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July 5, 2019

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

RE: The Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians' Comments on the Draft Environmental Impact Statement for Docket Numbers CP17-494-000 and CP17-495-000, Jordan Cove LNG Terminal and Pacific Connector Pipeline Projects

Dear Secretary Bose:

The Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians ("CTCLUSI" or "Tribe") appreciates the opportunity to comment on the Draft Environmental Impact Statement ("DEIS") for the Jordan Cove LNG Terminal ("Terminal") and Pacific Connector Gas Pipeline ("Pipeline") projects (collectively referred to as the "Project"). The Tribe is an intervenor in this proceeding and previously submitted detailed comments as part of the EIS scoping process. In addition, the Tribe has previously expressed its concern regarding the need for government to government consultation on the Project. Finally, the Tribe has for years expressed concern regarding FERC's failure to comply with NHPA Section 106 requirements to consult with the Tribe regarding ground disturbing activities resulting from FERC-authorized activities associated with the Project.

The Tribe also appreciates the repeated assurances that FERC will continue to receive and consider comments submitted after the closing of the formal comment period for the DEIS. Most recently, FERC staff reiterated this assurance at a meeting between FERC and Tribal staff in Coos Bay on June 25, 2019. Therefore, the Tribe reserves the right to amend or supplement these comments.

These comments, as well as our scoping comments, are submitted as part of the NEPA process and do not, in any way, replace or diminish FERC's independent obligations to consult with the Tribe on a government-to-government basis to otherwise faithfully discharge the United States' trust responsibilities to the Tribe. Staff-to-staff meetings are almost always helpful, but they do not constitute government-to-government consultation required by Executive Order 13175, which requires federal departments and agencies to consult with tribal governments when considering policies that would impact tribal communities. As we have reiterated to FERC on numerous occasions, government-to-government consultation means that decision makers from

both the Tribe and FERC meet to discuss the implications of a proposal to the Tribe, its people, and the resources upon which it depends.[1] To date, this has not occurred.

The importance of consultation and the shortcomings of FERC and other agencies was recently highlighted by a GAO Report titled, "Additional Federal Actions Needed for Infrastructure Projects", GAO-19-22: (March 20, 2019)[2]. Publicly Released: Apr 19, 2019", which found, in part, that federal agencies too often initiate consultation late in project development stages, agencies do not adequately consider tribal input when making decisions about proposed infrastructure projects, and agencies fail to respect tribal sovereignty or the government-to-government relationship between federally recognized tribes and the federal government. These same shortcomings have been demonstrated in this process.

The Tribe has consistently urged FERC to prepare an EIS that discloses and fully assesses the wide reaching impacts of the Project. The Applicant's proposal to build an LNG export terminal, miles of pipeline, and to export North American natural gas overseas poses grave threats to public safety, the economy, and natural resources in the Pacific Northwest. The Project will impact huge swaths of land. The Project will significantly impact an array of cultural resources that are of critical importance to the Tribe: from ancient burials and village sites to hunting, gathering, and spiritual practices that are used by tribal members to this day, including potentially significant impacts to contributing features of the Tribe's traditional cultural property in Coos Bay. The DEIS fails to adequately consider and assess impacts to the Tribe and the resources to which it values and depends. TR6-1

Beyond the Pacific Northwest, the Project will induce additional natural gas production in the United States, primarily involving hydraulic fracturing ("fracking") of unconventional gas sources, causing attendant environmental harm. The Project will cause increasing emissions of greenhouse gas, conventional, and toxic air pollutants. In turn, those effects will inevitably make their way back to the Pacific Northwest generally, and on Coos Bay particularly, by way of climate change impacts such as rising ocean levels, increased ocean temperatures and increased ocean acidification and hypoxia. For these reasons, the National Congress of American Indians ("NCAI") passed Resolution DEN-18-014[3] opposing the siting of LNG facilities, such as this Project, near tribal lands. TR6-2

The Coos River Estuary and Jordan Cove area which the Tribe knows as the *Q'alya ta Kukwis shichdii me* Traditional Cultural Property ("TCP")[4], and the surrounding areas are an integral part of our ancestral homeland. The Tribe has a long and documented history in Coos Bay, specifically including the Jordan Cove area. Our traditional use and connection overlaps with the Project's footprint, in addition to the greater Coos Bay area, which allowed our Tribe to grow and thrive. The Tribe has a strong relationship to the land and waters that would be directly

[1] A copy of the Tribe's consultation policy is available in Chapter 1-8 of the Tribal Code, available at https://ctclusi.org/assets/57f698a9c9e22c806c00000f.pdf.
[2] Available at https://www.gao.gov/products/GAO-19-22.
[3] Available at http://www.ncai.org/attachments/Resolution_pkrtLgiqnEeMuJcGoRfqsABqWUBpyhYmNqVGXtxeqqHjrKdcBRf_DEN-18-014%20Final.pdf.
[4] https://ctclusi.org/tcp

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TR6-1 We disagree that the Project poses a great threat to public safety, the economy, and natural resources in the Pacific Northwest. Safety was addressed in section 4.13 of the draft EIS, and socioeconomics in section 4.9. We agree that the Project may impact cultural resources important to the CTCLUSI; however, those impacts were adequately considered in section 4.11 and appendix L of the draft EIS.

TR6-2 We disagree that the Project would induce additional natural gas production in the United States, and cause environmental harm through increased use of hydraulic fracturing or "fracking" as a production technique. FERC does not regulate activities associated with the exploration and production of natural gas, including fracking. Those activities are regulated by individual states. There is no reasonable way to determine the exact wells providing gas for the Project, nor is there a reasonable way to identify the well-specific exploration and production methods used to obtain those gas supplies. It is possible that much of the gas for the Project would be produced in Canada; and many Canadian wells are drilled using conventional vertical methods, so they are not fracked. Because a natural gas transportation project is proposed before FERC, it is not likely that it would lead to additional drilling and production. In fact, the opposite causal relationship is more likely, i.e., once production begins in an area, shippers or end users will support the development of a pipeline to move the natural gas to markets. In past proceedings, the Commission concluded that the environmental effects resulting from natural gas production are not reasonably foreseeable or causally-related to the proposed pipeline projects. GHG was addressed in section 4.14 of the draft EIS. Air quality was discussed in section 4.12.1. The CTCLUSI ties to the TPC District "Q'alay ta Kukwis schichdii me" encompassing Coos Bay was mentioned in section 4.11 and appendix L.

impacted by the proposed Project. The Tribe remains an important part of the surrounding community and seeks to protect the abundance of cultural resources within the bay and uplands, including the remains of our past that lie hidden within Jordan Cove and other traditional resources.

TR6-2 cont.

Beyond consideration of these comment, the Tribe requests a meeting with FERC to discuss the TCP and how the FEIS will consider impacts to the TCP.

1. FERC's Obligations under NEPA

The National Environmental Policy Act ("NEPA") establishes a "national policy [to] encourage productive and enjoyable harmony between man and his environment." NEPA is intended to reduce or eliminate environmental damage and to promote "the understanding of the ecological systems and natural resources important to" the United States. 42 U.S.C. § 4321.

Under NEPA, FERC must complete an EIS that includes a detailed statement regarding, among other things: (i) "the environmental impact of the proposed action," (ii) "any adverse environmental effects which cannot be avoided should the proposal be implemented," and (iii) "alternatives to the proposed action." 42 U.S.C. § 4332(2)(C). NEPA's purpose is twofold: first, to ensure that federal agencies undertaking a major federal action take a "hard look" at a proposed project's environmental impacts before deciding how to proceed, and, second, to ensure that relevant information about the impacts of a proposed project and its alternatives is made available to members of the public, in order to provide a meaningful opportunity for their comment and participation in the federal decision-making process.

TR6-3

An EIS must identify and provide a full and fair discussion of all significant environmental impacts caused by the proposed action/project. 42 U.S.C. § 4332; 40 C.F.R. § 1502.1. EISs shall not serve as a means of justifying decisions already made or a rubber stamp for a project. 40 C.F.R. § 1502.2(g). The EIS shall describe the environment of the area. 40 CFR § 1502.15. The EIS shall also describe all direct, indirect, cumulative effects and their significance. 40 C.F.R. § 1502.16

The agency must take a "hard look" at identifying and evaluating potential adverse environmental impacts. *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1376 (9th Cir. 1998). Courts will set aside an EIS as arbitrary or capricious if the agency can identify no "rational connection between the facts found and the choice made;" that is, if the "explanation for its decision [ran] counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

2. Issues of Significant Concern

The Tribe's review of the DEIS has identified the following significant issues that need to be addressed prior to the release of the Final EIS ("FEIS") and prior to any decision by the Commission in this matter:

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TR6-03 The draft EIS meets the standards required by the CEQ to comply with the NEPA.

a. FERC has failed to Complete Cultural Resource Surveys Necessary to Assess Impacts and the 106 Process has not been Completed to disclose whether and how Impacts will be mitigated.

Both NEPA and the NHPA require FERC to disclose impacts of the Project on cultural resources. However, the DEIS indicates that FERC has not done the work to assess those impacts. Moreover, FERC admits that it does not know the scope of significant Project impacts to cultural resources, including impacts to the TCP.

The DEIS admits:

> We have not yet completed the process of complying with Sections 101 and 106 of the NHPA. **Additional cultural resource inventories, evaluations, and associated reports are yet to be completed**. Consultations with tribes, SHPO, and applicable federal land-managing agencies have also not been concluded. We are recommending that Jordan Cove and Pacific Connector not construct or use any of their proposed facilities, including related ancillary areas for staging, storage, temporary work areas, and new or to-be-improved access roads, until all studies and consultations necessary to complete compliance with the NHPA have been completed. It is expected that the resolution of adverse effects through an MOA and implementation of treatment plans would mitigate impacts at affected historic properties to a less-than-significant finding, should the Project be approved by the Commission. … Further, surveys of both the LNG terminal facilities and pipeline are incomplete and may result in the identification of additional historic properties. Also, an ethnographic study of the Project and the identification of traditional cultural resources is incomplete. One known TCP is present in Coos Bay and overlies the Project facilities. Once evaluations are complete, adverse effects on historic properties would be resolved by implementing the procedures outlined in a Project-specific MOA following completion of the Section 106 process pursuant to the NHPA.

TR6-4

The DEIS also admits that the Applicant's ethnographic study is insufficient – "A draft ethnographic study was filed with the FERC on April 4, 2018 (Deur 2018); however, FERC staff have requested revisions to the document. The revised ethnographic study is expected to address what natural resources are important to the Tribes, such as traditionally gathered plants, fisheries, and hunted species that may still exist in the Project area." Again, this demonstrates that the DEIS has failed to take the "hard look" at impacts to these resources, as required by NEPA. Absent a fully executed Programmatic Agreement, the NHPA does not allow a federal agency defer the 106 process until after Project approval. Instead, this work needs to be completed prior to the issuance of the FEIS.

NEPA also requires that any mitigation measures be disclosed and evaluated. However, the National Historic Preservation Act ("NHPA") § 106 process is far from complete and it is impossible to determine what mitigation measures the § 106 consultation process will develop and how effective those measures will be. FERC must complete the § 106 process – either a

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TR6-4 The draft EIS disclosed the status of our compliance with the NHPA. The treatment plans produced by the applicant, and mentioned in section 4.11 and appendix L of the draft EIS, provide the mitigation measures proposed. The draft EIS stated that an agreement document would be developed by FERC, in consultation with the consulting parties, including the CTCLUSI, to resolve adverse effects at affected historic properties. The draft EIS (see page 4-636) also mentioned the CRPA between the applicant and CTCLUSI. We will consider referencing the CRPA in the agreement document. The draft EIS (in section 4.11.3.1) included a recommendation that the Commission include in its Order, if it authorizes the Project, as an environmental condition, that the applicant must produce a revised Ethnographic Study, prior to construction, for the review and approval of FERC staff and interested Indian Tribes.

Programmatic Agreement ("PA") or Memorandum of Agreement ("MOA") prior to issuing any Project approvals. Development of the PA or MOA must occur in consultation with the Tribe.

As FERC is aware, the Tribe has entered into a Cultural Resource Protection Agreement ("CRPA") with the Applicant. The process of developing the Agreement came out of prior FERC analysis and conditioning, where FERC stated "we recommend that Jordan Cove execute an MOU with the Coos Tribes before we would allow construction to begin."[5] The CRPA is the product of years of negotiations between the Tribe and the Applicant and will serve as the framework through which the Tribe's cultural resources within the Project area are properly identified and protected. We appreciate the Applicant's willingness to partner with us to accomplish these important objectives. The Tribe believes that the CRPA can serve as an important element for FERC to meet its NHPA § 106 obligations. Accordingly, the Tribe requests: (1) that the CRPA be included as a mitigation measure adopted by FERC as a condition of approval and described in the FEIS and (2) that the PA or MOA developed for this Project include the CRPA as explicit conditions.

TR6-4 cont.

Moreover, FERC has required the Applicant to provide an ethnographic report, but this has not occurred to the satisfaction of FERC or the Cultural Resource Work Group. The Applicant has offered an extremely low amount of funding to the Tribes to conduct a study in an unreasonable amount of time thus, the Tribe have rightly rejected that offer. Instead, the Tribe's attendance at the Cultural Resource Work Group is purely for updates and should not be viewed as any sort of consultation or concurrence on how to properly address Project related cultural resources concerns. The Tribe requests that FERC complete the ethnographic report prior to the issuance of the FEIS.

b. The DEIS dismisses the Tribe's concerns about Geotechnical Work and cumulative impacts to cultural resources.

The DEIS essentially dismisses the Tribe's concerns about the geotechnical work and future impacts by concluding that no resources were found during the drilling and that once the site is developed there is no potential for future impacts:

> In their comments, the CTCLUSI state that the extensive geotechnical work (e.g., drilling and core sampling) that has occurred at the LNG terminal site over the three iterations of this Project has adversely affected cultural resources. We acknowledge that a considerable amount of geotechnical work has occurred at the LNG terminal site, but we are not aware of any documented impacts on cultural resources resulting from geotechnical work at this site. Ingram Yard and the South Dunes areas were surveyed by archeologists and no historic properties were identified. As described previously, we consider the impacts of past projects as part of the environmental baseline, but are addressing these comments because of the sensitive nature of cultural resources and the significance attributed to them by the CTCLUSI. Once construction of the LNG terminal is complete, the site would be

TR6-5

[5] Jordan Cove Energy Project and Pacific Connector Gas Pipeline Project: Final Environmental Impact Statement. FERC/EIS 0256F. September 2015. Volume II, Chapter 4, sections 4.4-4.14; Chapter 5, p 4-893.

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TR6-5 The draft EIS (page 4-638) acknowledged the concerns of the CTCLUSI about pre-construction geotechnical work. The Tribes can now monitor such work under the CRPA. The intent of geotechnical work is to assist in Project design, not to find archaeological sites as would be done during survey investigations under Section 106 of the NHPA. In a January 25, 2018 letter to FERC, the ACHP agreed with staff that "geotechnical testing as part of project planning… [is] not, in and of itself, subject to review by federal agencies under Section 106."

permanently transformed into an industrial facility and would not be subject to impacts from other projects; therefore, a cumulative impact on cultural resources would not occur.

The DEIS mischaracterizes the Tribe's comments. The Tribe was addressing current geotechnical work that occurred or may still be in process. Many of these activities occurred under the direction of FERC to facilitate completion of the NEPA process for the Project.

Actions that are taken "on behalf" of FERC, such as these, fall squarely within the ACHP's definition of an undertaking.[6] Indeed, FERC's own guidelines for cultural resource reporting by applicants state an even broader definition that includes those actions carried out with non-financial federal assistance or those "subject to state or local regulation administered pursuant to a delegation or approval by a federal agency."[7] The Tribe finds it highly unlikely that the pre-construction work so far is of a nature so outside the bounds of any of these definitions that the work can completely elude NHPA regulation. Finally, the fact that the work might be occurring on private lands does not negate their status as an undertaking because, as noted above, FERC's own regulations state that its NHPA responsibilities apply to undertakings on both public and private lands.

Our point is that the preconstruction testing is of a magnitude to in itself trigger Section 106 requirements – not that the testing thus far somehow rules out the possibility that cultural resources are present within the APE.

TR6-5 cont.

c. The DEIS fails to analyze impacts to the Tribe's traditional uses of the area.

Instead of taking a "hard look" at impacts of the Project to the Tribe's traditional uses, including gathering, hunting and fishing activities, FERC summarily dismisses its trust responsibility to consider these activities by pointing out that there is no ratified treaty – "Since the U.S. government never executed a treaty with the CTCLUSI, the Tribes do not have treaty-protected or special fishing or hunting privileges on ceded lands." This statement is misleading because it is not fully accurate. Because the treaty was not signed it could be interpreted that that land was not ceded and the Tribe still holds aboriginal title to these lands and while there may not be any treaty-protected resources, it does not absolve FERC of its obligations to look at the impacts of this Project to tribal use of surrounding resources. FERC has a trust obligation to ensure that impacts to resources are considered and mitigated. Additionally, the Tribe's traditional use areas are TCP contributing features, thus triggering Section 106 consultation and affects determination requirements.

TR6-6

Moreover, DEIS Section 4.4.3.6 (Wild-Harvesting of Non-Timber Forest Products) has no discussion of tribal use.

[6] 36 C.F.R. § 800.16(y).
[7] Federal Energy Regulatory Commission, GUIDELINES FOR REPORTING ON CULTURAL RESOURCES INVESTIGATIONS FOR NATURAL GAS PROJECTS, at 30 (July 2017).

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TR6-6 We will consider these comments while we revise the text for the final EIS. Only the proposed access channel would be closed temporarily during construction of the LNG terminal. During operation of the LNG terminal no portion of Coos Bay would be closed; although recreational boating may be delayed during the passage of LNG carriers. Therefore, tribal canoeing in the bay would not be prohibited, although it may be limited in specific areas at specific times.

During a staff-to-staff meeting on June 25, 2019, FERC staff indicated that they had no data to support any analysis of tribal "subsistence" uses that may be impacted. The Tribe suggests that FERC consider the fish consumption rate of 175 grams per day that was adopted by the State of Oregon in 2011 as part of its water quality standards process as a measure of fish consumption. This rate was adopted based almost entirely on tribal fish consumption surveys in the State of Oregon.

TR6-6 cont.

Lastly, the Tribe has continuously used Coos Bay for fishing, crabbing, clamming, gathering, and canoeing and ceremony. The closure of certain parts of the Bay to "recreational boats," which FERC would consider traditional canoes to fall under, hinders our ability to continue important cultural practices within in the Tribe's traditional areas. The closure of these areas is not limited to the construction phase, as all recreational boats would be expected to not be within the security buffer for LNG carriers coming in and out of the Bay. This raises concerns for the Tribe's ability as a canoe family to continue safely using the Coos Bay for ceremony and recreation by canoe. The use of the Bay for transportation is imperative to the culture and way of life for the Coos People.

d. Consultation

DEIS Section 4.11.1 (Consultations) of the DEIS lists a number of "consultations" that have occurred. However, there has only been staff-to-staff meetings between FERC and tribal staff and separate meetings with the Applicant and its consultants. As described above, these are not consultation per the Executive Order or the Tribe's laws.

TR6-7

Moreover, FERC has failed to respond to several letters sent by the Tribe – including, most recently, our request for an extension and our separate letter that expressed concerns about NHPA compliance.

e. The DEIS fails to take hard look at climate change.

The DEIS estimates that "Direct emissions from the Jordan Cove LNG and Pacific Connector Pipeline Projects would result in annual CO_2e emissions of about 2.14 million metric tons of CO_2e." DEIS 4-807. But the DEIS provides no discussion of the consequences that will result from these emissions, no analysis of whether this emission increase would render the projects contrary to the public interest, and not even an opinion on whether this increase would be "significant." *Id.*

The DEIS fails to take a meaningful look at climate change impacts because: (1) "there is no universally accepted methodology to attribute discrete, quantifiable, physical effects on the environment to the Project's incremental contribution to GHGs" and (2) FERC has "not been able to find any GHG emission reduction goals established at the federal level." The DEIS goes on to state, "[a]bsent such a method for relating GHG emissions to specific resource impacts, we are not able to assess potential GHG-related impacts attributable to this project. Without the ability to determine discrete resource impacts, we are unable to determine the significance of the Project's contribution to climate change."

TR6-8

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TR6-7 Leaders of the CTCLUSI met with the Chair of the Commission. Our responses to letters from the Tribes can be found in the EIS.

TR6-8 Climate change is discussed in section 4.14 of the draft EIS. The Project would comply with EPA GHG reporting and permitting rules. There is no generally accepted significance criteria for GHG emissions. If the EPA establishes a GHG significance level, the Commission would apply said level to projects under its jurisdiction.

There is nothing in NEPA that requires a specific reduction goal or a "universally accepted methodology" to assess impacts, including impacts related to GHG emissions and climate change. DEIS 4-806. NEPA does not require agencies to use methodologies that have been "universally accepted." To the contrary, FERC must use methods that are "generally" accepted "in the scientific community." 40 C.F.R. § 1502.22(b)(4). Thus, it is our interpretation that climate change impacts must be evaluated in the environmental analysis of the Project.

TR6-8 cont.

Numerous studies, including "Country-level Life Cycle Assessment of Greenhouse Gas Emissions from Liquefied Natural Gas Trade for Electricity Generation"[8] ("Life Cycle Study") demonstrate that an estimate of upstream and downstream greenhouse gas emissions associated with a single LNG facility is possible and has been conducted. The Life Cycle Study conducted an analysis of GHG emissions for a proposed LNG terminal in Kitimat, British Columbia. The analysis relied heavily on data sources provided by U.S. government agencies.

f. Cumulative Impacts/Proposed Action

The cumulative impacts analysis of the DEIS fails to consider a number of ongoing and future projects – this includes the Port of Coos Bay's Channel Modification proposal which impacts include expansion of operations of at least the Roseburg Chip Facility on the North Spit, the Port of Coos Bay's plan to construct a general purpose cargo terminal on the North Spit of the Coos estuary immediately down Bay from the proposed terminal, the FAA's airport expansion project, and the Port's bridge repair project[9].

Moreover, the DEIS's definition of the proposed action does not include elements that are directly related and necessary to the implementation of the Project – including the landfill closure and the relocation of the PacifiCorp facility. With respect to the landfill, there are cultural resource concerns for secondary deposits of cultural resources within the landfill material, which we have brought to the attention of the applicant, FERC, and state agencies on several occasions.

TR6-9

As discussed above, cumulative impacts from pre-construction work are not being adequately addressed by FERC and sites potentially could have been tested out of existence prior to proper identification. At a minimum, these actions need to be disclosed and analyzed as part of the cumulative impacts analysis.

The cumulative impacts analysis should be revised and strengthened in the final EIS. The DEIS lists some aspects of the project that hold potential cumulative impacts, but does not provide a sufficiently robust analysis of the aggregate impacts.

[8] Available at https://pubs.acs.org/doi/10.1021/acs.est.7b05298.
[9] Information about this project is available at https://www.portofcoosbay.com/news-releases/2019/6/11/port-repairs-and-rehabilitates-37-timber-bridges-along-the-coos-bay-rail-line.

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TR6-9 The cumulative impacts analysis does take into consideration the Port's channel modification project, the railroad bridge repair project, and the airport expansion (see table 4.14-2). It does not take into consideration the expansion of the Roseburg wood chip facility, and the Port's proposed general cargo terminal. In order to analyze those proposed future projects, we would need the CTCLUSI to provide us more information about them. We think the Port cargo terminal was an older proposal that was dropped. We are unaware that Roseburg Forest Products has plans to expand its North Spit facilities.

g. Overly Narrow Definition of the Purpose and Need for the Project and Range of Alternatives

The DEIS violates NEPA by failing to consider reasonable alternatives. The only alternatives considered in the DEIS are no action, use of entirely different sites, and "system alternatives" that would consist of other LNG export projects. The DEIS provides no analysis whatsoever of alternative designs for a facility at the proposed Jordan Cove site that would potentially have lower environmental impacts. Failure to take a hard look at these alternatives is unlawful. An EIS must include a robust analysis of alternatives to the proposed action: this discussion is "the heart of the [EIS]" and must "provid[e] a clear basis for choice among options." 40 C.F.R. § 1502.14. The Clean Water Act also requires evaluation of alternatives that would reduce wetland impacts. 40 C.F.R. § 230.10(a). Although these two requirements are similar, the Clean Water Act goes beyond NEPA's procedural requirements and imposes substantive obligations to actually adopt reasonable less damaging alternatives. 40 C.F.R. § 230.10(a).

The DEIS has a very narrow definition of the purpose and need for the Project that is limiting the analysis of alternatives:

> The purpose and need of the Jordan Cove LNG Project is to export natural gas supplies derived from existing interstate natural gas transmission systems to overseas markets. The purpose and need of the Pacific Connector Gas Pipeline Project is to connect the existing interstate natural gas transmission systems of Gas Transmission Northwest, LLC and Ruby Pipeline, LLC with the proposed LNG export terminal.

TR6-10

In our scoping comments, we stated, "[i]n crafting the purpose and need, FERC should abandon its past practice of identifying an unreasonably narrow purpose and need, and then relying upon the narrow purpose and need to reject reasonable alternatives and the 'no action' alternative." The EIS must fully explain the need for the facility, including demonstrated market demand for the LNG evidenced by binding purchase commitments and other information to support that conclusion. This, in turn, should inform the development of a robust range of alternatives to be fully assessed in the EIS."

The narrowly defined purpose and need has resulted in a very narrow range of alternatives that essentially has dismissed meaningful consideration of alternatives other than a Coos Bay facility and pipeline. In our scoping comments, we requested a broad range of alternatives:

(1) Whether to select the "no action" alternative;
(2) Whether other site locations will meet the purpose and need with less environmental, social, and tribal impacts;
(3) Whether the Project can proceed without impacting tribal cultural resources or other tribal resources;
(4) Whether conservation, efficiency improvements, and renewable energy can meet part or all of the energy demand the Project proposes to address;

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TR6-10 We disagree. The draft EIS complies with NEPA. It includes a robust analysis of alternatives in section 3, including the No Action Alternative; System Alternatives; and Route Alternatives.

(5) Whether export from other locations would better serve the public interest by mitigating economic or environmental impacts or by limiting the cumulative impacts of multiple terminals located in one region;
(6) Whether foreign countries can fuel their economies with non-North American natural gas;
(7) Whether alternative Project configuration, including pipeline routes, will minimize the potential for geologic hazards, harm to tribal, private, and public property and safety risks to communities near the pipeline; and
(8) Whether to deny export proposals all together as contrary to the public interest.

TR6-10 cont.

The Tribe reiterates its request for a robust and thorough analysis of the aforementioned alternatives.

Even the alternatives described lacks analysis. For example, the DEIS includes a Humboldt Bay LNG Export Terminal Alternative and concludes, without analysis, that the impacts of this alternative are likely to be similar to the Coos Bay alternative.

h. THE DEIS Largely Ignores the Tribe's Concerns about Social Impacts.

The Tribe's scoping comments raised concerns about the influx of temporary workers in the community, including added crime. Nearly 1,800 temporary residents from outside our local community will descend on coastal and pipeline route towns during the construction phase.

These concerns were largely ignored. The DEIS states:

> The experiences of oil- and gas-related boomtowns in North Dakota and Wyoming have limited applicability when considering the potential for increased crime in the Project area. As discussed above, temporary construction-related increases in population would range from about 3.4 percent (average) to 6.6 percent (peak) of the combined populations in the cities of Coos Bay and North Bend in 2017. These numbers would, however, be higher when pipeline construction workers employed in Coos County are added to the total (see section 4.9.2.1). This population increase would be temporary, and we conclude that attempts to estimate related increases in crime would be speculative, but were they to occur such increases would likely be commensurate with the relative increases in population.

TR6-11

During a staff-to-staff meeting on June 25, 2019, FERC staff indicated that they had no data to support an analysis of these impacts. The Tribe has included, as Attachment A, reports that support the impacts from the temporary influx of workers. It is not appropriate to dismiss this data simply because the temporary growth rates in the studies are not an exact match to projected temporary growth rates from the Project. NEPA does not allow lack of one hundred percent certainty to serve as an excuse for an agency to fail to identify and assess probable, significant Project impacts.

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TR6-11 The paper referenced in this comment (Komarek 2018) assesses the impacts of the fracking-related natural gas extraction boom in the Marcellas region of the U.S. on crime rates, by comparing crime statistics for "natural gas boom counties" in Pennsylvania, with similar counties in New York where fracking is banned. The author found that the natural gas boom counties experienced overall higher violent crime rates than the comparison counties. Komarek (2018) also noted that caution should be taken in extrapolating these results to other locations or industries or phases of technology development, with differences in local characteristics potentially resulting in different experiences with criminal activity. This information has been added to Section 4.9.1.1 of the FEIS.

Reference: Komarek, T.M. 2018. Crime and natural resource booms: evidence from unconventional natural gas production. Ann Reg Sci (2018) 61:113–137

i. The DEIS Fails to Take a Hard Look at Impacts to Viewshed and TCP Contributing Features.

Since 2006, the Tribe has considered the North Spit and surrounding areas to be a Traditional Cultural Property. The TCP is not considered in the DEIS analysis of visual resources of the Coos Bay area and the Tribe has not been engaged with FERC and/or the Applicant in any discussions regarding impacts to date. The Tribe agrees with the statement in the DEIS that indicates that the Tribe should be involved in the viewshed analysis. Within the TCP nomination, viewsheds are identified as contributing to the integrity of the nomination. The construction process as well as the Jordan Cove Facility and Pacific Connector Pipeline will significantly impact the viewsheds identified as significant to the Tribe within the TCP nomination.

TR6-12

j. Wetlands Analysis

The DEIS does not address FERC's own guidance, the Wetland and Waterbody Construction and Mitigation Procedures (May 2013)[10] ("Wetland Procedures"), on wetland impacts and mitigation. The proposed pipeline route under the estuary and through the Kentuck slough wetlands is inconsistent with the Wetland Procedures. For example, the Project will include open trench pipeline installation along Kentuck Slough wetlands. The Wetland Guidance prohibits this type of construction – "Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land". Wetland Procedures at 14. Likewise, the Project includes a cement access road along Kentuck Slough wetlands. This is inconsistent with the Wetland Procedures that provide, "The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland". Wetland Procedures at 15.

TR6-13

k. The DEIS Fails to Take a Hard Look at Earthquake and Tsunami Hazards.

The DEIS fails to consider current tsunami/earthquake hazard science. Using data from 1833 to 1994 is dangerously incomplete, and reflects the colonial historical period, which is barely a blink in the geological timeline. A major earthquake occurred in this area on January 26, 1700.[11] This event was so large that it produced a documented tsunami in Japan.

More information about earthquake and tsunami risks has emerged in recent years. For example, according to a recently completed study by Oregon State University, geologic data from the past 10,000 years indicates that the Oregon Coast has a significant likelihood of experiencing a subduction zone earthquake in the next 50 years – roughly the lifespan of a LNG export project.[12]

TR6-14

[10] Available at https://ferc.gov/industries/gas/enviro/procedures.pdf.
[11] *See* https://www.opb.org/news/series/unprepared/jan-26-1700-how-scientists-know-when-the-last-big-earthquake-happened-here/.
[12] USGS Website, http://pubs.usgs.gov/pp/pp1661f/.

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TR6-12 The text of Section 4.8.2 has been revised for the final EIS to address this point about impacts on the viewshed of the referenced NRHP-eligible TCP District "Q'alay ta Kukwis schichdii me".

TR6-13 Impacts to wetlands from construction of the pipeline would be mitigated for as described in the Compensatory Wetland Mitigation Plan filed with the FERC in January 2019. Additionally, as described in section 4.3.3.2 of the EIS, Pacific Connector has submitted a list of areas where modifications to the requirements if FERCs Procedures are requested. These include areas where the applicant has requested a 95-foot-wide construction right-of-way in a wetland or that TEWAs be located less than 50 feet away from a wetland. These proposed modifications to FERC's Plan and Procedures are provided in table E-1 of appendix E in the EIS and the justification for the requested modification to FERCs Procedures within the Kentuck slough wetlands is provide in table E-1.

TR6-14 The DEIS evaluates the information provided, as well as publicly available resources from other agencies. In addition, FERC staff reviews the design of the facility to applicable codes (i.e. ASCE, IBC, API, NFPA, CFR, etc.). The facility is designed to withstand earthquakes with return period intervals of up to 2,475 years, or a 2% probability of exceedance within 50 years (the Maximum Considered Earthquake as defined in ASCE 7-05).

The DEIS concludes that, "the site is not unsuitable due to tsunami hazards." DEIS at 5-4. Despite this, the DEIS recommends that further geotechnical studies (which have not yet been performed) and detailed designs of ground improvements be submitted to FERC for review and approval prior to construction. *Id.* Given the proximity of the Coos Bay communities and infrastructure as well as the risks and probabilities of a tsunami, it is unclear how a conclusion can be drawn that the site is suitable, while the DEIS admits that more information is necessary.

TR6-14 cont.

l. Project Impacts Will Be Overwhelmingly Negative to the Ecology of the Bay.

The net impact to the Coos Bay estuarine system will be unquestionably negative. In a study entitled "Assessing the Impact of Human Activities on British Columbia's Estuaries",[13] the authors identify that estuaries are one of the world's most biologically productive ecosystems. The study demonstrates that anthropogenic threats have made estuaries one of the most degraded ecosystems on earth. Dredging and shoreline hardening are two threats that result in habitat loss and degradation. Shoreline armoring to stabilize and protect coastal developments limits the ability of estuaries to retreat inland as the climate warms and sea levels rise and therefore may cause habitat and shorebird losses. Lastly, acidification of estuarine waters linked to atmospheric deposition of anthropogenic sources of greenhouse gasses may inhibit the growth of shelled organisms. Each of these factors are elements of this Project. A consideration of the contribution to ocean acidification from combustion of the natural gas induced by the Project must be included in the FEIS analysis. None of the numerous environmental impacts associated with the preferred alternative will result in a net enhancement of the estuarine ecosystem. The DEIS does not include an adequate analysis of the impacts of the proposed alternative on the Coos Estuary.

TR6-15

m. The Fish Window for In-water Work needs to be adjusted.

The proposed "in-water work window" for the Project will be October 1 to February 15. *See, e.g.*, DEIS at 2-49. However, as indicated by the photos taken below by the Tribe's Natural Resource Department staff of herring spawn near Fossil Point taken this last February, the Bay serves as an important spawning area for herring.[14] Herring spawning in the Bay occurs during February. Accordingly, in order to avoid adverse impacts to herring spawning, the in-water work must end by February 1.

TR6-16

[13] Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4061013/.

[14] ODFW, Natural Resources of Coos Bay Estuary at 40 ("Spawning occurs from January through April, and herring remain in the bay through summer."), available at https://odfw.forestry.oregonstate.edu/freshwater/inventory/pdffiles/Natural%20Resources%20of%20Coos%20%20Estuary%20No.6.pdf. *See also* http://www.clamdigging.info/Pacific%20Herring.html ("Herring occasionally spawn in most all of Oregon's bays but spawn consistently in Coos Bay, Umpqua Bay and Yaquina Bay from February through early April but most consistently during March."); http://www.milebymile.info/Chetco%20Bay.html ("Pacific herring enter the bay to spawn in February, March and into April.").

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TR6-15 See section 4.3 of the EIS for a discussion of impacts on water resources including Coos Bay. Dredging in the bay for the Project would be only at the access channel, and the four small navigation channel improvements. Turbidity caused by dredging would be of limited intensity, duration, and extent.

TR6-16 In water work windows that the applicant would follow are set by ODFW. These cannot be modified by the Commission.

3. **Section-by-Section Comments**

   a. **Section 4.1 Geological Resources**

- **Blasting Impacts:** The DEIS does not describe potential impacts from blasting on groundwater quality resulting from increased groundwater turbidity. Blasting can redirect surface water and groundwater flows to and from wetlands. In addition, turbidity and blasting agent by-products can degrade surface water and groundwater quality. The FEIS needs to address these impacts. TR6-17

TR6 continued, page 13 of 39

TR6-17 Impacts and measures to protect groundwater resources are fully described in the EIS: "A discussion of water supply wells within 150 feet of the construction right-of-way and measures proposed by Pacific Connector to avoid or minimize impacts on wells, including from blasting, is included in section 4.3. Pacific Connector would employ measures in the Blasting Plan including development of site-specific blasting operation and monitoring plans to address site variables (soil and rock types, etc.), which would incorporate known locations of existing groundwater wells or springs and seeps. Maximum ground motion velocities (or PPV) of 2 inches/second would be set for blast locations within 150 feet of water wells and springs."

Stream crossings and geologic hazards have been identified. Stream scour hazards are addressed in Section 4.13.1 and Section 4.3.2 of the draft EIS. Scour hazards would be avoided by employing HDD construction of the pipeline across streams as described in the draft EIS.

Pipeline construction BMPs for landslides and unstable slopes are documented in Section 4.1.2.4 of the EIS. In addition, pipeline monitoring protocols are also described.

As described in the EIS, "Drilling and blasting would be done with the Pacific Connector inspector present and with inspector's approval to proceed prior to each blast. Blasting operations would be conducted by or under the direct and constant supervision of experienced personnel legally licensed and certified to perform such activity in the jurisdiction where blasting occurs. Pacific Connector would require their contractor to provide a Blasting Plan at least five working days prior to any blasting-related activity, or two weeks prior to blasting on federal lands, and the contractor would be required to obtain Pacific Connector approval in writing prior to starting work."

- **4.1.2:** The DEIS at 4-4 describes stream crossings. What methodology will the Applicant have in place to identify stream crossings, geological hazards, and other ecologically sensitive areas?
- **4.1.2.3:** What site conditions will warrant the utilization of isolation valves to detect pressure loss and close the pipe automatically?
- **4.1.2.4:** The DEIS at 4-24 states that there are no standard operating procedures in place to reduce or eliminate landslide risks to buried pipelines. Is there any documentation or effort being put into developing best practices?
- **4.1.2.6:** How will the specifications that the Applicant will include in blasting contracts be formulated? According to what methodology or research? How will adverse impacts, aside from vibrations and fly rock, be defined, identified, and rated? How will measures for safe blasting practices near active pipelines be defined and enforced? How will seasonal restrictions on blasting to protect wildlife be developed? Who is the wildlife expert that will be consulted? How far in advance will the project set blasting schedules?

TR6-17 cont.

b. Section 4.2 Soil and Sediments

- 4.2.1.1: Sand and silt comprise the majority of permanent and temporary project areas. These soils are susceptible to wind and water erosion and liquefaction from seismic activity. FERC needs to better address facility stability from high substrate erosion potential, as well as impacts to transportation routes from soils undergoing liquefaction from seismic activity.
- 4.2.1.2: Considering the considerable amount of contaminants discovered in soils from historic industrial sites by the applicant, FERC needs to evaluate the scientific data accumulated on contaminant exposure to air and water from disturbed sediments, and the potential for yet undiscovered residual contaminants in these mostly unmitigated brownfields.

TR6-18

- **4.2.1.3:** Construction of the Pile Dike rock apron is expected to produce an increase in turbidity.
- **4.2.3:** The Forest Service has determined that construction will exceed allowable thresholds for detrimental soil conditions established by the applicable forest plans.

c. Section 4.3 Water Resources and Wetlands

- **Kentuck Mitigation:** The Kentuck mitigation site has reverted to wetland (from former golf course). Alternatives designed to meet the goal that avoid impacts to wetlands have

TR6-19

TR6 continued, page 14 of 39

TR6-18 Liquefaction hazards have been fully addressed in Section 4.13.1 of the EIS. Jordan Cove's ECRP includes BMPs to avoid and mitigate potential impacts from wind and water erosion.

Contaminants at the Jordan Cove site have been evaluated in coordination with the ODEQ; and all continuing investigation and remediation/disposal activities during construction will be coordinated with ODEQ as described in section 4.2.1.2. The SPCC Plan addresses the unique soil and subsurface conditions of the Project site, including the high permeability, shallow groundwater, and rapid transmissivity as described in the EIS.

As stated in the text: “Construction of the Pile Dike rock apron is expected to produce a localized, temporary increase in turbidity; however, the long-term effect of the rock apron would improve shoreline stability including accounting for the effects of marine traffic.”

This statement is followed by the following statement ""Therefore, the Forest Service has proposed plan amendments and compensatory mitigation actions to make provision for the proposed project."" These amendments and compensatory mitigation actions are further described in the EIS."

TR6-19 The scope and suitability of wetland mitigation is determined by the COE. Therefore, the Commission and the EIS defers this decision to the COE.

The applicant has proposed modifications to our Plan and Procedures. We have reviewed these changes and determined that they are adequate to comply with the intent of our Plan and Procedures.

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not been adequately evaluated. The Project will result in fill of wetland areas at this site. The former golf course at this site likely used fertilizers, pesticides and herbicides, and other chemical additives that would likely be mobilized by the restoration project.

- **CWA § 401 Certification:** The FEIS needs to note that the Oregon Department of Environmental Quality ("ODEQ") denied the Project's CWA § 401 Water Quality Certification on May 6, 2019, stating, "DEQ does not have a reasonable assurance that the construction and operation of the Project with comply with applicable Oregon water quality standards." DEQ's specific concerns, among others, included: (1) Expected effects of the construction and operation of the proposed pipeline and associated road and work areas on water temperature and sediment in streams and wetlands and (2) the risk of release of drilling materials from the construction of the proposed crossing of the Coos Bay estuary. This needs to be disclosed in the FEIS.

- **Consistency with FERC Wetland and Waterbody Construction and Mitigation Procedures:** As stated above, the DEIS fails to adequately assess consistency of the Project with FERC's Wetland Procedures. The Wetland Procedures provide, "The intent of these Procedures is to assist project sponsors by identifying baseline mitigation measures for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies. Project sponsors shall specify in their applications for a new FERC authorization, and in prior notice and advance notice filings, any individual measures in these Procedures they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation." The Applicant's plans outlined in its Wetland Compensatory Mitigation plan referenced in the DEIS fails to follow these procedures. The Wetland Procedures provide that the Applicant should "route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands." The pipeline route is routed through wetlands in Coos Bay and there are no alternate routes provided in the DEIS that avoid the Coos Bay wetlands. Below is the graphic from JCEP's application to the Oregon Department of State Lands for a removal and fill permit APP0060697 illustrating how the preferred route of the pipeline runs through the Kentuck mitigation site. The alternative routes noted in the graphic have a lesser impacts on wetlands, but are not included as alternatives in the DEIS.

TR6-19 cont.

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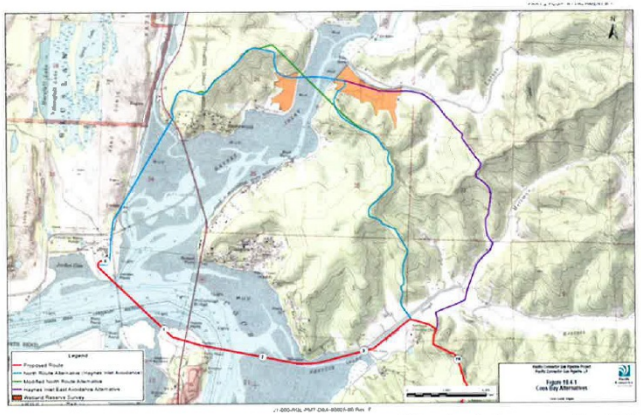
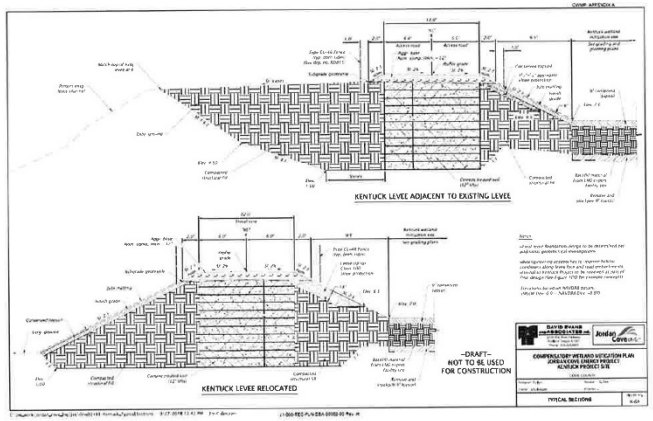


Figure 10.4.1 from Application to the Oregon Department of State Lands for a removal and fill permit APP0060697 showing the pipeline routes.

The provisions in the Wetland Guidance call for installations associated with extra work areas and access roads states that the applicant should "[l]ocate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land." The plans for the installation of the gas pipeline in the Kentuck mitigation do not minimize disturbance to wetlands. Below is the graphic from JCEP's application to the Oregon Department of State Lands for a removal and fill permit APP0060697 showing the construction techniques for the proposed "new and improved levee" to be constructed as part of the Kentuck wetland mitigation plan. The area under the 12' wide levee top labeled "access road" demonstrates 11 consecutive 12" lifts of cement treated soil as forming the bulk of the structure. This road is needed to allow heavy equipment to access works areas where the Applicant will install the portion of the pipeline to be buried in the Kentuck slough and install and access the drill pad for the Coos Bay East Horizontal Directional Drilling pipeline entry point at the Kentuck mitigation site. This is inconsistent with the Wetland Guidance and should be disclosed and addressed in the FEIS.

TR6-19 cont.



Page 1185 of Appendix A in Application to the Oregon Department of State Lands for a removal and fill permit APP0060697

- **Coho Benefits of Kentuck Mitigation:** The assertion that there will be an increase salmon Coho population in Coos Bay due to an increase in salt marsh habitat at the Kentuck mitigation site has no scientific rationale. The addition of salt mash alone does not imply there will be an increase in Coho salmon production. It is spawning habitat availability and quality that determines salmon production in a given region. The Coos Watershed Association's *Coos Bay Lowland Assessment and Restoration Plan* (2006)[15] provides information about the two spawning streams, Kentuck and Metmann Creeks, that drain into Coos Bay via Kentuck Slough, and their potential for salmonid production. The Plan concludes that neither is ideal for Coho salmon production because these creeks have been negatively impacted by poor forest and agricultural practices, and that the presence of rock quarries with their concurrent sediment production results in generally poor habitat for salmonids. Riparian shading is low or absent in many areas suitable for spawning and rearing, large woody debris is virtually non-existent in both streams, summer water flow is much reduced (e.g., Metmann Creek is less than 1 cfs from July through October), and sedimentation has impacted much of the useable spawning gravel.

TR6-20

[15] Available at http://www.cooswatershed.org/wp-content/uploads/2017/01/Coos-Bay-Lowland-Assessment-and-Restoration-Plan01-07.pdf.

TR6 continued, page 17 of 39

TR6-20 We noted that actions taken at Kentuck slough and adjacent creek habitat would benefit early marine rearing juvenile salmonids which is correct as juveniles entering the estuary from any area could utilize this nearshore habitat that would become available that had not been accessible before. This statement does not indicate that overall coho salmon production would increase.

- **Eelgrass Habitat Destruction and Inadequacy of Mitigation:** The eelgrass mitigation plan is inadequate. NMFS has designated eelgrass essential fish habitat ("EFH") and it is not sufficient to include the text in DEIS at 4-129 without an analysis of the impact to this EFH and ESA-listed species, including anadromous fishes, eulachon, and others. Impacts to eelgrass from the Project will not be short-term, the loss of benthic organisms will be permanent, and will not reestablish once eelgrass revelation is complete. The DEIS provides no evidence for these statements and these issues should be addressed before the final EIS is submitted.

  The removal of 46,535 cubic yards of sediment from the wetland surface of the eelgrass mitigation area will result on the complete removal of any epibenthic biota and infauna from this area. This is not a short-term impact. TR6-21

  The area chosen for the eelgrass mitigation needs to be dredged to lower it to an elevation suitable for eelgrass establishment. This action will create a "sump" - essentially a deeper hole surrounded by a higher elevation plain. This has serious implications for the functioning of the estuary. At certain tide levels, around those lower than 0-foot NAVD08, the excavated eelgrass mitigation area will hold water in a shallow intertidal pond formed by the dredging. Juvenile fish, including salmon smolts and eulachon, are attracted to eelgrass habitats, hence the plant's designation as EFH. Fish seeking low tide refuge in shallow intertidal ponded water areas are particularly vulnerable to predation by piscivorous birds and mammalian macropredators. Constructing an eelgrass mitigation area as proposed by JCEP will result in the creation of an eelgrass bed that is attractive to fish.

  On sunny low tide days, when the tide level leaves water in the excavated area, the remaining water will warm and have a reduced oxygen content. Many studies have shown that low oxygen and high temperatures have negative impacts on eelgrass photosynthesis and growth. These negative impacts are most notable with increasing temperature. Recent studies in the South Slough National Estuarine Research Reserve, located in Coos Bay south of the Jordan Cove project area, have shown that a small elevation in temperature over a short period, has resulted in a serious decline in eelgrass cover.

- **Impacts of Dredge Pipe and Booster Pump to Eelgrass Mitigation Site:** Elevation of the temporary dredge lines to avoid laying them on eelgrass beds or the intertidal, and the potential use of a moored booster pump, requires placement of some type of support pilings. Tidal scour and the associated loss of eelgrass will occur because of the presence of these pilings. Several studies, including Pregnall MM (1993) and Everett et al. (1995), demonstrate that stakes and pilings associated with rack oyster culture placed in eelgrass TR6-22

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TR6-21 The scope and suitability of wetland mitigation is determined by the COE. Therefore, the FERC and the EIS defers this decision to the COE.

TR6-22 Text has been revised to address this issue.

beds in the South Slough of Coos Bay resulted in scouring, alteration of sediment characteristics and a reduction in eelgrass density.

Where the pipe is not elevated above the substrate, it will lay flat on the intertidal. Here, it also has the potential for scour issues due to tidal and current movements. The route of the pipeline crosses low gradient intertidal areas. This will result in the pipeline forming a dam-like structure that restrict or alter tidally mediated flooding and dewatering of intertidal areas. It will also act as a dam to the movement of small organisms such as recently settled and juvenile Dungeness crabs. Eelgrass is an important habitat for these animals.

TR6-22 cont.

- **Groundwater Impacts:** The DEIS contradicts itself in regard to potential groundwater impacts stating, first, "[c]onstructing the Project could affect springs, seeps, and wells. Depending on the location of a well, spring or seep relative to the pipeline, the flow of the feature could be temporarily or permanently affected. These resources could be redirected and experience changes in quantity and quality." The DEIS then states, "The construction of the Project would temporarily affect groundwater. However, based on the characteristics of underlying groundwater, the applicant's proposed construction and operations procedures and methods, and their implementation of impact minimization and mitigation measures, we conclude that constructing and operating the Project would not significantly affect groundwater resources." The FEIS needs to clarify which statement is correct and provide the basis for the conclusion.

TR6-23

- **Hydrologic v. Mechanical Dredging:** The DEIS provides no specifics or methodology or oversight on how the Applicant will determine when to use hydraulic dredging versus mechanical dredging. Large amounts of mechanical dredging would negate the benefit of occasional hydraulic dredging.

TR6-24

- **4.3.1.2:** Constructing the Project could affect springs, seeps, and wells. These resources could be redirected and experience changes in quantity and quality.

  What tools are being used to estimate, measure, or improve how closely excavated topsoil and subsoils will be returned to their original soil horizon and slope position?

TR6-25

- **4.3.2.1:** Moffat & Nichol studies cited at DEIS at 4-84 are flawed because they do not account for turbidity from the Project as a whole, but instead just the dredging and construction of the slip and access channel. Moreover, there will be long term, frequent and regular sedimentation events from berthing and unberthing.

TR6-26

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TR6-23 Text in the final EIS has been revised for clarity.

TR6-24 As discussed in section 2, environmental monitors would be required along the project length. The construction contractor would select the method that is appropriate for the site specific conditions, and in line with the requirements outlined in the Order (if approved), as well as other federal, state, and local permit requirements.

TR6-25 Compliance monitoring would occur during project implementation to monitor and evaluate these factors.

TR6-26 Propeller wash from LNG carriers and tug boats associated with the Project, as well as ship wakes (waves) breaking on shore, could increase erosion along the shoreline and resuspend loose sediment along the shallow shoreline area, resulting in temporary increases of turbidity and sedimentation in the bay, both of which would affect water quality. The effects of these actions relating to sediment, bottom disturbance, and wave actions on marine aquatic resources are discussed in section 4.5 of the EIS.

We acknowledge that an inadvertent release of hazardous materials could adversely affect water quality in Coos Bay. The purpose the SPCC Plan is to minimize the potential for accidental releases of hazardous materials and to minimize effects of a spill by establishing protocols for minimization, containment, remediation, and reporting of any releases that might occur.

What enforcement will there be of the site-specific SPCC Plan? The FEIS should describe this.

TR6-26 cont.

The DEIS conflates the likelihood and impact of potential spills. The SPCC plan minimizing the impact and likelihood of a spill does not necessarily negate the impact of spill events on water quality or contamination.

- **4.3.2.2:** Use of FWS Stream Crossing Screening Matrix at DEIS at 4-100 is improper and ineffective, because it treats stream crossings individually without factoring in other project related sediment effects.

Stream temperature effects in this section are discussed in isolation and not in the aggregate.

TR6-27

The DEIS needs to disclose how many of the 173 streams that were evaluated in the stream crossing evaluations were actually visited and how many were evaluated based on desktop analysis.

What literature exists to support the attempts to replace substrate characteristics and physical habitat features? Has this been done before? Have there been any projects with long term monitoring to determine the effectiveness and best practices of this kind of restoration?

If any crossing is moved into the "high" project impact and "high" stream response risk matrix category, what specific crossing designs will be considered? Will they be made on the spot by qualified individuals? When will changes in bank material, bank angle modifications, substrate material, plants, bank material, etc. be made, based on what criteria?

The stream response risk matrix arbitrarily excludes crossings with a high risk of project impacts and a medium risk of stream and site response, as well as crossings with a medium risk of project impacts and a high risk of stream and site response, from mitigation. Why doesn't a High-Medium or Medium-High impact rating trigger a site specific crossing plan?

The DEIS at 4-104 states that during construction of Williams Northwest Pipeline's Capacity Replacement Project in Washington State (completed in 2006), 1 in 67 crossings resulted in a failure to maintain water quality standards. The exceedance occurred through a failure of the pumps during the night when a monitor was not on site to restart the pump. Why are these only monitored during the day?

the DEIS estimates the duration of elevated water quality impacts from failure be less than about 2 to 4 hours for small streams, and up to about 6 hours for large stream

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TR6-27 The applicants' crossing plans for streams are in addition to those typically required by FERC. They have used a method recommended by FWS to assess risk to streams from pipeline crossing and developed additional mitigation actions to be taken at sites for the various risk levels. These plans will need approval of State agencies through their permitting process. It is not the role or scope of the Federal EIS to assess the Project's compliance with State regulations or OARs. FERC assumes that the State will determine if the Project is in compliance with the State requirements and OARS during their review of the Applicant's State permit applications. If the State chooses it could make the requested requirements contingent for State permit approval. As disclosed in Chapter 5 of the EIS, any authorization from the FERC would be conditional on the Applicant acquiring all applicable federal and federally delegated permits. See also response to comment CO28-166.

crossings. This does not take into account failures that occur at night. It is misleading to assume every failure will be identified right away, especially when the DEIS describes a nighttime failure evidence from another project of a nighttime failure during the Williams Northwest Pipeline's Capacity Replacement Project in Washington State (completed in 2006). TR6-27 continued

The Applicant has requested a modification to sometimes use only native materials removed from the stream be used for backfilling. When will this occur? What conditions will be met to determine if a particular place does or does not qualify?

d. Section 4.5 Wildlife and Aquatic Resources

- **Ballast Water Management:** There currently is not adequate funding for regular ballast water inspections, especially in the Coos Bay area. The large amounts of potentially foreign water (also hull fouling) could introduce invasive species into Coos Bay, if not properly managed. If random inspections to confirm compliance/lack of invasive larvae are not conducted in a regular manner, undetected violations are expected. Attempts to eradicate invasive species are often unsuccessful and costly. The FEIS needs to assess the effectiveness and funding for the current program. TR6-28

- **Mud Shrimp Impacts:** Mud shrimp are barely mentioned in the DEIS. Dredging the bay will degrade the habitat of the native mud shrimp (*Upogebia affinis)*. The shrimp are especially sensitive to the kind of disturbance caused by installing the pipeline through the Bay. Mud shrimps are also dealing with the cumulative impacts of an introduced parasite infestation, a parasitic isopod called *Orthione griffenis*. Dredging and pipeline installation in the Bay cause the shrimp to decline even further triggering lower water quality since the shrimp are filter feeders. Scientists have stated, "In Oregon estuaries, mud shrimp filter as much as 80 percent of the bay water per day."[16] Mud shrimp are also an important food source for birds, fish, and other animals. The DEIS failed to consider the impacts to the bay ecosystems if the Project reduces mud shrimp populations even further. TR6-29

- **Fish Exclusion Screens:** There is a problem with inadequate fish exclusion screens on ballast and engine cooling water that needs to be address in the FEIS. Cooling water uptake for ships in berth is estimated at 6.1 million gallons per visit; screen size is 24 mm (approx. 1"). This does not meet Oregon Department of Fish and Wildlife or NMFS criteria and juvenile fish are likely to be entrained.[17] TR6-30

[16] *See* https://today.oregonstate.edu/archives/2005/aug/new-invasive-parasite-raises-concern-west-coast-estuaries. *See also,* 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.

[17] Screening Criteria is included in the NOAA Passage Facility Design Criteria at 86, available at http://www.nwr.noaa.gov/Salmon-Hydropower/FERC/upload/Fish-Passage-Design.pdf . The ODFW screening criteria is available at http://www.dfw.state.or.us/fish/screening/index.asp.

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TR6-28 Comment noted. The effects of ballast water and associated invasive species are addressed in section 4.3 and 4.5. We defer to the U.S. Coast Guard in regards to the management of ballast water for international vessels.

TR6-29 The EIS acknowledges that some benthic shrimp would be lost from project actions. But dredging has been occurring regularly in Coos bay for decades so this is not a new impact. The pipeline would occupy a very small area of the total bay bottom, and is a temporary disturbance so magnitude of effect is slight. Overall areas affected are a limited portion of the total bay habitat. Also the applicant has proposed habitat mitigation to replace some lost habitat resulting from habitat changes. The level and magnitude of effects is adequately presented in section 4.5.2

TR6-30 Comment noted. We acknowledged that these do not meet the State's screening criteria. The State's screening criteria cannot be required by the FERC or this EIS on these international LNG vessels under current regulations (as the FERC has no authority over international shipping vessels).

- **Impacts from Wake Stranding:** Vessel traffic will cause wake stranding of juvenile salmon and other fish. Wake stranding will increase greatly due to the additional deep draft ships. The FEIS needs to address this impact. TR6-31

e. Section 4.6 Threatened, Endangered and Other Special Status Species.

- **Impacts of Clearing and Ground Disturbance and ORVs:** A large swath of clearing and ground disturbance will occur across Oregon for the pipeline that will create an ideal site for exotic species to thrive and harm native ecosystems, forestland, and farmland. These impacts will significantly affect fish, wildlife, and special aquatic sites. There are also concerns about increased Off Highway Vehicles (OHV) using the cleared pipeline area as new access points that may impact rare native species such as Cox's Mariposa Lily. BLM acknowledges that controlling ORV use in the pipeline area will be extremely difficult, if not impossible. Proposed barriers are likely to be inadequate. TR6-32

- **Impacts to Coho Salmon:** 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. Salmon are extremely important to the Tribe's culture and any adverse impacts are unacceptable. TR6-33

- **Impacts to Pacific Marten:** The DEIS at 4-316 states, "[T]he Project is **not likely to adversely affect** Pacific marten-coastal DPS because: … there is a relatively low potential for the coastal DPS individuals to occur based on historical accounts and the current low estimated number of individuals south of the Umpqua River." However, there is a high potential that Pacific marten are present in the shore pine near the slip.

  Adjacent to the slip is a large dune occupied by a mature shore pine vegetation community that is potential habitat for the coastal marten (*Martes caurina*), a State Sensitive species and one that has recently been petitioned for listing on the federal Endangered Species Act list (Federal Register 2015; USFWS deemed the Humboldt coastal marten a distinct population segment but found a listing was not warranted). While information regarding distribution, connectivity of habitat, and abundance is still largely unknown at this time, a group of conservation organizations has also petitioned the Oregon Fish and Wildlife Commission to consider listing the coastal marten on the State of Oregon Endangered Species List. Currently, ODFW considers the coastal marten a State Sensitive Species and an Oregon Conservation Strategy Species because of the limited extent of its preferred habitat (late successional mixed conifer forest and apparent association with shore pine) and its apparent low survival rate in fragmented forests elsewhere in the United States. ODFW recommended that the Department of State Lands consider the potential impacts to habitat connectivity for the coastal marten in its review of the habitat conversion at the slip. ODFW is considering this patch of forested dune habitat Category 2 according the ODFW Fish and Wildlife Habitat Mitigation Policy. TR6-34

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TR6-31 This issue is addressed in section 4.5.

TR6-32 Comment noted.

TR6-33 Comment noted.

TR6-34 Comment noted.

f. Section 4.7 Land Use

- **Kentuck Site:** The DEIS is incorrect in stating that the Kentuck project site is currently used for pasture. DEIS at 4-404 ("Formerly a golf course, the Kentuck project site is currently used for pasture."). The photo below was taken in December 2018. The Kentuck site has reverted to a freshwater wetland.

TR6-35

Further JCEP itself indicated the mitigation site is a wetland in numerous documents. One such example is provided below from their application to the Oregon Department of State Lands for removal and fill permit APP0060697.[18]

[18] Available at https://lands.dsl.state.or.us/index.cfm?fuseaction=Comments.AppDetailLF&id=60697.

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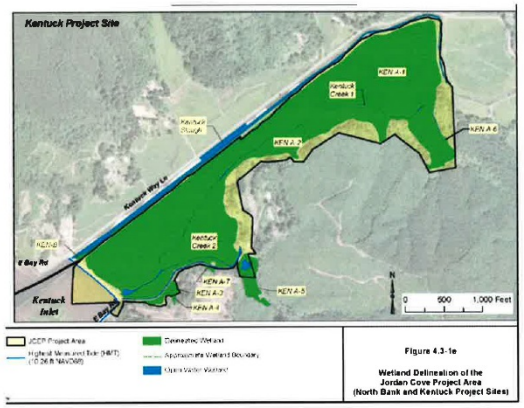
TR6-35 The text has been revised in the final EIS to say: "Formerly a golf course, much of the Kentuck project site is shown as open land with wetlands on figure 4.7-2b. Delineated wetlands on the site are shown on figure 4.3-1e."



g. Section 4.8 Recreation and Visual Resources

- **Viewshed Impacts to TCP:** Since 2006, the Tribe has considered the North Spit and surrounding areas to be a Traditional Cultural Property. Impacts to the TCP is not considered in the Visual Resources of the DEIS. Within the TCP nomination, viewsheds are identified as contributing to the integrity of the nomination. The construction process, as well as the Jordan Cove Facility and Pacific Connector Pipeline will significantly impact the viewsheds identified as significant to the Tribe. TR6-36

- **Impacts to Tribal Gathering:** The North Spit has been used by the Tribe since time immemorial for gathering and hunting culturally significant species. The increased population to Coos Bay during the construction phase will increase the amount of people that are hunting for recreation within the Coos Bay area, which will impact the viability of tribal members successfully hunting and gathering their traditional foods short term, with the long term affects being unknown. The Project could result in up to 6.6 percent population increase in local population due to the project workers, which will result in significant effects on parks and other recreational areas. TR6-37

- **Increase in Traffic:** The FEIS needs to disclose impacts to cultural and recreational uses resulting from increases in traffic on the TransPacific Parkway. The Tribe's TCP nomination highlights the use of this area by Tribal members. The TransPacific Parkway is heavily trafficked by Tribal members to gather culturally significant plants, collect TR6-38

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TR6-36 Please see the response to Comment TR6-12; the text of Section 4.8.2 has been revised to acknowledge this point.

TR6-37 The draft EIS (see appendix L) acknowledged that the CTCLUSI have utilized the North Spit for many thousands of years. However, after 1881, tribal access to the Jordan Cove LNG terminal tract would have been restricted. This is currently private lands, and the Tribes will not be able conduct hunting, fishing, or gathering activities there in the future. Section 4.8.1.1 of the draft EIS further acknowledged that the influx of Jordan Cove LNG terminal workers to the area could add to the number of people who would hunt on public lands in the region during hunting seasons. However, this potential increase in hunters would be temporary and short term. The total construction period for the terminal would be about 53 months and most construction jobs would last for less than two years. As noted with respect to overall Project related demand for recreation, Jordan Cove employees temporarily relocating to the area would have limited time available to hunt, primarily on weekends (when they are not working). We do not believe that Project workers would represent serious competition to CTCLUSI members efforts to hunt and gather traditional foods.

TR6-38 Project-related impacts resulting from potential worker traffic was discussed in section 4.10.1 of the draft EIS. The applicant would reduce Project-related traffic on the Trans-Pacific Parkway by erecting a Workers Housing Complex in the South Dunes area (so some employees would not have to commute to the terminal) and use buses from off-site parking area. The NRHP-eligible TCP District "Q'alay ta Kukwis schichdii me" overlaps portions of the Cities of North Bend and Coos Bay; so there is already existing transportation infrastructure and traffic within the TCP District that may affect tribal activities.

Potential conflicts between recreational drivers on the Trans-Pacific Parkway and construction traffic traveling to and from the Jordan Cove LNG Project are discussed in section 4.8.1.1 in the Recreation Access and Driving for Pleasure subsection. This section has been revised to note that these impacts could also apply to Tribal members who use the Trans-Pacific Parkway to access the North Spit area to gather culturally significant plants, collect shellfish, and hunt.

Peak hours in this context refer to the following periods:

- Midweek AM (6:30 to 7:30 AM)
- Midweek PM (5:00 to 6:00 PM)
- Friday PM (5:30 to 6:30 PM)
- Saturday midday (11:30 AM to 12:30 PM)

This information has been added to section 4.8.1.1.

Mitigation measures are summarized in section 4.8.1.1 of the draft EIS and discussed in more detail in section 4.10.1.2.

shellfish, and hunt. The area is also used by the public to access the beach, fishing ramps, and dune recreation sites. The increase in traffic will have a negative impact on access to the area. The DEIS suggests traveling to the North Spit outside of peak hours to avoid delays. This is impossible for many tribal members who work regular jobs and wish to visit these areas in their free time. Access to traditional gathering areas is essential to continue to exercise our rights as Native people. Additional mitigation to minimize disruption should be included in the FEIS. TR6-38 cont.

- **Outdated Information:** The DEIS at 4-535 references a report from 2002 for recreation use on beaches. This study is 17 years old; the credibility of the numbers being accurate for current times is very low. More current information is needed in the FEIS. TR6-39
- **Increased Demand from Construction Workers:** DEIS at 4-538 states that there could be up to a 6.6 percent population increase due to the project workers, and that this will not result in significant effects on parks and other recreational areas, based on low levels of current use. However, the study referenced for "current use" was from 2002, therefore the statement is unreliable. TR6-40
- **Noise:** DEIS at 4-538 states, "Distance, topography, coastal winds, and vegetation would help to minimize Project construction and operational noise." There is no study or other reference to support this statement. This raises concerns, that the topography will not be enough to mitigate for the noise pollution from this project. Ambient noise associated with oil and gas development has been found to have public health implications. The noise levels produced by gas and oil activities may increase the risk of adverse health effects, including annoyance, sleep deprivation, and cardiovascular disease. It is recommended that more mitigation techniques are put into place, to reduce ambient noise traveling to highly populated areas. TR6-41
- **Impacts to Hunting:** As discussed in the TCP nomination, the North Spit has been used since time immemorial to the present for gathering and hunting culturally significant species. The increased population to Coos Bay during the construction phase will increase the amount of people that are hunting for recreation within the Coos Bay area, which will impact the viability of Tribal members successfully hunting and gathering their traditional foods short term, with the long-term effects being unknown. Additional mitigation to minimize disruption should be included in the FEIS. TR6-42
- **Clamming and Crabbing in the Coos Bay:** The Tribe has continuously used the North Spit and surrounding mud flats in the Coos Bay Channel since time immemorial. There is a concern for the indirect impacts to critical shellfish habitat that will occur by dredging the bay. The impacts from dredging are identified to only be "temporary", with no supporting justification, as well as the impacts from dredging the boat slip are not identified. Crabbing and clamming within the bay will be negatively impacted, without proper mitigation in place for the disturbances to the critical habitat for shellfish. Stress to the clam beds could result in a population wipeout. The harvest and consumption of our TR6-43

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TR6-39 The statement referenced in the comment is as follows: "Given the large amount of public lands in the region and the relatively low levels of current use, this potential short-term increase in demand is not expected to result in significant effects on parks and other recreational areas."

The reference to relative low levels of current use refers to use of a range of areas and facilities in the vicinity of the LNG Terminal site, not only the stretch of beach controlled by OPRD on the west site of the Spit, which was the subject of the cited survey (Shelby and Tokarczyk 2002). In general, the draft EIS characterizes existing recreation use based on the most recent publicly available information (see section 4.8.1)."

TR6-40 See response to comment TR6-39.

TR6-41 Distance, topography, coastal winds, and vegetation do generally help to dissipate sound, but are not considered mitigation measures for the Project. The effects of topography and distance have been included in all noise calculations associated with the Project. During Project construction and operation, we would provide the necessary oversight, coordinate monitoring, and enforce the implementation of applicable mitigation measures.

TR6-42 Section 4.8.1.1 of the draft EIS acknowledged that the influx of Jordan Cove LNG terminal workers to the area could add to the number of people who would hunt on public lands on the North Spit during hunting seasons. However, this potential increase in hunters would be temporary and short term. The total terminal construction period would be about 53 months and most construction jobs would last for less than two years. Jordan Cove employees would have limited time available to hunt, primarily on weekends (when they are not working). We do not believe that Project workers would represent serious competition to CTCLUSI members efforts to hunt, fish, and gather traditional foods.

TR6-43 The draft EIS discussed clamming and crabbing activities in Coos Bay in sections 4.5.2 and 4.8.1.1. Dredging in the bay for the Project would be only at the access channel, and the four small navigation channel improvements. Turbidity caused by Project-related dredging would be of limited intensity, duration, and extent. Impacts would be temporary; as in-water work to dredge the access channel would be done in a period from four to six months (page 4-246 of the draft EIS). Disturbance to estuarine habitats in the bay would be mitigated with reestablishment of estuarine habitat at the Kentuck Slough Wetland Mitigation area.

local fish, clams, and crabs is critical to the identity of the Coos People. These gathering locations within the bay have been identified through the TCP nomination and are considered contributing features. Additional mitigation to minimize disruption should be included in the FEIS. TR6-43 cont.

- **OHV Controls and Limited Access to Right of Way:** There are concerns with the pipeline putting up fencing and locked gates around right-of-way areas. Implementing these measures could impact tribal members' ability to harvest and access areas of importance. Additional mitigation to minimize disruption should be included in the FEIS. TR6-44

- **National Scenic Byways:** The importance of viewsheds is central to the TCP nomination. As demonstrated within the TCP application, there are many locations throughout the Coos Bay that holds special spiritual value to the Coos People. The viewsheds contribute to the feeling of place, which has retained since time immemorial. The removal of vegetation, as well as the installation of the vast LNG Cooling Tanks that would be placed at the Jordan Cove Energy facility will immensely change the viewshed. It is difficult to discuss the impacts to the viewshed, when only discussing the pipeline, rather than discussing the Pacific Connector Pipeline and Jordan Cove Energy Project as a single project. Additional mitigation to minimize disruption should be included in the FEIS. TR6-45

- **Other Extensive Recreation Management Areas:** DEIS at 4-550-551 states trail segments would need to be closed during pipeline construction. Adding pipeline construction on top of logging that already occurs in the area will greatly hinder access to the Blue Ridge Trail System. This area is very important and highly traveled by tribal members in order to access traditional gathering, hunting, and ceremonial areas, as well as used for recreation. Additional mitigation to minimize disruption should be included in the FEIS. TR6-46

h. Section 4.9 Socioeconomics

- **4.9.1.1:** The Tribe expressed concerns in the scoping comments about increases in crime, drug use, assaults, kidnapping, sexually transmitted infections and sex trafficking from the proposed worker's camp at the South Dunes site (average of 1023 workers onsite and 1996 workers at peak construction). The average population increases for CB/NB & Co. may be estimated at 3.4% and 1.4% respectively (DEIS at 4-588); however, the analysis lacks consideration of the composition of the workers, being prominently male. For instance, of the 89% of the population at the workers' camp will be workers with the remaining 11% being family members. This may be more or less dramatic for the peak construction period at 30 months and needs to be analysis to properly assess adverse impacts. It is not valid to dismiss the boomtown analysis simply because population increases are low, especially when the population increases from the pipeline are not included. An analysis of the all workers' income as well as industry demographics should TR6-47

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TR6-44 Potential measures to limit access to the pipeline right-of-way are discussed in section 4.8.1.2 in the OHV Controls and Limited Access to the Right-of-Way subsection. In general, these measures would be designed to limit the use of the new pipeline right-of-way for motorized access in areas where this type of access does not presently exist. Therefore, these measures are unlikely to affect existing patterns of motorized access by Tribal members or others. Furthermore, the right-of-way is mostly accessed via private lands from which tribal members may be prohibited.

TR6-45 Please see the responses to Comments TR6-12 and TR6-36 regarding discussion of the significance of the viewshed to a TCP. The draft EIS indicated, as does the final EIS, that various aspects of the LNG terminal will change the visual setting and may have significant visual impacts. The CTCLUSI have not identified to FERC additional specific viewpoints of importance to the Tribes that should be considered in the Visual Impact Analysis or additional mitigation measures that should be included in the final EIS.

TR6-46 The proposed Pacific Connector pipeline would only cross about 2 miles of the Blue Ridge Trail System ERMA. Any road closure would be temporary during construction. This does not represent a significant long-term impact on CTCLUSI members ability to use the trail for access to traditional gathering, hunting, and ceremonial areas. On August 6, 2019, Pacific Connector filed additional measures it would utilize to reduce impacts on the Blue Ridge Trail System ERMA and its users, including establishing a roughed-in trail within 24 hours of construction with directional signs, remediate trail to full design standards within two weeks after construction, install standard trail route markers, provide advance notice to BLM for construction dates, and implement OHV measures.

TR6-47 The draft EIS also identifies estimated peak terminal employment as a share of the combined populations of Coos Bay and North Bend (6.6 percent) and Coos County (2.8 percent) (section 4.9.1.1). It also compares the average and peak combined terminal and pipeline workforces with total county population in section 4.9.2.1, with estimated increases equivalent to 1.7 percent (average) and 4.0 percent (peak) of total county population.

Jordan Cove anticipates that the proposed workforce housing facility would be occupied by workers who are unaccompanied by family members. In other

words, 100 percent of workforce housing facility occupants are assumed to be workers. While workers have not yet been hired for the Project, it is reasonable to assume that the majority of the construction workforce hired for the Project would be male, given that the workforce in the U.S. construction industry is predominantly male (Seger 2018). Construction workers would be relatively highly paid, especially when per diem payments are factored in. This information has been added to section 4.9.1.1 of the draft EIS. Per capita and median household incomes are identified for the potentially affected counties in table 4.9.2.4.1 of the EIS.

The cited article describes the combined service unit that the Coos County Sheriff's Office will have with Jordan Cove (Johnson 2018). As described in the article, the combined service unit will be staffed by Coos County Sheriff Office officers who will be responsible for providing security around the facility, as well as for vessels traveling in and out. Officers assigned to the combined service unit will be fully funded by Jordan Cove and work on regular deputy assignments when they are not providing security for Jordan Cove. Officers are being hired and trained now and some could be available, along with existing law enforcement officers to address any increases in illegal or criminal activities during construction were they to occur.

The comment regarding local workforce education conflates statements about the operation and construction workforces. An estimated 40 percent of the operating workforce was assumed to be hired locally as noted. The other cited statement (from page 4-588 of the draft EIS) relates to the construction workforce.

Potential increases in crime are addressed in section 4.9.1.1 of the draft EIS. As discussed in this section, some studies and articles have identified increases in crime related to large influxes of temporary workers. Other studies found inconclusive links between crime and increased oil and gas activity or only minor increases in crime. Studies have also concluded that impacts depend on a range of variables, with different oil field counties experiencing different levels and types of crime-related impacts. As a result, attempts to use this information to estimate related potential increases in crime from the Project would be speculative, as noted in the draft EIS.

References:

Johnson, N.A. 2018. Jordan Cove has its own Division in the Sheriff's Office. The World. March 5. Available online at: https://theworldlink.com/news/local/jordan-cove-has-its-own-division-in-the-sheriff-s/article_fd7cddb2-fb52-527a-8f8d-d3507922c06a.html.

Seger, C. 2018. Viewpoint: The Continuing Rise of Women in Construction. Engineering News Record. August 29. Available online at: https://www.enr.com/articles/45091-viewpoint-the-continuing-rise-of-women-in-construction.

be complete and folded into the analysis of impacts to local populations before the FERC concludes that increases in crime are "speculative" and "would likely be commensurate with the relative increases in population." Additionally, it appears that local governments and even the applicant disagrees with this analysis given the recent increase in funding that local law enforcement has received by the project proponent.[19]

TR6-47 cont.

High school graduation rates for Coos County are low (estimated 58% by one report[20]). The estimates provided for the local workforce consider the low educational backgrounds of the estimated 72 "locally" hired people (40% of 180 at the LNG facility). Additionally, it is stated that the Applicant expects workers to have the skills they need already and gained experience in other related industries including oil and gas and power (DEIS at 4-588); however, nowhere are the local community's experience levels reflected to support that these workers will indeed be local.

The Tribe is extremely concerned with the negative impacts, such as rape, sex trafficking ,and physical violence on Native Americans, especially women and girls, who have disproportionately been adversely impacted by temporary labor camps. Again, demographics of population increases caused by the local construction and operation of the LNG should be assessed when considering applicability to crime, drug use, assaults, kidnapping, sexually transmitted infections and sex trafficking to North Dakota or Wyoming boomtown studies and temporary camp impacts research such as those posted on the Secwepemcul'ecw Assembly "What are Man Camps" webpage[21]

- **4.9.1.2:** The housing needs for the camp will interfere with local tourism, vacation housing and residential housing.

TR6-48

Rental housing demand is very high in Coos Bay. As described in the DEIS, the project will have a negative impact on the availability and cost of rental housing for local residents. This impact extends to temporary housing like hotels, motels, RVs, campgrounds, and rentals rooms, which will subsequently impact tourism during construction and decommissioning periods. There is already issues with affordable housing in the in the area. Tribal members on rental assistance need to find housing that meets HUD Fair Market Rent (FMR) value[22]. Right now, the Tribe supplements the HUD FMR by $150 dollars because no one can find a place to live within the HUD FMR parameters[23]. This the increase in rental costs will disproportionally impact low income community members and especially tribal members. This impact has not been adequately mitigated in the current proposal despite the DEIS stating that analysis and action plan identified shortages of rental housing (4-592).

[19] https://theworldlink.com/news/local/jordan-cove-has-its-own-division-in-the-sheriff-s/article_fd7cddb2-fb52-527a-8f8d-d3507922c06a.html
[20] FRACKED GAS INFRASTRUCTURE: A THREAT TO HEALTHY COMMUNITIES. A Special Report and Recommendations to the Governors of Oregon and Washington. Oregon Physicians for Social Responsibility and Washington Physicians for Social Responsibility. June 2019. pp35
[21] https://www.secwepemculecw.org/no-mans-camps.
[22] https://www.huduser.gov/portal/datasets/fmr/fmrs/FY2019_code/2019summary.odn
[23] Personal communication CTCLUSI Housing Department July 1, 2019

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TR6-48 Potential impacts to short-term housing in Coos County are disclosed in the EIS. In addition, these potential impacts are discussed with respect to environmental justice populations in section 4.9.1.9 of the final EIS. This is important information that the Commission would take into consideration when deciding whether to approve the Project proposal. Mitigation is not required as part of the NEPA process.

- **4.9.1.3:** It is unsatisfactory that the DEIS was unable to identify how this facility would impact property values because of a "lack independently prepared, peer-reviewed studies regarding natural gas export terminal facility impacts on property values." In effect, this conclusion backs out of any analysis of impacts to low income or minority populations as well as overall economic impacts. For example, increases in market values of real estate and property in the project area (both temporary and/or permanent) would prevent low income community members, including tribal members, from being able to afford to purchase a home. TR6-49

- **4.9.1.4:** It is not clear how the "supply chain" impacts will effect small businesses. The DEIS discusses only groceries and household goods and services but does not discuss other "supply chain" impacts such as those on local restaurants, gift shops, or seafood providers. These effects of the supply chain itself may cause increase in costs for these items or increase costs to local resources by the local community and reduce the resource availability. The broad nature of the analysis may be clouding local economy impacts, making it appear overall in a positive light, when in fact small businesses are not indirectly benefiting. Local jobs created from "supply chain" will be dissolved after the 53 month construction period as the DEIS previously states that "Very few, if any, of the temporary construction worker relocating to the Project area are expected to stay permanently." DEIS at 4-589. TR6-50

  The DEIS states that union locals believe they can supply the majority of skilled crafts workers from within Oregon. Please clarify if this "belief" comes from ECONorthwest or another source.

  Indirect and induced FTE jobs in Oregon, estimated to be 14,107 and 13,435 respectively, should be considered in the cumulative impacts analysis.

- **4.9.1.5:** There is not inclusion for supporting local tribal governments in the Community Enhancement Plan. Tribal governments provide many services for free to local governments or developers including but not limited to: permit review for compliance, cultural resource compliance support, habitat restoration and estuary spill protection. As the local tribes provide services for free to the County, tax revenue must contemplate these services and they should be directed to the tribes who provide these services. TR6-51

- **4.9.1.6:** The public service facilities in the DEIS include law enforcement and fire protection, medical facilities, schools, and public utilities. These service facilities need to be adequate for construction and operation of LNG facility and terminal, vessel traffic and pipeline so as not to reduce services to local community members. Because the worker's camp will increase crime, drug use, assaults, kidnapping, sexually transmitted infections, and sex trafficking, public services must be sufficient to provide protection to at risk populations through mitigation most notably during construction and peak construction when population of men specifically will increase. It is not clear that the TR6-52

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TR6-49 The section and text cited in the comment addresses concerns that the presence of the proposed terminal would result in decreased property values. Concerns related to increased competition for limited housing resources are addressed in section 4.9.1.2. Environmental justice concerns related to the proposed LNG terminal are addressed in section 4.9.1.9.

TR6-50 The draft EIS provides a summary of an economic impact analysis prepared by ECONorthwest on behalf of Jordan Cove. A more detailed discussion of the analysis and results is available in the report prepared by ECONorthwest (2017a). Estimated impacts are presented by economic sector in Table 6 of that report. Potentially affected sectors include among others: restaurants, hotels, and other accommodations; retail stores; and arts, entertainment, and recreation. These impact estimates are based on estimated in-state Project expenditures and estimates of construction worker-related spending. Potential impacts to other economic sectors, including recreation and tourism and commercial fishing are addressed in sections 4.9.1.7 and 4.9.1.8.

The cited statement regarding union locals is from ECONorthwest (2017a). This has been clarified in the final EIS.

The indirect and induced job estimates developed by ECONorthwest represent employment that could be supported elsewhere in the Oregon economy. These may be existing jobs, overtime hours for existing workers, or in some cases new positions. Section 4.14.1.7, which addresses cumulative effects and socioeconomics has been expanded to note that the Project would also support indirect and induced jobs elsewhere in the statewide economy.

The following statement has been added to the Cumulative Effects section in the final EIS (see section 4.14.1.7): "Construction and operation of the Project would also support indirect and induced jobs elsewhere in the state economy."

TR6-51 This Community Enhancement Plan is an agreement between Jordan Cove and local governments and outside the FERC's jurisdiction.

TR6-52 Potential impacts to public services are discussed in sections 4.9.1.6 (LNG Terminal) and 4.9.2.6 (Pipeline) of the draft EIS. Potential impacts related to crime are discussed in sections 4.9.1.1 (LNG Terminal) and 4.9.2.1 (Pipeline).

As noted in response to comment TR6-47, Jordan Cove anticipates that the proposed workforce housing facility would be occupied by workers who are unaccompanied by family members.

Local and federal law enforcement agencies are responsible for enforcing laws. Potential impacts to public services including law enforcement, medical facilities, and utilities are assessed in sections 4.9.1.6 (LNG Terminal) and 4.9.2.6 (Pipeline). As discussed in section 4.9.1.6, Jordan Cove would reimburse Coos County to cover any costs associated with public safety during construction and operation. Jordan Cove has also committed to building and funding the SORSC within the Jordan Cove LNG Project site. Additional information on law enforcement is provided in response to comment TR6-47.

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analysis considers this. For example how is the safety of the 7% women and 3 % children living at the worker's camp managed? TR6-52 cont.

Sanitary waste transport must be considered in traffic impacts, air quality and waste water treatment capacity and effluent analysis (at IWWP). Similarly, solid waste or other waste transport must be considered in traffic impacts, air quality and water quality (stormwater) analysis.

- **4.9.1.7:** There will be adverse effects to recreation, local us,e and tourism. Effects of the proposed project range include interfering, altering and limiting access to or quality of local destinations or resources. This will disproportionally effect the traditional practices of the Coos in this area[24]. These effects need to be analyzed with respect to the proposed *Q'alya ta Kukwis shichdii me* Traditional Cultural Property Historic District and comprehensive ethnographic reports, which are still lacking. "Supply chain" analysis should consider use of natural resources by the workers like fish, crab, and shellfish and impacts to community access to these resources, especially the tribes with traditional practices tied to these resources TR6-53

- **4.9.1.8:** Local commercial fishing economy and safety will be strained by additional limits on their transit windows. This could a trickledown effect on supply of seafood. The demand on the other hand would likely be increased due to the increase in population. Without a Transit Management Plan, how will adverse impacts commercial fishing and availability of their product will be mitigated? Commercial fishing impacts analysis should include the reasonably foreseeable Coos Bay Channel Modification Project. TR6-54

- **4.9.1.9:** Environmental justice ("EJ") includes identifying and addressing, as appropriate, disproportionally high and adverse human health or environmental effects of its programs, policies, activities on minority and low-income populations. It is not clear that FERC has performed analysis on patterns of fish consumption, vegetation, and wildlife. TR6-55

  Native Americans considered in this section only represent the percentages living in the area, but it is very true that seasonal traditional use occurs by tribal members who live within the state and beyond. Thus, disproportional impacts to traditional practices and resources may occur thus impacting the mental and physical health of tribal members by virtue of limiting their ability to practice or utilize resources[25]. The Tribe suggests FERC considers Oregon's Best Practices for Environmental Justice,[26] in addition to the EJSCREEN application. The Tribe also asks that the specific issues brought forth by the Tribe be addressed.

[24] https://www.oregon.gov/oprd/HCD/NATREG/Pages/Jordan-Cove-TCP.aspx
[25] Resources, practices and locations include but are not limited to those in the Q'alya ta Kukwis shichdii me Traditional Cultural Property Historic District application
[26]https://www.oregon.gov/gov/policy/environment/environmental_justice/Documents/Oregon%20EJTF%20Handbook.v4.pdf

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TR6-53 The Project would have mostly temporary and limited impacts on tourism and recreation, as explained in sections 4.8.1.1 and 4.9.1.7 of the draft EIS. Furthermore, impacts of the Project on hunting are addressed in section 4.8 and 4.9 of the draft EIS. Access to the North Spit (outside of the LNG terminal tract) would not be restricted, as discussed in section 4.10.1 of the draft EIS, therefore there would be little significant impacts on the CTCLUSI traditional practices. The Tribes are correct to expect the recommended revised Ethnographic Study to address potential impacts on the TCP District "Q'alay ta Kukwis schichdii me."

TR6-54 Potential impacts to commercial fishing are addressed in section 4.9.1.8. As noted in section 4.9.1.8, the Coast Guard, as part of its Waterway Suitability Report (WSR) and LOR, will require that Jordan Cove to develop a Transit Management Plan to outline how conflicts with other commercial vessels would be avoided (see draft EIS, p. 4-598).

TR6-55 Noise and air quality impacts were fully considered in section 4.12 of the draft EIS. Water quality impacts on aquatic resources of Coos Bay were addressed in section 4.5.2.2. Jordan Cove did not identify any currently existing contaminated sediments in the bay at the access channel. Jordan Cove has a SPCCP to handle the incidental release of hazardous materials at the terminal. Stormwater runoff from the terminal would be managed in accordance with Jordan Cove's ESCP. The Port's non-jurisdictional proposed Coos Bay Channel Modification Project was addressed in Cumulative Impacts (section 4.14 of the draft EIS). We do not think there would be contamination from the Project that would negatively impact aquatic species in Coos Bay or affect the CTCLUSI members traditional food gathering activities, including fishing, crabbing, and clamming.

The Tribe has not determined if the census tracts analysis is comprehensive; however, it should be considered that FERC's recent approach to environmental justice in the Atlantic Cost Pipeline has been called out for undercounting environmental justice communities using census tracts[27]. TR6-55 cont.

EJ impacts of noise and exposure to particulate matter or exposure to contamination (air particulate from construction, worker traffic or on-site power generation, suspension of contaminants in the water- fish, clams, crabs, swimming, harvesting) were not fully considered. These need to be considered and analyzed concurrently with Port of Coos Bay Channel Modification Project impacts.

i. Section 4.10 Transportation

- **Impacts Underestimated:** The DEIS failed to consider the impacts of the increased volume of traffic to habitat, noise pollution, air pollution, and spills. Moreover, the DEIS analysis of air traffic underestimated growth and the modeling did not incorporate potential for air traffic growth, noise pollution, habitat impact TR6-56

j. Section 4.11 Cultural Resources

- **Supplemental Subsistence:** During the June 25, 2019 staff-to-staff meeting, FERC staff indicated that the FEIS would include an analysis of the Project on "supplemental subsistence" of the Tribe. The Tribe believes that FERC needs to look at the Tribe's traditional and cultural uses, which include subsistence practices. Merely examining subsistence uses will miss significant impacts felt by tribal members that depend on the Bay and its resources. TR6-57

[redacted]

[27] https://www.nrdc.org/experts/montina-cole/pipeline-case-brief-ferc-enables-environmental-injustice

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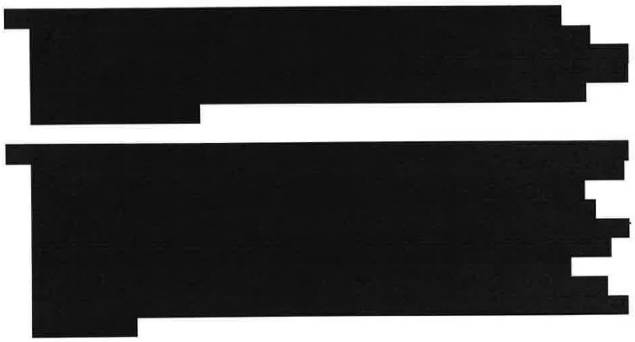
TR6-56 The impacts of constructing and operating the Project on the natural and human environments are identified and discussed throughout the environmental analysis section of this document. This includes the potential impacts of Project-related vehicle traffic where appropriate. The LNG Project is not expected to result in an increase in air traffic. Noise and air emissions were covered in section 4.12.

TR6-57 Text and analysis related to supplemental subsistence has been added to the EIS.

- **Impacts to Tribal Health:** The DEIS admits that overall health of the Bay will be impacted both in the short term and long term some will be temporary and others will be permanent. The health of the Bay is important to fish, plants, animals, and people. Tribal members' health is directly tied to the health of the Bay and, if the water and the resources present in the Bay disappear, then the identity and health of tribal members will also be negatively impacted. TR6-58



- **Need for Construction Operations Plan:** A more thorough determination of the effects of the Project on the tribal cultural resources and the TCP cannot occur until a complete Construction Operations Plan is submitted. TR6-59

- **PacifiCorp Substation:** Additional information is supplemented to the FERC docket regularly making it continually difficult to address all of these impacts completely or appropriately. One such example is the PacifiCorp substation that is required to be moved by the Applicant due to the LNG project, which is not going to be used to power the facility. Therefore, work with siting of this substation facility and its use in the project should fall under NHPA § 106 review by FERC. The Tribe requests FERC confirm its authority for NHPA § 106 review of this facility as being sited and used to power the LNG terminal. If it is determined to fall under the NHPA § 106 review of FERC, then the Tribe request that the substation facility not be moved until certification for the Project is issued and an MOA or PA is signed. TR6-60

- **Hollering Place:** The Tribe is currently starting construction of a recreation and cultural educational facility at the Hollering Place. The FEIS should consider all direct and indirect impacts, as well as viewshed impacts from the Project on that site. TR6-61

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TR6-58 Comment noted. Impacts to the human and natural environment (include the Bay) are addressed in section 4 of the EIS. As discussed in sections 4.3 and 4.5 of the draft EIS, the Project would not have any long-term significant impacts on the health of the Coos Bay estuary and its associated aquatic species. Therefore, the Project would not have significant long-term impacts on the health of the members of the CTCLUSI who fish, crab, or clam in the bay.

TR6-59 This is not true. While some information was still pending at the time of the issuance of the draft EIS, the lack of final plans does not deprive the CTCLUSI of a meaningful opportunity to comment. The courts have held that final plans are not required at the NEPA stage (see *Robertson v Methlow Valley Citizens Council*).

TR6-60 The PacifiCorp substation is located in the South Dune area. Jordan Cove has conducted cultural resources surveys of the South Dune area (Byram and Purdy 2007, Byram and Shindruk 2012, Byram and Rose 2013, Bowden et al. 2017, and Punke et al. 2018). HRA recorded the PacifiCorp substation as part of the remains of the Menasha/Weyerhaeuser mill complex at the South Dune area, and evaluated it as not eligible for the NRHP (Bowden et al 2017). The Oregon SHPO and FERC staff reviewed that report and agreed with its findings, and the FERC provided its determinations in sections 4.11.3.2 and appendix L of the draft EIS. Therefore, we have complied with Section 106 of the NHPA for this Project element.

TR6-61 We considered the CTCLUSI future plans for the Hollering Place under Cumulative Impacts (section 4.14 of the draft EIS).

- **Tribal Owned Lands:** The Tribe has reservation land directly next to the proposed Kentuck Mitigation site. It is unclear from the DEIS the amount of disturbance the proposed mitigation work will cause, but changes in increased flow, direction of flow, or widening of the channel will result in impacts to the reservation property that will include erosion of the property and at an increased rate. Any impacts need to be disclosed in the FEIS. TR6-62

- **Tribal Consultation:** The DEIS at 4-635 describes comments from individual Tribal members. This is inappropriate, as this section is focused on consultation with agencies such as SHPO and tribal governments. Comments from the tribal public should be incorporated in socioeconomics or another section, but is not appropriate within Section 4.11. TR6-63

[redacted]

Under the Unanticipated Discovery Plan ("UDP") accepted by FERC, it should reflect that Tribal monitors/staff have specialized knowledge of cultural resources and their expertise should be utilized during determinations for potential sites inadvertently discovered and subsequent significance findings, which involves collaborative efforts between the SHPO, Tribes, FERC, and the Applicant.

- **4.11.1.4 Communications with Other Agencies:** In regards to the ACHP letter, FERC has not considered the impacts raised by the ACHP within the DEIS and failed to consider the cumulative effects of hundreds to thousands of geotechnical tests and the potential to impact and essentially test to oblivion cultural sites before there is an "undertaking." During the last staff-to-staff meeting between the Tribe and FERC, FERC staff stated that they were considering cumulative impacts from the geotechnical testing given the small area of the terminal site. Therefore, the FEIS should reflect how FERC plans to address these pre-construction effects and if mitigation is appropriate. TR6-64

- **4.11.2.1 Jordan Cove LNG Project:** There are no direct or indirect impacts addressed in the DEIS relating to the dredging for the boat slip or four turns within the channel. There will be both direct and indirect as well as cumulative impacts associated with this work. Direct impacts will include the location of the ground disturbance, mixing of sediments or legacy chemicals, effects to plants and animals in the APE. Within the indirect APE, impacts will result in changes in hydrologic flow of the Bay increasing erosion to cultural resources adjacent to the direct APE and increased sedimentation at other adjacent sites. TR6-65

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TR6-62 Impacts associated with the Kentuck Slough Wetland Mitigation Site were disclosed in the EIS. We do not expect that those impacts would extend outside of the boundaries of Jordan Cove owned property. Therefore, CTCLUSI lands near the Kentuck Slough Wetland Mitigation Site should not be affected.

TR6-63 We disagree. We think the section on tribal consultations is the appropriate place to mention comments from individual Native Americans. The UDP has not yet been finalized or accepted by FERC staff. CTCLUSI should provide the applicant with its comments on the draft UDP.

TR6-64 The ACHP has not filed comments on the draft EIS. The intent of such geotechnical work is to assist in Project design, not to find archaeological sites as would be done during survey investigations under Section 106 of the NHPA. In a January 25, 2018 letter to the Commission, the ACHP agreed with staff that "geotechnical testing as part of project planning… [is] not, in and of itself, subject to review by federal agencies under Section 106." Also, see our response to TR6-5.

TR6-65 Direct and indirect impacts to various resources that could be affected by the dredging and "four turns" are addressed in section 4 of the EIS. We will reconsider visual impacts of the LNG terminal on the McCullough Bridge and the TCP District "Q'alay ta Kukwis schichdii me" in our analysis for the final EIS. HRA evaluated the Trans-Pacific Parkway Causeway as part of the Menasha/Weyerhaeuser mill complex, and found that site to be not eligible for the NRHP, to which the Oregon SHPO and FERC staff agreed (see appendix L of the draft EIS).

The DEIS incorrectly conclude that no historic properties would have a view of the above ground components of the LNG terminal. This does not consider the TCP or the McCullough Bridge. Additionally, the Trans Pacific Parkway should be considered for eligibility in the National Register, as it is over fifty years old and significant for contributing to the accessibility of cultural/natural resources, commercial use, and recreation and there should be a discussion for potential effects determinations of this resource. TR6-65 cont.

- **4.11.2.2 Pacific Connector Pipeline Project:** There is no discussion or consideration in the DEIS of direct or indirect impacts for wildfires during construction or operation of the pipeline. Construction activities in dry conditions could result in wildfires and leaks from the pipe could increase intensity of already burning wildfires thus impacting adjacent cultural resources. TR6-66

  Removal of vegetation could result in direct and indirect effects of increases in sediments getting into rivers and streams at crossing locations and increased erosion at or adjacent to the pipeline corridor thus, impacting cultural resources (natural resources are cultural resources to the Tribe).

- **4.11.3.1 Ethnographic Studies:** The Tribe agrees with FERC that the Applicant should do a more thorough investigation of areas that are considered TCPs or that carry religious or cultural significance for Tribes. This work should be conducted in coordination with the Tribe and should be approved by the Tribe prior to acceptance by FERC. The FERC should then consider potential impacts to these resources from the proposed undertaking, which makes this problematic if it is only listed as a condition to complete but there is not adequate review and effects determinations made. The ethnographic work must be completed prior to the FEIS. TR6-67

- **4.11.3.2 Jordan Cove LNG Project:** The Tribe strongly disagrees with the statement in the DEIS that "no historic properties have been identified within the APE for the Jordan Cove LNG terminal." The TCP is a historic property determined eligible for listing on the National Register by the Oregon SHPO and is currently under review by the National Park Service ("NPS"). The FEIS should reflect this information and consider any and all potential impacts to the TCP. TR6-68

- **4.11.4 Unanticipated Discovery Plans:** The current version of the UDP does not adequately take into consideration the expertise of tribal monitors or their role in making determination of sites when there is an unanticipated discovery. FERC should look to the CRPA between the Tribe and the Applicant as a better example of a UDP. TR6-69

- **Cultural Resource Condition:** No ground disturbance should be conducted that could impact cultural resources until appropriate conditions are met, including compliance with NHPA § 106 consultation, and effects determinations are made with an appropriate TR6-70

TR6 continued, page 33 of 39

TR6-66 The draft EIS discussed the potential for wildfires that may be related to pipeline construction in section 4.4.2.7. Pacific Connector developed an Emergency Response Plan Concept Paper, a Fire Prevention and Suppression Plan to reduce the potential for wildfires. The potential for sedimentation into streams from runoff over areas where vegetation would be removed was addressed in section 4.3.2.2 of the draft EIS. Erosion control methods would reduce those impacts.

TR6-67 We have recommended in the draft EIS, that the applicant complete its Ethnographic Study, including reviews by Indian Tribes, prior to construction.

TR6-68 We have considered these comments while revising the text for the final EIS. Based on a finding by the Oregon SHPO, in its letter to FERC staff dated July 19, 2019 (after the draft EIS was issued), we agree that the TCP District "Q'alay ta Kukwis schichdii me" is eligible for the NRHP.

TR6-69 The UDP is not yet finalized or accepted by FERC staff. The CTCLUSI should provide their comments on the UDP to the applicant, so that these elements can be incorporated into the final version.

TR6-70 We would consider referencing the CRPA between the CTCLUSI and the applicant in our draft agreement document.

mitigation plan. The CRPA between the Tribe and the Applicant should be made a condition of any § 106 compliance document (e.g., PA, MOA, etc.). TR6-70 cont.

k. Section 4.12 Air Quality

- **Air Quality Monitoring Stations:** There were no air quality monitoring stations established by ODEQ or the Applicant to obtain baseline data for the Coast Region. It is inappropriate to use an air quality station from the Valley, which would lower the threshold of air quality for the coast. TR6-71

  There will be an increase in traffic, trains, and ships during construction and without appropriate baseline data from a coastal air monitoring station there cannot be appropriate short- or long-term effects determinations. In addition to baseline data, there should be continual monitoring by an entity other than the Applicant in order to assure the most accurate information is reported.

- **4.12.1.1:** How can we comment on this Project in its entirety if the design of the Klamath Compressor Station has not been finalized? There needs to be an additional opportunity for the Tribe to review and comment on this element of the Project. TR6-72

  It is untrue that aside from LNG, which would be stored incident to transportation, the Project would not be storing hazardous or flammable substances in excess of any thresholds identified in 40 C.F.R. § 68, and therefore, those regulations do not apply. Heavier hydrocarbons that are highly flammable will be transported along with the methane in the pipeline and will need to be stored and handled onsite.

  The Applicant has indicated that it would require vessels calling on the terminal to meet the fuel sulfur requirements. Is this a binding requirement?

  The air quality comparisons in the DEIS are irrelevant and useless. The locations are so far away, none are on the coast, and are more urban.

- **4.12.1.3:** The FEIS should disclose when and how will the frequency and methodology of dust suppression be determined and implemented. TR6-73

- **4.12.1.4:** The FEIS should disclose when and how helicopters will be used.

- **4.12.2 Noise and Vibration:** The discussion of federal noise limits and regulations does not address the fact that there has been no study of acoustics for the Bay. Sounds echo louder and for longer distances in the Bay effecting a greater number of residents. In order for in-water work to be completed during the allotted fish window, the operations will have to occur 24 hours a day and will result in negative impacts to people and animals who live in the Coos Bay area surrounding the project APE. These 24-hour operations will not be compliant with the City of North Bend noise ordinance. This impact should be disclosed and analyzed in the FEIS. TR6-74

TR6 continued, page 34 of 39

TR6-71 We acknowledge that the ambient air quality at the monitor locations presented in the EIS is likely to have higher background concentrations than the ambient air in the vicinity of the proposed Jordan Cove terminal. This approach is more conservative when evaluating project impacts since the project is required to demonstrate that the sum of the project impacts plus the ambient background concentration does not exceed the ambient air quality standard. The use of ambient monitoring data from sites closer to urban areas is likely to overestimate the actual air quality impacts in the coastal area of the project.

TR6-72 Comment noted.

TR6-73 Information about dust suppression is provided in section 4.12. Information about helicopter use is provided in section 4.5.

TR6-74 Existing ambient conditions in and around Coos Bay were considered in the final EIS. Construction noise impacts associated with activities such as pile driving, dredging, vessel movements, and HDD were analyzed relative to Coos Bay and nearby onshore NSAs. As noted in section 4.12.2.3 of the final EIS, the reflective nature of water within Coos Bay was incorporated into the acoustic modeling analysis. Based on review of the North Bend City Code, it does not appear that there are any numerical decibel limits that would be applicable to the Project. For pile driving and HDD activities, FERC has recommended noise mitigation measures as indicated in the final EIS. Dredging and overall construction noise are not estimated to result in noise levels greater than FERC's noise requirement of 55 L_{dn} dBA. During operation of the Jordan Cove LNG Project, there would be less than one ship movement per day and noise from LNG carriers is not expected to create a noticeable change in overall noise levels.

Moreover, it is unclear what blasting restrictions for channel modification of the four turns will occur. Will it be restricted to daytime hours? Additionally, dredging work or HDD work during construction may also exceed the noise threshold within the Bay and should only occur during daylight hours. TR6-74 cont.

l. Section 4.13 Reliability and Safety

- **Need for Channel Modification:** There is no evidence in the record to support a valid need for dredging associated with the Project. In May 2018, the Coast Guard indicated "that the waterway in its current state" is "considered suitable for the LNG marine traffic associated with the proposed project" and can accommodate vessels with a maximum length of 300 meters or approximately 984 feet which is over 200 feet longer than any of the proposed current LNG vessels. Additionally, "simulated transits were Coast Guard piloted by the Coos Bay Pilots and witnessed by the USCG…these successful simulations expand the ability for Jordan Cove LNG to use any class of LNG carrier (membrane, Moss, or SBT) with physical dimensions equal to or smaller than observed during the simulated transits." *Id.* TR6-75

In 1994, the Army Corps of Engineers completed its Navigation Improvements Final Feasibility Report and Environmental Impact Statement, which similarly question the need for widening of the channel or turning basins:

Page 39: "During the last several years, about 300 deep draft vessels have used the channel annually. This number is not expected to increase over the life of the project to a point where there would be a general need to design for two-way deep draft traffic." Today there are fewer ships around 60 annually, which is a significant drop from the numbers recorded around 1994 during this study and even with the LNG vessel traffic of approximately 120 vessels annually would not match what was observed during this Corp EIS analysis.

Page 39: "Even with the trend toward larger vessels, the pilots indicate that the existing width of the entrance channel is sufficient"

Page 39: "The lower channel to RM 9 is nominally 300 feet wide, but it varies considerable because of the use of wideners at bends. The pilots are satisfied with the existing width of the lower channel and do not recommend any changes.

Pg. 40: "The pilots indicate that there have been little difficulties in operating within the existing turning basins and there have been no accidents associated with turning maneuvers."

Pg. 40: Minimal delays: "The actual time recorded for the turning maneuver was 7 minutes."

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TR6-75 As described in section 2.1.1.6 the purpose of the proposed modifications to the marine waterway would be to allow for a more efficient transit of LNG carriers. However, neither the EIS nor the applicant imply that the Project could not be constructed or operated without these proposed modifications.

- **Identification of Emergency Response:** The FEIS should identify agencies that would be in charge of assisting in a response- local emergency, law enforcement, states, regional response team, etc. TR6-76

m. Section 4.14 Cumulative Impacts

- **Insufficient Consideration of Impacts:** As addressed above, the DEIS has not adequately addressed cumulative impacts from all of the projects within the Coos Bay area. These include the FAA airport runway expansion project, the dredging of the four turns associated with the LNG project, the Army Corps dredging and proposed channel modification to deepen and widen the current channel, the Port's bridge upgrades, and the relocation of the PacifiCorp facility.

n. Section 5.1 Conclusions of the Environmental Analysis

- **Section 5.1.2**: The study of vessel wakes does not consider impacts to cultural resources or habitat conditions or cumulative impacts of other projects to conclude that shoreline impacts would not increase. The FEIS needs to consider these impacts. TR6-77

  No site preparation and/or construction should occur until consultation with ODEQ has been completed regarding existing soil and groundwater contamination at affected sites to ensure that exposure to hazardous materials /postnatal commination has been fully addressed.

- **Section 5.1.6:** Increased rates of stress, injury, and mortality and behaviors (avoidance, displacement, etc.) will cause adverse impacts to wildlife and fish. Section 7 consultation should be completed prior to the issuance of the FEIS, so that impacts to ESA-listed species and mitigation measures are fully disclosed and analyzed. TR6-78

- **Section 5.1.7:** The Tribe strongly disagrees that land be taken through eminent domain prior to the issuance of all required permits. FERC should not issue any conditional certification. All permits must be received prior to any certification decision. TR6-79

- **Section 5.1.8.1:** Recreation will be negatively impacted for all of Coos Bay, Charleston, and potentially areas north and south that currently access recreation sites via Highway 101 through Coos Bay. Moreover, the Tribe has concerns that the traffic, construction, pollution, noise and use by South Dunes residents may result in permanent changes to tribal gathering (aquatic and terrestrial plants and seaweeds), clamming, ceremony and Bay access (boat ramp) patterns. Additionally, Air Quality and Noise (5.1.12.2) may impact tribal use of this area and/or resource availability. The Tribe is also concerned that noise windows will be exceeded noise during in water work windows or other periods where the construction costs are considered over socioeconomic, wildlife or fish impacts. Therefore, we have significant concerns with the finding that a no significant adverse impact finding can be attained other than in the theoretical. TR6-80

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TR6-76 This information is provided in section 4.9 of the EIS.

TR6-77 The study of wakes from LNG carriers transiting in Coos Bay (see section 4.5.2.1 of DEIS) concluded that there would be little shoreline erosion caused by such wakes. If the vessels do not cause serious erosion, there would be no likely impacts on cultural resources located along the bay shoreline.

TR6-78 The ESA compliance process does not have to be completed prior to issuance of the final EIS. However, we have recommended that the Commission Order include a condition that construction cannot begin until the applicant has acquired all applicable federal permits, including a BO from the Services that reaches the conclusion that the Project would not jeopardize populations of federally-listed threatened or endangered species. We presented our BA to the Services on July 29, 2019.

TR6-79 The U.S. Congress conveyed the power of eminent domain to any company that receives a Certificate from the Commission.

TR6-80 We concluded, in section 4.8.1 of the draft EIS, that recreational opportunities would not be significantly impacted by the Project. Nor do we think that Project-related traffic, noise, and pollution would cause major changes to traditional tribal fishing, clamming, crabbing, and gathering activities, because environmental impacts would mostly be temporary and not significant. The findings are supported in the draft EIS, in section 4.3.2 for water quality, 4.10.1 for traffic, and 4.12 for noise and air quality.

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Kimberly D. Bose, Secretary
July 5, 2019
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- **Section 5.1.8.2:** The DEIS states that the visual character of Coos Bay's northern shoreline would be permanently and significantly impacted. It is not clear how this adverse impact will be mitigated. The FEIS must address any mitigation measures to address these impacts. TR6-81

- **Section 5.1.11:** Ethnographic studies have not been complete to the Tribe's satisfaction. The NHPA § 106 process cannot be completed until an adequate ethnographic study is provided.

  As stated above, the Tribe has prepared a TCP nomination that has been determined eligible for listing by the State's Advisory Committee on Historic Preservation and the State Historic Preservation Office. It is therefore our belief that NHPA § 106 compliance in consultation with the SHPO will require consideration of adverse impacts to the property. TR6-82

  Moreover, cumulative impacts to cultural resources must be considered for pre-construction work authorized or directed by FERC. No ground disturbance can occur for this Project until NHPA § 106 consultation has been completed. If an MOA or PA is drafted to comply with NHPA § 106, the Tribe must be signatory, as the Tribe will be providing the expertise planning, surveying, defining appropriate mitigation preferences, monitoring, and serving in roles related to unanticipated discovery. In effect, NHPA § 106 requirements cannot be fulfilled without input and participation by the Tribe.

o. Section 5.2 FERC Staff's Recommended Mitigation

- **5.2 General:** This section should be clarified to state that no ground disturbing activities of any kind shall commence prior to completion of the NHPA § 106 process and all other applicable permits, such as the CWA § 401 certification, is received. TR6-83

- **Mitigation #2 and 3:** These provisions should be modified to state, "The Director of OEP or their designee cannot modify the conditions of the order in such a way that may have a result in adverse impacts to traditional practices, beliefs and/or cultural resources, without consulting with affected tribes and the Director of the OEP must administer their authority according to FERC approved agreement to satisfy NHPA compliance."

- **Mitigation #6:** The provision should be modified to state that it must be determined by the OEP in consultation with affected tribes that prior to any ground disturbance that any identified adverse impacts to traditional practices, beliefs and/or cultural resources are managed appropriately through agreements, permit conditions, and/or agreed upon mitigation. TR6-84

- **Mitigation #8:** One EI at the terminal is not sufficient give the amount of ground disturbance occurring concurrently at the terminal, in or adjacent to the channel, and at the South Dunes areas. Concurrent pipeline HDD work is occurring in Coos Bay and will require multiple EIs to manage each HDD site. Additionally, the Tribe has concerns

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TR6-81 No mitigation is proposed or required.

TR6-82 We agree that a revised Ethnographic Study is necessary, prior to construction. The EIS considers Project related effects on the NRHP-eligible TCP District "Q'alay ta Kukwis schichdii me." Cumulative impacts on cultural resources are addressed in section 4.14 of the draft EIS.

TR6-83 This is covered by recommendations 11 and 33.

TR6-84 Recommendations 1 through 15 are standards that appear in most FERC EIS, and it is unlikely that FERC management would allow their wording to be changed. We would consider changes to Project-specific recommendation 16, in light of BLM's re-examination of the Blue Ridge Variation prior to the production of the final EIS. Consultations with the SHPO is covered under recommendation 33. We are not going to change the wording of that recommendation. We see no evidence or reason to indicate that the potential lighting would have "significant" impacts to aquatic resources, and our recommendations are expected to address potential impact concerns.

TR6 continued, page 38 of 39

about the term construction spread and/or that the OEP has the ability to establish where EIs are employed. OEP must not have the sole authority to discretionally determine EIs.

- **Mitigation #9(g):** The Applicant, as well as permitting agencies, must include correspondence from tribes concerning issues of noncompliance and the Applicant's response.
- **Mitigation #11:** No wavier should be allowed before commencing construction without consultation from the affected tribes.
- **Mitigation #16:** As indicated at the June 25, 2019 meeting, the Blue Ridge is a suboptimal route because of impacts to cultural resource. The Tribe asks that any approval of a Blue Ridge route variation by OEP be conducted in consultation with the affected tribes.
- **Mitigation #21:** This measure should be modified to require that FERC consult with the SHPO and/or affected tribes with respect to any filings of ODEQ regarding existing soil and groundwater contamination at the sites listed in Appendix G and/or proposed site-specific soil or groundwater handling, management, and disposal procedures to ensure that no cultural resources are impacted.
- **Mitigation # 23 and 26:** It is unclear if significant adverse impacts will occur to fish and/or wildlife if the level of required lighting has not been determined and if the mitigation for the lighting has not been determined. Such determination should be made prior to the FEIS and the measures modified accordingly.
- **Mitigation #33:** Construction and/or use any staging, storage, or temporary work area and new or to-be-improved access roads provide loopholes for ground disturbance to occur without the conditions outlined for #33. This measure should be modified to clarify that no ground disturbance shall occur until SHPO and the tribes have provided concurrence.

TR6-84 cont.

4. Conclusion

Thank you for the opportunity to comment on the DEIS. We expect FERC to consider the Tribe's comments as it conducts its review fairly, openly, and in compliance with applicable law, including but not limited to NEPA, the NHPA and the APA. We look forward to FERC engaging the Tribe in government-to-government consultation regarding this Project and to otherwise discharge the United States' trust obligations to the Tribe.

Please note that, as part of this submission, we are also providing redacted copies of our comments and supporting documentation. We request that FERC protect from disclosure any information in our comments that is subject to Exemption 3 of the Freedom of Information Act ("FOIA"), which incorporates the various nondisclosure provisions in other federal statutes, including, but not limited to, Section 304 of the NHPA, and the Archaeological Resources

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Protection Act, 17 U.S.C. § 470hh(a). The Tribe requests that FERC redact all FOIA-exempt information contained in our submissions prior to public disclosure.

If you have any questions about these comments, please feel free to contact Margaret Corvi, our Culture and Natural Resource Director, at (541) 997-6685, or Stacy Scott, our THPO, at (541) 888-7513.

Sincerely,

Alexis Barry, Executive Director
The Confederated Tribes of Coos,
Lower Umpqua, and Siuslaw Indians

UTE INDIAN TRIBE
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Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, D.C. 20426
Re: Docket CP17-494-000 and CP17-495-000 (Jordan Cove Energy Project and Pacific Connector Gas Pipeline)

To Whom It May Concern:

The Ute Indian Tribe of the Uintah and Ouray Reservation is writing to voice our support for Jordan Cove and Pacific Connector. We urge the Federal Energy Regulatory Commission to issue certificates to Jordan Cove Energy Project and Pacific Connector Gas Pipeline under the Natural Gas Act. This project is important to The Ute Tribe, it's membership and it meets the high standards of design, public benefit and environmental preservation that is outlined under the Natural Gas Act, and the DEIS fully informs the public and the decision makers of the potential impacts of the project to the environment, as required by the National Environmental Policy Act. TR7-1

The Uintah/Piceance Basin of Utah and Colorado is a massive natural gas resource and there are significant local, regional, and national economic and societal benefits that could result from developing that natural gas and taking it to markets around the world including:

- Due to its unique attributes, the Uintah/Piceance Basin natural gas supply should be the logical first choice for any Western U.S. or Pacific Rim market. According to a PricewaterhouseCoopers study, in 2015 the oil and natural gas industry contributed 66,800 jobs and $3.5 billion in employee wages in Utah. In Colorado, oil and gas operations added 232,900 jobs and accounted for more than $23 billion in wages. These jobs represent the truck drivers, engineers, rig hands, construction workers and contractors who make oil and gas production and delivery possible;

- According to release of a report in April 2019 by the Utah Governor's Office of Energy Development, the Ute Indian Tribe and the Colorado counties of Garfield, Mesa, Moffat, and Rio Blanco entitled, *"Natural Gas Markets for the Western States and Tribal Nations,"* the most promising U.S. LNG export option on the U.S. Pacific Coast is the proposed Jordan Cove LNG liquefaction facility located in Coos Bay, Oregon. The Jordan Cove LNG project, if completed, will become the best-positioned LNG export

TR7 Ute Indian Tribe, L. Duncan, page 1 of 2

TR7-1 Comment noted.

TR7 continued, page 2 of 2

terminal in the U.S. to serve markets in Asia. The key advantage that Jordan Cove enjoys is a significantly shorter shipping distance to Asia relative to other LNG export terminals in the U.S.; and

TR7-1 cont.

- By providing market access for Uintah/Piceance natural gas, the U.S. can use LNG exports to positively impact energy geopolitics and improve its national energy security. U.S. LNG can offset dependencies of nations around the world on energy supplies from the Middle East and Russia. Natural gas exports can used in regions without reliable energy resources or can be used to replace existing energy sources responsible for high levels of harmful emissions. Increased use of natural gas is helping to combat climate change by lowering emissions of carbon dioxide (CO_2), a primary greenhouse gas (GHG). A constructive U.S. LNG export policy can also help reduce energy poverty by providing affordable new sources of energy while improving air quality and reducing greenhouse gas emissions.

We appreciate the opportunity to provide comments on the Jordan Cove Energy Project and Pacific Connector Gas Pipeline, a project of significant importance for The Ute Indian Tribe, Oregon, Utah and the United States of America and its energy security.

Sincerely,

Luke Duncan
Chairman Ute Indian Tribe

Cc: Senator Mike Lee
Senator Mitt Romney
Congressman Chris Stewart
Congressman John Curtis
Congressman Ben McAdams

The Confederated Tribes of the Grand Ronde Community of Oregon
Cultural Resources Department
Historic Preservation Office
9615 Grand Ronde Road
Grand Ronde, OR 97347-9712
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Toll Free: 1-800-422-0232
Fax: (503) 879-2126
Email: THPO@grandronde.org

August 23, 2019

Federal Energy Regulatory Commission
Attn: John Peconom, Environmental Project Manager
888 First Street NE
Washington DC 20426

Re: Comments on Ethnographic Study Needs
Pacific Connector Gas Pipeline Project (CP17-494)

Dear Mr. Peconom,

The Confederated Tribes of the Grand Ronde Community of Oregon ("Grand Ronde" or "Tribe") has previously submitted comments on the Draft Environmental Impact Statement for the proposed Jordan Cove Energy Project (CP17-495) and proposed Pacific Connector Gas Pipeline (CP17-494) (collectively, the "Projects") on July 3, 2019. As part of that submission, our office provided technical comments specific to cultural resource concerns. In those comments, we expressed agreement with the recommendation for an Ethnographic Study to be conducted as part of the due diligence for the Projects' analyses pursuant to the National Environmental Protection Act (NEPA) and National Historic Preservation Act (NHPA). We would like to take this opportunity to share the Tribe's understanding of an Ethnographic Study, and our expectations regarding the process for conducting such a study.

TR8-1

The Tribe understands Ethnographic Studies to be an inclusive study of people, place and practices. Studies of this sort should not only be a list of places and people of an area, but also include the practices undertaken by those people within specified landscapes throughout time. There are numerous methodological paths to accomplish such a study; however, our experience has found inclusion and examination of numerous attributes results in a more thorough and accurate documentation of cultural resource understanding. It is from this best informed understanding that decision makers can fulfill their responsibilities under Federal and State laws and regulations. As a result of our own experience in both conducting and reviewing such studies we offer the following attributes as a minimum start-point for inclusion in any Ethnographic Study:

- discussions of Tribes and Bands of an area,
- Traditional Cultural Properties (TCPs),
- Historic Properties of Religious and Cultural Significance to Indian Tribes (HPRCSITs),
- gathering areas,

TR8 Confederated Tribes of the Grand Ronde Community of Oregon, page 1 of 3

TR8-1 As stated in section 4.11.3.1 of the draft EIS, we have requested that the applicant prepare a revised Ethnographic Study that would address resources other than archaeological sites that may be important to Indian Tribes, including, but not restricted to, sites of traditional cultural or religious importance, and plants and animals traditionally hunted, fished, or gathered. The EIS recommended that the Commission Order include this as a condition, so that the revised Ethnographic Study would have be submitted for review by staff and interested Indian Tribes prior to construction, if the Project is authorized.

TR8 continued, page 2 of 3

- hunting areas,
- fishing areas,
- view-sheds,
- managed areas,
- trails,
- river corridors,
- named places,
- connections to landscape,
- *ikanam* (creation stories central to Tribal culture), and
- incorporation of the above topics in interpretation of archaeological sites and/or "isolates."

TR8-1 cont.

An Ethnographic Study of commensurate scale and scope to the Projects is necessarily a long term undertaking. At minimum, such a study will require a full year's round of seasons to observe, interact, and record appropriate information, with an additional 6-12 months for drafting, review, and completion of the final report.

The FERC License Applicant for the Projects ("Applicant") has previously suggested that each Tribe take responsibility for preparing their own Ethnographic Study, and has offered to contract with this Tribe to undertake compilation of such a study of our interest area on the Applicant's behalf. This offer raises points that have already been shared with the Applicant directly, but are nonetheless relevant to this correspondence.

- First, the need for an Ethnographic Study has been expressed by the Tribe to the Applicant and FERC numerous times since the filing of these dockets (PF17-4-000, later CP17-494 and CP17-495) three years ago. The delay in conducting these studies has resulted in a situation where timelines are unacceptably compressed. The resulting documentation would be insufficient, in our opinion, to adequately identify, record, and interpret for the purposes of assessing potential impacts.

- Second, it is not the responsibility of the Tribe to produce such a study. It is the responsibility of the Applicant to provide adequate information to the FERC so that the Commission may make the most informed decision. Although the Tribe is the most knowledgeable party on the topic, and our office expects to be coordinated with to identify appropriate information and interpretations, it is not appropriate to assume the Tribe will take on the Applicant's responsibilities.

- Third, it should be clear that the Ethnographic Study authors must be allowed to operate with intellectual and editorial freedom when documenting potential Project effects and sharing such documentation with FERC or the governments of participating tribes.

The Applicant's continued offers for the Tribe to conduct the Ethnographic Study on their behalf and to fulfill their obligations indicates they have yet to thoroughly hear and understand the concerns outlined above. It is the Applicant's responsibility to meet the

TR8 continued, page 3 of 3

request of the Federal agency. It is the responsibility of this Tribe, through Government-to-Government relationships and consultation, to provide review and comment as to the accuracy and applicability of the product. The end result should and must be the most complete understanding reasonably possible of cultural resources at risk of adverse impact and injury by the Projects. TR8-1 cont.

Thank you for the opportunity to provide additional comment, and we hope that you find these comments helpful. We look forward to continued coordination with you and your staff on these Projects. If you have questions, please email our office at THPO@grandronde.org.

Sincerely,

Briece Edwards
Manager, Historic Preservation Office

CONFEDERATED TRIBES OF
COOS, LOWER UMPQUA & SIUSLAW INDIANS
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September 3, 2019

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

RE: Docket Numbers CP17-494-000 and CP17-495-000, Jordan Cove LNG Terminal and Pacific Connector Pipeline Projects

Dear Secretary Bose:

The Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians ("Tribe") appreciates FERC staff for meeting with Tribal staff in June. As a result of the meeting, we believe we have a better understanding how certain components of the Jordan Cove LNG Terminal and Pacific Connector Pipeline Projects will be assessed. Following the meeting, the Tribe provided detailed comments on the DEIS. We would like to reiterate a few points and provide the following additional comments.

First, we appreciate that FERC concurs with the State Historic Preservation Office that our TCP must be considered as eligible for listing on the National Register of Historic Places when undertaking NHPA section 106 compliance for this Project. We look forward to meeting with FERC or contract staff in person as soon as possible, preferably before the FEIS publication, to discuss the potential impacts to contributing features identified in our application. The TCP document contains culturally sensitive information, so any meetings with FERC or contract staff would need to be closed. TR9-1

Second. as we have stated in prior meetings with FERC, it is imperative to complete a MOA or PA for the Project prior to any approvals, to comply with NHPA Section 106 requirements to address identified and unanticipated cultural resource impacts. We are committed to working through this document with the Commission and other agencies. We have witnessed firsthand how the "approve first, protect cultural resources later" approach limits the ability of tribes and agencies to protect cultural resources. Again, we request signatory party status on any cultural resource agreement, and we request such an agreement be fully executed prior to issuance of any approvals. TR9-2

Third, in discussions with FERC, we have identified several Project activities that must be assessed for cumulative impacts to water quality, anadromous fish habitat, and cultural resources. This includes directly related projects such as landfill operations and closure, TR9-3

TR9 Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians, page 1 of 2

TR9-1 Comment noted. We would consider sending staff or a consultant to CTCLUSI office in Coos Bay, Oregon to examine an un-redacted version of the "Q'alya ta Kukwis shichdii me" Traditional Cultural Property Historic District National Register of Historic Places Registration Form, in order to identify specific locations of religious or cultural importance to the CTCLUSI on Coos Bay that may be affected by the Project.

TR9-2 We will draft an agreement document for the Project prior to the Commission making its decision. It has been FERC practice to invite Indian tribes that are not affected landowners to be "concurring parties" to our agreement documents.

TR9-3 The cumulative effects section has been updated as appropriate.

PacifiCorp substation relocation[1], reasonably foreseeable projects such as airport expansion and updates, channel modification, and rail bridge maintenance/replacement. But for this Project, these activities would not be occurring. Also, indirect and cumulative impacts such as indirect and induced jobs must be assessed. The USACE jetty improvements must also be assessed, as it now includes road expansion, dredging, and filling in of the cribs. TR9-3 cont.

Next, please update us on the status of the ethnographic work, which is identified in the DEIS as a condition that the applicant must complete before construction. We concur with the Confederated Tribes of the Grand Ronde Community of Oregon's August 23, 2019 letter to FERC, including the analysis of what a Section 106 compliant ethnographic report must include. This work should be complete before any approval is granted as compliance with Section 106 is dependent on the completion of a study or studies of the project area to determine impacts. How is the viewshed analysis expected to be conducted in consultation with the Tribe? The applicant proposes that this analysis will be part of the ethnographic study but there are viewshed impacts to a variety of pre-contact and historical features and structures located within the project APE. TR9-4

Lastly, overall, we are concerned that conditions set forth in the DEIS and upcoming FEIS will be based upon yet-to-be-obtained federal, state and local permits approvals. If this is the case, then the ROD must clearly state that the applicant will only be able to move forward on ground *work after* all permits are in place and section 106 review and compliance has been met. It is important to clarify this as it is confusing in the DEIS when different work is allowed for different conditions- such as "prior to construction," "prior to drilling activities at HDD sites," "prior to initial site preparation," "prior to construction of final design," and "prior to construction of final design." Additional clarification and definition are needed. TR9-5

We request that no ground disturbing work be allowed prior to completion of all conditions including obtaining all necessary permits cultural resource work/section 106 compliance and mitigation, water quality certification, and land owner consent.

If you have any questions about this letter, please feel free to Stacy Scott, our THPO, at (541) 888-7513 or sscott@ctclusi.org.

Sincerely,

Alexis Barry, Executive Director

[1] In a December 2018 email with PacifiCorp, a company representative stated that Fort Chicago Holdings LLC, the parent company of Jordan Cove Energy Project, requested the substation to be moved.

TR10 continued, page 2 of 2

TR9-4 The draft EIS included a recommendation that the Commission Order contain an environmental condition that the companies produce a revised ethnographic study prior to construction. This study may be referenced in the agreement document. If the study identifies specific locations of religious or cultural importance to Indian tribes within the viewshed for the Project, we would consider these impacts.

TR9-5 The EIS does not contain any conditions. It does contain recommendations that the Commission Order contain a number of specific environmental conditions. One of our recommendations is it that the Project may not be constructed until after all applicable federal permits are obtained.

CO6 Federal Energy Regulatory Commission, G. Sexton, J. O'Keefe, page 1 of 13

June 11, 2019

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

RE: Jordan Cove Energy and Pacific Connector Gas Pipeline Project Draft Environmental Impact Statement

Greetings,

Please consider the following comments from the Klamath Siskiyou Wildlands Center (KS Wild) regarding the Draft Environmental Impact Statement (DEIS) for the Jordan Cove Energy and Pacific Connector Gas Pipeline Project.

Forest Plan Amendments

All projects or activities within a National Forest must be consistent with the governing LRMP…The Forest Service has determined that the linear nature of the Pacific Connector Pipeline Project would not be consistent with certain requirements of the LRMPs of the National Forests crossed. To address these inconsistencies, the Forest Service proposes to amend the LRMPs of the respective National Forests to make provision for the Project.

-Jordan Cove DEIS page 1-9.

As acknowledged on page 1-9 of the DEIS, the proposed pipeline construction across federal public forestlands involves numerous actions that are inconsistent with the planning documents and management intent for those lands. The proposed violations of the underlying land use plans are significant, irreversible and irretrievable and may retard and prevent accomplishments of the goals and objectives of the LRMPs.

Rather than amending the controlling LRMP for the forests impacted by the pipeline project, the DEIS whittles the Plans down piece by piece without having to go through the rigor of public input and review of developing a new Forest Plan. *League of Wilderness Defenders, et al. v. Connaughton, et al.*, No. 3:12-cv-02271, *50 (D. Or. 2014). ("the ROD and final EIS do not adequately articulate a rational connection between the characteristics of the project area and the choice to adopt site-specific, rather than forest-wide, amendments.").

NFMA imposes substantive constraints on management of forest lands, such as a requirement to insure biological diversity. *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 898 (9th Cir. 2002). The NFMA and its implementing regulations subject forest management to two stages of administrative decision making. At the first stage, the Forest Service is required to develop a Land and Resource Management Plan, also known as a Forest Plan, which sets forth a broad, long-term planning document for an entire national forest. At the second stage, the Forest Service must approve or deny individual, site-specific projects. These individual projects must be consistent with the Forest Plan. *Great Old Broads for Wilderness v. Kimbell*, 709 F.3d 836, 851 (9th Cir. 2013) ("the NFMA prohibits site-specific activities that are inconsistent with the governing Forest Plan"); *see also Neighbors of Cuddy Mtn. v. Alexander*, 303 F.3d 1059, 1062 (9th Cir.2002) ("[s]pecific projects ... must be analyzed by the Forest Service and the analysis must show that each project is consistent with the plan"). The Forest Service's "interpretation and implementation of its own forest plan is entitled to substantial deference." *Great Old Broads*, 709 F.3d at 850 (9th Cir. 2013) (internal quotation marks omitted).

League of Wilderness Defenders, et al. v. Connaughton, et al., No. 3:12-cv-02271, *12 (D. Or. 2014).

The agency must articulate a "rational connection between the facts found and the choice made" to enact a geographically-limited, site-specific amendment rather than a general amendment to the Forest Plan as a whole. *Lands Council v. Martin*, 529 F.3d 1219, 1228 (9th Cir. 2008). Any Forest Plan amendment that results in a "significant change" requires the agency to prepare an EIS; non-significant amendments only require the simpler notice and comment process. *Lands Council v. Martin*, 529 F.3d at 1227.

League of Wilderness Defenders, et al. v. Connaughton, et al., No. 3:12-cv-02271, *50 (D. Or. 2014) (agency improperly limiting the geographic scope of the amendments to the project area even though the purported need for the amendments is forest-wide, not site-specific.").

"the repeated use of site-specific amendments allows the Forest Service to bypass any public consideration of the regional or forest-wide management implications of the amendments, and is inconsistent with NFMA's requirements for integrated forest plans. *League of Wilderness Defenders, et al. v. Connaughton, et al.*, No. 3:12-cv-02271, *54 (D. Or. 2014).

"a close reading of *Lands Council v. Martin* indicates there must be at least some characteristics unique to a site to support a site-specific amendment. *Lands Council v. Martin*, 529 F.3d at 1228. . . . Simply explaining the purpose of the Project, the desired conditions for the Forest, or stating that the amendment is site-specific because it was designed for a specific site, does not satisfy the rational connection between the facts found and the choice made required by *Lands Council*."

CO6-1

CO6 continued, page 2 of 13

CO6-1 The need for plan amendments in this project is specific to an application pursuant to Section 28 of the Mineral Leasing Act. Due to the linear nature of the project, it would not be consistent with certain requirements of the LRMPs of the National Forests crossed. To address these inconsistencies, the Forest Service proposes to amend the LRMPs of the respective National Forests to make provision for the project. The geographic connection for the site-specific plan amendments are rationally tied to route design and incorporation of mitigations to minimize impacts to NFS lands and resources (refer to section 3.4—Pipeline routes and Alternatives in the draft EIS). The Forest Service has identified suites of "Project Design Features" or "Project Requirements" necessary to accomplish goals and objectives of the respective LRMPs. The project design features are included as attachments to Pacific Connector's POD (see Table 2.6.3-1 of the draft EIS), which includes monitoring to ensure that the wide array of actions are implemented and assess the effectiveness of the actions relative to the goals and objectives of the respective LRMPs. A description of the characteristics that are specific to the project area, an explanation of the connection between these characteristics and the amendment, and an explanation of why the amendment is necessary to reach the desired conditions in the project area are disclosed in this EIS (see draft EIS sections 4.2, 4.3, 4.6, 4.7.3.4, 4.8 and appendices F.1 and F.2).

Per the substantive planning rule requirements at 36 CFR §§ 219.8 through 219.11, and the procedural requirements at 36 CFR § 219.13(b), the Forest Service provided Notice of Initiation for proposed plan amendments with the FERC NOI on June 26, 2018. The three categories identified by commenters were included in the Federal Register notice. The draft EIS contains an analysis of the substantive rule requirements within the scope and scale of the proposed plan amendments. It was determined that the substantive requirements of the Planning Rule will be met through project design features and mitigation actions included in the proposed ROW (see section 4.7.3.4 and appendix F.2 of the draft EIS)

League of Wilderness Defenders, et al. v. Connaughton, et al., No. 3:12-cv-02271, *54-55 (D. Or. 2014).

In the DEIS, plan amendments are proposed for the Umpqua, Rogue River, and Winema National Forests for the limited purpose of construction and operation of the Jordan Cove pipeline. Site-specific amendments in three categories are submitted to accommodate the project: (1) Rare Aquatic and Terrestrial Plant and Animal Communities; (2) Soil, Water and Riparian Areas; (3) Visual Resources. These amendments do not meet the substantive requirements mandated by the 2012 Planning Rule.

CO6-1 cont.

Recent case law from the 4th Circuit establish the standard by which to determine if a substantive requirement from the 2012 Planning Rule applies to a Forest Plan amendment and are persuasive in the present case due to their factual similarities to the Jordan Cove pipeline. Both *Cowpasture River Pres. Ass'n v. Forest Service* and *Sierra Club, Inc. v. United States Forest Service* involve site-specific Forest Plan amendments designed to allow for the construction of natural gas pipelines, which as proposed, were inconsistent with the applicable Forest Plans.

The court held in *Cowpasture* that a substantive requirement from the 2012 Planning Rule applies to a Forest Plan amendment if that requirement is "directly related to the plan direction being added, modified, or removed by the amendment." *Cowpasture River Pres. Ass'n v. Forest Serv.*, 911 F.3d 150, 163 (4th Cir. 2018). If the substantive requirement is directly related to the amendment, then the responsible official must "apply such requirement(s) within the scope and scale of the amendment." *Sierra Club, Inc. v. United States Forest Serv.*, 897 F.3d 582, 601 (4th Cir 2018). *Sierra Club, Inc.* developed a two-prong test for determining whether a substantive requirement is directly related to the amendment: the agency must look to both the purpose *and* effect of the amendment, and if the substantive requirement at issue is based upon or associated with either one, it is directly related. *Sierra Club*, 897 F.3d at 602.

The DEIS misstates the appropriate test, asserting "whether a rule provision is directly related to an amendment is determined by any one of the following: the purpose for the amendment, a beneficial effect of the amendment, a substantial adverse effect of the amendment, or a lessening of plan protections by the amendment." (DEIS, 1-9). FERC is mistaken in its contention that the agency may consider the effects *or* the purpose of the plan amendments, instead of both. This mischaracterization of the law persists throughout the DEIS, which consistently fails to analyze the purpose and effects of the plan amendments in a site-specific or cumulative manner.

CO6-2

Though the DEIS repeatedly concludes that because the "proposed amendment is directly related to substantive requirements, the Responsible Official must apply the requirements within the scope and scale of the proposed amendment (36 CFR 219.13 (b)(5))," it does not adequately consider the "scope and scale" as required by 36 CFR 219.13 (b)(5) and (6). Instead, the DEIS replicates the same language throughout with very little site-specific analysis. Additionally, the DEIS misrepresents the scope and scale of the project by failing to consider the cumulative impacts, for example stating: "this plan amendment does not alter these LRMP plan requirements for managing rare plant and animal communities

CO6-3

CO6 continued, page 3 of 13

CO6-2 The Forest Service appropriately determined that, because of their purpose, the proposed plan amendments are directly related to certain substantive requirements of the 2012 Planning Rule. The Responsible Official therefore must apply these requirements within the scope and scale of the proposed amendment (36 CFR 219.13 (b)(5)). However the Forest Service disagrees with the assertion that the agency must consider both the purpose and the effects once it has already determined that the amendment is directly related by its purpose. The effects of the project, including the proposed amendments, are analyzed in the resource sections in section 4 of the draft EIS. Therefore, the Forest Service has met the Planning Rule requirements, and fulfilled its obligations under NEPA per 40 CFR §§ 1502.16, 1508.7.

CO6-3 Appendix F.2 of the draft EIS provides a detailed discussion of the substantive requirements within the scope and scale of the proposed amendments. As mentioned above, section 4 of the draft EIS provides detailed effects analysis of the project impacts at the locations of the proposed amendments and at multiple effects scales per resource affected.

across 99.99 percent of the Winema National Forest. The proposed pipeline construction corridor including the TEWAs and the UCSAs is approximately 92 acres of the 1,043,547 acre Winema National Forest." (DEIS, 4-474). This information alone, without consideration of the "scope and scale" cumulatively, does not meet the burden required under the 2012 Planning Rule. CO6-4

Need for Additional Plan Amendments

In addition to the proposed amendments, the DEIS fails to propose, analyze, and disclose actions necessary for the Jordan Cove pipeline that necessitate plan amendments to the Aquatic Conservation Strategy (ACS) and the Survey and Manage program of the Northwest Forest Plan. For instance, the Pacific Connector pipeline route would cross 19 fifth-field watersheds, and proposed access roads would cross an additional 5 watersheds. Of these, the Pacific Connector would cross NFS land in 6 fifth-field watersheds subject to ACS. (DEIS, 4-136). Additionally, the DEIS states that construction of the Project in the Upper Cow Creek watershed has high potential for impacts that could prevent attainment of ACS objectives particularly as related to sediment, water temperature and mobilization of naturally occurring mercury. (4-503). Despite these considerable impacts on areas controlled by ACS, amendments in the DEIS fail to consider or mitigate these effects. Similarly, the DEIS fails to amend survey and manage program protections and buffers that would be violated by pipeline construction through known occupied sites. CO6-5 CO6-6 CO6-7

Late Successional Reserves

The NWFP ROD indicated that LSRs are to be managed to protect and enhance old-growth forest conditions.

Developments of new facilities that may adversely affect Late-Successional Reserves should not be permitted. New development proposals that address public needs or provide significant public benefits, such as powerlines, pipelines, reservoirs, recreation sites, or other public works projects would be reviewed on a case-by-case basis and may be approved when adverse impacts can be minimized and mitigated.
-Jordan Cove DEIS page 4-517

The Northwest Forest Plan has required the same standards for management of LSRs since 1994. Despite this, the 2019 DEIS presents a different standard than provided in the November 7, 2014 Draft Environmental Impact Statement for the Jordan Cove Liquefaction and Pacific Connector Pipeline Projects, which stated on page 3-63: "*The ROD stipulates that non-silvicultural activities in LSR, such as the installation of a pipeline or other utilities, would only be allowed where those activities could be demonstrated to be neutral, or may have benefits for the creation and maintenance of late-successional habitat.*" The 2019 DEIS provides no acknowledgement of or rationale for why the "neutral or beneficial" standard, which is identified as the "general guideline" in the NWFP ROD (at C-16), was omitted from the 2019 "LSR Standard and Guideline" CO6-8

CO6 continued, page 4 of 13

CO6-4 See response to CO6-3.

CO6-5 Proposed amendments to the Survey and Manage Standards and Guidelines are disclosed and analyzed in the draft EIS (see sections 2.1.3.2, 4.7.3.4 and appendix F.2). Compliance with the ACS Standards and Guidelines is also disclosed and analyzed in the draft EIS (see sections 4.7.3.5 and appendices F.1 and F.4).

CO6-6 Compliance with the ACS Standards and Guidelines in the Upper Cow Creek watershed is disclosed and analyzed in the draft EIS including project effects and mitigation (see sections 4.7.3.5 pages 4-500 to 4-554 and section 2.2.1.5 of Appendix F.4). In addition, an alternative crossing of East Fork Cow Creek considered in the draft EIS (section 3.4.2.8) that would reduce impacts in this watershed has been incorporated into the proposed route in the final EIS. Additional analysis of this new crossing is included in sections 2.1.3.3, 3.4.2.8, 4.7.3.5 and section 2.2.1.5 of appendix F.4 in the final EIS.

CO6-7 Proposed amendments to the Survey and Manage Standards and Guidelines are disclosed and analyzed in the draft EIS (see sections 2.1.3.2, 4.6.4.3, 4.7.3.4 and appendices F.2 and F.5).

CO6-8 The Standard and Guideline specific to new developments (such as pipelines) in LSR in the NWFP is on page C-17. This has not changed from the previous EIS for the Pacific Connector Project. Standard C-17 is described on page 4-517 of the draft EIS. The neutral or beneficial requirement is discussed on pages 4-521 and 4-522. This standard including the neutral to beneficial requirement is evaluated in section 4.7.3.6 of the draft EIS and is further discussed in sections 2.1 and 2.2 of appendix F.3. Additional clarification has been included in section 4.7.3.6 and appendix F.3 in the final EIS.

section. The agency has not provided an explanation for why the standard by which they evaluate the pipeline has changed from the 2014 to the 2019 DEIS, despite the endurance of the NWFP as the controlling document.

CO6-8 cont.

It is critical to note that the NWFP ROD anticipated pipeline construction and specifically addresses it at C-17. Hence if pipeline construction was intended to be exempt from LMPs the ROD would have indicated that. The NWFP ROD does not provide for plan amendments that exempt pipeline construction from standards and guidelines pertaining to riparian reserves, survey and manage, soil protections or LSRs. Rather, the ROD anticipated pipeline construction and indicated that it should not be permitted unless the impacts could be mitigated and would achieve a neutral or beneficial result for LSR management. Yet the Jordan Cove DEIS calls for amending forest protection LMP standards that conflict with the financial desires of the project applicant.

Here the pipeline project has not been planned so as "to have the least possible adverse impacts on LSRs." As will be discussed later in these comments, the Rogue River-Siskiyou National Forest proposed a "Roads Route" action alternative that would have significantly reduced impacts to LSR 227 (managed by the Forest Service) but it was not carried forward for analysis in the DEIS. Instead the proposed action in the DEIS calls for actions that will remove forests and increase habitat fragmentation in the LSR. Hence the project has not been designed to have the least possible adverse impacts to LSRs and the decision maker and the public cannot know the tradeoffs associated with implementing the project in the manner suggested by the Forest Service as having the least possible adverse impacts on LSRs.

CO6-9

The construction, operation, and maintenance of the proposed pipeline project would affect LSRs on Forest Service lands in several ways. It would remove and fragment LSOG forest habitat that some vertebrate and invertebrate species depend on. It would directly affect individuals of species listed as threatened under the ESA through removal of suitable nesting, roosting, and foraging habitat for the NSO.

-Jordan Cove DEIS page 4-520

The habitat removal and modification associated with project implementation would retard the creation and maintenance of late-successional habitat in the LSRs. Mitigation would not result in the project having a neutral or beneficial outcome for LSRs.

CO6-10

Page 4-520 of the DEIS indicates that through forest clearing (clearcutting) and increased forest fragmentation (edge effects) the pipeline project will adversely affect 1,135 acres located on Forest Service LSRs that are intended to be managed to retain and promote late-successional forest habitat. Despite the pipeline's path through federal lands managed by both the Forest Service and the BLM, LSRs affected are only disclosed for National Forest lands. This is a change from the 2014 DEIS, which provided qualitative data regarding the affects to LSR on both Forest Service and BLM land. Without this data, FERC cannot analyze relevant changes since the last application. The DEIS fails to

CO6-11

5

CO6 continued, page 5 of 13

CO6-9 The "Roads Route Alternative" proposed by the Forest Service is discussed in the draft EIS (see section 3.4.2.6). This route was not selected because it would have been 3 miles longer and have imposed a greater construction footprint in LSR. It also was not constructible in places due to terrain and tight radius turnpoints. It is important to note, however, that the original May 2006 route proposed by the applicant was modified to incorporate as much of the proposed Forest Service "roads route" as was feasible. As a result, the proposed route in the 2019 draft EIS incorporated recommendations of the "roads route," such as co-locating the pipeline along existing forest road corridors and regeneration harvested areas, to minimize impacts to mature forests in LSR 227. After working with the applicant to create the modified route the Forest Service determined that neither the May 2006 route, nor the USFS "roads route" would be environmentally preferable to the modified proposed route.

CO6-10 A Compensatory Mitigation Plan for LSRs has been developed by the Forest Service (see section 2.1.5 and Appendix F.3 of the draft EIS). The mitigation actions for LSR have been designed to be neutral or beneficial to the creation and maintenance of LSOG habitat by maintaining the overall acreage of LSOG within LSRs, and enhancing the function of the LSRs, e.g. through the addition of snags and large woody debris. Section 4.7.3.6 and appendix F.3 of the draft EIS include discussions of the steps that were taken to avoid and minimize impacts to LSOG forest in LSR and analyzes the proposed compensatory mitigation that is designed to be neutral or beneficial to the creation and maintenance of late-successional habitat.

CO6-11 The BLM RMP designations affected by the proposed Pacific Connector pipeline are disclosed in the draft EIS. Table 4.7.3.3-3 of the draft EIS discloses the acres affected by the proposed Pacific Connector project to all BLM land classifications including LSR and Riparian Reserves. In addition, impacts from the proposed Pacific Connector pipeline on marbled murrelets and northern spotted owls (the focus of BLM LSR) and Riparian Reserves are disclosed throughout sections 4.3 and 4.6 including sections 4.3.4, 4.6.1.2, 4.6.1.3, and 4.6.4 of the draft EIS.

provide a reason why the LSR data for BLM land was not included, and without more, the omission is arbitrary and capricious. CO6-11

Additionally, the LSR mitigation measures that are described in the DEIS establish that the negative impacts of project activities on LSRs significantly outweigh the alleged benefits of the proposed mitigation as disclosed in the DEIS.

In our comments on the 2014 Plan Amendment DEIS we raised a number of issues concerning LSR management and function on BLM lands impacted by the project. We include those comments as italicized below. Please note that the 2019 DEIS fails to contain even the cursory information regarding cumulative BLM and Forest Service LSR function that was at issue in the 2014 DEIS.

> *Page 4-188 of the DEIS indicates that the pipeline project will adversely impact 198 acres of **LSR 223** managed by the Roseburg District BLM. Page 4-189 then concludes:*
>
> *There are no proposed amendments to reallocate Matrix lands to LSR 223 in the BLM Roseburg District. This is due primarily to the lack of suitable LSOG forest habitat in the Matrix near the LSR and the pipeline. There is, however, a proposed amendment to reallocate Matrix lands to LSR 223 in the Umpqua National Forest, which boarders the east side of the BLM Roseburg District.*
>
> *In other words, the DEIS indicates that the pipeline project will directly harm LSR function on Roseburg BLM lands in a portion of the landscape that has been so heavily fragmented by past federal and private logging that no LSOG habitat of value exists near the planning area that can mitigate for the additional loss of LSR habitat. Converting unlogged LSOG habitat in the Umpqua National Forest to the LSR land use allocation will not mitigate or resolve the severe fragmentation and habitat loss problems associated with BLM management of the "checkerboard" land use pattern in LSR 223. Please also note that the DEIS fails to disclose whether or not the matrix land that will be converted to LSR on the Umpqua National Forest was likely to be logged. Given survey and manage requirements and wildlife, recreation and ACS objectives, it is highly likely that the Umpqua National Forest would continue to manage the matrix LSOG as LSOG for the foreseeable future. As the DEIS repeatedly states, very little LSOG has been converted to fiber plantations since the inception of the Forest Plan. Are survey and manage species present in the matrix lands at issue? It may be that the pipeline proposal calls for logging BLM LSR habitat in a highly fragmented landscape (in which such habitat is disproportionately valuable to LSOG associated species) in return for reallocating matrix lands that would not have been logged anyway and which are located significantly away from the impacts associated with the pipeline clearcut logging on BLM lands.* CO6-12

Page 4-530 of the DEIS indicates that (in direct contradiction to the Forest Service proposal contained in the "Roads Route" alternative suggested in their scoping

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CO6-12 The matrix lands proposed for reallocation to LSR are not currently planned for harvest, but the Umpqua NF is presently managing these acres as matrix. When and if any of these acres would be proposed for timber harvest or other management activities consistent with the matrix designation is speculative. The reallocations are designed to form larger blocks of habitat over time. Managing younger stands to develop into LSOG habitat would benefit species dependent on late-succession habitat in the future.

comments) the pipeline will bisect and fragment habitat across the entirety of **LSR 227** managed by the Rogue River-Siskiyou National Forest while only adding an isolated stand of matrix forest to the LSR. It appears that interior forest habitat essential to the function of LSR 227 will be removed while an isolated parcel well to the north of the bulk of the LSR habitat will be reallocated from matrix to LSR. Page 4-165 of the DEIS acknowledges that constructing the pipeline would result in forest fragmentation: CO6-13

Fragmentation results in new forest "edges" which play a crucial role in ecosystem interactions and landscape function, including the distribution of plants and animals, fire spread, vegetation structure, and wildlife habitat. New forest edges would affect microclimate factors such as wind, humidity, and light, and can lead to a change in species composition within the adjacent forest or increase invasion by invasive species.

Though the DEIS acknowledges the negative impacts new forest edges cause to wildlife, unlike the 2014 DEIS, which has a section titled "Comparison of Total Direct and Indirect Impacts of the Pacific Connector Pipeline Project and the Beneficial Impacts of Off-site Mitigation Actions on Edge Effect," the 2019 DEIS does not include any detailed or qualitative analysis regarding edge effects on wildlife, nor does it include any specific mitigation efforts. Rather, the 2019 DEIS speaks of edge effects broadly and recycles the same language, verbatim, into each Forest's mitigation section, stating "the mitigation measures incorporated into amendments for Survey and Manage species are designed to minimize, maintain or restore the potential for habitat fragmentation, edge effects, and loss of long-term habitats associated with effected species" (DEIS 4-447, 4-458, 4-474). The failure to provide site-specific and cumulative impacts analysis of edge effects represents an arbitrary and capricious omission. Attached to these comments is an article entitled Effects of Habitat Fragmentation on Biodiversity that we hereby submit to the record for this project. The paper discusses and illustrates issues that must be addressed in the NEPA process. CO6-14

Page 4-520 of the DEIS indicates that a total of 810 acres in LSR 227 will be negatively impacted in the Rogue River NF by the pipeline project. Yet only 522 acres of matrix is proposed for reallocation to the LSR land use allocation. Similarly, 426 acres of LSOG in the LSR will be negatively impacted but only 237 acres of LSOG located in the matrix is proposed for protection as mitigation. Not only does the quantity of LSOG in the reallocation fail to mitigate for the negative impacts to LSOG from the pipeline, but the 237 acres represents a 30 percent decrease in the total amount of LSOG included in the reallocation compared to the 2014 DEIS. These figures make clear that the impacts of the project (including the proposed mitigation) are negative (and not neutral or beneficial) to the achievement of LSR goals and objectives and violate the NWFP. CO6-15

Please further note that page 4-531 of the DEIS indicates that additional undisclosed LSR acres will be logged and additional forest fragmentation will occur in order to widen existing logging roads in the LSR to facilitate the use of oversized trucks and loads associated with the pipeline project. The impacts, location, and acreage of this proposed additional logging are not analyzed or disclosed in the DEIS. CO6-16

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CO6-13 The proposed pipeline route in LSR 227 utilizes existing forest roads and regeneration harvested areas to minimize impacts to interior forest from fragmentation. There are also past timber harvest areas in this location and as such there is little existing interior forest habitat in this portion of LSR 227 (for example see the map on page 8 of Appendix F.8a of the draft EIS). The proposed reallocation area adjoins LSR 227 and would add approximately four times as many acres of LSOG to the LSR than would be removed by the construction of the pipeline (see page 4-530 of the draft EIS). Additional discussion had been included in section 4.7.3.6 of the final EIS and sections 1.3.2 and 1.3.3.2 in appendix F.3 of the final EIS.

CO6-14 Analysis of edge effects and fragmentation on wildlife is disclosed in several sections of the draft EIS including mitigation efforts (e.g. see sections 4.4.2.4, 4.5.1, 4.6.1.1, 4.6.1.2, 4.7.3.6 and Appendices F.2 and F.3.). Additional discussion had been included in section 4.7.3.6 of the final EIS and sections 1.3.2 and 1.3.3.2 in appendix F.3 of the final EIS.

CO6-15 A large percentage of the impacts discussed on page 4-520 of the draft EIS are "indirect impacts" where LSOG habitat would not be removed by the project. Also only approximately 55 acres of the forest habitat that would be removed in LSR 227 meets the criteria for LSOG habitat. The draft EIS discloses that for every acre of LSOG habitat within LSR 227 that would be removed by the project, approximately 4 acres of LSOG habitat would be added to LSR 227 (see table 4.7.3.6-5 of the draft EIS). Also in addition to the reallocation of matrix to LSR 227 there is also a compensatory mitigation plan developed by the Forest Service that has been designed with the goal that overall the project would be neutral or beneficial to the creation and maintenance of LSOG habitat within LSR 227 (see pages 4-527 to 4-532 and appendices F.2 and F.3 of the draft EIS).

CO6-16 The potential widening of existing roads may be necessary to accommodate the construction of the pipeline. An estimate of the amount of clearing that may be needed was made based on the best information available at the time. Once details in the Transportation Plan of Development have been further developed a more accurate estimate may be made. However as disclosed in the draft EIS it is expected that these impacts would be very minor and would occur within or adjacent to existing roadways. The final EIS discloses that the impacts from road improvements are only about 1 acre (see section 4.7.3.6 of the final EIS and sections 2.1.3.1 and 2.2.3.1 in appendix F.3 of the final EIS).

Please note that page 4-426 of the DEIS indicates that:

Although the Pacific Connector project has been routed to avoid LSOG habitat as much as possible, the project would cause habitat fragmentation within LSR 227. Road decommissioning reduces the edge effects over time by revegetating road surfaces and eliminating road corridors.

In other words the project would result in immediate, significant, additional fragmentation and harm to LSR habitat objectives in return for speculative, future road decommisioning activities that likely would have occurred anyway. Similarly, the project will result in immediate, significant and additional loss of forest habitat located in LSRs in return for the "protection" of some matrix forest stands in which logging might never have occurred anyway due to wildlife, social and watershed objectives. CO6-17

Page 4-160 of the DEIS indicates that:

Clearing of forested and shrubland areas would be considered a long-term impact because affected areas would not resemble adjacent undisturbed areas for many years to many decades; and, as stated above, clearing of mature forests (e.g., LSOG forest) would be considered a permanent impact.

This statement directly acknowledges that the project will have negative (rather than neutral or beneficial) impacts to LSOG located in LSRs in violation of the NW Forest Plan. CO6-18

The Project May Increase Fire Hazard in LSRs

Page 4-172 of the DEIS acknowledges that:

Certain activities associated with construction and operation of the Pacific Connector project (such as prescribed burning of slash, mowing, welding, refueling with flammable liquids, and parking vehicles with hot mufflers or tailpipes on tall dry grass) could increase the risk of wildland fires, especially if these activities occur within the fire season.

In a region already prone to wildfire, the Pacific Connector project is not in the public interest. Not only do activities during the construction of the pipeline increase wildland fire risk, but by converting mature forest stands to into a continuous corridor of early seral plant communities, the project increases fire hazard and decreases options for fire management in the LSRs well into the future. The 2014 DEIS acknowledged the increased risk of fire associated with removing mature stands, stating (at 2-59) "the pipeline would create fire suppression complexity by creation of a continuous corridor of early seral plant communities." Despite the 2014 recognition of increased risk, the 2019 CO6-19

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CO6-17 The proposed road decommissioning is only one of several compensatory mitigation actions designed to enhance LSR objectives (see draft EIS 2.1.5 and appendices F.2 and F.3). There is presently no funding for the proposed road decommissioning so it is expected that it would not occur without funding from the applicant. The matrix lands proposed for reallocation to LSR are not currently planned for harvest, but the Forest Service is presently managing these acres as matrix. When and if any of these acres would be proposed for timber harvest or other management activities consistent with the matrix designation is speculative. The reallocations are designed to form larger blocks of habitat over time. Managing younger stands to develop into LSOG would benefit species dependent on late-succession habitat in the future.

CO6-18 A Compensatory Mitigation Plan for LSRs has been developed by the Forest Service (see section 2.1.4 and appendix F.3 of the draft EIS). The mitigation actions for LSR have been designed to be neutral or beneficial to the creation and maintenance of LSOG habitat by maintaining the overall acreage of LSOG within LSRs, and enhancing the function of the LSRs, e.g. through the addition of snags and large woody debris. Section 4.7.3.6 and appendix F.3 of the draft EIS include discussions of the steps that were taken to avoid and minimize impacts to LSOG forest in LSR and analyzes the proposed compensatory mitigation that is designed to be neutral or beneficial to the creation and maintenance of late-successional habitat.

CO6-19 Fire risk is addressed in the draft EIS (e.g., see section 4.13.2). the Forest Service compensatory mitigation plan also address fire risk and proposes actions that would reduce the risk of loss of habitat from high intensity fires (see section 2.1.5 and appendices F.2 and F.3 of the draft EIS). Additional discussion has been included in section 2.1.5.1 of the final EIS and in sections 1.3.2 and 1.3.3 of appendix F.3 in the final EIS.

DEIS is devoid of any discussion of this issue. In addition to being inconsistent with the public interest, this is a direct and significant negative impact (as opposed to neutral or beneficial) on the ability of the LSR land use allocation to achieve its management objectives. CO6-19 cont.

Rather than avoid or address the impacts of increasing fire hazard in the LSRs, the DEIS proposes "mitigation" measures that attempt to facilitate fire suppression and fire exclusion. As described in Appendix K: Fire Prevention and Suppression Plan (at 11), the Applicant will "take immediate action to suppress fires using all available manpower and equipment." Additionally, Appendix R: Prescribed Burning Plan, applies only to the burning of slash created during the project, and does not present any mitigation measures that attempt to offset the increased fire risk created by the pipeline. CO6-20

It is widely recognized that fire exclusion and fire suppression in fire dependent forests (such as those in southwest Oregon) increases fire hazard and fire severity over time due to changes in forest species and seral composition. Attached to these comments is an article entitled Ecology and Management of Fire-prone Forests of the Western United States that we hereby submit to the record for this project. Despite this generally accepted scientific data, the 2019 DEIS fails to discuss or analyze these issues. CO6-21

By creating a continuous corridor of early seral vegetation and by facilitating additional fire exclusion and fire suppression through LSRs the pipeline project will increase fire hazard and may contribute to high severity wildfire effects that inhibit the retention of late-successional habitat characteristics.

The Umpqua National Forest is the only land management area that presents mitigation measures that would lower the risk of loss of developing and existing mature stands and other valuable habitats to high-intensity fire, proposing (at 4-450) 228 acres of pre-commercial thinning, 288 acres of commercial thinning and 300 acres of off-site pine removal. However, this represents a drastic decrease in fire risk mitigation on BLM and Forest Service land from the 2014 DEIS (at 2-61), which proposed integrated stand density and fuels reduction on 6,563 acres, pre-commercial thinning on 1,039 acres, and under-burning on 2,035 acres. CO6-22

A Reasonable Action Alternative for LSR Management Should Have Been Developed

Project proponents and project planners have refused to develop and consider a reasonable range of alternatives that would be consistent with the respective LMPs in the project area. NEPA requires federal agencies to "study, develop, and describe appropriate alternatives to recommend courses of action." 42 U.S.C. § 4332(2)(E). With an EIS, an agency is required to rigorously explore and objectively evaluate all reasonable alternatives. *See* 40 C.F.R. § 1502.14(a). Please note that page 3-37 of the DEIS indicates that representatives of the Rogue River-Siskiyou National Forest proposed a "Roads Route Alternative" to project planners in which pipeline construction would have CO6-23

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CO6-20 Attachments K and R of the Plan of Development address the requirements the applicant would have to follow for construction of the pipeline on federal lands. These requirements address how fire from construction activities would be prevented. The Forest Service compensatory mitigation plan also addresses fire risk and proposes actions that would reduce the risk of loss of habitat from high intensity fires (see section 2.1.5 and appendices F.2 and F.3 of the draft EIS). Additional discussion has been included in section 2.1.5.1 of the final EIS and in sections 1.3.2 and 1.3.3 of appendix F.3 in the final EIS.

CO6-21 The draft EIS at 4-172 acknowledges that surface fires ignited in the herbaceous or low-shrub cover maintained along the permanent right-of-way may spread to adjacent stands and even trigger high intensity crown fire that could spread to areas more distant from the pipeline's route. The project record also acknowledges that if fire frequencies were to increase due to proposed activities, vegetative communities could shift over time to species compositions more suited to shorter fire frequencies. Stand density management activities, listed as mitigations in table 2.1.5-1, are designed, in part, to alter stand composition to increase resiliency to high severity wildfire effects and mimic reference conditions. Additional discussion has been included in section 2.1.5.1 and appendix F.3 in the final EIS.

CO6-22 Commenters' figures are incorrect. On the Umpqua NF in addition to the acres listed in the comment, there are also 2,458 acres of stand density fuel breaks, and 616 acres of road shaded fuel breaks proposed (see final EIS section 2.1.5 and Appendix F.2). The main reason for the reduction of mitigation that would lower the risk of habitat loss from high intensity wildfire that was listed in the 2014 draft EIS on the Umpqua NF, is the Stouts Creek fire which burned in 2015 between MP 96 and 109 of the Pacific Connector project (see attachment 1 to Appendix F.3 for a discussion of the Stouts Creek fire and the change in proposed mitigation). On the Rogue River NF there are 618 acres of Stand Density Fuel Break proposed. This is unchanged from the 2014 draft EIS. Also, the applicant has proposed mitigation on BLM lands which includes approximately 2553 acres of Stand Density Fuel Breaks as well as proposed heli-ponds, pump chances and dry hydrants. Additional discussion has been added in sections 2.1.4 and 2.1.5 of the final EIS and in appendix F.3 and F.12 of the final EIS.

CO6-23 The "Roads Route Alternative" proposed by the Forest Service is discussed in the draft EIS (see section 3.4.2.6). This route was not selected because it would have been 3 miles longer and have imposed a greater construction footprint in LSR. Not only would the alternative not avoid logging, clearing and construction activities in LSR as claimed in the comment, it would have resulted in a greater amount of logging, clearing and construction activities in LSR 227. It also was not constructible in places due to terrain and tight radius turnpoints. It is important to note however that the original May 2006 route proposed by the applicant was modified to incorporate as much of the proposed Forest Service "roads route" as was feasible. As a result, the proposed route in the 2019 draft EIS incorporated recommendations of the "roads route," such as co-locating the pipeline along existing forest road corridors and regeneration harvested areas, to minimize impacts to mature forests in LSR 227. After working with the applicant to create the modified route the Forest Service determined that neither the May 2006 route, nor the USFS "roads route" would be environmentally preferable to the modified proposed route. Also, the route in the final EIS incorporates the modified Pacific Crest Trail crossing which co-locates the pipeline along an existing road (see section 3.4.2.9 in the final EIS).

paralleled existing roads and would have avoiding logging, clearing and construction activities within the Late Successional Reserve 227. FERC and the public cannot contrast this reasonable action alternative with the proposed action because project proponents and project planners refused to develop the alternative for consideration in the DEIS. Hence, the tradeoffs, benefits and challenges of implementing the Forest Service proposed alternative on Forest Service managed lands cannot be known. Please further note that the Forest Service is entitled to substantial legal deference in questions of professional judgment concerning management of Forest Service lands and resources. The preferences of project proponents to construct the pipeline directly through Federal LSRs do not relieve FERC of its duty to develop, consider and contrast reasonable alternatives to the proposed action as suggested by the Forest Service during project scoping.

CO6-23 cont.

Survey and Manage Forest Plan Amendments Are Significant

The contention on page 4-447 of the DEIS that proposed survey and manage plan amendments are not significant is in error. The proposal to directly impact habitat at 188 known survey and manage sites involving 38 rare species (Appendix F.5) is a major change in management direction and will directly impact a significant number of high value species.

CO6-24

Soil Forest Plan Amendments Are Significant

The DEIS proposes to violate/amend soil standards to facilitate pipeline construction. As acknowledged on page 4-70 the negative effects to soils from project activities that violate the existing forest plans are both significant and "long term." Many of these negative impacts to soils will occur in previously protected land use allocations such as LSRs, riparian reserves and Key Watersheds. Additional (but unanalyzed and undisclosed) soil compaction will be associated with road widening throughout the project area and yarding activities to facilitate forest clearing. The cumulative impacts of violating existing soil protection standards through clearcutting, pipeline construction, road widening and yarding activities are significant, irreversible and long term.

CO6-25

The Project Will Violate the Aquatic Conservation Strategy

The Pacific Connector proposal would not be compliant with underlying and more restrictive standards and guidelines in the Umpqua, Rogue River and Winema National Forests' LRMPs that apply to riparian areas. Instead of coming into compliance with these standards and guidelines, NWFP site-specific plan amendments are proposed.

CO6-26

Page 4-77 of the DEIS indicates that the project will remove (clearcut) 30 acres of vegetation located in riparian reserves including 7 acres of mid-seral forest and 8 acres of

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CO6-24 A complete analysis of Survey and Manage species impacts are contained in Appendix F.5 and summarized in section 4.6.4.3 of the draft EIS. Where there were impacts to species with limited known populations, the Forest Service required route adjustments to avoid impacting known sites. Refer to Section 3, Survey and Manage species Route Variations. However, due to the linear nature of the project, all known populations could not be avoided because species occur in forested stands throughout the entire NFS lands adjacent to the current proposed route. Therefore, it was concluded that as long as Survey and Manage objectives for species persistence could be met, additional route adjustments were not warranted.

CO6-25 Environmental consequences to soils relevant to impacts on federal lands is disclosed in the draft EIS, Section 4, 4.2.3.1. In addition, Appendix G of the draft EIS provides a detailed assessment of soils and is the basis for effects analysis contained in the draft EIS. The effects of yarding activities for clearing the corridor are included in the effects to soils in the analysis. Road widening would not occur throughout the project area. The very limited amount of estimated road widening on Forest Service lands (approximately 1 acre) would occur along the existing road corridor and would not require yarding or amendments to the soil standards and guidelines.

CO6-26 The Forest Service has not proposed to amend riparian reserve standards and guidelines in the NWFP for the Pacific Connector project. Impacts on riparian areas are disclosed in sections 4.7.3.5 and Appendix F.4 of the draft EIS. For each watershed, there is a detailed analysis of Aquatic Conservation Strategy Objectives. Summary tables per watershed provide information on impacts caused by removal of vegetation during construction. This analysis is summarized and included in section 4.3.4.2, 4.7.3.5 and appendix F.4 of the draft EIS.

LSOG forest stands. The impacts of associated edge effects and yarding activities on riparian reserve management objectives is not disclosed or analyzed.

CO6-26 cont.

At 4-238 and 4-239 the DEIS indicates that the project will mitigate harm to ACS and riparian forest resources through road decommissioning, road resurfacing, instream LWD placement and culvert replacement. All of these activities are already occurring on Federal lands within the project area, especially in Key Watersheds and LSRs. The Rogue River-Siskiyou, Umpqua and Winema National Forests have robust track records and foreseeable proposals for all four of these restoration/mitigation strategies. The Medford, Roseburg and Coos Bay BLM Districts also regularly propose and implement these activities. Road decommissioning, road resurfacing, instream LWD placement and culvert replacement would all occur regardless of the Pacific Connector project.

Implementation of the action proposed in the DEIS will violate the LRMPs regarding riparian management and directly harm ACS management objectives while relying on mitigation measures that are common and ongoing regardless of whether the pipeline is constructed or not.

CO6-27

Cumulative and Site-Specific Impacts on BLM lands not considered

The DEIS is devoid of sufficient information and analysis regarding site-specific impacts of the pipeline on BLM lands. This omission not only precludes meaningful analysis of the pipeline's effects on BLM lands, but also renders any cumulative impact assessment impossible. Though the Forest Service provides some analysis of the pipeline on a broader scale, the FS and BLM manage lands within the same watersheds, use the same access roads, and have overlapping land designations. Therefore, without more information regarding the pipeline's impact on BLM land, cumulative impacts addressed by the FS are insufficient and the DEIS fails to meet its burden under NEPA.

CO6-28

The DEIS, rather than providing detailed analysis of the environmental impacts of the proposed pipeline, including both site-specific and cumulative consideration, attempts to reverse the process mandated by NEPA and analyze the project before a sufficiently definite proposal is presented. This is not the procedural role of the DEIS under NEPA and represents an arbitrary and capricious agency action.

CO6-29

Please ensure that we are provided a timely hard copy of the forthcoming BLM and Forest Service RODs.

Thank you for considering these comments and concerns.

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CO6-27 While we agree with the commenter that the Umpqua, Rogue River, and Winema NFs have track records for implementing all of these restoration/mitigation strategies, we disagree that the proposed mitigation actions would occur without the Pacific Connector project. There is presently no funding for any of these proposed projects and none is foreseeable. Also, these mitigation actions have been proposed in the watersheds that would be impacted by the project. If restoration funds become available to the Forest Service it is likely that there would be areas of higher priority for those funds. Compliance with the ACS Standards and Guidelines is disclosed and analyzed in the draft EIS (see sections 4.7.3.5 and appendices F.1, F.2, and F.4). Additional discussion has been included in sections 2.1.5.1 and appendix F.2 of the final EIS.

CO6-28 See response to CO6-11 on disclosure of impacts on BLM lands. The Forest Service LSR and Riparian Reserve land allocations do not overlap BLM designations. With the completion of the Western Oregon Plan Revisions the land designations, including LSR and Riparian Reserve in the BLM RMPs are no longer under the direction in the Northwest Forest Plan.

CO6-29 A detailed proposed action is presented in section 2 of the draft EIS and in the accompanying appendices. Detailed analysis of the environmental impacts of the proposed pipeline and Jordan Cove facility including site specific and cumulative impacts are discussed throughout section 4 of the draft EIS and in the accompanying appendices.

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