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SUBMITTED VIA EMAIL (dominic.p.yballe@usace.army.mil)

U.S. Army Corps of Engineers
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RE: Comments on the Columbia River Crossing Clean Water Act Section 404 Dredge and Fill Permit Application, No. NWP-2008-414

The Northwest Environmental Defense Center ("NEDC") submits the following comments on behalf of itself and the Rosemere Neighborhood Association regarding the Oregon Department of Transportation's and the Washington Department of Transportation's (collectively, including the U.S. Federal Highway Administration and the U.S. Federal Transit Administration, "co-lead agencies") permit application for a Clean Water Act ("CWA") section 404 dredge and fill permit submitted to the United States Army Corps of Engineers ("Corps") for activities associated with the Interstate 5 Columbia River Crossing Project ("CRC"). Given its mission to protect the environment and natural resources of the Pacific Northwest, NEDC is especially concerned about the adverse environmental impacts that are likely to result from discharges of dredge and fill material associated with the CRC.

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). In furtherance of this goal, the CWA prohibits the discharge of dredged or fill material to waters of the United States unless authorized by a permit. *Id.* § 1311(a). The massive CRC project contemplates the discharge of 60,408 cubic yards of fill with a permanent impact on approximately 1.6 acres of waters of the United States. Such adverse impacts on the

Columbia River, a regional beauty and natural resource used by citizens of Washington and Oregon for recreation, navigation, and commerce, should be carefully and closely scrutinized.

Because the proposed CRC fails to conform to federal requirements under section 404 of the CWA and the project is likely to negatively impact the public interest, the Corps should deny the section 404 permit. In the alternative, NEDC requests that the Corps identify special conditions and limit the duration of the permit to reduce the probable negative effects. In the very least, the Corps should require the co-lead agencies to submit additional information to meet the Corps' own regulations that require the applicant to provide information sufficient for public notice and for the Corps to make a reasonable judgment as to whether the proposed discharges will comply with the Guidelines.

Background

In 2011, the co-lead agencies issued a Final Environmental Impact Statement ("FEIS") and Record of Decision ("ROD") that identified a replacement bridge for the Interstate 5 Bridge that would be 95 feet above zero Columbia River Datum ("CRD") ("95 foot bridge"). In November of 2012, the co-lead agencies published an internal re-evaluation to support a change in the bridge design that increased the vertical clearance to 116 feet above zero CRD ("116 foot bridge"). *See* Columbia River Bridge Vertical Clearance NEPA Re-evaluation, December 2012 ("Re-evaluation"). The co-lead agencies claim that the Re-evaluation is sufficient to meet their duty under the National Environmental Policy Act ("NEPA") to analyze the environmental impacts of the CRC.

On January 3, 2013, the co-lead agencies submitted an application for a section 404 dredge and fill permit to the Corps (and jointly to the Oregon Department of State Lands for a removal fill permit). *See* Joint Permit Application, Oregon Department of State Lands No. 52419 ("Permit Application"). The Corps posted public notice of the permit application on February 11, 2013. *See* U.S. Army Corps of Engineers Public Notice for Permit Application, No. NWP-2008-414, *available at* http://www.nwp.usace.army.mil/Missions/Regulatory/PublicNotices/ tabid/1889/ Article/ 10067/nwp-2008-414.aspx (last visited April 9, 2013) ("Corps' Notice"). In the meantime, on January 30, 2013, the co-lead agencies submitted an application for a general bridge permit to the

United States Coast Guard ("USCG"). The USCG denied the general bridge permit application as incomplete on March 8, 2013, and requested additional information. *See* March 8, 2013 Letter from K. A. Taylor to Paula Hammond, Washington State Department of Transportation, and Matt Garrett, Oregon Department of Transportation (attached hereto). Among other things, the USCG requested a preliminary assessment of the new navigational channels that would be required for the CRC and a reduction in the size of the Upper Vancouver Turning Basin, more specific information on mitigation for the direct adverse impacts to current users of the waterway, and more information on the economic impact on current and future river users. Despite the USCG's requests for additional information, NEDC is unaware of any supplements to the co-lead agencies' section 404 permit application submitted in early January.

Discussion

I. The permit application lacks information necessary for the Corps to make a compliance determination.

The CRC is a multi-year, multi-billion dollar project which should be reviewed at an appropriate level of scrutiny. Section 404 of the CWA authorizes the Corps to issuer permits for the discharge of dredged or fill material into navigable waters. 33 U.S.C. § 1344. Such permits must be compliant with regulations promulgated by the Environmental Protection Agency ("EPA"). 40 C.F.R. § 230 ("404(b)(1) Guidelines" or "Guidelines"). In this case, the permit application lacks the information and analysis crucial for the Corps to demonstrate that the CRC is compliant with the CWA or the Guidelines. First, the co-lead agencies' analysis under NEPA is legally flawed. The Corps should not rely on this NEPA analysis as the basis for issuing a section 404 permit under the Guidelines. Second, the co-lead agencies have not provided sufficient information to demonstrate compliance with the Guidelines, and thus the Corps should deny the permit application.

A. The Corps should not rely on the environmental analysis in the co-lead agencies' legally flawed FEIS.

Recent changes to the CRC and new information demonstrate that the CRC will have significant environmental effects that were not considered in the FEIS and thus necessitate the preparation of an SEIS. Regulations under NEPA require the preparation

of a Supplemental EIS ("SEIS") if the "agency makes substantial changes in the proposed action that are relevant to environmental concerns" or if there "are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c). Changes to the bridge design and new studies conducted since the co-lead agencies issued the ROD demonstrate that the CRC will have significant environmental effects that were not considered in the FEIS. Unless and until the co-lead agencies complete an SEIS, the analysis in the FEIS and related documents is legally flawed and should not become the basis for the Corps' analysis under the CWA.

The co-lead agencies have an ongoing duty to prepare an SEIS that accounts for recent changes to the CRC. The Council for Environmental Quality's ("CEQ") regulations define "significantly" as encompassing both context and intensity. *Id.* § 1508.27. Intensity refers to the severity of the impact, which includes, *inter alia*, beneficial and adverse impacts, the degree to which the proposed action affects public health or safety, the unique characteristics of the geographic areas, the potential for controversy, uncertainty of the impacts, and adverse effects on listed species or critical habitat. *Id.* Based on these considerations, the change in the CRC bridge design since the issuance of the FEIS and ROD presents a significantly different picture of the environmental impact of the proposed project from what was previously envisioned.

For example, the CRC will have immediate and direct adverse impacts on navigation due to the low clearance level that were not considered in the FEIS. At least one business claims it will go out of business because the proposed height of 116 feet is too low. The CRC general bridge permit application identifies direct economic impacts to three industrial fabricators as a result of the lower vertical bridge clearance. CEQ's regulations define "effects" to include economic effects. 40 C.F.R. § 1508.8(b). The direct and immediate economic impact to businesses upstream from the proposed CRC is a significant effect that the co-lead agencies failed to consider in the FEIS. The 2012 Navigation Impact Report ("NIR"), completed by the co-lead agencies in November of 2012, supplements the FEIS with new information and analysis, but fails to cure the need for an SEIS. Even assuming, *arguendo*, that the NIR is legally sufficient to supplant the need for an SEIS, the analysis provided in the NIR regarding direct economic impacts to

river users upstream from the proposed CRC is inadequate.

In addition, the FEIS lacks specific information regarding how the co-lead agencies anticipate mitigating the direct impacts to navigation that will result from a lower clearance than what the existing bridge provides. For example, the co-lead agencies should provide the specific types of mitigation being considered for each user, key milestones for achieving mitigation agreements and completing the mitigation itself, an analysis of the feasibility of the proposed mitigation, and an assurance that the mitigation process is timely proceeding.

The 2012 bridge design that increased the vertical clearance from 95 feet to 116 feet means there will be a steeper grade along the bridge than was considered in the FEIS. In Oregon, the mainline grade of I-5 increased from 2.8 to 3.7 percent. In Washington, the mainline grade of I-5 increased from 3.4 to 4.0 percent. Steeper grades result in poor site distances, which increases risks to public safety and runs contrary to the stated purpose and need to, *inter alia*, improve travel safety and traffic operations. Steeper grades may also pose a greater risk of harm from stormwater runoff. The NIR and Re-evaluation fail to address whether the steeper slopes will require changes to the stormwater management plan for the bridge and its interchanges.

Due to the change in height and corresponding increased horizontal span, it is likely that the new bridge design will have a different footprint than that analyzed in the FEIS. Although the Re-evaluation states the bridge and its approaches will be longer, it fails to explain how these longer distances will not result in an increased footprint. Re-evaluation pages 4-1 to 4-2. In *The Piedmont Environmental Council v. U.S. Dept. of Transportation*, the district court determined that the Federal Highway Administration should have prepared an SEIS for the modification of termini for a proposed highway bypass project where the agency's review of the environmental consequences in an Environmental Assessment prepared after modifications were proposed provided insufficient detail to ensure the environmental consequences of terminus shift were fairly evaluated. 159 F. Supp. 2d 260 (W.D.Va. 2001). Here, too, the co-lead agencies have failed to provide sufficient detail to ensure the environmental consequences of the design change were fairly evaluated. A longer bridge and longer approaches will necessarily result in a larger footprint, which is likely to have significant environmental impacts.

Because these environmental impacts were not considered in the FEIS, an SEIS is necessary.

The Corps cannot and should not rely on the legally flawed analysis in the FEIS, ROD, NIR or Re-evaluation when determining whether the proposed dredge and fill activities for the CRC comply with the Guidelines. Before adopting the co-lead agencies' FEIS, the Corps has an independent duty to ensure that the analysis complies with NEPA. *See* 40 C.F.R. § 1506.3(a) (explaining that an agency may adopt a FEIS "provided that the statement . . . meets the standards for an adequate statement under these regulations."). The Corps also has a duty to ensure compliance with the Guidelines, and reliance on another agency's arbitrary and capricious analysis under NEPA does satisfy that duty. Although in most cases the analysis required under NEPA will provide sufficient information for the Corps' determination of compliance with the Guidelines under the CWA, where the NEPA analysis is insufficient in detail the Corps is required to supplement the NEPA documents with additional information. 40 C.F.R. § 230.12(a)(3)(i-iv). Because the FEIS and related documents are legally flawed, the Corps must supplement the NEPA documents with additional information to support its determinations under the Guidelines.

B. The co-lead agencies fail to provide information necessary for the Corps to make a compliance determination.

Pursuant to the Guidelines "the compliance evaluation procedures will vary to reflect the seriousness of the potential for adverse impacts on the aquatic ecosystems posed by specific dredged or fill material discharge activities." 40 C.F.R. § 230.10. The burden of proof to demonstrate compliance with the Guidelines rests with the applicant and where insufficient information is provided to determine compliance, the Guidelines mandate that no permit may be issued. 40 CFR § 230.12(a)(3)(iv). *See also Utahns for Better Transportation v. U.S. Dept. of Transportation*, 305 F.3d 1152, 1187 (10th Cir. 2002) (determining that the Corps' issuance of a section 404 permit "with insufficient information . . . was arbitrary and capricious").

An application must include, *inter alia*, "a complete description of the proposed activity including necessary drawings, sketches, or plans sufficient for public notice . . . ; the location, purpose and need for the proposed activity" and "scheduling of the activity."

33 C.F.R. § 325.1(c). In addition, an application must include "environmental data and information on alternative methods and sites as may be necessary for the preparation of the required environmental documentation." *Id.* § 325.1(e). *See also id.* § 325.2(a)(4) (directing the district engineer to follow 33 C.F.R. Part 230 for documentation required under NEPA). Here, the co-lead agencies have failed to provide sufficient information for the Corps to determine whether the discharges of dredge and fill material comply with the Guidelines.

The regulations promulgated by the Council on Environmental Quality ("CEQ") under NEPA require an FEIS be made available to the public. *See* 40 C.F.R. § 1502.19. *See also id.* § 1506.6. Yet the alternatives to the CRC were not included in the co-lead agencies' permit application that was posted on the Oregon Department of State Land's website or in the Corps' public notice. Large sections of Chapter 2 of the FEIS were missing from the application materials. Sections 2.3 - 2.7 of the FEIS, nearly half of the chapter dedicated to alternatives, were not publicly available. These sections were also not available on the co-lead agencies' own website, www.columbiarivercrossing.org. The only place where the chapter could be located in its entirety was is in an official hard copy of the FEIS.

The application materials also contain inconsistent statements regarding whether the project area includes jurisdictional wetlands. For example, the permit application claims on one hand that the project will not impact jurisdictional wetlands, *see* Permit Application Attachment A, section 3.2, but at the same time acknowledges the existence of wetlands in the project area and explicitly states that the applicant has not determined the extent to which wetlands exist. In section 5.4 of the permit application it states that "[n]o jurisdictional wetlands will be impacted in Oregon during construction or operation." Page 4 of the permit application form also indicates that freshwater wetlands are not a water resource affected by the project. However, section 5.3.2 of the permit application describes wetland delineation studies that indicate the presence of wetlands within the project area. Section 5.3.3, describing affected species, also describes the existence of wetlands in the project area.

The determination of whether wetlands will be impacted is crucial to the Corps' analysis under the Guidelines, as it will dictate whether the permit applicant faces a

presumption that alternatives with lesser environmental impacts exist. *See* 40 C.F.R. § 230.10(a)(3). Wetlands are a special aquatic site. *Id.* § 230.41. Although the CRC is water dependent insofar as its purpose is to provide transportation over the Columbia River, the CRC does not require proximity or siting within the wetlands that appear to be within the project area. Rather, any impact to these wetlands is likely a side effect of the CRC's siting. The lack of clarity regarding the location and impacts to wetlands prevents the Corps from completing the analysis required by EPA's regulations.

The failure to clearly identify impacted wetlands also runs directly contrary to the overarching policy in the Guidelines, which states that "[f]rom a national perspective, the degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these Guidelines." 40 C.F.R. § 230.1(d). Furthermore, the application fails to list or analyze the specific pollutants that will be generated in the building and operating of the CRC, the location and description of the storm water treatment facilities to be built, and the effect of cofferdams on total suspended solids ("TSS") and turbidity levels.

The CRC permit application states that drilling in the Columbia River Mainstem to create foundations for the bridge will produce drill waste, slurry, and water, to be disposed of in "appropriate upland disposal." *See* Corps' Notice. *See also* Permit Application, page 20. The location of the primary destination of said waste, slurry and water is not disclosed and alternative sites for the upland disposal are not suggested or considered. No discussion may be had as a part of the commenting process in the absence of this information.

Question: How can the Corps evaluate the applicant's compliance when the scale of the proposed project is indeterminate?
Question: What is the co-lead agencies' plan for disposing of the contaminated waste, slurry and water that will result from construction of the bridge, and what are the alternatives to that plan?

Not only does the failure of the applicant to provide essential information counsel against issuing the section 404 permit, but this void resulted in the Corps' violation of its

own regulations by preventing meaningful public comment. Pursuant to the Corps' own regulations, to provide for meaningful public comment that allows the Corps to evaluate the probable impact on the public interest the Corps' notice must "include sufficient information to give a clear understanding of the nature and magnitude of the activity." 33 C.F.R. § 325.3(a). The public notice should include, *inter alia*, "other available information which may assist interested parties in evaluating the likely impact of the proposed activity, if any, on factors affecting the public interest." *Id.* § 325.3(a)(13).

As noted, the analysis of practicable alternatives was not made available to the public for comment. This goes against the Corps' policy to provide a public commenting period because the vast majority of the public would not be able to comment on the alternatives to the project at hand.

Question: Why was the complete alternatives analysis not included in the permit application or a complete version of the FEIS not available online to the public?

The Guidelines provide that a section 404 permit may not be issued if "there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines." 40 C.F.R. § 230.12(a)(3)(iv). Without the information identified above, it is impossible for the Corps and the public to have adequate information to understand the potential impacts of the CRC and assess whether mitigation is possible. For these reasons alone the Corps should deny the CRC application for a section 404 permit.

II. The proposed dredge and fill activities do not conform to the Guidelines.

Any permit that does not conform to the Guidelines is invalid. *Bersani v. Robichaud*, 850 F.2d 36, 39-40 (2d Cir. 1988), *cert denied*, 489 U.S. 1089 (1989). The CRC, as proposed, is inconsistent with the Guidelines. Thus the Corps should deny the proposed section 404 permit.

First and foremost, the CRC fails to conform to the Guidelines because the statement of purpose and need is improper. As a result, the applicant failed to analyze a reasonable range of alternatives and ignored a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem and which

would not have other significant adverse environmental consequences. Second, the proposed discharges are likely to cause or contribute to violations of State water quality standards. Third, the proposed discharges will jeopardize the continued existence of listed species. Fourth, the discharge is likely to cause or contribute to significant degradation of the waters of the United States. Finally, the mitigation proposed to offset the adverse impacts of the proposed discharges fails to provide adequate protection and ensure no net loss of wetlands. Because the dredge and fill activities related to the CRC are not consistent with the Guidelines, the Corps should deny the applicant's request for a section 404 permit.

A. The statement of purpose and need is not clearly defined or supported, resulting in the failure to consider a reasonable range of alternatives.

Relying on an unsubstantiated statement of purpose and need, the applicant produces an insufficient range of alternatives and fails to adequately discuss the environmental impacts of the proposed alternatives. The applicant incorrectly assumes that the NEPA analysis is proper, it is unclear if the alternatives from the FEIS are automatically incorporated, and the applicant fails to analyze a no-build alternative. Of the alternatives considered, the applicant fails to provide a sufficient explanation for why the CRC is the least environmentally damaging alternative. Based on the faulty purpose and need and the failure to consider a reasonable range of alternatives, the Corps should deny the application for a dredge and fill permit.

1. The Corps should clarify the basic statement of purpose and need.

The Corps has an independent obligation to define the project purpose and need "from both the applicant's and the public's perspective," 33 C.F.R. Part 325, App. B, Section 9(b)(4), and need not accept the applicant's statement of purpose and need. A purpose and need statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. The purpose should be *basic*. *Id.* § 230.10(a)(3) (emphasis added). *See also* U.S. Army Corps of Engineers Memorandum, Permit Elevation, Plantation Landing Resort, Inc. (April 21, 1989) (noting that an "essential aspect" of the Guidelines' alternatives analysis "is to decide what is the 'basic purpose' of the planned activity").

The co-lead agencies' statement of purpose and need is not basic. The co-lead agencies provide a paragraph to explain the statement of purpose and need. *See* Permit Application at 4. It states that the purpose is to "improve I-5 corridor mobility," "travel safety and traffic operations," "connectivity, reliability, travel times and operations of public transportation," "highway freight mobility" and "interstate travel and commerce," and the "structural integrity" of the bridge. This laundry list of purposes is far from basic. The permit application goes on to describe congestion, freight movement, public transportation, safety, and seismic vulnerability as needs for the CRC. It is essential that the Corps reduce these articulations to a basic statement of purpose and need, since that statement will determine the scope of the alternatives analysis.

2. The applicant's statement of purpose and need lacks sufficient support.

The dearth of academic or scientific references in the purpose and need statement does not comport with the magnitude of the CRC. Blanket assertions on topics as varied as traffic predictions, causal explanations of anonymous auto accident statistics, and editorial conclusions on the subject of bicycle riding are examples of un-sourced data in the statement of need. If relied on by the Corps, these statements must be independently verified by the agency. 40 C.F.R. § 1506.5(a) (stating that "[t]he agency shall independently evaluate the information submitted and shall be responsible for its accuracy" and that "[i]t is the intent of this paragraph that acceptable work not be redone, but that it be verified by the agency"). The Corps will ultimately be responsible for the accuracy of this information.

Question: What are the factual bases of the assertions of purpose and need?

The lack of substantive support for the stated purpose and need is another reason for the Corps to develop its own statement of purpose and need. *See* Memorandum from M. Peters, FHWA Administrator, and J. Dorn, FTA Administrator, to FHWA Division Administrators and FTA Regional Administrators, "Guidance on 'Purpose and Need'" (July 23, 2003). Because the applicant fails to support the statement of purpose and need, the Corps should deny the permit application or seek the information necessary as a foundation for these blanket statements.

3. The applicant's discussion of alternatives is inadequate.

The Guidelines require an investigation of practicable alternatives and state that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." 40 C.F.R. § 230.10(a). The requirement that the proposed action be the least environmentally damaging practicable alternative ("LEDPA") reflects the fundamental policy of the Guidelines: "the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern." *Id.* § 230.1(c). *See also* 45 Fed. Reg. 85,340 (Dec. 24, 1998) (noting that "if destruction of an area of waters of the United States may reasonably be avoided, it should be").

To make this determination, the Corps must consider a *reasonable range* of practicable alternatives. The permit application submitted by the co-lead agencies and the FEIS prepared under NEPA fail to consider a reasonable range of practicable alternatives. Although the Corps may generally rely on the analysis of alternatives required under NEPA, 40 C.F.R. § 230.10(a)(4), this assumes that the NEPA analysis was proper. As explained above, the FEIS, ROD, NIR and Re-evaluation related to the CRC do not meet NEPA's requirements and portions of these are currently being challenged in litigation. What's more, the analysis in these documents insufficiently analyzes the impacts of the alternatives that have been identified. The Corps must, as the Guidelines direct, "supplement these NEPA documents with . . . additional information." *Id.* § 230.10(a)(4).

First, the co-lead agencies fail to analyze a reasonable range of practicable alternatives. The Guidelines require practicable alternatives that at least consider activities that do not involve a discharge of dredged or fill material into waters of the United States and discharges at other locations. 40 C.F.R. § 230.10(a)(1). Here, the permit application identifies only 4 alternatives. The differences between these alternatives are minor. Plus, the co-lead agencies chose to follow all of the proposed

"alternatives." For example, the applicant identifies the use of a vibratory hammer as an alternative to an impact hammer that will reduce damage to aquatic habitats. While this example is useful and diligent in its spirit, the permit drafters have elided an ocean of potential alterations and configurations that would meet the proposed need.

The applicant did not consider any alternatives that were significantly different from the plan chosen. This essentially means that these are not alternatives to the proposed plan, but actually just the proposed plan. In addition, none of the alternatives are shown to address the purposes and needs on a different basis than the proposed project.

Question: How can the Corps evaluate CRC's compliance in the absence of an analysis of a reasonable range of alternatives?

The applicant fails to analyze alternatives that are practicable and would result in less environmental damage to waters of the United States. According to 40 C.F.R. § 230.10(a)(2), practicable alternatives are those available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. A practicable alternative need not meet the entire purpose and need when considered in isolation. *See, e.g.*, *Citizens Against Toxic Sprays v. Bergland*, 428 F. Supp. 908, 933 (D. Or. 1977) ("An alternative may not be disregarded merely because it does not offer a complete solution to the problem"). The Corps has a duty to consider a reasonable range of alternatives that meet the project's purpose and need, including an alternative that combines different plans.

The CRC plan is inherently modular, yet is presented in all-or-nothing fashion. Instead, alternate and various combinations of the Hayden Island Interchange, bridge demolition, transit extension, and North Portland and Columbia River bridges should be assessed individually. For example, the transportation, shipping and safety concerns cited as part of the project need are individually remediable. Particularly in light of the contingent basis of the Hayden Island Interchange, an assessment of each individual project goal and its practicable alternatives will provide a clearer picture for the Corps' review. Surely the economic and technological alternatives will vary by volume and

duration of construction activity. It is therefore not possible that the alternatives stated represent a reasonable range, owing to the fact that the duration and extent of the project itself are not determined.

The applicant should have analyzed a phased, no-build alternative. The applicant assumes the problems with the existing bridge can only be remedied by a building a newer, bigger bridge. This is incorrect. By focusing on a single new bridge as the solution, the applicant improperly ignores reasonable alternatives that would meet the stated purpose and need. For example, a phased, no-build alternative would meet the purpose and need to improve transportation facilities but with a lesser adverse environmental impact than the chosen alternative. This alternative would include tolling on the existing bridge to fund projects to address current seismologic issues and fixing the existing railroad bridge to match the vertical clearances of the existing bridge, thereby avoiding the need for S-curve maneuvers and reducing the overall number of lifts required. Assuming traffic issues on the bridge continued even after imposition of a toll, construction of an arterial bridge adjacent to the existing bridge would alleviate congestion and provide an opportunity to include improvements for alternative modes of transportation, including bike, pedestrian, and light rail. This is just one of many practicable alternatives that should have been considered, but that the applicant failed to analyze.

By reducing its analysis to only consider alternatives consisting of a single new bridge, and ignoring options for phased construction or retrofitting existing structures, the applicant ignored practicable alternatives that would meet the purpose and need with less environmentally damaging impacts, in contravention of the Guidelines. This blatant disregard for the required analysis warrants the Corps' denial. At the very least, the Corps should require the applicant to revise its alternatives analysis to consider practicable alternatives, like the one suggested above, that will meet the needs of the CRC but result in lesser adverse impacts to waters of the United States.

Second, the analysis of the four identified alternatives is inadequate. The applicant's proposed alternatives section is improperly focused on why the proposed plan was chosen rather than distinguishing why alternative plans were disregarded. The first alternative discusses the reduction in the number of drilled shafts and the amount of

piling driving. The original plan is vague, only saying that they proposed to drive "numerous" steel piles and that the new plan "significantly reduces" the amount of the pile driving, the size of the piles, and the amount of noise in the water. These terms are not only vague but relative, giving no indication of the actual differences between the two plans. The permit discusses how damaging the original plan was, but gives no indication for what "significantly reduces" might actually mean.

Question: Are any of the details about projected impacts contained in the FEIS?
Question: What are the specifications or projections for the total amount of pile driving in the plan?
Question: Specifically how many piles have been reduced in the chosen alternative, as compared to other practicable alternatives?

The second alternative considers the overall design of the bridge. An earlier proposal considered three bridges crossing the Columbia River. Ultimately, however, to reduce the temporary and permanent impacts of the project, a "stacked alignment" reducing the number of piers in the water was adopted. In the applicant's alternatives analysis these are the only two proposals for bridge design. More alternative bridge plans were considered in the FEIS. The FEIS considered five alternatives, the first being a no build option. Although the purpose statement is written in light of a "No-Build Alternative," it is on a minute scale.

Some alternatives in the FEIS were quickly dismissed but could have been practicable and had less environmental impact, such as a higher level bridge with a higher clearance. *See* CRC FEIS, pages 2-72. The alternative designs that were quickly dismissed had no information relating to the environmental impacts of those choices, focusing only on the impacts to transportation.

Question: Are the alternatives from the FEIS automatically incorporated, and if so, how does the analysis of the environmental impacts of those alternatives comport with the water quality specific analysis required under the Guidelines?

Question: Did the additional alternatives in the FEIS meet the statement of purpose and need?
Question: Are five alternatives sufficient for a project of this scale?
Question: Why was the only other alternative bridge plan considered a variation of the bridge plan that was decided on?

Alternatives two and three are identical except for the mode of public transportation used. The third alternative discusses a reduction of in-water pier complexes from 21 to 12. This alternative is more about supporting the plan that the co-lead agencies have chosen than explaining why the alternative plans is eliminated. Moreover, it is essentially restating the second practicable alternative. The second alternative states that the new plan will reduce the in-water pier complexes by approximately a third, and that is the sole issue discussed in this alternative.

Question: How is the second practicable alternative different from the third?

The fourth alternative cannot reasonably be called an alternative because it merely discusses the plan for treating stormwater. The FEIS analysis of the differences between the supplemental and replacement crossings states that both plans would add new stormwater management facilities. This is not an alternative if the applicant already stated in the original plan its intent to "remove most of the pollutants in the stormwater runoff from the I-5." The applicant also states that the project intersects with several jurisdictions and the strictest requirements will be utilized, but it is unclear which jurisdiction these come from and how those standards will be attained. The alternatives analysis discusses the options of which jurisdictional standards to apply, as if there might be a choice as to which regulatory scheme the CRC is subject to.

Question: Does the Corps have the authority to consider different jurisdictional standards that apply to the CRC?
Question: What specific jurisdictional requirements will the treatment be held to?

Question: How does the applicant plan to attain the high standard of stormwater treatment, and does that plan provide sufficient assurance to the Corps regarding protection of water quality standards in the Columbia River?

The analysis mentions only that stormwater treatment would not be as thorough with a supplemental river crossing. Otherwise, the environmental impact for all of the proposed alternatives is very similar. At bottom, the environmental impact of each alternative is not adequately discussed.

B. The proposed discharges are likely to cause or contribute to violations of state water quality standards.

A permit may not be issued if the discharge of dredged or fill material "causes or contributes, after consideration of disposal site dilution and dispersion, to any violations of any applicable state water quality standard." 40 C.F.R. § 230.10(b)(1). To determine whether or not a large-scale project such as the CRC will contribute to a violation of an applicable state water quality standard, substantial information needs to be provided by the applicant and analyzed by the Corps.

As noted above, the permit application materials and FEIS lack essential information. Specifically, the applicant has not identified or analyzed specific pollutants that will be generated in the construction and operation of the CRC, the location and description of the storm water treatment facilities to be built, and the effect of cofferdams on TSS and turbidity levels. Without this information, it would be premature for the Corps to authorize the permit. The Corps should require the applicant to provide more information to ensure the CRC will not interfere with Oregon's and Washington's applicable water quality standards.

1. The applicant fails to identify which state water quality standards apply and inappropriately suggests that historic lack of enforcement might excuse compliance.

Oregon and Washington implement different water quality standards in various waters. This is especially true with regard to storm water discharges. While the applicant acknowledges that the two states' storm water management goals "differ significantly" and that the differences "can have an impact on the size of water quality

facilities required," the vague description of the facilities that will be used in storm water discharge treatment provided in the permit application warrant concern and should be closely analyzed by the Corps.

Question: Will the project meet Washington's or Oregon's specific water quality standards? Which standards apply, and where?

Oregon's water quality standards require that all discharges from contributing impervious areas ("CIA") undergo treatment regardless of the degree to which the different surfaces are likely to contribute greater flow or pollutants. The FEIS makes the repeated claim that proceeding with the locally preferred alternative ("LPA") will reduce the total amount of untreated pollutant generating impervious surface ("PGIS") from 219 acres to zero acres.

Question: What level of "treatment" does the CRC propose?
Question: How many acres of impervious surface will be added as a result of the project, compared to what currently exists is projected in the area?

Despite the requirement for treatment, the CRC's permit application states that this standard "is not consistently applied within Oregon." In making this statement, the applicant provides one example of the standard not being enforced in an attempt to justify a general trend of lack of enforcement.

Question: What is the authority for the proposition that a standard or regulation should not apply simply due to lax enforcement?

The idea asserted by the applicant, that lack of enforcement of a water quality standard might somehow render that requirement null, runs contrary to the purpose of 40 C.F.R. § 230.10(b)(1), which serves to ensure that no state water quality standard will be violated during a dredge or fill activity. While the permit application materials plainly recognize that Oregon has more stringent water quality standards, the applicant follows

up that recognition by attempting to undermine the standards. Simply stating that the standards are "not consistently applied within Oregon" does not negate the fact that Oregon requires the treatment of storm water that is discharged from all CIA.

2. The applicant's vague plans to treat stormwater do not ensure that the project will not cause or contribute to a violation of water quality standards.

The permit application provides insufficient support for the Corps to make the determination and ensure that the proposed discharges will not cause or contribute to a violation of water quality standards. First, the permit application lacks a Spill Prevention, Control and Countermeasures Plan as required for public notice and to ensure protection of wetlands. Second, the co-lead agencies disregard significant impacts on jurisdictional wetlands and surrounding wetland buffers in their analysis of the impacts that will result from construction of the CRC. Finally the application fails to consider the project's impacts to floodplains. Because the co-lead agencies and the Corps cannot ensure that the proposed discharge will not cause or contribute to a violation of water quality standards, the Corps should deny the permit application, consistent with directives set forth in the Guidelines.

a. The application lacks a Spill Prevention, Control and Countermeasures Plan as required for public notice and to ensure protection of wetlands.

Section 5.2.2 of the application provides for the future preparation of a Spill Prevention, Control, and Countermeasures (SPCC) Plan prior to beginning construction. The Plan will be developed and implemented in compliance with ODOT Standard Specification 00290.00 and 00290.90. *See* Permit Application, Section 5.2.2. The relevant Oregon specifications outline the duties and obligations of the Contractor in relation to protection of the waters of the State. Notably, Specification 00290.00 requires that the Contractor comply with all applicable federal, State, and local environmental laws.

The applicant's stated compliance measures—or lack, thereof—employ circular reasoning to avoid stating any substantive methods for preventing or controlling spill pollution. The applicant is essentially stating that it will comply with the CWA by complying with Specification 00290.90, which requires compliance with the CWA. This

presents obvious problems in terms of assessing compliance. It is imperative that the public have an opportunity to evaluate the applicant's SPCC plan at this stage in the process. Allowing the applicant to postpone development of the plan effectively circumvents public oversight of an integral aspect of the CRC construction project. This creates the potential for significant loss of ecological values within the Columbia watershed, especially in light of the fact that the FEIS identified a wide array of potential sources of toxic pollutants. *See* FEIS at 3.14.4. Prior to approval, the Corps should require the applicant to develop a full SPCC so that can be evaluated through a public commenting period. This would ensure that plans exist to effectively avoid spills, as well as minimize their effects if they do occur, in compliance with the Guidelines.

According to the EPA:

> [T]he degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these Guidelines. The guiding principle should be that degradation or destruction of special sites may represent an irreversible loss of valuable aquatic resources.

40 C.F.R. § 230.1(d).

EPA has implemented a "no overall net loss" policy for any activities causing degradation to wetlands. *See* Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines, 55 Fed. Reg. 9210 (Mar. 12, 1990) ("MOA"). In response to continued public comments regarding potential impacts to jurisdictional wetlands in the Main Project Area, the application provides the public with the conclusory statement that "[n]o jurisdictional wetlands will be impacted in Oregon during construction or operation of the CRC project." Permit Application at section 5.5. However, this conclusion seems to be at odds with the FEIS, which states that the footprint of the CRC will encroach upon three wetland buffers and that this encroachment will "introduce more impervious surface in the vicinity of project wetlands and bring highway traffic closer to wildlife within the wetlands." FEIS at 3.15.3. In fact, the FEIS stated that the long-term effects to such wetlands "are expected to be small," which leaves the public wondering what new research led the applicant to alter its

prediction from "small" impacts to "no" impacts. *Id.*

b. The application disregards significant impacts on jurisdictional wetlands and surrounding wetland buffers.

It is crucial that the applicant does not downplay even minimal potential impacts to jurisdictional wetlands, especially in light of EPA's stated "no net loss" policy. *See* MOA. The applicant also seeks to downplay the direct effects resulting from construction activities that encroach upon wetland buffers. However, construction and stormwater impacts on these sensitive areas are likely to affect the wetlands themselves. This is especially true in the Victory Interchange construction project area, where substantial increases in impervious surfaces could lead to impacts related to significant increases in stormwater discharge. The applicant has failed to provide adequate information regarding the expected stormwater increase, nor has it developed a plan for treatment and discharge. As a result, it is not possible for the public to meaningfully assess potential impacts on the jurisdictional wetlands in the project area, nor can we readily accept the conclusion that the "small" effects expected under the FEIS have inexplicably been negated in the absence of any notable design changes.

The applicant has not adequately addressed concerns related to wetland buffer areas, which "provide habitat or corridors necessary for the ecological functioning of aquatic resources." 40 C.F.R. § 230.93(g)(2)(i). The EPA has delegated to the Corps the authority to require the "restoration, establishment, enhancement, and preservation" of wetland buffers "to ensure the long-term viability of those resources." *Id.* Both Oregon and Washington have also promulgated standards for appropriate wetland buffers which are based largely on the specific characteristics of the wetland and the potential perturbations from adjacent land uses. Wetland Mitigation Banking Guidebook for Oregon at 5-13.

The applicant does not allow for an adequate wetland buffer around sites affected within the project area. According to the FEIS, filling activity will occur within a 50-foot wetland buffer at the Victory Interchange Wetlands and Kiggins Bowl Wetlands. FEIS Exhibit 3.15-7. As the applicant admits, this will lead to increased impervious surface in the vicinity of the project wetlands and will bring highway traffic closer to wildlife. Based on their urban location, both of these wetlands are already negatively affected by

their surroundings, leading to an obvious conclusion that they are "highly sensitive" under the relevant state standards. Additionally, their proximity to heavy vehicular traffic subjects them to a high potential for perturbation. Therefore, these wetlands should be protected by a substantial buffer, very likely the mandated maximum buffer of 200 feet.

The applicant has only allocated a 50-foot buffer around these sites and project construction will encroach on this minimal buffer, subjecting the protective barrier to fill activities, increased runoff, and increased vehicular traffic. The resulting impacts to the buffer and the wetlands themselves will likely include: degradation to vegetation; water pollution increases resulting from stormwater run-off; disturbances to wildlife relating to increased vehicular noise; and, diminished air quality related to expected increases in vehicular traffic. Based on this analysis, it is clear that the applicant cannot substantiate its claim that "[n]o jurisdictional wetlands will be impacted in Oregon during construction or operation of the CRC project." Permit Application 5.5. The Corps should require the applicant to provide practicable alternatives to this construction, or evidence explaining why no practicable alternatives exist. If this is the case, CRC is required to provide sufficient compensatory mitigation, in compliance with EPA's stated "no net loss" to wetlands policy.

The applicant also dismisses concerns related to the Burnt Bridge Creek wetlands by stating that they "are already negatively affected by the urbanized environment." FEIS at 3.15.3. However, it is irresponsible for the applicant to ignore consideration of potential degradation to these wetlands simply because they are already significantly degraded. Burnt Bridge Creek is listed by the EPA as an Impaired Water, and the Washington State Department of Ecology is currently implementing a program to establish a Total Maximum Daily Load to remedy failed water quality standards. The applicant should be required to provide further information to explain how it proposes to avoid, minimize, or mitigate potential impacts, rather than treating Burnt Bridge Creek as doomed and undeserving of CWA protection.

Overall, it is clear that the proposed construction work will cause degradation to several wetland buffers, which will inevitably lead to impacts on the wetlands themselves. The applicant has not provided adequate information explaining how such impacts are unavoidable, nor has it explained any methods by which these impacts will

be minimized. If impacts to wetland systems are, indeed, an unavoidable corrolary of the CRC project, then the applicant should be required by Corps to propose further compensatory mitigation in compliance with EPA's stated "no net loss" policy.

c. The application fails to consider the project's impacts to floodplains.

Executive Order 11988 and local and state regulations require more detailed analysis of floodplain impacts, including a no-rise analysis, prior to project approval. The FEIS states "a further analysis will be completed when a more detailed design of bridge piers is available and prior to permitting." FEIS at 3.14.3. However, no such analysis is contained in the permit application, though such considerations are extremely relevant given the expected long-term water displacement and flow alterations which will necessarily result from in-water construction. Inadequate consideration of potential floodway alterations could have severely detrimental impacts. Foremost, flooding in the Columbia River and North Portland Harbor would severely disrupt residential communities and economic activity in the region. As a corollary, river encroachment into the surrounding areas would lead to a tremendous amount of pollutant introduction into the river.

Prior to permitting, the Corps should require the applicant to conduct the legally mandated floodplain impact evaluation, rather than allowing the continued postponement of this analysis to some future time when the public will no longer be able to meaningfully consider the effects as part of the proposed project. Such evaluation is necessary to determine if the applicant is adequately considering the necessary avoidance measures to prevent substantial hydrological consequences that would result from river intrusion into the floodway area.

3. The permit application lacks information essential for the Corps to ensure that the discharges will not cause or contribute to a violation of water quality standards.

Overall, the lack of information in the permit application materials and the FEIS makes it difficult to conduct a proper analysis on the CRC's likely effect on applicable water quality standards. Primarily, the failure to mention of specific pollutants that are likely to be present in storm water runoff makes the analysis very difficult because it

forces a reader to accept the applicant's assumptions that the proposed storm water treatment facilities, which have not been described in any notable detail, will simply take care of the runoff and thus cause no adverse effect on the water quality in local water bodies. The lack of information regarding the pollutants involved and the treatment facilities makes a water quality analysis impossible. By merely mentioning the pollutants associated with the project as those involved in "typical highway runoff," the application forces its readers to assume the various pollutants and amounts. Simply saying that water quality facilities will be provided "where practical and cost effective" is also insufficient.

The statement regarding "typical highway runoff" fails to take into account the fact that the CRC will be a massive 10-lane bridge accompanied by a light rail and pedestrian and bike lane. These facts, and the large amount of traffic projected to use the new bridge, likely will result in the CRC producing more runoff than a "typical highway."

The permit application lacks information about the specific storm water facilities proposed for the CRC. This is disconcerting at such a late stage in the project design. While it makes sense that the applicant would wait until the permit has been issued to give detailed plans about specific storm water treatment facilities, providing this information during the public comment period is necessary for the public to understand the CRC's overall plan for building and implementing storm water facilities, and allow the public to comment on whether those plans are likely to comply with Oregon's and Washington's water quality regulations.

For example, due to the lack of information, it is impossible to determine whether or not several aspects of OAR 340-041 required for permitting and Water Quality certification will be met. As another example, OAR 340-041-0007(1) requires "the highest and best practicable treatment and/or control of wastes, activities, and flows . . . so as to maintain" pollutant parameters at necessary levels. Without specific information regarding the type of treatment and control measures the CRC will employ, it is impossible to determine whether this water quality standard will be met.

Based on its smaller size, relative to the Columbia River, the Columbia Slough is at risk of suffering larger adverse effects on its water quality and composition. While the permit and the FEIS take this into account, several other claims made about the Slough

are troubling and lack the information necessary for public review. For example, the FEIS states that "while the Columbia Slough drainage would experience a decrease in other pollutants" under the building of the LPA, presumably due to the proposed storm water control techniques, there is no mention of which pollutants would decrease or how the construction phases will affect water quality in the Slough.

In fact, the sentence goes on to mention that the Slough may experience a slight increase in copper. This is in line with a trend in both the permit and the FEIS to not reveal specific pollutants that will be generated in the construction and the operation of the CRC. One could make an inference that typical pollutants associated with traffic, such as oil, grease and copper, will be involved. Yet as stated above it is the applicant's burden to provide this information and the failure to identify specific pollutants in the permit application materials makes it extremely difficult to examine the CRC's potential effects on Oregon's and Washington's water quality standards.

Without information or estimates of the types and amounts of pollutants involved, determining whether or not the pollutants will potentially violate water quality standards is nearly impossible. Inferences should not have to be made by the public as to whether or not specific pollutants will be involved. This responsibility falls to the applicant and despite a request for more information about specific pollutants in the comments by Earthrise Attorney Tom Buchele, the FEIS and the permit application do not provide enough information to conduct a proper water quality analysis. This is especially true when analyzing Oregon's strict water quality standards.

Question: How can pollutants that are unknown in composition and amount be said to comply with applicable water quality standards?
Question: What specific pollutants and concentrations of these pollutants will enter Oregon waters as a result of the CRC project?

An obvious area of concern when building a bridge of this size and scope, as well as when removing a bridge the size of the current I-5 Bridge, is the potential for an increase in the amount of TSS in the water. Oregon's water quality standards require that maximum TSS in a water sample be kept below a certain level. A major project like the

CRC directly in and over Oregon's waters threatens to increase TSS beyond these levels. In addition, a project like the CRC can easily be seen to have an effect on the turbidity, which is also regulated under Oregon water quality standards.

One of the measures required to build the CRC involves the sinking of cofferdams to help build the new pier foundations. The FEIS states that "turbidity caused by any activity inside the cofferdams would be contained within the cofferdams." *See* FEIS at 3-346. The Corps should require support for this claim, such as a description of the procedures taken to ensure that turbidity is contained within the cofferdams as there is a potential that the cofferdams are not completely water tight, thus releasing sediments into the water bodies and resulting in an increase in both TSS and turbidity levels. Plus, the FEIS raises greater concern, stating that "sediment would be disturbed" both during the installation and the removal of the cofferdams as well as during the demolition of the current I-5 Bridge. *Id*. Instead of focusing on the effect of increased levels of TSS and turbidity as a result of these activities, the FEIS shifts the discussion and states that there are no known contaminated sediments in the Columbia River portion of the project.

Question: Where is the analysis of the effect of the installation and removal of the cofferdams on TSS and turbidity requirements?

Although the permit applicant overlooks the likelihood of increased levels of TSS and turbidity in the Columbia due to construction of the CRC and demolition of the existing bridge, the Corps cannot and should not allow these issues to go unaddressed. Without this essential information, it is difficult to know if one of the main processes necessary for building the CRC, the use of cofferdams, will adversely affect Oregon water quality standards to the point of non-adherence to the regulations. Additionally, the knowledge that contaminated sediments are located in the North Portland Harbor give rise to further concern. Specifically, the potential re-suspension of these contaminated sediments would not only increase levels of TSS and turbidity, but would also re-introduce toxic sediments into the water that could have drastic effects on water quality standards and aquatic life alike. The Corps should consider the potential for existing contaminants to volatize as a result of the disturbances during dredge and fill activities,

and the extent to which this may threaten violations of Oregon's and Washington's water quality standards.

One would hope that tests and analyses were conducted to determine the effect of cofferdams of this size and the resulting re-suspension of solids and increased turbidity when such cofferdams are installed or removed. Due to their size and the requirement that they be anchored, it only makes sense to be concerned with the installation and removal of the cofferdams and the subsequent effect on water quality. If such tests were conducted, however, they have not been provided to the public or the Corps in the permit application materials. Without further information regarding the effect of the cofferdams, it is not possible to determine whether the CRC will comply with applicable water quality standards. Once again, the lack of a comprehensive analysis in the water quality discussion in the permit application and the FEIS prevents a meaningful discussion or adequate analysis of the CRC and its effect on applicable water quality standards.

Without additional information about pollutants involved, the effect of cofferdams and resulting impacts regarding increased TSS and turbidity levels in the Columbia River, and the scope and design of the water quality facilities proposed to prevent untreated runoff from entering the water bodies affected by the project, it would be unwise for the Corps to approve the permit. The Corps and the state of Oregon should wait to make these determinations until after acquiring this information, giving the public an opportunity to comment, and completing their own objective review.

4. The Corps should consider existing threats to water quality in combination with the impacts that will result from this project before determining whether water quality standards will be met.

The stormwater treatment plans outlined in the co-lead agencies' permit application paint the CRC as beneficial to the environment, but fail to disclose the fact that the current I-5 Bridge opened in 1917, long before any of the environmental regulations of the 1970's were passed. This likely explains the lack of treatment for stormwater discharges from the current bridge. Even assuming that all of the stormwater discharges will be adequately treated, including the issues resulting from existing stormwater discharges, the CRC is still likely to generate a giant increase in the cumulative volume of stormwater discharges generated.

Question: Is there any way to ensure a net environmental benefit, such that the applicant can demonstrate that Oregon's and Washington's water quality standards will not be violated in whole or in part by the CRC dredge and fill activities?

Just as the Corps should refrain from approving a 404 permit based on the lack of information as outlined above, Oregon should not provide the Water Quality certification necessary for the CRC to move to its next steps. 40 C.F.R. § 230.10(b)(1). The lack of information about the proposed stormwater treatment facilities is one many deficiencies of the permit application. As such, this should signal a concern to the states to be hesitant in providing Water Quality Certification to the CRC without requesting additional information. Simply providing assurances that all storm water will be treated without providing an in-depth analysis of the facilities to be used would undermine the purpose of the state regulations. A section 404 permit should not issue unless and until Washington and Oregon certify the discharges will not harm water quality.

C. The CRC's discharges of dredged and fill material will jeopardize the continued existence of listed species.

The Guidelines state that "no discharge of dredged or fill material shall be permitted if it … jeopardizes the continued existence of species listed as endangered or threatened . . . or results in likelihood of the destruction or adverse modification of [designated] critical habitat." 40 C.F.R. § 230.10(b)(3). An action jeopardizes the continued existence of a listed species if it "would be expected, directly, or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers or distribution of that species." 50 C.F.R. § 402.2. Because the CRC is likely to jeopardize the continued existence of listed species and adversely modify critical habitat, the Corps should not authorize the section 404 permit.

On January 19, 2011, the National Marine Fisheries Service ("NMFS") prepared a Biological Opinion ("BiOp") addressing section 7 of the Endangered Species Act ("ESA") concerning the effects of the proposed CRC. The Corps may look to this BiOp for guidance on whether or not the CRC's proposal "[j]eopardizes the continued

existence of species listed as endangered or threatened." 40 C.F.R. § 230.30(c). However, the Corps has an independent obligation to make the determination. 16 U.S.C. § 1536(a)(2); *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010) ("arbitrarily and capriciously relying on a faulty Biological Opinion violates" the action agency's duty under section 7(a)(2)). *See also* 40 C.F.R. § 230.11 ("[t]he permitting authority shall determine in writing the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological components of the aquatic environment"); *id.* § 230.11(e) (requiring the Corps to "determine the nature and degree of effect that the proposed discharge will have . . . on the structure and function of the aquatic ecosystem and organisms").

In the BiOp, NMFS concludes the CRC "is likely to adversely affect" sixteen ESA-listed species and their designated critical habitats. BiOp, at 2. Of concern are eight different species of salmon, five species of steelhead, southern green sturgeon, eulachon, and eastern Steller sea lion. Despite the significant impacts to these species and their habitat, however, NMFS ultimately concludes that the proposed CRC is not likely to jeopardize the continued existence of these species or adversely modify or destroy designated critical habitat. As discussed in detail below, this conclusion is arbitrary and capricious and therefore the Corps may not reasonably rely on the BiOp when fulfilling its independent statutory duty under section 7(a)(2) of the ESA to ensure against jeopardy and adverse modification.

Specifically, first, the BiOp fails to properly consider the true scope of the project and the current environmental conditions faced by the critically imperiled species in the area. Second, the BiOp does not provided enough factual evidence for a meaningful determination to be made as to whether the proposed CRC will jeopardize the continued existence of listed threatened and endangered species. Third, the BiOp fails to properly address the impacts of the action on the species in the region. Finally, the BiOp does not adequately address the cumulative impacts of the project. Based on the information available, this project will jeopardize the continued existence of several listed species and will adversely modify or destroy designated critical habitat. As a result, the Corps should not issue the section 404 permit to the co-lead agencies.

1. NMFS has improperly constricted the action area and inaccurately described the environmental base line.

As a threshold matter, NMFS's BiOp fails to take a proper look at the CRC. To properly evaluate the effects of an action, NMFS must define the appropriate "action area" and establish the "environmental baseline" to which the project's impacts will be added. 50 C.F.R. § 402.02. NMFS limited the "action area" here to "(1) The area where underwater noise caused by pile driving will exceed background; (2) the lower Columbia River where dissolved and suspended pollutants caused by stormwater runoff from CRC is redistributed to the Pacific Ocean; and (3) the eastern Pacific Ocean where southern resident killer whales overlap with Chinook salmon from the Columbia basin." BiOp at 19.[1] This constricted action area fails to satisfy the regulatory requirement that the action area include "all areas" that will be "directly or indirectly" affected by the project. Specifically, NMFS fails to include the significant upland areas that will be impacted by the CRC, and which in turn, will significantly affect the species at issue. NMFS must, given the nature, scope, size and location of this project, define the action area to include the true geographic reach of the project's impacts on the salmon. To accomplish this, the designation of the action areas must begin with an accurate description of the direct and indirect impacts resulting from the CRC. Only through a process of describing an action area that represents the full geographic scope of the impacts of the project on the species at issue will NMFS be able to accurately evaluate the impact this project will have on the species.

Furthermore, by unlawfully constricting the "action area," NMFS excluded many of the adverse impacts on salmon that must be considered as part of the environmental baseline. Specifically, NMFS fails to appropriately address the significant impacts the urbanization of the Columbia River watershed, and specifically the area from the Bonneville Dam to the mouth of the river, has had on the species at issue. In addition, the provided environmental baseline did not analyze several important studies and

[1] NMFS later describes the "action area" as "the lower Columbia River basin, that portion of the mainstem Columbia River and its tributaries downstream of Bonneville Dam to its Pacific Ocean terminus." NMFS does not explain why the "eastern Pacific Ocean" was dropped from this analysis.

reviews related to Lower Columbia River salmon species available at the time the BiOp was released, thus the BiOp does not consider the best available science to determine that the CRC is not likely to jeopardize the listed species. For example, the BiOp fails to analyze the success in avoiding jeopardy of the "reasonably prudent alternative" from the 2008 Willamette Project Biological Opinion, nor does it consider NMFS's own 2010 status update of listed species in the area and the additive impacts from past incidental take statements. In fact, NMFS is currently unable to track the effect that past incidental take statements have actually had on the listed species and thus, cannot adequately evaluate the current status of the listed species.

Moreover, since about 2005 NMFS has prepared hundreds of biological opinions regarding federal agency actions with potentially adverse impacts on listed salmonids, many of which authorize some level of "incidental take." NMFS, however, failed to consider or analyze the cumulative authorized take for each listed species and how the CRC's additional impacts would add to that existing take and harm to each listed salmonid.

In order to insure the species' long-term survival and recovery it is necessary to properly analyze the context in which the proposed action will occur, through a proper analysis of the true action area and the environmental baseline within that area. Here NMFS has failed to meet the statutory and regulatory requirements. As a result of these fundamental failures, the Corps many not reasonably rely on the BiOp.

2. The Corps should reject the section 404 permit application because it jeopardizes the continued existence and recovery of listed species.

The CRC will jeopardize the continued existence of several species. An action will jeopardize a species if it appreciably reduces the chances of the species recovery. As NMFS itself has explained, the risk to both a species' likelihood of survival and recovery increases so long as the species' population is at a level below that which is necessary to sustain survival and recovery. *See* NOAA White Paper, The Habitat Approach: Implementation of Section 7 of the Endangered Species Act for Actions Affecting the Habitat of Pacific Anadromous Salmonids (April 26, 1999).

To determine if an activity will prevent recovery, an agency must know what the recovery goal is. *National Wildlife Federation v. National Marine Fisheries Service*, 524

F.3d 917 (9th Cir. 2007). NMFS's BiOp does not adequately take into account the fact that the ESA calls not only for the continued existence of listed species, but also prevents barriers to *recovery*. Rather, NMFS seems to be of the opinion that since the current habitat is not well-suited for the restoration of listed species, an additional project will not have a significant adverse effect. However, this logic antithetical to the text and intent of the ESA. One of the primary reasons that these specific species are listed under the ESA and the area is designated as critical habitat is because the traditional habitat has been and is subject to significant degradation.

3. NMFS has failed to address the direct and indirect impacts the crossing will have on the species.

The effects of an action that must be considered include the "direct and indirect effects . . . together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline." 50 C.F.R. § 402.02. Here, NMFS admits that it has failed to undertake the appropriate analysis, stating "[t]he present level of planning for these actions is not sufficient to support a complete analysis of effects that are reasonably certain to occur on ESA-listed species or their designated critical habitats." BiOp at 19. NMFS's failure to address the effects is without question a fatal flaw that must be remedied before the action is authorized.

The direct and indirect effects the CRC will have on endangered species include, but are not limited to, the adverse modification of migratory routes throughout and after the construction process, the continued degradation of salmon habitat in the Columbia River, and an increase in storm water runoff, including the discharge of heavy metals, from the increased construction and traffic over the Columbia River

Specifically, one of the main threats to endangered salmon from the proposed project is the threat of being injured, killed, or otherwise adversely affected by high levels of aquatic noise resulting from the construction process. As noted in the BiOp, impact pile driving will continue for at least four years within an invaluable migration and feeding corridor. As a result, salmon and other endangered species are expected to be affected by the noise at least twice and as many as six times. For example, some salmon pass by the construction site once as a juvenile migrating to the ocean and again as an

adult returning to spawn. Salmon are most susceptible to aquatic noise in their alevins, smolt, and juvenile stages but even adult salmon may be adversely affected. BiOp at 61-62. As such, increased aquatic noise introduces the salmon to potential take and predation at least twice during their lifetimes. The effect of sound will be disproportionally felt by Columbia River chum salmon as the sound will affect their spawning habitat as well as their migration corridor. These chum salmon are also not accounted for in the proposed mitigation plan. Eastern Steller sea lions will also be adversely affected far more as they pass through the construction corridor often on their way to and from the ocean and the Bonneville Dam to feed. There is a possibility that many Stellar sea lions will be turned back from good feeding grounds by the aquatic noise. BiOp at 73, 74.

Indeed, NMFS, in its cursory analysis of the impacts of underwater noise during the construction of the crossing, fails to acknowledge the true extent of the potential harm to salmonids. NMFS states "Modeling of the population-level effects pile driving, the primary source of impacts from CRC, shows that the magnitude and temporary duration of those effects will not increase the risk of extinction faced by these species." BiOp at 73.[2] This conclusion is dubious because NMFS never fully addresses the impact of the activities authorized here. Specifically, NMFS focuses mainly on the mortality and injury that will result from the action, but fails to address the impact to the species of the sub-leathal effects. According to NMFS, all fish will "may experience a temporary threshold shift in hearing due to a temporary fatiguing of the auditory system that can reduce the survival, growth, and reproduction of the affected fish by increasing the risk of predation and reducing foraging or spawning success" at sound levels equal or greater than 150 dB re: 1 µPa2 BiOp at 62-63. NMFS further states that some activities will cause this level of underwater noise up to twelve miles away from the construction site. *Id.* at 58, Table 24. And, despite the clear limitations on in-water work established to protect salmon species—limitations not discussed in the BiOp—such activities are allowed to occur year round for up to four years. *Id*. at 78. NMFS fails to explain how these known impacts that will affect all fish within the in-water action area will affect the populations.

[2] NMFS' conclusion is suspect as it specifically admits previously that "this model was not able to assign those mortalities to individual populations." BiOp at 72.

Since this project will continue to degrade the already compromised habitat, the CRC is likely to jeopardize these species' continued existence. Further, without knowing the recovery goal, NMFS cannot determine whether the CRC will create a barrier to the species' recovery. To fulfill its independent obligations under section 7(a)(2), the Corps should deny the section 404 permit because it is likely to jeopardize the continued existence and recovery of listed species.

Similarly, the BiOp also fails to adequately quantify the effects of reduced water quality. After acknowledging the fact that the release of contaminants is likely to occur, the BiOp fails to articulate the predicted contaminants, their levels, and the expected attendant impacts. For example, the BiOp does not adequately take into account the effects of an increase in stormwater runoff, pollution, and heavy metals from the increased construction and traffic over the Columbia River on listed species under the ESA. It raises the threat saying,

> The proposed action will also have adverse effects on ESA-listed fish for the design life of CRC due to reduced water quality from stormwater discharge and physical habitat alteration due to the final, as-built project footprint for the design life of the CRC. The intensity, or magnitude, of each of these effects will be such that they are likely to injure or kill individual fish within the action area.

BiOp at 71. The BiOp seems to dismiss this concern shortly thereafter, however, hopefully suggesting that "the long-term contribution of CRC to comprehensive stormwater management and improved water quality is consistent with recovery actions identified in recovery plans for the lower Columbia River." In reaching this conclusion, NMFS erroneously relies on unspecified and unproven stormwater best management practices (BMPs) to conclude that the CRC is unlike to appreciably reduce the likelihood of survival and recovery of listed species. BiOp at 73. In reality, Oregon and Washington's experience with Industrial General Stormwater Permits and Municipal Separate Storm Sewer System demonstrate stormwater discharges often fail to comply with established permit limits and therefore such permits regularly fail to protect water quality. While the goal of improving stormwater management over existing conditions is necessary, NMFS cannot rely on alleged or anticipated improvements in water quality without quantifying, or at a minimum, estimating the amount of pollution and quantity of annual stormwater discharges.

Moreover, NMFS's analysis of the CRC's effects on water quality lacks sufficient detail. NMFS states in the BiOp that "due to the relatively small amount of time that any heavy equipment will be in the water and the use of proposed conservation measures, including site restoration after construction is complete, any increase in contaminants is likely to be small, infrequent, and limited to the construction period." BiOp at 63. This analysis fails to take in to account many factors. For one, it does not state how heavy equipment will add to reduced water quality, it merely says the exposure will be brief. Moreover, it fails to address the cumulative impacts on ESA listed fish from the discharge of pollutants from the bridge both during and after construction. Because it is based on unknown assumptions and ignores relevant information, NMFS's BiOp for the CRC is arbitrary and capricious.

As such, the Corps should not rely on the BiOp prepared by NMFS. *See Center for Biological Diversity v. U.S. Bureau of Land Management*, 698 F.3d 1101, 1127-28 (9th Cir. 2012) ("an agency cannot meet its Section 7 obligations by relying on a Biological Opinion that is legally flawed"). Rather than providing a meaningful quantitative assessment that would allow an independent body to decide whether a proposed action jeopardizes the continued existence of listed species, the BiOp raises and fails to adequately address a host of different factors and threats. Instead, the Corps should conduct its own independent studies to ensure any and all information regarding the project's potential effects on ESA listed species is accurate. Thus, the Corps may not issue a 404 permit until the impacts on listed species are better known and quantified.

4. The Corps must consider the cumulative effects of the proposed project on listed species.

NMFS's cumulative impacts analysis is deficient as it wholly fails to address the effects of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area." 50 C.F.R. § 402.02. To analyze these impacts correctly, NMFS must describe all relevant future activities and assess how those activities would impact the species. *Id.* § 402.14(g)(4); *Greenpeace v. NMFS*, 80 F. Supp. 2d 1137, 1149 (W.D.Wash. 2000) (holding that mere listing of future activities without any explanation or analysis of how those activities may affect the listed species was not sufficient to consider cumulative effects). As a threshold matter, as noted earlier, NMFS'

unlawful constriction of the "action area" significantly contributes to this flaw. By limiting the action area to only the in-water portion of the action area, NMFS has ignored upland actions that will occur in the immediate vicinity of the project that may have a cumulative effect on species impacted by the CRC. Indeed, although NMFS notes the likely population growth in the area and identifies some of the potential resulting consequences, NMFS fails to meaningfully address the impact to the area and the species.

Because of these concerns and its duty to conduct an independent review of the threats to endangered species, the Corps should reject the BiOp. Furthermore, the Corps should not authorize the CRC's proposed section § 404 permit until more comprehensive studies can be done addressing the factors laid out above along with any other prudent concerns effecting listed species under the ESA.

D. The proposed discharges are likely to cause or contribute to significant degradation of waters of the United States.

Under 40 C.F.R. § 230.10 (c), the Corps is prohibited from issuing a section 404 permit if the proposed discharges "will cause or contribute to significant degradation of the waters of the United States." The plain meaning of the threshold of "significant degradation" helps define the standard. The Oxford English Dictionary defines "significant" as "sufficiently great or important to be worthy of attention,"[3] and "degradation" as "deterioration of the quality of the environment or ecosystem, especially involving a decrease in its biodiversity."[4] Applying the plain meanings of these words, the Corps cannot issue a 404 permit when it appears that the applicant's activities will cause deterioration to the environmental qualities of the nation's waters to an extent sufficient to be worthy of attention. Keeping this threshold in mind, the Corps is to base their decision on "appropriate factual determinations, evaluations, and tests…with special emphasis on the persistence and permanence of the effects" described in 40 C.F.R. § 230, subparts C through F. These effects include potential impacts on physical and chemical characteristics (Subpart C) and biological characteristics (Subpart D) of the aquatic ecosystem, as well as potential impacts on special aquatic sites (Subpart E) and human

[3] *See* THE OXFORD ENGLISH DICTIONARY (3d ed. 2011), http://dictionary.oed.com/ (last visited March 4, 2013).
[4] *Id.*

use characteristics (Subpart F).

An analysis of the permit application materials, together with the BiOp and Biological Assessment, makes clear that the impacts to many of the elements identified in these EPA guidelines are likely to be substantial. The project is likely to have major impacts on water quality in the Columbia River system, on wetlands in the project area, and is likely to adversely affect wildlife dependent on waterways within the project area, including threatened and endangered species. This in turn will negatively impact human use characteristics of the river, including commercial and recreational fishing. Further, mitigation measures identified by CRC are not sufficient to replace functional values lost as a result of the project. In short, the CRC project is almost certain to cause degradation "sufficiently great to be worthy of attention" to the waters in the project area and beyond. If the applicant is unwilling to pay greater attention to the functional values identified in the EPA guidelines, the Corps should deny the permit on these grounds.

1. The CRC will have a significant adverse impact on water quality in the project area and beyond.

The Guidelines instruct the Corps to consider the individual and cumulative adverse effects of the discharge of pollutants on, among other things, water quality. 40 C.F.R. § 230.10(c). Pursuant to 40 C.F.R. § 230, Subpart C, the Corps must consider "Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem," including suspended particulates, turbidity, and water quality. Several activities directly and indirectly related to the CRC's construction would adversely affect the Columbia River's water quality and composition. NMFS's BiOp identifies several of the project activities and their resulting impacts on water within the project area. It is difficult to make a straight-faced argument that these impacts, in the cumulative, do not rise to the level of "significant degradation." Taken together, the picture painted by NMFS is one of a river dramatically changed in terms of clarity, chemical content, and physical content. Given the Columbia River's functional connection with commercial and recreational uses, as well as the ecosystems of the Pacific Northwest, the adverse changes proposed by the CRC are likely to have dramatic effects well beyond the immediate project area.

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a. The applicant's proposed discharges will result in the re-suspension of sediments.

Sediment in the lower Columbia River and its tributaries contains toxic contaminants that can be harmful to fish and other wildlife. BiOp at 58. Although the CRC's permit application states that "no contaminated sediments have been documented" within the pile installation area, *see* CRC Permit Application at 20, there is a former Superfund site (the Boise Cascade property) within the project footprint. There is also a scrap metal processing station adjacent to the existing I-5 bridge, and decades of stormwater runoff from that bridge have likely placed a great deal of contaminants in both the river and the substrate. It is very unlikely that there are no contaminated sediments in the project area.

If the project goes forward, a great deal of this sediment will be removed from its current location. According to the BiOp, "Pile installation and removal, and installation and operation of the bubble curtain, will disturb the sediments in the action area and result in some re-suspension of coarse-grained material into the water column." BiOp at 58. Further, "sediment and contaminants are likely to be released into the water by construction activities that are part of the proposed action, including geotechnical surveys, excavation, grading, filling, and in-water work area isolation." *Id.* Clearly, there will be an enormous amount of material re-suspended from the river bottom. If toxic metals and other pollutants are in fact present in this material, they can become biologically available to fish and other organisms in the area, *see* 40 C.F.R. § 230.21(b), and then move their way up the food chain. While the applicant does not seem concerned with the composition of this re-suspended sediment and does not devote much analysis to its content, the Corps should insist on more rigorous studies of the chemical characteristics of this material. Failing to do so would be inconsistent with the Corps' own regulations requiring factual determinations to support any final determinations about the impact of the proposed discharges.

In addition to the potential pollutants present in this sediment, the re-suspension of the substrate material could have a dramatic effect on life in the river due to increased turbidity. This is precisely the type of significant adverse effects the Corps must consider under the Guidelines. 40 C.F.R. § 230.10(c)(2). EPA's regulations state that elevated

levels of suspended particulates in the water column "may reduce light penetration and lower the rate of photosynthesis and the primary productivity of an aquatic area if they last long enough." 40 C.F.R. § 230.21(b). This increased turbidity can also reduce the feeding ability of some sight-dependent fish species, as well as being aesthetically displeasing. *Id.* The applicant makes only passing references to these further impacts in its FEIS and permit application, again downplaying the potentially harmful effects these new clouds of material in the water column can have on the river's ecosystem. The Corps should not allow the permit to move forward until applicant takes a much closer look at how these newly resuspended sediments will impact life in and out of the river, or the Corps makes its own factual determinations on these effects.

b. The proposed discharges of dredged and fill material will add contaminants to the aquatic ecosystem.

In addition to the chemicals likely to be re-suspended from the riverbed, the project will be adding contaminants to the Columbia River from the various in-water construction activities. According to the BiOp, "the use of heavy construction equipment results in small, unpredictable releases of fuel, lubricant, and hydraulic fluids." BiOp at 58. In addition, it is likely that construction material such as grinding slurry, concrete, and rubble will be released into the water from above-water construction equipment, and that grinding slurry will be released from underwater wire-cable saws used to take apart the current I-5 bridge piers. *Id.* These contaminants, released during construction activities that involve the discharge of dredged or fill material, will have a significant direct adverse impact on waters of the United States.

Beyond these direct deposits of contaminants into the river, there will also be an increased discharge of stormwater runoff associated with the project. These pollutants, coming from automobiles and construction equipment, will include metals such as arsenic, copper, lead and mercury. Plus, these pollutants will not confine themselves to the project area. According to the BiOp, "pollutants like these travel long distances in rivers either in solution, adsorbed to suspended particles, or retained in sediments until mobilized, transported by future sediment moving flows." *Id.* The persistence of these metals and other released chemicals ensure that adverse effects from the project area will be felt downstream all the way to the mouth of the Columbia, and beyond. BiOp at 59.

The impact of project activities on water quality in the Columbia basin should be a very real concern to the Corps as they make their determination regarding the CRC permit. The re-suspension of sediment from the river bottom will dramatically affect turbidity levels in the project area, while potentially bringing enormous amounts of long-dormant pollutants back into the water column. Compounded with the release of metals and chemicals from the project's in-water machinery, discharge of construction material like slurry and concrete, and increased stormwater runoff containing various toxic metals, the CRC is likely to have a sizable impact on the Columbia River and its watershed. As required under 40 C.F.R. § 230, Subpart C, the Corps should make extensive factual determinations about these likely impacts to the physical and chemical characteristics of the aquatic ecosystem before issuing the permit. As the permit is written, it appears the project would in fact cause "significant degradation" to the Pacific Northwest's most important river.

2. The CRC project will have an adverse impact on several Special Aquatic Sites in the area.

Subpart E of the EPA's regulations directs the Corps to examine impacts on "Special Aquatic Sites" from project activity. 40 C.F.R. § 230.40-45. Included in this subpart are wetlands and sanctuaries and refuges. Before issuing a 404 permit for the CRC, the Corps should look very closely at how the project will affect several wetlands within the main project area, as well as an 800-acre undeveloped parcel of land immediately downstream from the new bridge site. The wetlands and the natural area serve vital ecological functions for the area, and are especially valuable given their urban location. If the proposed discharges will adversely affect these areas, it is likely to be significant.

a. Several wetlands and wetland buffers are within the project area.

On the Oregon side of the river, the main project area includes several small wetland systems. These wetlands "are remnants of the former slough system that have been modified to increase drainage and convey stormwater from the surrounding area to the Columbia Slough." FEIS at 3-357. According to the FEIS, these waters are "remnants of the extensive wetland system that existed on the floodplain of the Columbia River prior to development," and "perform important functions and are particularly

valuable due to their relative rarity in the urban area." FEIS at 3-354. As Exhibit 3.15-3 in the FEIS illustrates, several of these valuable wetlands are located completely or partially within the main project area. While one would hope preserving the ecological functions of these wetlands would be a top priority for any new project, there is surprisingly little mention in the permit application or the FEIS about how exactly these valuable lands will be affected.

Wetlands inside the main project area in Oregon include the Victory Interchange wetlands, Schmeer Slough, Walker Slough, the Expo Road wetland, and the Vanport Wetlands. The FEIS acknowledges that the project footprint itself will intersect with the buffer area for the Victory Interchange wetland, FEIS at 3-361, and that this intersection "would introduce more impervious surface in the vicinity of project wetlands and bring highway traffic closer to wildlife within the wetlands." *Id.* The FEIS then shrugs this off by stating that "the long-term effects are expected to be small," in part because "the wildlife activities that may be impacted are already negatively affected by the urbanized environment." *Id.* This logic is difficult to follow. The FEIS stated, seven pages earlier in the document, how valuable the functions of these few remaining urban wetland areas are. Then, after illustrating how the project footprint will encroach upon one of this sensitive area's buffer zones, the FEIS reassures us that since these functions are already depleted, there should be no concern about any further negative impacts.

At least this encroachment on the Victory Interchange wetland is acknowledged in the FEIS. On the other hand, nowhere in the FEIS or the permit application is there mention of anticipated impacts on the other wetlands in the project area, including the Expo Road Wetland (completely within the main project area), Walker Slough, or the Vanport Wetlands. The omission of any discussion of adverse impacts to the Vanport Wetlands is especially troubling. Vanport is a 90.5 acre wetland which provides compensatory mitigation for wetland impacts at other Port of Portland property locations. *See* Port of Portland, Mitigation Management Program, Annual Report 2008, at page 48, *available at* http://www.portofportland.com/PDFPOP/Miti_ Mngt_Prg_Annual_ Rpt_ 2008.pdf (last visited April 14, 2013).

A great deal of work was done to the site, and upon its completion in 2001 it won the Columbia Slough Watershed Council's Achievement Award. *Id.* The site has the

highest water quality function, hydrologic function, and habitat function of any of the existing wetlands in the project area, FEIS at 3-356, and provides valuable habitat for over 100 species of birds, mammals, and amphibians (including western painted turtles). Several acres of the Vanport Wetlands are within the Main Project Area, but the only mention of possible impacts to the site are on page 3-364 of the FEIS, which states "roadway improvements will only occur outside the mitigation site [Vanport] boundaries." Clearly, many other impacts to the site are possible other than direct roadway improvements, and these possible impacts should be acknowledged and fully addressed. This certainly does not happen in the permit application, where the only mention of Vanport is a single sentence, stating "The Vanport Wetlands, a Port of Portland mitigation site, is located within the project area." *See* Permit Application at 49.

The documents in the permit application are similarly incomplete in describing impacts to wetlands within the project area on the Washington side of the river. The Kiggins Bowl wetland, classified as "Critical Lands" and as a "Non-Riparian Habitat Conservation Area," FEIS at 3-258, sits just west of I-5's current footprint, and is fully within the Main Project Area. The Burnt Bridge Creek wetland complex, a "Riparian Habitat Conservation Area," FEIS at 3-359, is just east of I-5 and partially within the Main Project Area. As with the Victory Interchange wetland in Oregon, both of these wetlands' buffer areas will be encroached upon by the project footprint. Kiggins Bowl in particular will have .3 acre of its buffer zone encroached upon, as the project moves directly up against the wetland itself. FEIS at 3-363. As with the Victory Interchange intersection, the applicant states that although this encroachment will bring more impervious surface and highway traffic closer to the wetlands, "the long-term effects are expected to be small." *Id.* Again, it is difficult to imagine how a massive highway expansion project in the immediate vicinity of these conservation areas will have a "small" long-term effect.

Question : Will there be development and/ or construction activities in the wetland buffer?

The Corps should require much more information from the applicant about how

the project will impact these sensitive wetlands. The services provided by these areas are invaluable for the Portland and Vancouver areas, and if the wetlands are adversely affected by the project, offsite mitigation will not replace the services lost in their current locations. There is simply not enough information in the application materials to determine that this massive highway expansion will not cause significant degradation to these important waters and the services they provide.

b. West Hayden Island, a proposed protected natural area, is just downstream from the proposed bridge construction site.

The Guidelines direct the Corps, in making their "significant degradation" determination, to analyze potential impacts to "sanctuaries and refuges." 40 C.F.R. § 230.40. According to the Guidelines, these consist of "areas designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources." *Id.*

Sitting immediately downstream, less than a mile from the proposed project site, is West Hayden Island ("WHI"), an area that certainly falls into this category. One of the most important natural areas in the region, WHI contains 826 areas of undeveloped land, and is part of a larger network of natural areas including Smith and Bybee Lakes, Sauvie Island, and the Ridgefield National Wildlife Refuge. *See* Sallinger, Bob, *Summary of Natural Resources on West Hayden Island*, available at http://audubonportland.org /issues/metro/rivers/hayden/resources. At least 39 acres of protected wetlands are present on the island, and, sitting "at the intersection of two major wildlife corridors…is utilized by wildlife moving north-south between Smith and Bybee Lakes and Ridgefield and east-west between Sauvie Island and the Sandy River."*Id.* At least "eighty-one bird species, nine mammal species, four amphibian species and nine members of the butterfly family have been observed on the island," *id.*, and the area provides a valuable aquatic habitat for endangered salmon and steelhead species, who use the shallow water habitat provided by the island's shoreline year-round. *See* City of Portland, *About West Hayden Island,* available at http://www.portlandoregon.gov/bps/article/262539Metro has designated the area a regionally significant Habitat Conservation Area.

While West Hayden Island is clearly an incredibly valuable natural refuge sitting in the immediate vicinity of the project area, it is not even mentioned in the permit

application. The FEIS brings up WHI one time, discussing the Port of Portland's possible future plans to develop a marine terminal facility there. FEIS at 3-434. Nowhere is there any mention of possible impacts to the site from the bridge project, which seems to indicate that the applicant has not considered what impact their in-water and out-of-water construction will have on this natural refuge just downstream. This is unacceptable, and the Corps should address these issues in its factual determinations.

As mentioned above, the project construction has a strong likelihood of adversely affecting water quality, turbidity, and composition in the immediate project area and beyond. Arguably, the worst of these effects will be felt just downstream, where the WHI habitat is located. Endangered salmon, steelhead and eulachon utilizing the WHI shoreline's protected shallow habitat could very well find themselves exposed to recently re-suspended particulates from the project site, toxic chemicals and metals released from heavy machinery, and lethal underwater noises from pile driving. This in turn could affect predator species of all kinds on WHI, and ultimately lead to a significant degradation of this aquatic site, as well as the greater network of natural areas of which it is part. The Corps must require more information from CRC about possible impacts to this location.

The permit application simply does not sufficiently take into account potential impacts on special aquatic sites, including wetlands in the area and the WHI refuge. Since the Corps is obligated to analyze these impacts before issuing the 404 permit, it would be arbitrary to issue the permit without requiring much more information on how this project will affect these locations and their associated functions. If applicant will not, or is not required to provide additional information, there will be no way for the Corps to determine whether the planned activities will cause significant degradation to these rare and valuable urban locations, and the permit should be denied.

3. The project will have a significant adverse impact on the biological characteristics of the aquatic ecosystem, including impacts on several listed species.

The Guidelines explain that the Corps must consider "[s]ignificantly adverse effects of the discharge of pollutants on aquatic ecosystem diversity, productivity, and stability," including the "loss of fish and wildlife habitat or loss of the capacity of a

wetland to assimilate nutrients [or] purify water." 40 C.F.R. 230.10(c)(3). Subpart D of the Guidelines directs the Corps, in making its significant degradation determination, to analyze potential impacts on biological characteristics of the aquatic ecosystem. This includes impacts to threatened and endangered species, other aquatic organisms in the food web, and other wildlife. The impacts to fish and wildlife, particularly threatened and endangered fish, have been thoroughly discussed in other sections of this comment. We raise the subject again here, however, to point out that all of the issues raised elsewhere in the comment regarding the project's impacts to wildlife are applicable to the "significant degradation" analysis as well. As discussed, activities such as extremely loud underwater pile driving, re-suspension of toxic materials, and runoff from construction machinery will be occurring in the project area for several years. The Corps is obligated to determine whether the impact of these activities on aquatic and non-aquatic organisms rises to the level of significant degradation. We believe the analysis throughout this comment indicates that it does.

4. The CRC will adversely impact human use characteristics of the Columbia River.

The Corps must consider the "[s]ignificantly adverse effects of the discharge of pollutants on human health or welfare" and "on recreational, aesthetic, and economic values." 40 C.F.R. § 230.10(c)(1) and (4). Subpart F of the Guidelines directs the Corps to analyze the potential effects of the proposed activity on human use characteristics of the nation's waters, including impacts on recreational and commercial fisheries. This comment's illustration of the short- and long-term impacts on the already-depleted fisheries in the Columbia watershed shows there is every indication that the discharges of dredged and fill material associated with the CRC will greatly diminish fishing opportunities on the Columbia and its tributaries for years to come.

According to Oregon Department of Fish and Wildlife, the Columbia River "offers premiere opportunities to fish for salmon, steelhead, sturgeon, shad and a variety of warmwater species." Oregon Department of Fish and Wildlife, *Columbia River Fisheries*, *available at* http://www.dfw.state.or.us/fish/oscrp/CRM/index.asp. Fishing on the Columbia has provided sustenance for human residents of the region for thousands of years, and continues to be a valuable economic driver for the region both for commercial

fisheries and as a draw to recreational fishermen from around the world. All of the anadromous fish species sought after by Columbia River fishermen pass through the proposed project area at various stages of their life history. Adverse impacts to these and other sport fisheries are likely to be substantial. During the many years of in-water construction, members of all species present on the lower Columbia will be faced with a gauntlet of toxic chemicals, lethal noises and re-suspended sediment for miles beyond the immediate project area. This will greatly diminish fishing opportunities in the short term, and could result in many more years of reduced populations of prized fish species. This in turn will drastically reduce the value of the river and its many tributaries down- and upstream from the project site as a commercial and recreational fishery. This will be a significant degradation of the river's human use characteristics, and the Corps should deny the permit application on these grounds.

It would be arbitrary for the Corps to determine that the CRC will not cause significant degradation to waters of the United States. Applying the analysis required under the Guidelines, it is clear that if the project goes forward as planned it will have serious, adverse impacts on various physical, biological, and human use characteristics of the waters of the Columbia River system. Several of these impacts, outlined herein, rise above the "sufficiently great or important to be worthy of attention" threshold. Unless the CRC addresses these impacts in a meaningful way, the Corps should follow the Clean Water Act's requirements and deny the 404 permit application.

E. The proposed mitigation fails to provide adequate protection.

In assessing permits under Section 404 of the CWA, the Corps' goal is to "strive to avoid adverse impacts and offset unavoidable adverse impacts to existing aquatic resources." *See* MOA, 55 Fed. Reg. 9210. Regarding wetlands, the Corps should "strive to achieve a goal of no overall net loss of values and functions." *Id.*

The mitigation requirements in the Guidelines require a sequential analysis. The first step, avoidance, requires that permits should issue "for only the least environmentally damaging practicable alternative." *Id.* at 4. Second, unavoidable potential adverse impacts should be minimized through all "appropriate and practicable" measures, 40 C.F.R. § 230.10(d), which include measures that are "appropriate to the scope and degree of those impacts and practicable in terms of cost, existing technology,

and logistics in light of overall project purposes," *id.* at § 230.2(g). For all "unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required," *see* MOA, the permit applicant must compensate. Such mitigation includes the "restoration..., establishment..., enhancement, and/ or in certain circumstances preservation of aquatic resources for the purpose of offsetting adverse impacts." 40 C.F.R. § 230.92. When possible, the Corps "should consider opportunities to offset anticipated aquatic resource impacts by requiring on-site and in-kind compensatory mitigation." *Id.* § 230.93(b)(5).

As discussed in detail below, the CRC application fails to adequately comply with the Guidelines as they relate to mitigation. Therefore, the Corps should deny the application until adequate adjustments are made which more fully avoid, minimize, and mitigate potential adverse impacts to existing aquatic resources.

1. The application fails to adequately mitigate potential adverse impacts to existing aquatic resources.

The Corps must determine appropriate and practicable steps to mitigate the adverse impacts of the CRC. Assuming, *arguendo*, that the permit applicant provided sufficient information for the Corps to determine the existing baseline conditions, the Corps must determine the mitigation necessary to achieve its "no net loss" goal. As noted in previous sections, much of the essential data is missing to determine the CRC's impacts to aquatic resources.

For example, the applicant postponed development of a comprehensive stormwater and spill prevention and pollution control plan, making it impossible for the public to adequately assess whether future minimization and mitigation procedures will comply with EPA guidelines. Due to the gravity of potential impacts that could result from a lack of proper mitigation compliance in these plans—both to river hydrology and area wetland functions—it is imperative that the public have an opportunity to assess and comment on these plans prior to permit approval. In addition, the application fails to adequately address potential impacts to area wetlands and wetland buffers, seeming to directly contradict EPA's stated directive of "no overall net loss of values and functions." *See* MOA.

The applicant has also repeatedly postponed development of a stormwater

treatment facility design. In the Water Quality and Hydrology section summary, the FEIS states:

> This section also discusses a conceptual stormwater treatment design for the [locally preferred alternative] that has been developed for analysis purposes and to advance discussions with agencies on regulatory approvals. *This design meets regulatory criteria*. Agency coordination will continue through the development of the final stormwater design, to be completed as part of future permitting (emphasis added).

FEIS at 3-333. The FEIS concludes that the "design of the stormwater collection and treatment system will be further developed, refined and analyzed after [record of decision] as part of the final project design." *Id.* at 3-350. It is crucial for the public to have further information regarding the stormwater collection and treatment system prior to approval of the application. Though construction of the CRC will lead to a substantial increase in overall impervious surface—and, as a corollary, increased stormwater volume—the applicant has repeatedly cited stormwater treatment as a net benefit of construction of the new bridge. However, as noted above, there is little evidence of the net environmental impact and the alternatives analysis never considered the No-Build Alternative.

Stormwater is a significant cause of water pollution, due to the presence on roadways of chemicals associated with automobile operation. Precipitation causes these chemicals to enter stormwater outfalls and, if improperly treated, eventually cause biological degradation in protected waterways. Without more information regarding the proposed treatment system, it is impossible for the public to effectively assess whether increased impervious surface area will not cause substantial impacts to the Columbia River, or its surrounding wetland areas.

To offset the impacts from pile driving, CRC proposes that it will monitor aquatic noise and only conduct 12 hours of impact pile driving per 24 hour day. *See* Permit Application at 19. Unfortunately, migrating salmon and other endangered species do not follow a nine to five commute schedule and so it is difficult to accurately know when they may be present, although there is some thought given to their peak migration times. As such, it is likely that endangered species will be adversely impacted by aquatic noise. To mitigate this harm CRC has proposed to install a bubble shield that will reduce the

auditory impact of pile driving by 10 db. BiOp at 57. However, even with that reduction auditory levels will still be high enough to kill, injure, and otherwise adversely affect endangered species present in the area. *See, e.g.*, Jim Laughlin, Washington State Department of Transportation, *Underwater Sound Levels Associated With Pile Driving at the Cape Disappointment Boat Launch Facility, Wave Barrier Project* (March 2006), page 12, *available at* http://www.wsdot .wa.gov /NR/rdonlyres/0931C69E-BDF1-4341-8CA3-AECF5F8FB1F8/0/ Cape DisappointmentRpt.pdf (noting that a bubble curtain did not function as well as anticipated to reduce noise impacts from pile driving). The Corps should look into other ways to additionally mitigate the sound such as caps upon the shafts subjected to impact pile-driving.

Finally, the co-lead agencies also failed to analyze or mitigate negative impacts due to extended in-water work windows. The permit application provides that all work will take place during approved work windows; however, the permit lacks specific information as to what those windows will be. Instead, ODOT states in Table 4-2 of Attachment A in the permit application that pile driving will occur September 15 through April 15 of year, and all other construction, include drilling shafts and the use of cofferdams, will occur *year-round*. These work windows represent a variance from the Oregon Department of Fish and Wildlife's ("ODFW") In-Water Work Guidelines, which were established to minimize the potential impacts to important fish, wildlife and habitat resources. ODOT does not identify additional mitigation measures to address the adverse impacts that will result from the extended in-water work windows. Given these extreme variances, including year-round activities that ODFW would otherwise generally cabin to only winter months, ODOT failed to identify significant adverse impacts. DSL should require ODOT to identify these impacts and provide additional mitigation to reduce the adverse impacts.

For example, the lighting on the temporary structures suggests that the construction could possibly occur year round and at night. There is no information regarding the cumulative impacts on aquatic species that night work may have. The other suggestion, that all pumps must employ a fish screen and that NMFS will operate and maintain each fish screen installed, fails to address exactly where the screens will be utilized and how they will protect aquatic life. Considering the size of this project, DSL

needs to request a more thoroughly analyzed permit to assess the likely environmental harm to aquatic life, including ESA species in the Columbia River.

2. The proposed compensatory mitigation plan does not adequately consider the likely significant impacts of the CRC.

If available avoidance and minimization measures are not practicable, the EPA guidelines provide that compensatory mitigation methods can be used. The "fundamental objective" of such projects should be to "offset environmental losses resulting from unavoidable impacts." 40 C.F.R. § 230.93. The preferred approach to such mitigation efforts is to undertake projects in areas immediately adjacent or contiguous to the discharge site. *See, e.g.*, MOA. Ideally, such measures would achieve no "net loss" of aquatic values.

The evidence provided by the applicant does not adequately demonstrate that the proposed compensatory mitigation project at Dabney will achieve these goals. First and foremost, the applicant does not adequately quantify the expected impacts resulting from construction, excavation, and filling, such that an accurate comparison can be calculated. Similarly, too little information is provided regarding the expected benefits from the Dabney restoration activities. Though the Permit Application cites to an assessment memorandum created by the River Design Group, this assessment does not demonstrate that the expected benefits will sufficiently offset expected habitat loss in the CRC Main Project Area. Without more information regarding the expected takings of salmonids, juxtaposed against the expected species regeneration at Bonnie Creek, it is impossible for the public to make an informed assessment of the efficacy of the proposed mitigation plan.

The proposed mitigation measures on the Sandy River within Dabney State Recreation Area hardly compensate for the adverse effects of the CRC project that have been identified. For one, the CRC project is expected to adversely affect sixteen listed species. However, the Sandy River only supports coho, spring and fall Chinook, winter steelhead and eulchon. This additional project fails to mitigate the adverse impacts suffered by other listed species such as Snake River fall run chinook salmon, Snake River spring/summer chinook salmon, Columbia River ESU chum salmon, Columbia River DPS bull trout, Snake River sockeye salmon, southern green sturgeon, and eastern Steller

sea lions. Without adequate mitigation measures any and all take of listed species will jeopardize the survival of endangered species as they do not help them recover to a point when listing under the ESA is no longer necessary for their ensured continued survival.

The expected benefits of the proposed mitigation plan don't correlate to expected impacts in the CRC Project Area. To the contrary, the restoration project seems entirely focused on providing increased habitat for salmon. Though the project reflects an important biological concern in the Columbia watershed, it ignores the necessity of compensating for a variety of other likely biological impacts occurring in the project area under the CWA. Indeed, the FEIS and Permit Application note a number of expected unavoidable water quality impacts, none of which are effectively mitigated by the Dabney restoration project.

The applicant's proposed compensatory mitigation project at Dabney State Recreation Area fails to adequately compensate for expected unavoidable impacts in the project area. The expected benefits at Dabney are primarily focused on salmon habitat restoration, thus ignoring the need for compensation of other lost hydrological values in the project area. The applicant's reliance on the effectiveness of stormwater management as an all-purpose compensatory mitigation tool for all other impacts is misguided, especially since, as previously stated, the public has had no opportunity to evaluate the comprehensive stormwater management plan. As a result, the Corps should deny the application at this time and require further analysis of proposed minimization and mitigation measures, as well as a more effective on-site and in-kind compensatory mitigation project that adequately compensates for expected adverse impacts.

The Dabney project also fails to provide adequate information regarding the potential for loss of biological values resulting from construction, excavation, and fill activities at Bonnie Creek. Like the CRC project, any proposed construction activities at Bonnie Creek must be implemented in compliance with appropriate state and federal regulations. Though the Bonnie Creek Permit Application acknowledges that in-water excavation and fill activities will be required, it does not provide any information regarding how these activities will be executed so as to maintain the chemical, physical, and biological integrity of the waters. Permit Application, Attachment F at 1.4.

Notably, the permit does not address: how filling activities will comply with

discharge requirements under 40 CFR § 230.10; the potential impacts of excavation activities on the Creek substrate; the potential for increased turbidity resulting from excavation and fill activities; how adjustments to water circulation patterns in the Bonnie Creek tributary may effect water circulation patterns in the greater Sandy River; how the potential for pollutant discharge from construction activities will be avoided, minimized, or mitigated; and, how reduced flow rates could negatively alter the thermodynamics of Bonnie Creek. Furthermore, the applicant provides no relevant information regarding the proposed stormwater treatment facilities, making it impossible to evaluate whether they will indeed result in a net biological benefit to water quality. Permit Application, Attachment F at 1.2.

More information should be required from the applicant prior to permit approval, so that the public can effectively evaluate the potential impacts resulting from the Bonnie Creek restoration project in isolation. Most importantly, the applicant states that the "naturally dynamic characteristics" of the Sandy River make the results of such a project unpredictable, acknowledging that there are a variety of potential sources of failure, including "river channel realignment, excessive racking of river-borne debris, excessive aggradation/degradation, and structural failure." Permit Application, Attachment F at 1.6. The applicant only proposes a potential solution to the last issue—simplicity in structure—ignoring the other potential sources of failure, thus providing insufficient information regarding proposed mitigation if the Bonnie Creek restoration project does not accomplish the predicted net biological benefits.

Once an adequate assessment of the net biological benefits at Bonnie Creek is possible, the restoration product can be properly juxtaposed against the expected impacts resulting from the CRC construction project to determine if Bonnie Creek provides adequate compensatory mitigation. In the meantime, the Corps should require further information regarding the efficacy of the proposal. A failed restoration project could contribute to significant degradation to the Sandy River watershed, not to mention the net loss in the Columbia, which would remain uncompensated following the CRC construction. Without complete information regarding the proposed methodology and effects to be utilized at Bonnie Creek, it is impossible for the public to adequately assess and comment on the efficacy of the proposed project.

3. The applicant's proposed mitigation project does not adequately compensate for lost ecological resources and functions.

The applicant has identified a wide array of potential lost ecological functions resulting from the broad CRC project. Taking at face value the applicant's assertion that these impacts are indeed unavoidable—and that they cannot be minimized through economically practicable measures—the applicant is required to implement appropriate compensatory mitigation measures. 40 C.F.R. § 230.91. The applicant acknowledges City of Portland requirements that the mitigation site must be within the same watershed, *see* FEIS at 3.15.5, but seemingly ignores EPA's explicit preference for on-site mitigation efforts. Nor does the applicant explain why on-site mitigation was not practicable in these circumstances. *See* MOA. Additionally, EPA has expressed a preference for in-kind mitigation with consideration of the functional values lost by the resource. *Id*.

Though the applicant states that its mitigation site must "replace all of the resources and functions affected," it has provided inadequate evidence of such compensation being implemented through the Dabney restoration plan, including how this plan will result in a 3:1 mitigation to impact ratio for permanent impacts to open water habitat. FEIS at 3.15.5. Instead, the applicant simply repeatedly cites to stormwater treatment as an all-encompassing mitigation mechanism, though the final designs for these facilities have been repeatedly postponed, thus depriving the public of any meaningful opportunity to assess their efficacy.

Even if the Corps chooses to accept the applicant's assertion that it is utilizing every practicable method for avoiding and minimizing ecological and hydrological impacts to the Columbia River, the Corps should require the applicant to provide more information explaining how the proposed mitigation will actually compensate for the variety of lost ecological values resulting from the CRC project, so that the public can conduct an effective evaluation of the proposed compensatory mitigation site.

4. The applicant's mitigation plan fails to adequately account for impacts to salmon.

Construction activities will occur during salmon migration. Specifically, sockeye migration will coincide with vibratory and impact work on pier 6; coho migration will coincide with vibratory work on piers 2, 4, and 5, and vibratory and impact work on piers

3, 6, and 7; chinook migration will coincide with vibratory and impact work on piers 3, 6, and 7. This raises concern that the loud underwater noise from the construction of these piers will kill or injure these fish. According to a study produced by the California Department of Transportation, the underwater sound levels such as those produced by impact work constructing piers for bridges can have lethal and sub-lethal impacts on salmon, including physiological stress responses, temporary and permanent hearing loss, as well as structural and cellular damage of both auditory and non-auditory tissues. *See* Mardi C. Hastings and Arthur N. Popper, *Effects of Sound on Fish* (2005) (prepared for the California Department of Transportation), *available at* http://www.dot.ca.gov/hq/env/bio/files/Effects_of_Sound_on_Fish23Aug05.pdf.

The CRC project construction will also result in significant increases in pollutants. EPA states that "[r]oad, highway, and bridge construction and reconstruction generate runoff pollution by virtue of the sheer volume of earth that must be disturbed and topsoil that is removed during these activities." EPA Water: Planning Considerations for Roads, Highways and Bridges, *available at* http://water.epa.gov /polwaste /nps/planroad.cfm. EPA also explains that "[h]eavy metals, oils, other toxic substances and debris from construction traffic and spillage can be absorbed by soil at construction sites and carried with runoff water to lakes, rivers and bays." EPA Water: Roads, Highways and Bridges – NPS Categories, *available at* http://water.epa.gov/polwaste/nps/roadshwys.cfm. The BiOp for the CRC also notes that "[s]ediment and contaminants are likely to be released into the water by construction activities" and that "grinding slurry will be released" from the deconstruction of the existing bridge. BiOp at 58.

The Corps must consider the impact of construction activities and the resulting pollution during periods of salmon migration. The BiOp notes that water pollution is already one of the contributing factors to the decline of some of the salmon populations. BiOp at 31; 47. A notable result of the construction of this bridge is the increased development that will mean increased levels of impermeable surfaces. This will result in increased drainage of chemicals into the river in the long term, rather than just during construction.

Question: In the long term, what effects will construction of the CRC have on salmon?

Climate change is already a problem affecting salmon, altering their habitat and reducing their numbers, as noted in the BiOp. *See* BiOp at 47. The CRC will accommodate more automobile traffic, which will result in additional greenhouse gas emissions, further contributing to climate change. These concerns should be considered in the context of a warming planet and an increasingly more vulnerable salmon population.

Question: How will this affect the salmon in the changing conditions caused by a rising climate?

The first consideration in the mitigation sequencing for a 404 permit should be that the least damaging alternative is selected, and the second is to take appropriate and practicable steps to minimize unavoidable damage. According to the EPA:

> Erosion and sediment control is widely accepted as a necessary practice, but there are certain ways to make even the most well-crafted ordinance more effective. First, communities need to have the staff and resources to enforce erosion and sediment control regulations; otherwise, the authority to inspect sites becomes useless. In addition, the technical manual referred to in the ordinance needs to provide useful guidance on selecting erosion and sediment control measures; in particular, it should not include measures that are ineffective. Third, education of contractors, engineers, and designers regarding the importance and effective use of erosion and sediment controls is essential to implementing effective erosion and sediment controls.

See EPA Water: Erosion and Sediment Control, *available at* http://water.epa.gov/polwaste/nps/erosion.cfm.

Question: Are plans in place to implement all of these measures recommended by the EPA to avoid and minimize the impact of erosion and sediment on salmon?

The third and last consideration in the mitigation sequencing for a 404 permit should be to compensate for damages caused. The applicant has provided a compensatory mitigation plan for the enhancement and improvement of shallow water refuge,

spawning, and rearing habitat for migratory aquatic species. However, if a permit is issued, the Corps will determine what is appropriate and practicable compensatory mitigation, and the amount of compensatory mitigation required shall be commensurate with the anticipated impacts of the project.

Question: If any, much less all, of the above listed concerns have impacts on the salmon as they migrate upstream to spawn, how will improved refuge, spawning, and rearing habitat compensate at all?

If compensatory mitigation "shall" be commensurate with the anticipated impacts, then whatever compensation is undertaken must restore the salmon population to levels equal to those prior to beginning the CRC project. A restoration of any ratio below 1:1 would not satisfy that demanding standard.

III. The Corps should deny the permit as contrary to the public interest.

Even if the Corps determines that the CRC's dredge and fill activities would comply with the Guidelines, the Corps may not issue the section 404 permit if doing so would be contrary to the public interest. 33 C.F.R. § 323.6(a). Under § 320.4(a), the Corps must evaluate the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. *Id.* § 320.4(a)(1). As part of the analysis, the "benefits which reasonably may be expected to accrue . . . must be balanced against its reasonably foreseeable detriments." *Id.* The Corps' final "decision should reflect the national concern for both protection and utilization of important resources." *Id.* When making the public interest determination, the Corps must consider all relevant factors, including, *inter alia*, "conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership . . . welfare of the people." *Id.* The various factors should be considered according to "relative extent of the public and private need for the proposed structure," the "practicability of using reasonable alternative locations and methods to accomplish the objective," and the "extent and permanence of the beneficial and/or detrimental

effects." *Id.* § 320.4(a)(2).

In this case, although the two new bridge structures would provide some public benefits, particularly when focusing on transportation mobility in the region, the CRC as a whole is contrary to the public interest. In particular, the CRC threatens long-term significant degradation of the environment including degradation of the Columbia River, the Columbia Slough, and immediately adjacent upland areas. The CRC also threatens immediate, direct adverse impacts to navigation as well as significant long-term adverse economic impacts to the region upstream from the proposed project.

The CRC will result in direct, adverse economic impacts on upstream businesses due to a permanent restriction on navigation. The Corps may not authorize impacts that result in unacceptable impacts to navigation. *See* 33 C.F.R. § 320.4(g)(3) (explaining that a "riparian landowner's general right of access to navigable waters of the United States is subject to the similar rights of access held by nearby riparian landowners and to the general public's right of navigation on the water surface" and thus where a project would "create undue interference with access to, or use of, navigable waters, the authorization will generally be denied"). Yet the proposed bridge height with a clearance of only 116 feet will create a permanent restriction on navigation. Regardless of the information provided by the co-lead agencies, the district engineer "may make an independent review of the need for the project from the perspective of the overall public interest." *Id.* § 320.4(q).

Plus, the CRC will result in an induced restriction on future growth of businesses upstream from the bridge. These impacts run contrary to the Corps' own regulations, which state that "[p]rotection of navigation in all navigable waters of the United States continues to be a primary concern of the federal government." 33 C.F.R. § 320.4(o)(3). These unacceptable adverse impacts to navigation are an additional factor that weighs against the CRC in the context of the public interest review.

IV. If the Corps decides to issue the permit, it must include special conditions and limit the duration of the permit to mitigate probable adverse impacts on the public interest.

In addition to project modifications to minimize adverse project impacts and specific mitigation measures to ensure the project complies with the 404(b)(1)

Guidelines, the Corps may require additional mitigation measures "to ensure that the project is not contrary to the public interest" so long as they are "reasonable and justified." 33 C.F.R. 320.4(r)(1)(iii). These public interest mitigation measures are subject to the same sequential preference as mitigation provided under the 404(b)(1) Guidelines; to first avoid resources losses to the extent practicable, and then minimize, rectify, reduce, and compensate for unavoidable losses. *Id.* 320.4(r)(1).

Assuming the Corps decides to issue the section 404 permit,[5] it should impose special conditions and limit the duration of the authorization to reduce the negative impacts that are likely to result. *See* 33 C.F.R. 325.4(a) (stating that "[d]istrict engineers will add special conditions to [Corps] permits when such conditions are necessary to satisfy the legal requirements or to otherwise satisfy the public interest requirement"). The Corps must impose such conditions to satisfy not only the public interest requirement, but also its legal requirements under the Guidelines, the ESA, and requirements imposed by the states pursuant to section 401 water quality certifications.

Conclusion

NEDC urges the Corps to address the aforementioned deficiencies in the co-lead agencies' application for a section 404 dredge and fill permit before authorizing any dredge or fill activities. The lack of sufficient information precludes the Corps from making the determinations required under the Guidelines. Issuing the permit without this information or additional analysis would contravene the Corps' own regulations regarding the protection and preservation of waters of the United States. Even with this information, it is clear that the dredge and fill activities proposed by the co-lead agencies will fail to conform to the Guidelines, and as such the Corps should deny the application for a section 404 permit to construct the CRC.

Respectfully submitted,

[5] If the Corps determines that special conditions are necessary to ensure the project comports with the public interest but the conditions are not reasonably implementable or enforceable, the Corps must deny the permit. 33 C.F.R. § 325.4(c).

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