

Submitted by email to: hhearley@lcog.org

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Land Use Application #187-18-000153 – Jordan Cove Energy Project Navigation and Efficiency and Reliability of the Coos Bay Deep Draft Navigation Channel.

Dear Mr. Hearley,

Please accept these comments from Dr. Janet Hodder to be included in the evidentiary record for the application #187-18-000153 from Jordan Cove Energy Project (JCEP) to the City of Coos Bay which includes:

- 1) Map Amendment to the Coos Bay Estuary Management Plan (CBEMP) to Change the Designation of Approximately 3.3 Acres from 52-NA to DDNC-DA;
- (2) Text Amendment to the City of Coos Bay Comprehensive Plan to take a Reasons Exception to Statewide Planning Goal 16 to Authorize this Map Amendment;
- (3) Estuarine and Coastal Shoreline Uses and Activities Permit For “New and Maintenance Dredging” in the DDNC-DA Estuarine Zone; and
- (4) Estuarine and Coastal Shoreline Uses and Activities Permit to Allow an Accessory Temporary Dredge Transport Pipeline in the 52-NA, 53-CA, 54-DA, and 55-CA Estuarine Zones and an Accessory Buoy in the 52-NA Estuarine Zone.

I provided comments to the planning commission in a March 18 letter about this application and wish them to be acknowledge as part of the record for the Coos Bay City Council hearings.

The applicant asserts that the exception to change the designation of approximately 3.3 Acres from 52-NA to DDNC-DA in the Coos Bay estuary to construct a Navigation Reliability Improvement #4 is justified for several reasons including:

- To allow for more efficient vessel transits through the Federal Navigation Channel.
- Minimizing delays for vessel transit.
- Result in an economic boon to the city of Coos Bay.

The City Council should follow the recommendation made by LCOG’s staff that, based on the evidence in the record, a denial of this permit is the more supported conclusion. Below I outline seven reasons why I support LCOG’s recommendation.

1. The justification for the need for NRI #4 to allow for enhanced vessel transit in Coos Bay is not supported.

An argument from the applicant repeated numerous times in the application is that dredging in the 52-Natural Aquatic zone for Navigation Reliability Improvement #4 is needed to allow for more

efficient vessel transits through the Federal Navigation Channel. The staff conclusion on page 39 of their report that, *“deep-draft vessel calls by international vessels would not be practicable or possible without the NRIs in place”* is false. There are a number of lines of evidence to dispute the need for NRI #4 for navigation of any vessels transiting Coos Bay and thus allow for a denial of the map amendment change. This evidence shows that the current Federal Navigation Channel is adequate for LNG ship transit and does not need the NRI 4 dredging.

They include:

1. A letter to Jordan Cove Energy project dated November 7, 2018 from USCG Commander J. C. Smith, Captain of the Port, Sector Columbia River documenting that simulated transits by Coos Bay pilots demonstrated that they could safely and successfully maneuver LNG carriers up to 299.9 meters (983.3 feet) in length and 49 meters (160.8 feet) in beam and 11.9 meters (39 feet) in draft. This is the proposed size of the LNG ships that will call at the JCEP terminal. This letter was appended as a reference in my comments to the Coos Bay planning commission.

2. The Coast Guard Letter of Recommendation to FERC signed by USCG Captain W.R. Timmons, dated May 10, 2018 in response to JCEP’s Letter of Intent and based on the comprehensive review of JCEP’s Waterway Suitability Assessment (WSA). It states, *“I recommend the Coos Bay Channel be considered suitable for LNG marine traffic”*. This letter was appended as a reference in my comments to the Coos Bay planning commission.

3. An analysis supporting the letter of recommendation issued by COTP sector Columbia River on May 10, 2018. In this analysis a WSA team, which included several Coos Bay based participants, met in Coos Bay on November 1, 2017 to analyze the suitability of the Coos Bay Channel to support marine traffic. The results of this meeting are included as a supplement to the aforementioned Captain of the Port’s May 10, 2018 recommendations. This analysis states on Page 9 of Exhibit 4 in the Coos Bay City application, *“Based on my review of the completed on November 1, 2017, and input from state and local port stakeholders, and taking into account previously reviewed expansion projects, I recommend to the Federal Energy Regulatory Commission that the waterway in **its current state** be considered suitable for the LNG marine traffic associated with the proposed project.”* (emphasis added)

4. The FERC Draft Environmental Impact Statement Executive summary page ES-3 stated, *“Areas adjacent to the Coos Bay Federal Navigation Channel would be modified, but it is suitable to support the LNG carriers that would call on the terminal.”*

2. The justification of need based on State Planning Goals is inadequate

Under OAR 660-004-0022(1) the applicant must demonstrate a need for the proposed use/activity based on requirements of one or more State Planning Goals 3 to 19. In the applicant’s case, the demonstrated need for the proposed NRI site is based primarily on Goal 9 (Economic Development) and 12 (Transportation). LCOG has advised the City that, *“Demonstrated need for an exception must show that the City will fail or is at risk to provide adequate opportunities for a variety of economic activities, for example, without the exception. The applicant has not provided evidence sufficient to indicate that an exception is required in order to meet the City’s Goal 9 and Goal 12 obligations.”*

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GOAL 9: ECONOMIC DEVELOPMENT.

To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

GOAL 12: TRANSPORTATION.

To provide and encourage a safe, convenient and economic transportation system.

The applicant provides no evidence that dredging NRI #4 will be a boon to the economic prospects for the City and the state. The Federal Navigation Channel is suitable for all shipping up to 983.3 feet in length, a size almost a third again larger than any other vessel that enters Coos Bay. Thus the denial of NRI #4 dredging will not prevent the City from providing adequate opportunities for a variety of economic activities associated with shipping in Coos Bay. The applicant's assertion that dredging NRI #4, *"will be a boon to the economic prospects for the City and the state because it will make the Channel safer and more efficient for productive economic enterprises of the kind that provide opportunities to Oregonians"* is not supported by this detail.

The submission of economic studies showing a value added by the JCEP project does not contain any reference to how NRI #4 contributes to this value. The presumed choice by staff to include excerpts from the applicant's response to what I presume are the Department of State Land Fill-Removal comments, dated May 9, 2019, in exhibit PP is hard to understand. The inclusion of exhibit PP is particularly troubling as the statements on Page 16 and 17 regarding the economic benefits of the JCEP project are misleading. The information that, *"On March 22, 2016, JCEP announced that it had executed a preliminary agreement with JERA Co., Inc., the largest LNG buyer in the world, for the acquisition of at least 1.5 mtpa of LNG capacity from the Project. Following the announcement of the JERA agreement, JCEP announced the execution of a preliminary agreement with ITOCHU Corporation, a significant Japanese investment and trading firm, for the procurement of 1.5 mtpa of LNG capacity from the Project."* does not apply to the current firm, Pembina, who are executing the JCEP project. The announcements were made by a previous company executing this project, Veresen, who are no longer involved in the JCEP. There is no evidence from permit applications, FERC submissions, or Pembina investor materials that these preliminary agreements are still in place. The same permit request included in the materials by staff also states, *"The Navigation Reliability Improvements NRI were determined to be necessary by the 2015 Asian customers"* providing further evidence that NRI #4 is not necessary to provide opportunities for economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Additionally the staff's conclusion from the information in Exhibit PP that, *"additional deep-draft vessel calls by international vessels would not be practicable or possible without the NRIs in place"* is false. As stated above the entire JCEP project can occur without the addition of NRI #4 because the US Coast Guard has certified the Coos Bay Federal Navigation Channel is adequate for all vessels.

The OAR 660-004-002(8)(b) rule to maintain adequate depth in Coos Bay to permit continuation of the present level of navigation means that navigation rights that were in existence when the JCEP application was filed should be protected. The NRI #4 dredging is not designed to permit continuation of the present level of navigation. It is designed to enhance navigation by adding NRI #4, an area outside the Federal Navigation Channel. Jordan Cove provides considerable evidence in a variety of permit

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requests and resource reports to show the Federal Navigation Channel is adequate for LNG tankers without NRI #4 as noted above.

3. The justification of public need/benefit is not supported.

CBEMP Policy #5 – Estuarine Fill and Removal Criteria C states that, “*Dredging and/or filling shall be allowed only if a public need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights.*” LCOG advises that, “*the local government cannot simply conclude “yes, it’s in the public interest.”*” To approve the proposal, the City needs to adopt a finding explaining what is relevant to that determination, and present evidence in the record for a “public interest” determination. The applicant bases the public interest on improved navigational ability.

On November 7, 2018 the applicant submitted a joint permit request to the Oregon Department of State Lands (DSL) and the US Army Corps of Engineers (ACE) who have yet to rule on the permit request. Page 2 of this permit provides further information from JCEP that refutes the “demonstrated need” for the Navigation Reliability Improvements. It notes that the Navigation Reliability Improvements were determined to be necessary by the 2015 Asian customers. This fails to demonstrate both that this request is in the public interest and Goal 9’s requirement that economic activities are vital to the health, welfare, and prosperity of Oregon’s citizens. Page 2 of the DSL/ACE permit was appended as a reference in my comments to the Coos Bay planning commission.

The JCEP DSL/ACE permit request on page 2 also states, “*Modeling showed that without the NRIs in place, the greater delays imposed by the Pilots on LNG ship transits of the channel due to environmental conditions would result in a potential annual loss of production at the facility equal to about 38,000 tonnes of LNG. This would equate to a direct loss of revenue of about \$8.0 million per year for the facility.*” JCEP proposes to export 7.8 million tons of LNG/year”. Without all four of the NRIs dredged they can export 7,762,000 tons (7,800,000 minus 38,000) which amounts to 99.51% of their anticipated output. . This insignificant reduction in production is not a reason to remove sediment that is supporting productivity in the Coos estuary in an area that is designated as natural aquatic.

Throughout the Coos Bay NRI #4 permit the applicant extols the fact that the NRI #4 addition is for all users of the channel, not just for LNG tankers. In no other documentation prepared for the JCEP is this assertion made. For example, in this application Exhibit BB, the Dredging Pollution Control Plan, states the purpose of the Navigation Reliability Improvements are to, “*permanently improve the width of the Federal Navigational Channel (FNC) by performing dredging in four specific areas within the first seven river miles of the Coos Bay FNC. This will provide safe access for LNG carriers through the FNC in Lower Coos Bay to the Jordan Cove Project site.*” There is no mention of other shipping activities.

Public Trust rights say that the State must manage submerged and submersible lands to ensure the collective rights of the public to fully use and enjoy this resource for commerce, navigation, fishing, recreation and other public trust values. The Coos Bay Estuary Management Plan’s Policy #5 indicates that the City shall support dredge and fill activities in the estuary **only** if the use or alteration does not unreasonably interfere with Public Trust Rights. The proposed use by LNG tankers associated with the Jordan Cove project will unreasonably interfere with these public trust rights including those associated with fishing, navigation and recreation. For example, initial and maintenance dredging of NRI4 will

result in a loss of productivity of the bay for growing commercial fish and shellfish. LNG ship passage has multiple implications for recreational crabbing as it will restrict the ability to undertake this activity because:

- The LNG ships can only transit Coos Bay in the Federal Navigation channel at high tide, due to the need for sufficient depth to ensure safe passage. Prime crabbing time is around high tide when the current in the bay slows and crabs are walking on the bottom feeding. At mid tide levels tidal currents are much stronger and crabs often bury themselves and are not available for harvest.
- The ships, and the tugs that will accompany them, will be required by the Coast Guard to have a safety/security zone of 500 yards around the vessels. When a ship and associated tugs are moving in and out of Coos Bay in the Federal Navigation channel there are a number of regions where it will not be possible for a recreational boat to safely move far enough away from the safety/security zone including the region of NRI #4.

4. Compliance with Goal 13 has not been demonstrated adequately.

Goal 13: Energy Conservation.

To conserve energy.

The applicant has not demonstrated compliance with Goal 13 because the applicant's evidence is insufficient to claim the proposed NRI will *"facilitate maximal energy conservation by increasing the safety and efficiency of vessel transit of the Channel, and by increasing the Channel's operational window"*. Neither has it provided evidence for details of how NRI #4 will, *"conserve energy that is currently wasted when, outside the Channel's operational window, vessels wait outside the Channel, using fuel and adding time and expense to transit."*

The information in Exhibit MM - *LNG Carrier Transit Energy Conservation with NRI's in Place: Navigation Reliability Improvements; City of Coos Bay Land Use Application #187-18- 000153* has no details of how the comparison between the environmental condition limits and historical environmental data was calculated. It does not provide any data for the environmental condition limits or historical environmental data that were used in determining the average transit delay of LNG Carriers into and out of the port during each month of the year. There is no way to verify the conclusion that, *"the average reduction in the total delay related to the LNG Carrier transit was 7 hours per port call."*

There are several other details regarding the timing of the transit of LNG vessels in and out of Coos Bay that the applicant has not included in their application, or their assessment of reduction in efficiency, which will have a much more significant effect on energy conservation than the NRI #4. First it should be noted that the transit time from Asia to the coast of Oregon is not a fixed amount, will vary for many reasons, and is going to be the major reason for energy use by the LNG vessels. On reaching the Oregon coast the configuration of Coos Bay is much more important in determining the timing of LNG tanker transit than the small dredged area of NRI #4. The depth of the current Federal Navigation Channel is 37 feet. Coos Bay experiences semi-diurnal tides meaning that there are two high tides and two low tides each day. One of the high tides is higher than the other and one of the low tides is lower than the other. LNG ships can only use the channel during some high tides as they do not have enough under keel clearance to transit the bay at any low tides, and on some days the lower high tide will not be high enough for the needed under keel clearance. None the less, the US Coast Guard has said the

Federal Navigation Channel is sufficient for LNG tanker use; but they will need to time their transits to coincide with high tides. A second detail that will influence transit time for LNG ships is the mismatch between the depths of the Federal Navigation Channel and the LNG Terminal slip. The LNG terminal slip is planned to be dredged to a depth of 45 feet so that an LNG tanker can still float at low tide. Because the Federal Navigation Channel is only 37 foot deep a berthed LNG tanker can only leave the terminal to transit Coos Bay at tides greater than 6 feet above mean low, low water to ensure that it has sufficient under keel clearance to enter the 37 foot deep Federal Navigation Channel as it starts its transit out of Coos Bay. These two factors alone are much more important in determining terminal berth availability and the timing and energy use of in and outbound LNG tankers than the small modification of NRI #4.

Additionally, Page 24 of Resource Report 11 for the JCEP terminal project submitted to the Federal Energy Regulatory Commission in Docket No. PF17-4-000 dated May 2017 states, “*The LNG Transit Management Plan will establish a specific set of weather conditions during which the entry or departure of LNG carriers will not be allowed. JCEP has determined, with the assistance of the local harbor pilots that these conditions occur approximately 10 days per year and when these conditions do occur, they are only in place for a period of approximately 12 hours. The clear majority of these conditions is caused by ebb tides and last a short duration.*” These details were not mentioned in Exhibit MM and show yet again that it is not NRI #4 that will determine the efficiency of LNG transits.

The applicant’s argument that other vessels using the Federal Navigation Channel will benefit from the NRI #4 dredging is also spurious. Whatever company purchases JCEP’s gas (as yet unknown) will undertake an additional 120 inbound and 120 outbound ship transits/year over the current Coos Bay ship calls. As only one vessel can transit the Federal Navigation Channel at a time, and because the LNG vessel will have a no-other-ship 500 foot security zone that accompanies it in the Federal Navigation Channel, there will be additional delays for other vessels waiting to enter and leave Coos Bay. They will have to wait for the LNG tanker to complete its transit to and from the terminal. JCEP assertion that NRI #4 will benefit other port users is not supported.

5. Compatible with other adjacent uses as indicated in OAR 660-004- 0020 (d) is inadequate.

A goal 16 exemption cannot be granted unless the proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts. The applicant fails to address this requirement as they do not include any measures to reduce adverse impacts and they only cite the Federal Navigation Channel as an adjacent use. They do not address the impacts on the 52-NA area that is adjacent to the proposed NRI #4. Dredging for NRI #4 will result in a continual movement of sediment from the undredged portion of the 52-NA area into the new deepened area of NRI #4 thus impacting the organisms and ecological services of the remaining 52-NA area. Additionally two other activities adjacent to the proposed NRI #4 will potentially be impacted:

- i. the 52- NA area east of NRI #4 is slated to be the site for JCRP eelgrass mitigation activities.
- ii. the activities associated with building the entrance slip to the JCEP terminal will take place on the western side of the FNC adjacent to the NRI #4 region.

The changes in the hydrographic regime and associated sediment transport associated with dredging for NRI #4, and any influence that it will have on the adjacent 52-NA area has not been addressed by the applicant.

6. Inadequacies in the applicants' response to dredging procedures, spills and discharges.

JCEP notes that they will use best management practices to avoid and minimize spills or discharges during dredging operations and dredged material transport. Page 12 of Exhibit 5 says that, "*JCEP would avoid and minimize oil spills or toxic discharges during dredging operations and dredged material transport, including the implementation of spill containment plans.*" For reasons hard to understand the staff included a 120 page Spill Prevention, Control, and Countermeasure (SPCC) Plan as Exhibit A.4 purported to detail these best management practices. It contains no reference however to NRI #4 and no details of any spill containment plans or other best management practices related to the dredging of NRI #4. Exhibit A.4 only addresses construction activities for the JCEP Liquefied Natural Gas Terminal Project. The applicant has failed to provide an adequate response to dredging procedures, spills and discharges for the NRI #4 location. Attachment F, Oregon Department of Environmental Quality's (ODEQ) response to JCEP's modeling, however, confirms that dredging at the Navigational Reliability Improvement locations would cause turbidity levels to increase above allowable numeric limits. Staff included JCEP's Dredging Pollution Prevention Plan in the attachments but has not been evaluated by ODEQ so it is not possible to say if the plan sufficiently demonstrates that JCEP has considered and proposed all practicable turbidity control techniques to avoid, minimize, and mitigate these effects as required by OAR 340-041-0036.

7. NRI #4 Impacts on Marine Mammals is incomplete.

NRI #4 is located to the east of the largest harbor seal resting and pupping site in Coos Bay. The applicant has failed to address impacts of noise and disturbance as a result of dredging activities and associated noise on these animals while they are resting on shore. The technical memo related to marine mammal noise disturbance included in the staff attachments deals only with underwater sounds. The assertion that harbor seals may be acclimated to dredging because of the annual maintenance dredging by the US Army Corps of Engineers is absurd. USACE maintenance dredging is not an annual event in the vicinity of NRI #4.

Respectively submitted,

A handwritten signature in cursive script, reading "Janet Hodder", is displayed on a light blue rectangular background.

Janet Hodder Ph.D.