncertainty for the general public; and
- (11) Wetland management is a matter of this state’s concern since benefits and impacts related to wetland resources can be international, national, regional and statewide in scope. [1989 c.837 §2]

Further, the Department must also consider the state of Oregon’s policy to:

- (1) Promote the protection, conservation and best use of wetland resources, their functions and values through the integration and close coordination of statewide planning goals, local comprehensive plans and state and federal regulatory programs.³⁶³

For proposed removal-fill activities that occur within wetlands and tidal waters, “through its permitting and enforcement programs, the Department will seek to offset losses of the functions and values of the water resources of this state” (OAR 141-085-0506).³⁶⁴

Aligned with the federal sequencing for mitigation,³⁶⁵ under OAR 141-085-0510(54), “mitigation” is defined as:

...the reduction of adverse effects of a proposed project by considering, in the following order:

- (a) Avoiding the effect altogether by not taking a certain action or parts of an action;
- (b) Minimizing effects by limiting the degree or magnitude of the action and its implementation;
- (c) Rectifying the effect by repairing, rehabilitating or restoring the affected environment;
- (d) Reducing or eliminating the effect over time by preservation and maintenance operations during the life of the action by monitoring and taking appropriate corrective measures; and
- (e) Compensating for the effect by creating, restoring, enhancing or preserving substitute functions and values for the waters of this state.³⁶⁶

³⁶³ ORS 196.672

³⁶⁴ OAR 141-085-0506(7).

³⁶⁵ See Appendix B for detailed discussion. In 1990, EPA and the Department of Army entered into a Memorandum of Agreement (MOA) to clarify the type and level of mitigation required under Section 404 regulations. 1) Avoid - Adverse impacts are to be avoided and no discharge shall be permitted if there is a practicable alternative with less adverse impact; 2) Minimize - If impacts cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken; 3) Compensate - Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain. *See* Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency. The Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines. 6 February 1990. <https://www.epa.gov/cwa-404/memorandum-agreement>.

³⁶⁶ OAR 141-085-0510(54).

After the Department determines whether the applicant has taken all possible steps to avoid and minimize the impacts to wetlands and tidal waters, the Department must review the proposed compensatory mitigation.³⁶⁷

OAR 141-085-0680 establishes the principal objectives of Compensatory Wetland and Tidal Waters Mitigation (“CWM”) to:

- (a) Replace functions and values lost at the removal-fill site;
 - (b) Provide local replacement for locally important functions and values, where appropriate;
 - (c) Enhance, restore, create or preserve wetlands or tidal areas that are self-sustaining and minimize long-term maintenance needs;
 - (d) Ensure the siting of CWM in ecologically suitable locations considering: local watershed needs and priorities; appropriate landscape position for the wetland types, functions and values sought; connectivity to other habitats and protected resources; and the absence of contaminants or conflicting adjacent land uses that would compromise wetland functions; and
 - (e) Minimize temporal loss of wetlands and tidal waters and their functions and values.
- (b) Applicants must demonstrate how the selected method of CWM (i.e., mitigation bank, in-lieu fee mitigation, advance mitigation, permittee-responsible mitigation and payment in-lieu mitigation) addresses the principal objectives.³⁶⁸

The applicants are not in compliance with these requirements and therefore, the Department must deny the permit. The application does not comply with the mitigation sequencing required by the Department, as well as by the Environmental Protection Agency (“EPA”) and the Corps. Moreover, the proposed mitigation fails to avoid adverse impacts, practical steps were not taken to minimize the adverse impacts, and the appropriate compensatory mitigation was not selected.

A. Mitigation Sequencing

The Department must deny the permit because the applicants have not thoroughly demonstrated that adverse impacts have been avoided and that practicable alternatives have been selected (*See* Chapter 7). As discussed in detail in Appendix B. Clean Water Act 404 Comments, the applicants have further failed to demonstrate compliance with federal mitigation requirements. The applicants have failed to comprehensively demonstrate that there are no other, less damaging alternatives, such as those that do not damage special aquatic sites, including but not limited to wetlands, mud flats, vegetated shallows, and riffle and pool systems. Further, the applicants have failed to demonstrate that the proposed removal-fill activities would have less adverse impacts than the alternatives. Therefore, absent additional information provided by the applicants, particularly regarding direct, indirect, and cumulative impacts to special areas of concern, including but not limited to dunes, bogs or fens, mature forested wetlands, vernal pools, known

³⁶⁷ Department of State Lands. A Guide to the Removal-Fill Process. December 2016.
https://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf Chapter 8, p. 139.

³⁶⁸ OAR 141-085-0680(2).

use by any listed species, or documented high natural resource value, the Department must deny the permit.³⁶⁹

B. Off-Site, Out-of-Kind Compensatory Wetland Mitigation

In addition to the applicants' failure to demonstrate avoidance of adverse impacts and selection of practicable alternatives, the applicants have also failed to propose adequate compensatory mitigation. Specifically, the applicants propose to mitigate the impacts of the 229-mile pipeline and the terminal at two sites in Coos Bay. In the Compensatory Wetland Mitigation Plan, the applicants state:

Pipeline impacts to wetlands will consist of several relatively small, individual impacts spread over a large geographic area, and ***therefore it was deemed impracticable to conduct wetland mitigation at multiple sites in the various watersheds the Pipeline crosses.*** Instead, wetland mitigation for the Pipeline emphasized consolidating mitigation in a single location that would have a high likelihood of success. Therefore, Pipeline mitigation is being incorporated into the same location as much of the LNG Terminal wetland mitigation, which will occur at the Kentuck Project site in Coos Bay, Oregon.³⁷⁰

In the application to the Department, the applicants have proposed both off-site and out-of-kind mitigation for the identified permanent impacts to wetlands and tidal waters. The Department should deny the permit for the project because the off-site and out-of-kind mitigation proposed is a less ecologically preferable method than a mitigation strategy that utilizes on-site and in-kind mitigation.

1. Off-Site Compensatory Wetland Mitigation

Compensatory wetland mitigation can be considered either “on-site” or “off-site.” According to federal regulations, on-site mitigation is when the mitigation area is either located on the same parcel of land, or contiguous to, the impact site.³⁷¹ According to DSL’s removal-fill guide, DSL interprets “off-site” to mean “a location that is not within the tax lot(s) of the proposed removal-fill activity or within tax lots adjacent to the removal-fill activity tax lot(s).”³⁷² Off-site mitigation must adhere to the following selection guidance:

- The off-site mitigation area ***must be located, at a minimum, within the 4th field HUC*** (hydrologic unit code) ***in which the removal-fill site is located.***
- DSL may direct applicants to more localized (e.g., 5th field HUC or smaller watershed) mitigation opportunities when warranted as a result of: application of the principal objectives for CWM; impact site functional assessment that identifies wetland service(s) of high function and value; input from public review process; or a

³⁶⁹ Department of State Lands. A Guide to the Removal-Fill Process. December 2016.

https://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf Chapter 8, p. 8-3.

³⁷⁰ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697>. Compensatory Wetland Mitigation Plan. P. 1. P. 1085.

³⁷¹ *Id.* § 332.2.

³⁷² Department of State Lands. A Guide to the Removal-Fill Process. December 2016.

https://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf Chapter 8. P. 8-9.

watershed management plan or other locally adopted plan that identifies wetland services critical for retention within a smaller landscape.³⁷³

The State’s removal-fill regulations under OAR 141-085-0680 prioritize on-site mitigation, listing the following principal objectives of Compensatory Wetland Mitigation to:

- (a) Replace functions and values lost *at the removal-fill site*;
- (b) *Provide local replacement* for locally important functions and values, where appropriate...³⁷⁴

The DSL removal-fill guide provides further clarity by stating that providing local replacement for locally important functions and values is “considered and documented by showing *how on-or near-site mitigation opportunities have been maximized* when locally important wetland functions are anticipated to be lost at the impact site.”³⁷⁵

In the current Compensatory Mitigation Plan, the applicants propose off-site mitigation at the Kentuck Project for removal-fill impacts all along the pipeline route. It is clear from the existing regulations, statute, and policy guidance that preference and priority is given to on-site mitigation rather than off-site mitigation. The applicants bear the burden of proof to demonstrate that on-site mitigation is not practicable.

Not only is the mitigation proposed off-site, but it is also outside the 4th field HUC. Specifically, the Umpqua, Rogue, and Klamath 4th field HUCs are far outside the 4th field HUC for the Coos watershed. The DSL removal-fill guide emphasizes the importance, even for linear projects like a pipeline, of restricting mitigation to at least the 4th field HUC, stating:

Linear projects such as pipelines, roads, power lines, etc. that have permanent wetland impacts in multiple watersheds present a challenge for CWM... DSL offers the following additional guidance when planning CWM for linear projects in multiple watersheds:

- Any proposed permanent impacts to “special wetlands” (as defined in Step 1) are subject to the standard CWM requirements.
- For all other proposed permanent impact to wetlands, *CWM may be combined at the 4th field HUC level* with the mitigation requirement interpreted to mean replacement of the predominant wetland condition being impacted in that watershed.³⁷⁶

The applicants bear the burden of proof to demonstrate that on-site mitigation is not practicable, which they have failed to meet. OAR 141-085-0565(5). Absent a proposal from the applicants for that is, at the minimum, combined at the 4th field HUC level, the Department cannot determine that the applicants have provided all practicable mitigation, and therefore must deny the permit.

³⁷³ Department of State Lands. A Guide to the Removal-Fill Process. December 2016.

https://www.oregon.gov/dsl/WW/Documents/Removal_Fill_Guide.pdf. Chapter 8. P. 8-9.

³⁷⁴ OAR 141-085-0680. Emphasis added.

³⁷⁵ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 8. P. 8-6. Emphasis added.

³⁷⁶ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 8. P. 8-19. Emphasis added.

2. Out-of-Kind Compensatory Wetland Mitigation

As stated in DSL’s removal-fill guide, “Generally, DSL requires ‘in kind’ replacement as a foundation to achieving the regulatory objective of functional replacement.”³⁷⁷ The guide clarifies that “in-kind” refers to the same Cowardin systems and class and HGM class and subclass.³⁷⁸ Out-of-kind mitigation may be permissible if the applicant demonstrates:

- Replacement of wetland function and values that address problems identified in a watershed management plan or water quality management plan
- Replacement of important wetland types, functions and values disproportionately lost in the region (watershed)
- Replacement of rare or uncommon plant communities appropriate to the region as identified from sources such as the Oregon Biodiversity Information Center and the Oregon Conservation Strategy
- Replacement of wetland types that are technically impracticable to replace (e.g. slope wetlands)³⁷⁹

As an example, the DSL removal-fill guide states:

Out-of-kind mitigation must make ecological sense within the landscape proposed. For example, while a proposal to create an out-of-kind depressional wetland may address a documented critical flood storage need in the watershed, creating that wetland at the bottom of the watershed would not make ecological sense.³⁸⁰

In this case, the applicants propose out-of-kind mitigation for impacts to the identified 0.91 acres of forested and scrub-shrub wetland converted to emergent wetland with the Kentuck Project Site. The Kentuck Project Site will involve constructing levees to dike historical tide lands to allow for reconnection to the estuary. This mitigation component will cover 91.46 acres and, according to the applicants, will result in tide channels, mudflats, salt marsh, and freshwater wetland communities. At the northeast end of the former golf course, the applicants also propose to reconnect the freshwater floodplain to Kentuck Creek covering 9.14 acres. The mitigation proposed at the Kentuck Project site will itself require 5.47 acres of impacts to wetlands that must be mitigated.³⁸¹

Permanent impacts to at least 0.91 acres of forested and scrub-shrub wetlands located along the pipeline route across eight fifth-field watersheds (HUC 10) that may include special areas of concerns, including but not limited to mature forested wetlands and known use by any listed species, are not likely to be adequately mitigated by the off-site and out-of-kind mitigation proposed by the applicants. Specifically, the off-site and out-of-kind mitigation proposed is a less ecologically preferable method than a mitigation strategy that utilizes on-site and in-kind

³⁷⁷ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 8. P. 8-8.

³⁷⁸ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 8. P. 8-8.

³⁷⁹ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 8. P. 8-8.

³⁸⁰ Department of State Lands. A Guide to the Removal-Fill Process. December 2016. Chapter 8. P. 8-8.

³⁸¹ Department of State Lands APP0060697. 7 November 2018.

<https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailF&id=60697>. Compensatory Wetland Mitigation Plan. P. 4. P. 1088.

mitigation. OAR 141-085-0510 defines “ecologically or environmentally preferable” as “compensatory mitigation that has a higher likelihood of replacing functions and values or improving water resources of this state.”³⁸²

Further, as discussed in more detail in Appendix B. Clean Water Act 404 Comments, prioritizing on-site and in-kind mitigation is aligned with federal mitigation requirements. Mitigating impacts to small streams, forested wetlands, and within watersheds that are hundreds of miles from Coos Bay by restoring eelgrass beds and an estuarine wetland is not “of a similar type to the affected aquatic resource” for many of the proposed pipeline impacts.³⁸³ Therefore, while the applicants claim their selected mitigation is “in-kind,” the mitigation actually proposed is both off-site and out-of-kind mitigation, contrary to the Corps’ guidelines under 33 CFR 332.3(e).

C. Conclusions

The applicants have failed to demonstrate that they have fully considered a range of less environmentally damaging (and likely more environmentally beneficial) mitigation alternatives that are likely available. Moreover, the off-site and out-of-kind mitigation that they have proposed raises other environmental concerns, that contaminated soil will be disposed of on the Kentuck site which would be in opposition to the long-term conservation vision and harm the estuary. Commenters urge the Department to carefully evaluate practicable alternative restoration alternatives of that location that do not involve as much fill, as well as alternatives that ensure fill is not contaminated (*See Chapter 8 infra*). The applicants have not provided sufficient information, have not demonstrated that adverse impacts have been avoided or minimized, and have proposed the least preferable type of mitigation. Because the applicants have failed to demonstrate that they have provided all practicable mitigation to reduce the adverse effects of their proposed removal-fill, the Department must deny the permit.

Chapter 10. CONCLUSIONS

10.1 Conclusions

It is the Commenters’ position that the applicants have failed to provide reasonable assurances that the project will comply with Oregon’s removal-fill law and related regulations and policies for the following reasons:

- **The application is incomplete (ORS 196.825(12)(b)):** The applicants fail to provide essential information and analysis of wetland and/or water impacts in areas where the applicants have been denied access by landowners; the application does not appear to contain cross-section drawings for fill and/or removal where the pipeline crosses jurisdictional waters; the presumed obstruction hazards identified by the Federal Aviation Administration will require termination or re-design of the project; the application fails to address deficiencies identified by DEQ in the 401 Water Quality Certification Joint Permit Application; the application fails to include referenced mitigation plans; and the application fails to include the necessary contaminant studies regarding the marine slip

³⁸² OAR 141-085-0510

³⁸³ 33 CFR § 332.3(e)(2). § 332.3(e)(1); 40 CFR § 230.93(e)(1).

dock and access channel area. The Department must deny the permit because the application is not complete. ORS 196.825(12)(b)). (*See Chapter 2 infra*).

- **The purported public need is outweighed by the loss to Oregon’s waters (ORS 196.825(3)(a)):** The Department must affirmatively determine that the project would address a public need consistent with *Citizens for Resp. Devel. In the Dalles v. Walmart* 295 Or App 310 (2018). For a privately-sponsored project of this scale and complexity, the Department must consider public need in a transparent and comprehensive analysis that weighs all of the relevant impacts and alleged benefits of the project. The Department cannot find there is a predominate public need for the project because the project is unnecessary and there is no evidence of demand for it, and the public need identified by the applicants is outweighed by the loss to Oregon’s waters. (*See Chapter 3 infra*).
- **The project is not consistent with the protection, conservation, and best use of water resources of the State (ORS 196.825(1)(a)):** The project would likely do immense damage to water quality in Oregon, and the applicants have failed to demonstrate that the project is consistent with the protection, conservation and best use of the water resources of this state. The proposed project will likely impair designated beneficial uses, threatening drinking water supplies and fish habitat. It will also likely further degrade stream segments that are already water quality impaired for temperature, dissolved oxygen, pH, turbidity, mercury, and sedimentation. Because the applicants have not demonstrated that the state’s waters’ will be protected, the Department must deny the permit because the project is not consistent with the protection and conservation of Oregon’s waters under ORS 196.825(1)(a). (*See Chapter 4 infra*).
- **The project would interfere with navigation, fishing, and public recreation:** The Director must conduct a weighing of the public benefits of the project against interference with factors including navigation, fishing, and public recreation (*See Citizens for Resp. Devel. In the Dalles v. Walmart*, 295 Or App 310 (2018)).³⁸⁴ As part of this weighing of benefits, the legislature has clearly demonstrated that it is the State’s “paramount policy” to preserve Oregon waters for navigation, fishing, and public recreation. ORS 196.825(1). The applicants have failed to demonstrate that the project will not unreasonably interfere with navigation, fishing, and public recreation and, therefore, the Department must deny the permit. ORS 196.825(1)(b). (*See Chapter 5 infra*).
- **The applicants have failed to demonstrate independent utility (OAR 141-085-0565(3)(a)):** The project is clearly connected to the Coos Bay Channel Modification project (*See Appendix J*). The applicants would be the primary benefactors from the proposed widening and deepening of the federal navigation channel as part of the CBCM project or similar efforts to expand the navigation channel. Further, there are serious questions about the feasibility of LNG vessels transiting the federal navigation channel under the dredging currently proposed as part of this application. The applicants have failed to demonstrate in the application that the project has independent utility as required under OAR 141-085-0565(3)(a) and, therefore, the Department must deny the permit. (*See Chapter 6 infra*).

³⁸⁴ ORS 196.825(1)(b).

- **The applicants have failed to demonstrate a comprehensive analysis of alternatives to the project (OAR 141-085-0550(5), ORS 196.825(3)(c) and (d)):** The applicants have failed to demonstrate a comprehensive analysis of alternatives to the project, and therefore, the Department does not have the information to consider the availability of alternatives both for the project and for proposed fill sites, and to determine that the project is the practicable alternative with the least adverse impacts on the water resource, as required under Oregon law. Consequently, without the information necessary to determine whether the applicant has considered a reasonable range of alternatives, the Department must deny the removal-fill permit. (*See Chapter 7 infra*).
- **The project will not conform to sound policies of conservation and will likely interfere with public health and safety (ORS 196.825(3)(e)):** The applicants have failed to demonstrate compliance with the Clean Water Act, as discussed in detail in Appendix A. Clean Water Act 401 Comments and Chapter 4 *infra*. The Department must not approve the permit without consultation with NOAA Fisheries and U.S. Fish and Wildlife as required under the Endangered Species Act. Further, the applicants have failed to demonstrate compliance with state conservation policies, including but not limited to the Oregon Conservation Strategy and the Oregon Plan for Salmon and Watersheds. Additionally, the applicants have failed to demonstrate that the project will not interfere with public health and safety. Potential risks to public health and safety include natural hazards, such as floods, tsunamis, wildfires, landslides, and earthquakes identified under Statewide Planning Goal 7. The potential for high flow events that expose the pipeline or frac-outs at proposed stream crossings may result in increased risks to public health and safety. The Department should consider the airport hazard identified by the FAA and navigation safety hazards discussed in Chapter 5 *infra*. Therefore, the Department must deny the removal-fill permit. (*See Chapter 8 infra*).
- **The project will not conform with existing land uses (ORS 196.825(3)(g)):** The applicants have failed to demonstrate that the project conforms with existing land uses designated in applicable comprehensive plan and land use regulations. Moreover, the applicants have failed to provide the Department with the information necessary to make the determinations required by ORS 196.825(3)(g) that the applicants' proposed fill or removal is compatible with the requirements of the comprehensive plan and land use regulations for the area in which it will take place. Further, the applicants have failed to obtain land use permits for the project in Coos Bay. Because of the reasons adopted by LUBA in remanding the prior land use application are directly related to the inconsistency of the proposed dredge and fill in wetlands and in the Coos Bay estuary with the Coos Bay Estuary Management Plan, the project cannot be conditioned on a future land use approval to meet this criterion. In January 2019, the Douglas County Circuit Court Judge reversed the Douglas County extensions from December 2016 and 2017 that approved the Pacific Connector Gas Pipeline as a conditional use. Because the pipeline will require a new application for conditional use permit and utility facility necessary for public service, the applicant has not met its burden to demonstrate to the Department that the project conforms to Douglas County's acknowledged comprehensive plan and land use regulations. The applicant has failed to meet its burden of providing the Department with the information necessary to make the evaluations under ORS 196.825(3)(g); therefore, the Department must deny the permit. (*See Chapter 9 infra*).

- **The applicants have failed to provide all practicable mitigation to reduce adverse effects of the proposed fill or removal (ORS 196.825(3)(i)):** The Department should carefully evaluate practicable alternative restoration alternatives of that location that do not involve as much fill, as well as alternatives that ensure fill is not contaminated (*See* Chapter 8 *infra*). The applicants have not provided sufficient information, have not demonstrated that adverse impacts have been avoided or minimized, and have proposed the least preferable type of mitigation; therefore, the Department must deny the permit.

For the foregoing reasons, the Commenters urges the Department to deem the application legally and factually insufficient and deny the removal-fill permit this project.

Dated this 30th day of January, 2019.

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Public Comment on DSL APP0060697 (Jordan Cove Energy Project and Pacific Connector Gas Pipeline) Application for Removal-Fill Permit – January 30, 2019

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