

- 21 -
C.R.C.F.A. Columbia River Crab Fishermen Greenfield 1/99

P.O. Box 84
Chinook Washington 98614
U.S.A.

Phone (360) 777 - 8242

January 10, 1999

U.S. Army Corps of Engineers
Portland District
P.O. Box 2946
Portland, Oregon 97208-294

Dear Colonel Slusar,

I am writing you this letter in regards to a recent event that I unfortunately was a part of on December 10, 1998.

First of all, before I get started, I would like to clarify the fact that the corps is causing mounding both in and out of the navigation channel due to their dredge spoil dumping near the mouth of the river.

December 10 was a very nice day with very little wind, and about a 10 foot swell. We were fishing crab approximately two miles north of buoy number 1 that day. That afternoon myself, along with other fishermen, noticed the swell starting to build. It got big enough that we decided to head for port in order to get across the bar before dark. On our way in, I got to witness something I have not yet seen in my eleven years of crab fishing. A swell broke (tipped over) approximately a quarter mile S.W. of buoy #3, right in the middle of the channel. That is normally a very heavily traveled area by fishermen. Fortunately nobody was there at that time. My boat is only 36'x12', and I can guarantee you that if that wave would have broke on my boat, I wouldn't be writing you this letter today.

I won't go on any more, I am confident that you are aware of our (crab fishermen) concern about the safety of our fleet. We hope that you take measures to correct this problem, or at the very least keep it from getting any worse.

Sincerely,



Rob Greenfield
CRCFA

- 72 -
Gray 1/99

1/15/99

U.S. Army Corps of Engineers
Portland District
CENWP-PE-E
Attn: Steve Stevens
PO Box 2946
Portland, Oregon 97208-2946

Dear Sir,

I'm dropping you a note in reference to my dungeness crab operation off the mouth of the Columbia River during the time frame around the middle of August 1998. I had a couple of strings of crab pots in the area of buoy no. 7 to buoy no. 3. I ran this gear every day being that the weather was calm and we could fish daily. There was a large number of soft shelled crab present at the time. It became very disturbing to me that a great many of the days the pots that were in the location of buoy no 7 and out toward buoy no. 3 would be buried down in the sand and I would have to stop on each pot to pull it free. But the most alarming thing was that most all the crab would be dead.

At that time of year I fish around 300 pots. I didn't find this problem anywhere else. It became increasingly apparent that the dredge spoils being dumped on site E were quickly covering the crab gear as well as smothering the crab. This happened day after day, it certainly brings several questions to light - first it has to be extremely apparent that when the crab show up around the Columbia River in great abundance and are especially vulnerable there shouldn't be any dredge dumping on these crab. There is no question when that time frame is. I have crab fished for many years. We see these new soft crab appear in August usually from the 10th to the 20th. That crab is always thickest close to the river. Once these soft crab appear they remain in the area until they get caught, usually about December.

One has to wonder how many crab are buried and don't crawl out - I know your study from San Diego that shows crab crawl out from a small amount of dredge spoils. There are also examples to show dredge spoils don't disperse worth a darn at shallow depths, like sites A & B, which would obviously be part of the problem in Site E.

It also becomes a factor of the disruption of covering our crab pots as the spoils tail out as well as dead crab for many pot lengths away from the dredge site. I believe it not legal for dredge spoils to impact an ongoing commercial fishery in this manner.

I don't want to complain on for ever but I do want to get the absolute point across that there is considerable damage done in dredge site disposal areas as well as the tail out area. There is no doubt that this occurs - I've been there and done that as they say. I'm absolute sure about the soft shell appearance in large numbers being close to mid August. The Corp definitely needs to do some further and better studies if they believe it to be any different.

Sincerely,

Lance Gray
Crab Fisherman



Northwest Environmental Defense Center
10015 S.W. Terwilliger Blvd., Portland, Oregon 97219
(503) 768-6673 Fax - (503) 768-6671

District Engineer
U.S. Army Corps of Engineers, Portland District
CENWP-PE-E Attn: Steven J. Stevens
P.O. Box 2946
Portland, OR 97208-2946

Corps of Engineers Response

This letter constitutes the comments of Northwest Environmental Defense Center (NEDC), Oregon National Resources Council Fund (ONRC), Northwest Environmental Advocates (NWEA), and Sierra Club Oregon Chapter, regarding the Portland District US Army Corps of Engineer's (Corps) Draft Integrated Feasibility report for Channel Improvements and Environmental Impact Statement (draft EIS) for the Columbia and Lower Willamette River Federal Navigation Channel. Our organizations are non-profit, public interest organizations located in the Pacific Northwest. Most of our members reside, work and/or recreated in or along the Columbia and lower Willamette Rivers. We request that these comments be incorporated into the record.

1. Comments noted.

1. Our past Experience with the Corps on this issue has indicated that the Corps regularly disregards the comments our organizations submit. Not only is such behavior unprofessional, it also violates the spirit and intent of the public comment process under NEPA. Therefore, we request that the Corps give these comments full consideration, as NEPA requires. As we have done throughout the dredging and deepening EIS processes, we will look for incorporation of our suggestions in the final EIS. Should there be any issues you wish to discuss, please contact us (particularly NEDC).

The draft EIS fails to adequately comply with several statutory regulations, including (I) the National Environmental Policy Act (NEPA); (II) the Endangered Species Act (ESA); (III) the Clean Water Act (CWA); (IV) the Resource, Conservation, and Recovery Act (RCRA), and (V) the Ocean Dumping Act (ODA).

I. The draft EIS does not fully comply with NEPA requirements.

The NEPA process should be used to identify and address the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment. 40 CFR § 1500.2(e). The draft EIS fails to fulfill the purpose of NEPA because it A) does not provide a "full and fair discussion" of significant environmental impacts in a manner

Corps of Engineers Response

- as to avoid predecisional impact analysis; B) does not present environmental impacts and alternative actions in comparative form; C) inadequately addresses cumulative environmental impacts that have not been sufficiently addressed previously in other EIS documents relating to maintenance of the navigation channel; and D) does not fully consider reasonably foreseeable significant adverse impacts, nor address the availability of information relating to these impacts.

A. The EIS rationalizes decisions instead of fully discussing environmental impacts.

- The EIS should provide "full and fair discussion of significant environmental impacts," and shall not be used to rationalize or justify decisions already made. 40 CFR §§ 1502.1, 1502.2. Several aspects of the draft EIS indicate that the Corps views its purpose as to rationalize decisions rather than to provide a "full and fair discussion" of significant environmental impacts. To begin with, many potentially negative impacts are dismissed as insignificant without clear basis or supportable scientific evidence. For example, the Corps relies on limited scientific studies to reach the conclusion that Dungeness crabs will escape detrimental impacts from disposal of dredged material onto crab habitat. The study cited took place in a small tank rather than in an environment more similar to Dungeness crab habitat. Also, the amount of material deposited on the crabs was such a small fraction of the amount of material which will ultimately be disposed of during both the construction phase and the subsequent maintenance as to make the simulation inconclusive. DEIS, Appendix H, Exhibit F. Therefore, the Corps' conclusion that Dungeness crab will survive deposits of dredged material up to 10" depths by moving into the water column appears to be a rationalization rather than a supportable determination. Id. Furthermore, basing this conclusion on behavior exhibited only during the study adds a great deal of speculation to the Corps' conclusion.
- The Corps reaches other conclusions in a similarly speculative manner. When discussing rock blasting, for example, the draft EIS states that salmonids and other fish in the Columbia and Willamette Rivers will be scared away prior to the blasting to decrease the likelihood of killing the fish. DEIS at 6-21. However, the draft EIS does not indicate what techniques will be used to effectively scare the fish, whether a similar technique has been conducted elsewhere, nor what probability of success this technique may have. Also, the Corps concludes, with no apparent scientific reasoning, that benthic organisms will repopulate the blasted areas. Id. It provides no proof that such a conclusion is well founded, nor does it indicate when or how the repopulation would occur. Once again, the Corps seems to use these conclusions to rationalize their decisions.
- Finally, incorporating the feasibility study into the draft EIS has the effect of diminishing the intended goal of an EIS, which is to identify and address the reasonable alternatives that will avoid or minimize adverse effects. 40 CFR § 1500.2(e). Rather than fully addressing reasonable alternatives to the deepening, the Corps focuses a great deal on the various deepening alternatives, giving little attention to any actual avoidance or minimization of adverse effects. Also, while NEPA does not preclude a federal agency from employing a balancing test in reaching substantive permitting decisions, the extent to which the Corps favors the deepening alternatives is impermissible. Indeed, the Corps' cost-benefit analysis does not include costs beyond the

2. Comments noted. See our responses provided below.

3. We realize the limitations of the crab burial studies. The determination that crabs could survive burial in up to 10 inches of material is based on actual data. However, the sample size was small. The Corps interpretation of that data has been incorporated into Appendix H, Exhibit F. Input on additional crab studies recommended by the management and monitoring task force will be considered.

4. A blasting plan was developed in cooperation with the federal and state resource agencies. It incorporates proven methods to minimize impacts to fish in the vicinity of the blast. All blasting will be done during the approved in-water work period, which is a time when fish numbers are low. Benthic invertebrate populations have been shown to recolonize a disturbed area relatively rapidly following the disturbance. This information is presented in the EIS.

5. Corps planning guidance recommends an integrated feasibility report and EIS as the preferred format. Most Corps General Investigation studies have used this format since the mid-1980s. Alternatives other than channel deepening were considered but determined not to be cost effective. Because of this, they were not considered in detail. Costs attributed to loss of agricultural land and other commercial and natural resources are taken into account. They are either described subjectively in the EIS section on environmental effects, or evaluated quantitatively as we determine mitigation required for these losses.

Corps of Engineers Response

beyond the physical construction and maintenance of the channel, such as costs of species protection, losses of agricultural land, and loss of income resulting from salmonid and epibenthic habitat degradation. In not considering these costs, the Corps has not taken the necessary "hard look."

B. The draft EIS is not presented in comparative form.

6. "[The EIS] should present environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options." 40 CFR § 1502.14. Segmentation of the draft EIS from the no-action alternative does not present the alternatives in comparative form. Rather, it significantly deters the reader from comparing impacts of the sponsor's preferred alternative with the no-action alternative. In addition, the no-action alternative contains inadequacies which must be evaluated in their own right. Finally, conclusions in the no-action alternative are inconsistent with many in the draft EIS.

7. For example, the final SEIS of the DMMP (the no-action alternative) states that sediments in the Willamette River navigation channel would be suitable for in-water disposal. Furthermore, it indicates that while areas adjacent to the channel have high levels of HTRWs, the channel itself does not. Planned dredging along the Willamette River would have dredge spoils disposed through uncontained in-water and upland disposal techniques. However, the channel deepening draft EIS specifically states that HTRWs are present in the navigation channel, as well as areas adjacent, and that safe disposal of dredged sediment must be done through in-water disposal and capping. DEIS at 6-12. Inconsistencies of this kind are difficult to assess due to the segmentation of the draft EIS from the no-action alternative.

8. In addition, the no-action alternative contained many vague, unenforceable promises to resolve agency mitigation concerns in the future. The EPA rated the draft EIS for the no-action alternative as "EC-2", Environmental Concerns. These concerns were not adequately addressed in the final SEIS for the no-action alternative. Nor have NMFS concerns been addressed, especially in relation to possible effects of dredging on fish populations. Indeed, the section 7 consultation submitted with the no-action alternative was dated 1993, and could not have taken into consideration any cumulative impacts from 1993 through 1998. What's more, the biological opinion for steelhead has yet to be released. In light of the fact that the Corps has recently decided to implement the no-action alternative as its Dredged Material Management Plan, the deficiencies in the no-action alternative should be made available for comment as an alternative to the proposed deepening, rather than be automatically accepted.

9. To the extent that resolution of these agency concerns involves mitigation measures, the 9th Circuit has found that mitigation must be discussed in sufficient detail in the EIS to ensure that environmental consequences have been fairly evaluated. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353 (1989). A mere listing of mitigation measures does not sufficiently qualify as the reasoned discussion required by NEPA. Northwest Indian Cemetery Protective

6. The EIS compares impacts of proposed actions to the no action plan in Sections 2 and 6 of the EIS.

7. The material routinely dredged from the existing 40-foot channel for the Columbia and Willamette Rivers has been tested and evaluated. The material dredged has been determined suitable for unconfined in-water disposal. The Willamette River has some isolated areas which will require additional testing prior to dredging in accordance with the Dredged Material Evaluation Framework (November 1998). Back in the 1980s the Port of Portland dredged some contaminated sediment from the Willamette channel. This material was not placed in an unconfined in-water disposal site. Some of this material contained detectable levels of contamination. The Willamette River portion of the proposed action has been delayed to allow coordination with the ODEQ investigation and remediation planning for Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any Willamette River dredging and disposal activities. Appendix B provides additional detailed information on sediment quality.

8. The EPA has not commented nor raised objections to the Final Dredged Material Management Plan/SEIS or the Record of Decision on that action. The Final SEIS has adequately addressed their concerns with the Draft SEIS. The Final SEIS included the Biological Assessment for listed salmon and steelhead stocks. A Biological Opinion was received from the NMFS for the Dredged Material Management Plan/SEIS, and they concurred with our determination of no effect or not likely to effect.

9. The EIS and Appendix G lists describes in detail the environmental consequences and wildlife mitigation actions.

Corps of Engineers Response

Ass'n v. Peterson, 795 F.2d 688, 697 (9th Cir. 1986), rev'd on other grounds, 485 U.S. 439 (1988). Furthermore, a perfunctory discussion of these measures fails to take the "hard look" required under NEPA. The segmentation of the no-action alternative from the draft EIS precludes reviewing the alternatives in a comparable form.

10. Also, the EIS should reasonably explore and objectively evaluate all reasonable alternatives, and devote substantial treatment to each alternative. While the draft EIS does include a number of alternatives, it devotes little treatment to the non-structural alternative. It dismisses the alternative as less desirable, based primarily, it seems, on convenience to the shipping industry. An EIS should not use a cost-benefit analysis, nor the industry's preference, as its reasons for selecting or eliminating an alternative. Rather, an EIS should fully evaluate all reasonable alternatives.

C. The draft EIS does not adequately evaluate direct, indirect, and cumulative impacts.

EIS shall include discussions of direct effects and their significance and indirect effects and their significance 40 C.F.R. § 1508.8. Cumulative impacts must also be discussed. 40 CFR § 1508.25(a). "'Cumulative impact' is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 CFR § 1508.7. The congressional intent of NEPA and CEQ regulations mandate consideration of all of these actions to provide a full and fair analysis of the proposed action.

11. In other comments submitted to the Corps about proposed dredging plans, NEDC has consistently requested that the Corps address cumulative environmental impacts resulting from the maintenance dredging and disposal. Our fundamental concern has been the lack of adequate evaluation of the environmental consequences resulting from dredging. Our comments to the no-action alternative reiterated the concerns, as we do again here. Although the Corps acknowledges the NEPA requirement to include assessment of cumulative impacts, it again has failed to adequately address them in the draft EIS.

A fundamental problem in the draft EIS is the Corps' failure to recognize the Columbia and Willamette River systems as full ecosystems, rather than independent components. This failure is apparent in the Corps' handling of many major issues, from resuspension of hazardous and toxic materials, to destruction of benthic organisms, to disposal of 19 mcy of dredge material on Dungeness crab habitat. Considering that the rivers are whole ecosystems, with each component of the ecosystem having an impact on the whole, the draft EIS needs to address each activities on the whole. Also, since dredging has taken place in the Columbia and Willamette Rivers since the late 1800s, the Corps cannot look at the deepening project as an isolated incident, separated from past effects of dredging. Past, present, and future impacts along the entire ecosystem must be addressed to fully assess cumulative impacts.

10. See response # 2 to the US Department of Interior letter concerning LoadMax.

11. Comments noted. See our responses to your specific comments below.

Corps of Engineers Response

Specifically, the draft EIS has not adequately consider cumulative impacts on the following:

1) Loss of estuarine wetlands.

12. The draft EIS acknowledges that a substantial amount of wetland habitat has been lost due to urbanization and agriculture. DEIS at 6-57. However, causes and consequences of wetland habitat loss have not been adequately addressed in this draft EIS, the no-action alternative FSEIS, or in any other dredging document. Specifically, the DEIS has not addressed the net effect of the total disposal of dredged materials from channel maintenance dredging and other state, local, and private dredging projects on wetlands without mitigation. For example, the Port of Portland filled approximately 2,000 acres of wetlands and related habitat in Rivergate, with little or no mitigation. This fill has not been considered by the Corps in its discussion of direct, indirect, or cumulative impacts.

2) Cumulative impacts on benthic organisms.

13. In 1975, the Corps noted that “[b]enthic organisms are displaced by frequent dredging which makes their former habitat unsuitable for reintroduction. It can be estimated that 10 percent of the total bottom area of the Columbia river is so affected, but the impact on the total ecosystem is difficult to quantify.” (1975 EIS p. 4-3) Since that time, the Corps has yet to quantify the total impact on the ecosystem or the cumulative impact on benthic organisms alone. Instead, it has only noted that deep water benthic communities are less productive than shallow water communities, and, indeed, now uses that as justification for increased dredging in deep water. In order to provide an adequate assessment of cumulative impacts on benthic organisms, the Corps should: 1) calculate the current percentage of total bottom area of the Columbia River and the Lower Willamette River that is affected by dredging; 2) calculate the total percentage of benthic communities lost from dredging activities during the past 28 years; 3) assess the cumulative impacts that the loss of benthic communities has had on the total ecosystem; and 4) provide a reasonable estimate of expected losses to benthic communities from deepening and rock blasting.

3) Cumulative impacts on sturgeon.

In 1975, the Corps noted that the species to be most impacted by dredging activities would be white sturgeon. Since then, the Corps has acknowledged that the sturgeon fishery has been limited because of declining stocks of sturgeon. DEIS at 5-24. However, the Corps has never adequately determined the cumulative effects of dredging operations on sturgeon populations, nor does it sufficiently assess potential impacts of the deepening and rock blasting on current sturgeon populations. Rather, the draft EIS dismisses the potential of the dredging to entrain and hann significant numbers of sturgeon by dismissing its own testing techniques. DEIS at 6-19. To provide an adequate assessment of cumulative and future impacts on sturgeon populations, the Corps should: 1) calculate total area of the navigation channel populated by sturgeon; 2) calculate total decline in sturgeon population resulting from dredging activities; 3)

12. The general causes of wetland habitat loss, urbanization, agricultural development, infrastructure development, and dredge material disposal were identified in the DEIS in Section 6.12. The extent of these losses was also identified in this section. The consequences of these habitat losses was a cumulative loss of wildlife resources directly related to the level of habitat loss, as stated in this section of the EIS.

13. In the 1975 EIS and subsequent EAs for the Columbia River main navigation channel impacts to benthic invertebrates, sturgeon and salmon were addressed in detail. Impacts to these species by the currently proposed Dredged Material Management Plan have been addressed in the recently released SEIS for the project. Likewise, impacts to these species and others have been addressed in this EIS for the proposed project. As indicated in the EIS, the change in footprint of the shoals to be dredged with the deeper project is minor and consequently, the incremental impacts to the benthic communities from dredging is not expected to be significantly different from what is occurring now. Disposal activities will increase in some areas and this will increase the impact to benthic communities in these areas. These areas, however, are in the deeper parts of the river where several studies have show that benthic productivity is small. In order to verify this, however, we have agreed to conduct a study of one of the deeper disposal sites to assess the benthic productivity in this area. This information will be used to manage disposal operation in this site to minimize impacts to the benthic invertebrate populations to the extent possible.

Impacts to sturgeon by both the existing maintenance dredging program and the proposed channel improvement project have been described in the SEIS and this EIS. Additional information on sturgeon use of deep water areas in the lower river will be obtained during the above described benthic invertebrate study. This study will determine sturgeon use by season and age group in one of the deeper areas of the Columbia. This information will be used to design the disposal plan to minimize the impacts to larval and juvenile sturgeon from disposal.

calculate total loss of sturgeon habitat resulting from dredging activities; and 4) calculate the predicted losses of sturgeon habitat and population resulting from the proposed deepening and rock blasting.

4) Cumulative impacts on Dungeness crab.

The Corps acknowledges in the draft EIS that Dungeness crab populations have been adversely affected by disposal of dredge materials onto crab habitat. DEIS, Appendix H. However, it has not calculated the direct, indirect, or cumulative impacts resulting from all dredging activities. The current proposal to dump 19 mcy of dredge material onto offshore disposal sites will undoubtedly have disastrous effects on crab and other epibenthic populations. While the Corps relies heavily on the assumption that crabs will escape into the water column before they get buried in dredge deposits, it should nevertheless provide a complete assessment of potential losses to crab habitat and crab populations, as well as the resulting impacts on the ecosystem as a whole. It must also consider other causes of crab population decline.

5) Cumulative impacts on salmon populations.

The fact that salmon populations have continued to decline in the Columbia and Willamette Rivers may be witnessed by the recent listing of steelhead runs and the probable listing of six more Columbia River salmon runs. DEIS at 5-30. While the Corps acknowledges the imperiled state of salmon in the Columbia and Willamette Rivers, it fails to adequately assess cumulative impacts of dredging on salmon habitat and salmon populations. In particular, the draft EIS barely mentions the declines in population resulting from stranding of juvenile salmon at beach nourishment sites, increased predation by Caspian terns at artificial islands created from past dredging disposal, and other indirect and direct impacts resulting from dredging activities. To adequately address cumulative, direct, and indirect impacts on salmon resulting from dredging and related activities, the Corps should discuss 1) the cumulative impacts beach nourishment sites have had on salmon habitat and populations, regardless of whether the Corps no longer intends to dispose at these sites; 2) loss of salmon habitat - both shallow and deep water - as the result of dredging; 3) takings of salmon from entrainment during dredging; 4) entrapment and suffocation of salmon during disposal; 5) loss of food for salmon from reduced benthic organism populations; 6) interference with juvenile and adult migration, both from dredging operations and shipping in general; 7) impacts of water quality on salmon, including increased temperature, turbidity and resuspension of hazardous and toxic materials into the rivers; 8) impacts resulting from introduction of exotic species; and 9) any other direct, indirect, or cumulative impacts on salmon.

D. The draft EIS must address reasonably foreseeable significant impacts, even if information about them is unavailable.

The draft EIS fails to appropriately evaluate reasonably foreseeable significant adverse effects.

Corps of Engineers Response

13 (continued). Dungeness crab impacts from the new ocean disposal site have been described in both the EIS and Appendix H. Impacts, including cumulative impacts, to salmon species have been described in the EIS and the Biological Assessment for the project. The Corps is fully aware of historic losses to salmonids. As described in detail in the EIS and Biological Assessment, incremental impacts from this project are expected to be minimal.

Incremental environmental impacts from the channel deepening itself are expected to be minimal since the deepening will be limited to the existing channel footprint in which dredging has taken place for many years. For this reason, the Corps cumulative effects analysis in the EIS focused on habitat impacts from increased sediment disposal resulting from the project as the best means for assessing cumulative environmental effects. That analysis considers historic losses to habitat in the Willamette and lower Columbia rivers, as well as the additional impacts that will result from this project. When planned habitat restoration and mitigation is taken into account, this project is expected to result in a new improvement to affected habitats.

13. (cont)

Corps of Engineers Response

14. If the Corps' failure to address a subject comes from a lack of available information on the subject, NEPA requires the Corps to state such information is unavailable. 40 CFR § 1502.22. Furthermore, if the Corps cannot obtain relevant information, it must at least include a summary of existing credible scientific evidence and the agency's evaluation of foreseeable impact based on theoretical approaches. 40 CFR § 1502.22 (b).

1) The draft EIS does not adequately address the impacts of channel deepening on non-indigenous invasive species (NIS).

The Corps has not met the requirements of evaluating reasonably foreseeable impacts. Instead, it very briefly and incompletely addresses the potential introduction of NIS, simply stating that a primary means of transporting exotic species is through ballast water discharge, and that to date, no zebra mussels have been discovered in the Columbia River. DEIS at 5-24. The draft EIS neither refers to any relevant scientific evidence nor evaluates reasonably foreseeable significant impacts. Reasonably foreseeable impacts "[include] impacts which have catastrophic consequences, even if their probability of occurrence is low," so dismissing the potential introduction of exotic species as unlikely does not exempt the Corps from addressing the issue. 40 CFR § 1502.22(b).

15. NEDC submitted a FOIA request to the Corps, in which we requested any information the Corps had on the subject of exotic species. See Attachment A. The Corps' response indicated that the only information the Corps currently has consists of the information given in the DEIS. See Attachment B. This raises obvious questions about the due diligence given in considering cumulative and reasonably foreseeable significant adverse impacts. However, because the Corps has clearly indicated that it possesses no other information, we have attached several relevant documents relation to the subject of non-native invasive species. Since these documents are now part of the Corps' record, we expect the final EIS to discuss the information they contain, and to pay significant attention to the possibility of introduction of exotic species.

An EIS must look at both the direct and indirect effects of the proposed action and alternatives, especially in the light of new information. Considering new information regarding the danger of introduction of exotic species through ballast water discharges, it is imperative that the Corps of Engineers address the impact of exotic species introductions associated with continued large-hull ship activity throughout the Columbia and Lower Willamette Rivers as contemplated in and facilitated through the dredging plan for the next 20 years.

The introduction of the zebra mussel into the Great Lakes has already cause \$120 million worth of damages from costly cleanups, loss of native clam and mussel beds, and monitoring efforts. David Davis, Deputy Director, Office of Water, U.S. EPA, Testimony in front of Congress, July 17, 1996, 1996 WL 10829741. The zebra mussel, a freshwater invertebrate, can attach to almost anything and gums up effluent out puts from ships, factories, or sewage treatment plants. The European green crab represents another major threat. The green crab can live in both brackish and saltwater, has no predators, reproduces quickly, and voraciously preys on other invertebrates.

14. Comment noted. See our responses to your specific comments below.

15. The projections of traffic levels and export levels would occur with or without any channel improvement. The number of vessels expected to call on the river in the base condition does not represent an impact caused by any channel improvement alternative. The size of vessels in the future is also expected to be independent of any channel improvement activity.

Although the issue of invasive species is an important one for the Columbia River, and is recognized as such in the EIS, we do not believe that deepening the channel would contribute to the potential for increase in numbers or types of species. This issue is being addressed by multi-agency and industry working groups. We have included the invasive species study conducted by the Coast Guard for the lower Columbia River as a reference.

Corps of Engineers Response

Green Crabs Attack, 1 Native Species Network, Issue 2, at 5 (1996). Green crabs are found in every major bay in California and are moving their way north to Oregon. The ruffe, another threat, is a small, aggressive fish native to Eurasia which has been introduced into Lake Superior, threatening introduction into the rest of the Great Lakes. It is a hearty, voracious eater, threatens native fish populations of perch, whitefish and others, through egg predation and out-competition. Ruffe: A New Threat to Our Fisheries, Sea Grant Exotic Species, <http://www.d.umn.edu/~seagr/exotic/ruffe.html>. A Federal Task Force has estimated losses of economic value in sport and commercial fisheries in the Great Lakes at \$500 billion over the next 50 years. Gary Edwards, Assistant Director for Fisheries, USFWS, Testimony in front of congress, July 11, 1996, 1996 WL 10829512. Overall, these dangerous introduced species, which are almost always introduced through ballast water discharges, often have no natural predators and are able to out-compete native species. These species are merely a few examples of the current and future myriad of aquatic non-indigenous species introduced into United States bays, estuaries, and rivers through unregulated ballast water discharges which threaten our native commercial and sports fisheries. Non-indigenous introductions also result in millions being spent by local and federal agencies to eradicate the new pests and ultimately lead to extinction of local aquatic populations.

15. (cont)

The major vector of exotic pest species introductions into new rivers and estuaries is through unregulated discharge of ballast water once a ship either enters or is preparing to enter a port. The planktonic stage of many invasive species are sucked into a ship's ballast in the port of debarkation and then released into the waters of the next port of call when the ship empties its ballast in order to stay afloat in the shallower port waters. Essentially, these large ships serve as floating aquaria for potentially devastating invasive species. Ships traveling from Japan to Oregon have been measured to carry as many as 367 "distinctly identifiable taxonomic groups of plants and animals." Office of Technology Assessment, Harmful Non-indigenous Species in the United States 82 (1993). Once these planktonic organisms enter their new waters in the port where the ballast water is discharged, they grow into adults in their new home and often reproduce at incredible rates due to new food sources and few predators. As shipping increases, especially with the increased production and utilization of large-hulled ships, exotic species ballast water introductions are increased as well. For instance, 40%-100% of the organisms currently living in the San Francisco Bay estuary are exotic species. Andrew Cohen, The Exotic Species Threat to California's Coastal Resources, Proc. Calif. and World Ocean '97 Conf., Mar. 24-27, 1997, San Diego CA. More than 200 exotic species now live in the SF Bay, and estimates show that a new species establishes itself every 12-24 weeks. Andrew Cohen, Biological Invasions of the San Francisco Bay and Delta, summary of comments USFWS Directorate meeting, June 12, 1996. In light of this increased risk, there is now a heightened duty to consider these sorts of influences. In particular, the Corps must consider possible introductions in the DEIS.

Congress considers the impact from invasive species introductions via ballast water to be of national significance. Currently, there is a ban on unregulated ballast water discharge in the Great Lakes. Two years ago, Congress enacted the National Invasive Species Act of 1996,

Corps of Engineers Response

which identifies a high level of risk from introduced ballast water species and seeks to deal with the problem on a national level. 16 U.S.C. § 4711 (a), (c) (1994). These guidelines recommend that all ships entering United States ports discharge their ballast water in areas beyond the exclusive economic zone. Id. § 4711 (c)(1)(D)(i).

In light of the new information on the threat of ballast-water-introduced exotic species and the increasing level of shipping, it is imperative that the Corps study the effects of continued and increased large-hull ship entry into the Columbia and Willamette Rivers through continued maintenance and deepening of the dredged boating channel. This study should specifically consider the unregulated discharge of ballast water containing exotic species into the Columbia and Willamette waters. Without the Corps' continued dredging activity, it would be impossible for large-hull ships to enter the river and the risk from exotic species via ballast water discharges would be greatly reduced. Ballast water exchanges beyond the port are not only recommended nationally, but are generally safe and cost-efficient to perform. In addition, shore-based ballast water treatment plants should be developed that can quickly and efficiently sterilize ballast water. In short, these steps are necessary to prevent potential future loss of millions of dollars through destruction of commercial and sports fisheries and degradation of Oregon's natural aquatic ecosystems.

15. (cont)

For example, the December 16, 1993, Environmental Assessment on Columbia River Maintenance Dredging for River Miles 3 - 106.5, noted that an exotic species called *scirpus triqueter* is common on Wallace Island, an island described as possessing "interesting wetlands." 1983 EA, p. 8. The 1983 EA described *scirpus triqueter* as a "tri-square bulrush resembling *S. americanus*. This plant is very robust and is found in the flora of Taiwan. Species has been reported nowhere else in the U.S. It is common on the Columbia River in this vicinity." 1983 EA, p. 8. The presence of a species of flora from Taiwan could easily be related to shipping. The introduction of a "very robust" exotic species could have significant environmental consequences to native wetland habitats. Additionally, a Corps marine biologist told NEDC that at least one new species of freshwater shrimp has established itself within the Columbia River within the last twelve months. Each new species introduction is a potential Pandora's box of problems, and it is impossible to know which species may cause those problems. Therefore, each introduced species must be treated as a potentially destructive one.

As part of its final EIS, the Corps should study the environmental impacts from continued unregulated ballast water discharge into the Columbia and Lower Willamette Rivers. The channel presently allows large-hull ships to enter the Columbia. However, without the deepening, the ships would not likely pose as great of a threat because such large ships would not be able to enter the waterway. The Corps should more fully consider alternatives to the deepening to control the potentially serious and intractable problem of exotics invasions. Possible alternatives include coordination with other local and federal agencies to regulate ships entering the rivers. These regulatory steps could be presented in Memorandums of Agreement (MOA) between the agencies or through enforceable Best Management Practices (BMPs) to control the problem. The effects of unregulated ballast water exchanges must be studied and

Corps of Engineers Response

discusses as part of any environmental impact study for continued dredging activities.

15. (con't)

Because such introductions are likely to occur and would have high magnitude impacts on both the Columbia River aquatic ecosystems as well as on Pacific Northwest terrestrial ecosystems, the final EIS should detail: 1) which identified exotic species currently are in the Columbia, Willamette and Lower Snake Rivers; 2) the impact they have on endangered and threatened species; 3) the effect ballast water transfer would have on the spread and introduction of aquatic NIS; 4) the possible economic impact of large scale exotic species introduction; 5) the possible effect of NIS introduction on the diversity of native fauna and flora; 6) which exotic species pose the greatest threat of introduction to the Columbia River Basin; and 7) what prevention and mitigation measures the Corps proposes to prevent such introductions.

In comments to the final SEIS for the no-action alternative, NEDC thoroughly addressed the issue of NIS. These comments listed potential consequences of exotic species to the economy and ecology of the Columbia River, potential alternatives to prevent the introduction of NIS, and a bibliography of relevant research and testimonies about the NIS introduction. In failing to reference any of these sources and to mention any reasonably foreseeable impacts, the Corps has not complied with NEPA requirements.

2) The draft EIS does not adequately address reasonably foreseeable significant impacts of dredging on the redistribution and possible resuspension of hazardous, toxic, and radioactive wastes (HTRWs).

In spite of the fact that the draft EIS acknowledges the possibility that hazardous, toxic, and radioactive wastes may be present in navigation channel, it does little to assess the extent to which HTRWs exist or the possible effects from dredging and disposal of these materials. Sampling of sediments has been inadequate to determine actual amounts of hazardous materials in the areas to be dredged. The Corps only sampled sediments down to 10 inches, while the preferred alternative would excavate down 3 feet. DEIS, Appendix B, at 5. The Corps attempts to justify this method of sampling because the materials beneath had larger grain size. Id. at 6. However, larger grain size does not automatically preclude the existence of hazardous materials. Nor does sampling the top 10 inches factor in the previous effects of dredging on the composition of the channel bottom. Through the process of dredging, finer grained material may have been redistributed to lower levels, and consequently, more hazardous wastes may lie below the top 10 inches.

16.

Failure to chemically test samples with less than 20 % fine grain materials also prevents the Corps from adequately addressing future impacts, because the Corps doesn't have a clear idea of present conditions. Even though finer-grained material chemically binds better than the larger-grained material, larger-grained material may nonetheless have chemical contamination. In addition, material up to .50 mm may become suspended in the river from dredging operations. Failure to test these materials prevents the Corps from adequately assessing the possible impacts of resuspending hazardous materials into the waters.

16. It is believed that surface grab samples in the mainstem Columbia River can be used to collect representative samples because of the nature of the shoaling in this part of the project. Samples in the Willamette River were collected by grab sampler where the proposed dredging prism was thin (0 to 3 feet). Thicker shoals (3 feet up to 24 feet) were sampled using a 4" vibra core.

All samples with >20% fines were chemically tested except for one sample in the Columbia River (CR-BC-75A). This sample was compromised during the sampling event and therefore would not meet the protocols for chemical testing. Material with <20% fines were collected and chemically tested in the Columbia River portion of the project though this material met the exclusionary criteria of the CWA as described in the Dredged Material Evaluation Framework. All material proposed to be dredged in the Willamette River was tested chemically regardless of physical characteristics because of its proximity to known sources.

Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. If highly contaminated sediments are to be dredged, then suspension of contaminants will need to be addressed. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

Corps of Engineers Response

16. (con't) Indeed, the Corps has not addressed resuspension with any level of adequacy. While the draft EIS acknowledges that turbidity in the water would increase, it makes no indication that turbidity may indicate the resuspension of toxins. Nor has the Corps assessed any potential effects of this resuspension on water quality, aquatic species, or wetland and other aquatic habitat from the flushing of these toxins down the rivers. As stated above, to comply with NEPA requirements, the Corps must consider all reasonably foreseeable significant impacts.

3) The draft EIS neglects to adequately address other reasonably foreseeable significant adverse affects.

17. These effects include the possible designation of the 5.5 mile stretch of the Willamette River as a Superfund site, the possibility of dam removal on the Lower Snake River (a tributary to the Columbia River), and increased water flows for salmon. Much information about these possible actions exists, and could be obtained by the Corps. For example, the Environmental Protection Agency (EPA) conducted a study along the Willamette River, to evaluate the river for contamination and potential suitability for CERCLA designation.

II. The draft EIS indicates the dredging may violate Endangered Species Act requirements.

- A. The proposed Corps actions, as well as its draft EIS, fail to comply with Section 7.**
- 1. The information contained in the draft EIS does not adequately address impacts which should be fully discussed in the biological assessment.**

Section 7 of the ESA requires the Corps to consult with the Fish and Wildlife Service (FWS) about possible impacts to endangered and threatened wildlife species, and with the National Marine Fisheries Service (NMFS) about possible impacts to listed anadromous species (salmonids). To facilitate compliance with the consultation requirement, the Corps must submit a biological assessment, which may be undertaken as part of the Corps' compliance with NEPA. 16 U.S.C. § 1536(c)(1). NEPA allows an agency to combine its EIS with its biological assessment and submit its EIS as the biological assessment. Id. However, should the Corps only include the information currently available in the draft EIS, the biological assessment would inadequately detail potential threats to the endangered species, particularly to salmonids, and not allow the consulting agencies to "use the best scientific and commercial data available." 16 U.S.C. § 1536(a)(2).

18. In order to provide NMFS with a clear indication of potential threats to salmonids, the Corps should more fully address the following information in its biological assessment: 1) the effects of potential introduction of exotic species resulting from channel deepening; 2) direct mortality through dredging and blasting; 3) adverse impacts to salmonid critical habitat, including nearshore and estuary habitat; 4) effects of resuspension of toxins on water quality, and effects of water turbidity on water quality; 5) effects of destruction of benthic organisms on salmon food sources; and 6) potential impediments to juvenile and adult migration from dredging.

17. The Snake and Columbia River dams provide minimal flow regulation for the mainstem Columbia River. The potential for listing the 5.5 miles of the Willamette River as a Superfund site was not proposed at the time the draft report was written. Discussion of the present situation has been added to the EIS and studies cited.

18. A detailed discussion of the impacts of the proposed project on listed species, especially salmonids, was provided in both the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act requirements. The NMFS determines Section 7 compliance of the proposed project. As described in the EIS, the project is not expected to have a significant impact on salmonid populations in the river. The Corps coordinated with both WDFW and ODFW to determine appropriate salmon restoration measures to be implemented under ecosystem restoration. We have prepared a Biological Assessment for salmonid species and are currently seeking concurrence from the NMFS through their Biological Opinion. The USFWS, in cooperation with WDFW, ODFW, and NMFS, has prepared a Coordination Act Report with specific recommendations on natural resources and project-related impacts.

Corps of Engineers Response

2. The proposed deepening plan violates the Corps' obligation to not jeopardize endangered species.

19. The Corps has an obligation, under Section 7, to not jeopardize the continued existence of any endangered or threatened species, or to destroy or adversely modify designated critical habitat of the listed species. 16 U.S.C. § 1536(a)(2). Rather than take this obligation seriously, the Corps seems to be actively dodging its requirements through misstatements and failure to supply NMFS and FWS with the best scientific and commercial data available. Id. The failure to supply the reviewing agencies has been addressed above. Various inaccurate or blatantly incorrect assertions proliferate the DEIS. To begin with, the Corps inaccurately states that the lower depths of the Columbia River are not critical salmon habitat. However, the entire Columbia River, from the mouth to the confluence of the Columbia and Snake Rivers, has clearly been designated critical habitat for Snake River Sockeye Salmon, Snake River Spring/Summer Chinook Salmon, and Snake River Fall Chinook Salmon, "including all Columbia River estuarine areas and river reaches." 50 C.F.R. §226.22, at 109. Where the Corps decides that the navigation channel doesn't fall into critical habitat, it seems to have done this on its own volition, rather than following any specific determination.

B. Many proposed actions discussed in the draft EIS would be a taking as defined by the ESA.

Section 9 of the ESA prohibits the "taking" of a listed endangered species. 16 U.S.C. § 1538(a)(1)(B). The term take means to harass, harm, pursue, wound, kill, trap, or capture. 16 U.S.C. § 1532(19). In this case, the actions of the Corps have the potential to "take" listed bald eagles, Columbian white-tailed deer, and salmon species.

1. Dredging and disposal activities will harm, trap, and harass listed endangered salmon and steelhead species.

20. **a. Critical habitat and salmon food sources will be destroyed and/or modified.**
As already mentioned, the entire Columbia River is designated as critical habitat for six listed anadromous species. In addition, the lower Willamette River is designated critical habitat for steelhead. Many of proposed actions in the DEIS would significantly affect the habitat, thereby harming salmon. One of the most blatant examples is the proposed rock blasting in both the Columbia and Willamette Rivers. DEIS at 6-20. The DEIS acknowledges the potential harm that blasting may cause the salmon themselves as well as the benthic organisms upon which salmon feed. Id. Indeed, the DEIS states first, that consequences to the benthic organisms are unknown, then second, that benthic organisms in the blast area will be totally wiped out. DEIS at 6-21. Having actually acknowledged that there may be detrimental impacts from this proposed deepening, the DEIS attempts to soothe the concerned reader with the unfounded assurance that benthic organisms will recover to pre-blast levels. Id. The Corps apparently bases this assumption on the fact that, in other dredging situations, benthic organisms have repopulated

19. All conclusions in the EIS are based on the best scientific information available for a given issue. Also see our response #18.

20. See our responses #4 and #18.

rapidly. Here, however, the Corps provides us with no scientific proof upon which to base this assurance. Such lofty expectations must have concrete and significant scientific proof. The DEIS must define both the geographical extent of the blasting area and the expected population size of killed benthic organisms. Furthermore, the Corps must provide a well founded and scientifically supported estimation of time span until complete repopulation occurs, the impact on salmon if their food source is destroyed, if only temporarily, and the cumulative impacts on the habitat from the blasting.

20. (con't)

Even less data are provided about the techniques the Corps intends to employ to avoid direct impacts on salmon. The Corps acknowledges that blasting can cause mechanical damage to fish's internal organs. DEIS at 6-20. It sketches a plan in which over pressures would remain at or below 10 psi (as recommended by NMFS), to avoid this possible organ damage. Id. The blasting would take place from November 1 to February 28 in the Columbia and the remainder of the year in the Willamette, which conflicts with steelhead migration. DEIS at 6-21. Even though it acknowledges that the schedule would change in light of the recent listing of steelhead, it hasn't provided a specific timetable for NMFS or any other reader to assess. More importantly, the Corps relies on a ludicrous plan to "scare fish away prior to the blast." DEIS at 6-21. Unfortunately, it gives no indication of specific techniques to scare the fish away, nor references to its projected success rate, reliability, or acceptability in the scientific community.

b. Entrainment of salmon will obviously trap salmon and thereby be a taking.

One of the more ridiculous and disturbing conclusions reached in regards to salmon concern potential entrainment of juvenile salmon. The Corps conducted an entrainment study to assess possible effects of the dredging on salmon and sturgeon populations. In one test, 2,000 juvenile sturgeon were entrained, and in another, 1 sturgeon and 2 juvenile salmon were entrained. DEIS at 6-20. Perhaps recognizing that any entrainment of any salmon constitutes a taking, the Corps denounced its own scientific techniques and reached the startling conclusion that, despite its recent entrainment, no salmon would be entrained during dredging operations. DEIS at 6-37. The Corps states that salmon rarely use the deeper parts of the channel, and therefore, "they would no be subjected to entrainment during dredging." Id. It then refers to the entrainment of the two juvenile salmon as proof that salmon will not be entrained. Id. However, the study proved just the opposite. Within 5 hours of pumping time, two juvenile salmon had been collected. Id. As much as the Corps may try to put a positive spin on this fact, the bottom line is that the entrainment indicates future likelihood of more such takings, especially considering that actual dredging will last years, rather than hours.

21.

The Corps also tries to dispel the legitimacy of its own study, saying that it is a "worse case situation" because the draghead of the dredge was skimmed along the bottom. Id. Rather than instilling more confidence in the Corps' predictions, however, this disclaimer leaves the reader wondering how the Corps will avoid future such occurrences when its own tests fail. If anything, the failure of the study points to the probability of many more potential failures, during which many more salmon could be entrained. The Corps' handling of the facts presented about

21. Although two juvenile salmon were entrained during the sampling study, this entrainment occurred while the draghead was skimming the bottom. Entrainment should not occur during normal dredging operations, when the draghead would be buried in the sand. See Section 6.6.1.2 of the EIS for further detailed information. Also see our response #18.

entrainment also point to a trend of justification and dismissal of negative impacts. Not only is this a violation of NEPA in spirit and in law, but it leaves the reader wary to trust many of the statements made in the DEIS.

c. Flowlane disposal of dredged material will harm salmon.

The Corps repeats that adult and juvenile salmon migrate at depths above the disposal operations. DEIS at 6-37. It then takes this information to conclude that impacts to the salmon would be minimal. Id. This part of the DEIS provides no further information substantiating this assertion. A prior reference to flowlane disposal in the lower Columbia states that the area receives use by juvenile salmon, among other species, but that they would be able to "recover from [the] level of sediment deposition or to move out of the area during the disposal to avoid being impacted." DEIS at 6-22. As with the blasting, no scientific evidence supports this assumption. Indeed, the DEIS actually admits that individuals that can not move out of the way would likely be smothered. DEIS at 6-23. Smothering a salmon will kill it, and, therefore, will be a taking under the ESA. Further attempts by the Corps to negate the significance of smothering the salmon (such as by reasserting that populations are low at this depth) do not eliminate the fact that under section 9 of the ESA, taking of salmon is prohibited. 16 U.S.C. § 1538(a)(1)(B).

d. Dredging operations will interfere with salmon migration and constitute harassment.

22. See our response #18 concerning salmon impacts.

22.

Dredging and disposal will occur primarily in summer and early fall. DEIS at 6-38. During these times, intensive dredge operations would occur, creating noise and water pollution and increasing the general disturbance to the aquatic habitat. The DEIS fails entirely to address the harassment resulting from these operations. For example, while it acknowledges a short-term increase in turbidity, DEIS at 6-10, it makes no reference to the effects of this turbidity on migrating salmon, including how it may affect the salmon's navigational abilities. It mentions the possible disturbance of dredging to bald eagles and shoreline birds, but doesn't mention how increased activity will affect salmon and other aquatic species. DEIS at 6-41. Nor does the DEIS adequately address the fact that most dredging will occur during summer and early fall, when many of the listed stocks are in the Columbia and Willamette Rivers. DEIS at 6-38. Finally, the DEIS fails to consider possible future impacts from increased use of the navigation channel by larger boats, future development of port facilities, or future maintenance of the navigation channel. See DEIS at 6-58.

2. Proposed disposal activities are acknowledged to impact Columbian white-tailed deer habitat.

23. The Corps and the U.S. Fish and Wildlife Service concurred on ESA determinations and conservation measures for Columbian white-tailed deer at these dredged material locations, except Puget Island, during development of the Dredged Material Management Plan, the baseline condition for the channel improvement study. These ESA determinations and conservation measures were carried forward in our biological assessment, and it also addresses impacts and conservation measures for Puget Island.

23.

The areas which support Columbian white-tailed deer and which may receive dredge materials include Whites Island, Puget Island, James River, Tenasillahe Island, and Welch Island. DEIS at 6-38. On each of these islands, the deer typically use the area for forage and cover. DEIS at 6-32. In fact, Tenasillahe is part of the Julia Butler Hansen National Wildlife Refuge, and

Corps of Engineers Response

managed for the deer. DEIS at 5-15. The Corps acknowledges that disposal of dredged material on these islands will result in the loss of existing habitat and associated wildlife use. DEIS at 6-31, 6-32. To mitigate its acknowledged destruction of Columbian white-tailed deer habitat, the Corps has proposed seeding the dredged material to retain or regenerate the grass-forb forage. Id. However, this proposed mitigation will likely not succeed, and, regardless of whether it eventually does, deer will nevertheless be harmed by the planned disposal.

23. (con't)

In its discussion of islands formed from disposal of dredged material, the DEIS describes the islands as typically having little vegetation on the upland portion. DEIS at 5-15. It attributes this lack of vegetation to the lack of nutrients in the sand and the xeric nature of disposed sediment, saying "[n]either condition is amenable to the establishment of plants." Id. Indeed, the only island with plant communities established in the upland areas is Miller Sands, which was formed in the late 1920s and early 1930s. Id. In spite of this information regarding other islands, the Corps plans to seed disposed dredge material, but offers no indication that the seeding would succeed. Nor does the Corps present a time frame for the seeding to happen. Based on the Miller Sands example, one could expect grasses to grow within 70 years. Obviously, this type of mitigation would come too late to offset damage from the proposed disposal. Finally, even if revegetation were to succeed, there is no indication that the Columbian white-tailed deer would use revegetated areas.

3. Dredging and disposal activities will disturb bald eagle nesting sites, in spite of proclamations that they'll have no effect.

The Corps states that 56 bald eagle territories existed in the project area in 1997, and in 1998, the number of sites checked increased to 65. DEIS at 6-40. Quite obviously, bald eagles inhabit significant portions of the project area. As with the Columbian white-tailed deer and listed anadromous fish, however, the DEIS minimizes potential impacts to listed bald eagles rather than acknowledge potential harm resulting from proposed dredging and disposal activity.

24.

a. Nearshore dredging will drive bald eagles from nesting and foraging sites, and therefore, constitute harassment and harm.

The DEIS states that bald eagles may be temporarily displaced from portions of their territory during dredging activities. DEIS at 6-41. It says these displacements may last a few days to "about two weeks," but expects the eagles to simply use other portions of their territory during the disturbance. Id. However, it provides no information on whether the eagles would actually move to a different area or be permanently impacted from the disturbance. If the dredging activities disturb bald eagles to the extent that they leave their nests or foraging habitat, the dredging has harassed the eagles, which is prohibited under the ESA. 16 U.S.C. § 1538(a)(1)(B). Furthermore, if Corps' expectations prove inaccurate and the eagles don't avoid the dredging operations, the dredges may physically harm the eagles, which would also be a taking. Id. Finally, if the eagles do leave the foraging territory but don't return, they will have been displaced from their nests and may suffer indirect harm as a result of the nearshore dredging.

23 (continued). The agreed upon conservation measures will be implemented as part of the Dredged Material Management Plan (DMMP) and will be continued with implementation of the channel improvement project. The biological assessment and opinion for the channel improvement study, which will identify terms and conditions and/or conservation measures to be implemented, will be attached to the FEIS. We disagree with the contention that seeding of grasses and forbs will not work as previous efforts at Welch and Wallace Islands were successful.

24. The Corps has discussed impacts to bald eagles in the EIS and Biological Assessments for the DMMP and for the channel improvement study. The assessment for the channel improvement study is located in Exhibit G. The Biological Opinion from the US Fish and Wildlife Service will be provided prior to the Record of Decision.

Corps of Engineers Response

While these possibilities may seem speculative, they are no more so than the expectations printed in the DEIS. The Corps merely acknowledges potential harm, then dismisses this potential through recitations of expected eagle behavior. DEIS at 6-41. However, they present no data upon which these expectations are based, and indicate simply that "taking" of bald eagles is improbable. The attention to this topic in the DEIS also suggests that the spirit of NEPA has again been violated.

b. Potential contamination in dredged sediments may lower reproductive success in bald eagle pairs.

The DEIS notes that reproductive success for bald eagles nesting along the Oregon shore of the lower Columbia River is low. DEIS at 6-41. This limited success has been attributed to contaminants, such as DDE, PCB's, and dioxins, the main conduit of which has been dredging. Id. Rather than acknowledge that deepening and disposal of more dredged material may increase the eagles' exposure to contaminants, the DEIS concludes that contaminant loading is not an issue for the sandy sediments. Id. However, the Corps ignores its own statement that dredging may resuspend the contaminants, which then become available for uptake by bald eagles. Id. Since PCB's, DDE, DDT, and dissolved oxygen have repeatedly been found in tissue samples of lower Columbia River fish - to the extent that the lower Columbia River is on the 303(d) list - these chemicals obviously exist in the water. Further, as basic physical sciences tell us, these chemicals eventually settle to the bottom. Unfortunately, the Corps' choice to only sample sediments to 10" beneath the surface, when dredging will resuspend contaminants as deep as 3' beneath the surface, provides little data to analyze. Regardless, significant levels of dioxins were detected throughout the lower Columbia River. Appendix B at 24. To adequately show that contaminant resuspension is not a risk, the Corps must analyze larger-grained sediment and analyze to the proposed deepening depth, that is, three feet beneath the surface. Simply dismissing the potential for contaminant loading on the basis of the sediment being fine to medium-grained sand does not suffice as serious consideration of the potential harm to eagles.

c. Disturbance to foraging bald eagles from disposal activities will harass and harm bald eagles.

Several proposed disposal sites provide foraging, nesting, and loafing habitat to bald eagles. DEIS at 6-40. Disposal at many of these sites will destroy wildlife use and habitat. For example, disposal on Martin Island, upon which a bald eagle nest exists, would result in the loss of wildlife habitat. DEIS at 6-29. Planned timing and spatial restrictions are intended to avoid impacts, Id., however, the Corps presents no specific information about how these restrictions would work. The same loss of bald eagle habitat is expected on other proposed disposal sites, but very little data about bald eagle habitat and use is in the DEIS. Indeed, a frustrating trend in the handling of impacts to bald eagles is the lack of real information presented. When discussing the nest on Martin Island, for example, the DEIS refers the reader to section 6.7.2 for more specific information. However, the information in this section includes no more specific information or projected impacts. Instead, the discussion of bald eagles turns into another circular argument

25. See our response #24. The issue of contaminated sediments relative to bald eagles has been addressed in the EIS and Biological Assessment.

26. See our responses #24 and #25.

Corps of Engineers Response

about the lack of contaminants in sediment. DEIS at 6-41-42.

III. Proposed actions in the draft EIS may violate parts of the Clean Water Act.

A. Dredging operations will violate the Clean Water Act's antidegradation policy.

Both the Columbia and Willamette Rivers are Water Quality Limited Streams in Oregon. The Columbia River is water-quality limited for bacteria, dissolved oxygen (DO), temperature, total dissolved gas, and toxics (including PCB, DDE, DDT, and arsenic). Oregon's Final 1998 Water Quality Limited Streams - 303(d) list. The Lower Willamette River is water-quality limited for bacteria, chlorophyll a, DO, phosphorous, pH, temperature, and toxics, including mercury, pentachlorophenol, and arsenic. Nowhere in the DEIS are these 303(d) listings specifically mentioned nor considered. However, under the Clean Water Act, states must institute comprehensive water quality goals and standards for all waters of the state. Clean Water Act, §303(d), 33 U.S.C. §1313(d)(1)(C). Since these water quality goals (or TMDLs) are subject to federal approval, the safe assumption is that federal agencies must comply with these approved goals, rather than bully or maneuver their way around compliance.

27.

Under section 303, water quality standards are comprised of designated uses, water quality criteria, and antidegradation policies. EPA regulations required that states adopt water quality criteria that protect all designated uses. These criteria consist of narrative or numerical thresholds of quality which must be achieved or maintained in public waters. The numerical criteria are specific numeric values for chemical constituents, physical parameters, or biological characteristics. The narrative criteria are general statements of quality to be maintained. The antidegradation policies are narrative statements that discourage and/or prohibit the lowering of water quality in state waters.

Even if the antidegradation policy allows the waterbody to be degraded to the limits of the standards, the beneficial uses (and their attributes) may not be impaired. The recognized designated or beneficial uses for waters in the Willamette River Basin include: public domestic water supply; private domestic water supply; industrial water supply; irrigation; livestock watering; anadromous fish passage; salmonid fish rearing; salmonid fish spawning; resident fish and aquatic life; wildlife and hunting; fishing; boating; water contact recreation; aesthetic quality; hydropower; and commercial navigation and transportation. OAR 340-41-442. These uses must be protected even if the criteria in the standards do not apply. The resuspension of pollutants and toxics will inevitably occur through the dredging process. As both the Columbia and Willamette Rivers are currently water-quality limited for many parameters, this resuspension will contribute to the degraded status of these waterways. Thus, the process of dredging will violate the CWA's antidegradation policy. Furthermore, beneficial uses, such as salmon spawning and rearing, will suffer from the resuspension.

Not only does the introduction of non-native species pose significant threats to salmon, industry, and the entire Columbia and Willamette River Basins, it also could violate the antidegradation policy of the CWA. If zebra mussels become introduced to the Columbia River through ballast

27. Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

Corps of Engineers Response

28. water discharges, they would impact nearly all of the listed beneficial uses (public domestic water supply; private domestic water supply; industrial water supply; irrigation; livestock watering; anadromous fish passage; salmonid fish rearing; salmonid fish spawning; resident fish and aquatic life; wildlife and hunting; fishing; boating; water contact recreation; aesthetic quality; hydropower; and commercial navigation and transportation). The mussels are known to pose the greatest threat to irrigation systems by cutting off flow in irrigation canal. Portland Oregonian, 1998 WL 20376390. Also, the zebra mussel could destroy salmon recovery efforts. Not only do they choke out fish species by out-competing for microscopic food sources, they can also clog fish screens and ladders. Id. The zebra mussels' sharp shells can also cause direct harm to salmon by scraping off the salmon scales. Id. Therefore, any activity which allows or encourages introduction of non-native invasive species will violate the antidegradation policy of the CWA.

B. Section 404

Section 401 of the CWA requires water quality certification of all federal permits - in this case, Section 404. 33 U.S.C. §1341(a)(1). Section 404 requires that all projects involving the discharge of dredged or full material into waters of the United States be evaluated for water quality and other effects prior to making a discharge. 33 U.S.C. § 1344(a). The draft evaluation of § 404 included in the DEIS states that the proposed action, including mitigation, would result in "no significant adverse effects on human health or welfare, municipal water supplies, plankton, fish, shellfish, or wildlife. Significant adverse impacts on life stages of aquatic life and other wildlife dependent on the aquatic ecosystem, on ecosystem diversity, productivity, or stability, or on recreational esthetic or economic values would not occur." DEIS exhibit D. These conclusions have not been effectively proven or referenced in the DEIS.

29. Also, the project is not yet certified. It is not clear that it will ever become certified due to the significant problems with sediments in the Willamette River. The Corps' proposed channel deepening plan includes both rivers, with the intent to phase construction to delay the Willamette deepening procedures until the sediment issues are resolved. However, since only 5.5 miles of the Willamette have thus far been studied, and many more will most likely be tested in the future, the proposed delay may be indefinite. Additionally, for any certification to occur before complete testing of the river is completed would make no sense nor be responsible. The DEIS fails to address indirect impacts and possible future events related to the deepening project, including potential listing of the Willamette as a Superfund site.

IV. If the Corps proceeds with its proposed actions in the Willamette River, it will be a violator under RCRA.

30. The Corps of Engineers must comply with the Resource, Conservation and Recovery Act (RCRA). See RCRA § 3002, 42 USC § 6921. In the Columbia and Lower Willamette Navigation Channel Project, the Corps will be generating hazardous waste as defined in the statute. Generators of hazardous waste are persons or sites whose acts or processes produce waste which are listed or have a hazardous characteristic. 40 CFR §261. This includes any persons whose acts cause hazardous waste to become subject to the generation requirement, such

28. See our response #15.

29. The Section 404(b)(1) Evaluation (Exhibit D) has been revised to provide additional information supporting this conclusion. Also see our response #16.

30. Disposal of dredged material in waters of the United States is regulated under the Clean Water Act and not the Resource, Conservation and Recovery Act. The protection provided by these two laws are considered equivalent; however, there was in the past considerable disagreement over which law applied to various situations.

Corps of Engineers Response

as the dredging and transportation of waste. During the dredging of the Columbia and Willamette River, the Corps will be moving an enormous amount of sediments which are either listed or may be characterized as hazardous waste. Although the Corps may not be directly liable for the contamination of the sediment, according to RCRA's statutory guidelines, the Corps will be a generator of hazardous waste. Although the Corps considers themselves exempt from RCRA regulations, there is no statutory, regulatory, or judicial basis for that belief. If the Corps can prove that they are in fact exempt from RCRA, then this should be included and explained in the EIS. If not, the Corps must comply with all the regulations for generators of hazardous waste established in RCRA § 3002 and elaborated in 40 CFR § 262. Generators of hazardous wastes are persons or sites whose acts or process produce wastes which are listed or have a hazardous characteristic identified in 40 C.F.R. Part 261. A "solid waste" is defined by Part 261.4 as any "discarded material," and the Corps will be discarding dredged material as explained in Section 2 of the EIS. Waste generators, like the Corps, are responsible for determining whether their solid waste is hazardous, 40 CFR § 262.11. The failure to make a waste determination can lead to criminal prosecution of the generator. See United States v. Dee, 912 F.2d 741 (4th Cir. 1990).

30. (cont)

Many of the wastes that are identified in the EIS are listed as a hazardous waste in the RCRA regulations, or may be characterized as hazardous waste if the Corps conducted the proper characterization tests on the sediments. In the Columbia and Willamette River Sediment Quality Evaluation (Appendix B), the Corps identifies contaminants in the sediment that will be dredged, moved, and stored during the project. 89 samples of sediments were taken along the proposed dredging sites along the Columbia and the Willamette. The Columbia River Data showed the existence of metals, pesticides, and polynuclear aromatic hydrocarbons. The Willamette River sediment contains highly toxic compounds at high levels. Sample 42 exceeded the screening levels for mercury at .87 parts per million, and sample 42D at 489 ppm of lead. Samples 23 and 24 both exceeded screening levels of tributyltin. Furthermore, known carcinogens and endocrine disrupters were found in the sediment: 9 samples exceeded screening levels for DDT, PCPs exceeded screening levels in 42C, and Deildren exceeded screening levels at 40A. In one sample, 24A, pesticides are exceedingly high (DDD exists at 100 ppm and DDT exists in 198 ppm.). The Corps is responsible for determining whether these wastes are hazardous under the regulatory definition, and how much hazardous waste is going to be dredged.

Because the Corps is, or will be, a generator of hazardous waste, they must comply with the standard requirements for generators, which include: 1) characterizing all the waste that is dredged, transported, and stored, 2) handling the hazardous waste according to the regulations while in the possession of the Corps, and 3) compiling with all of the manifest requirements. See 40 CFR Part 262.

V. Specific Comments

A. Testing of toxins and pollutants should be more complete.

31. The Corps has chosen to not conduct Tier 11 chemical testing of dredged material which contains less than 20% sand and finer grained material. Although the finer grained material chemically

30 (continued). To clarify the jurisdiction recent changes to 40 CFR 261 November 30, 1998 has been made. These changes clarify when dredged material is not to be considered a hazardous waste, as shown by the text below:

"Sec. 261.4 Exclusions.

(g) Dredged material that is not a hazardous waste. Dredged material that is subject to the requirements of a permit that has been issued under 404 of the Federal Water Pollution Control Act (33 U.S.C.1344) or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. For this paragraph (g), the following definitions apply:

(1) The term dredged material has the same meaning as defined in 40 CFR 232.2;

(2) The term permit means:

[[Page 65938]]

(i) A permit issued by the U.S. Army Corps of Engineers (Corps) or an approved State under section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344);

(ii) A permit issued by the Corps under section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413); or

(iii) In the case of Corps civil works projects, the administrative equivalent of the permits referred to in paragraphs (g)(2)(i) and (ii) of this section, as provided for in Corps regulations (for example, see 33 CFR 336.1, 336.2, and 337.6)."

Unless the Portland Harbor is declared a "Superfund" site by EPA all dredging must be carried out under the regulations of the Clean Water Act. In addition if the Portland Harbor is declared a "Superfund" site by EPA the Corps will not conduct any navigational dredging work related to maintenance dredging of the existing project or new work dredging related to the proposed channel deepening project within the boundaries of the declared site.

31. Chemistry (Tier IIB) was conducted on material with less than 20% fines in the Columbia River and the Willamette River, in accordance with the Regional Dredged Material Evaluation Framework (November 1998).

Corps of Engineers Response

bonds better than the larger grained material, the larger grained material may still have chemical contamination. Because of this and the possibility of larger-grained material (up to .50 mm) becoming suspended in the river with impacts similar to larger-grained materials, the Corps should chemically test all of the samples.

32. The Corps should also test for radiation. The Hanford Nuclear Reactor site lies on the Columbia River upstream of the navigation channel. Radioactive materials readily travel down the Columbia, moving along with the constant suspension and resuspension of river sediment. Any omission of testing these materials for possible radioactivity is patently irresponsible and dangerous. The Corps seems to dismiss the need to test for radioactivity based on half-lives of radioactive material and the date Hanford ceased production. However, materials remain stored on the Hanford site and in the river. For example, cesium-137, a radio active substance, was present in all tested samples in 1993. Reconnaissance Survey of the Lower Columbia River, v. 1, May 1993, prepared for the Lower Columbia Bi-State Water Quality Program, at 3-29. Indeed, the Columbia River has been called the "most radioactive river in the world." Martin, 1996. To avoid resuspension of radioactive materials, the Corps should test for radiation prior to any deepening.

33. The Corps should also perform biological testing. The draft EIS states the only physical and chemical analyses - but not biological - were conducted on sediment samples. DEIS at 2-15. It then concludes that sediment within the Columbia River navigation channel is not contaminated. Id. It also acknowledges that four sites outside of the navigation channel had excessive levels of DDT. Id. However, it doesn't provide the reader with a clear idea of where, specifically, the testing took place, nor how close the testing site is to the navigation channel, the likelihood of this DDT sloughing into the navigation channel or becoming resuspended from the process of dredging, or other consequential effects from dredging near a contaminated site.

34. Finally, the Corps should test beneath the 10" depth actually tested. The Corps chose to test only to 10," primarily because it concluded that material beneath this level would not bind as well chemically as the upper material. DEIS, Appendix B at 5. However, if the Corps doesn't test to deeper levels, over two-thirds of the material to be dredged and resuspended will have gone untested. The flow of the Columbia River is large enough to suspend and transport particles as large as .10 mm, and as large as .50 mm during high flows. Reconnaissance Survey at 3-19. Thus, most of the material to be dredged could become suspended particles in the river and be dispersed throughout the river, including along the river's sloughs and wetlands. Resident and endangered species, including salmonids, depend on these areas for sustenance and cover, and could be impacted by chemicals bonded to the larger, untested materials. Because of these potential consequences, the Corps must test lower sediment material.

B. Economic analysis in the draft EIS is inaccurate, incomplete, and outdated.

The economic analysis was drafted during a booming economic upturn and has not taken into account the economic crises currently plaguing Asian and Latin American countries. Since

32. A Tier I evaluation was made regarding radionuclides in the project area. Based upon this analysis no testing at higher tiers was considered warranted. A reason-to-believe was not established that current levels of radionuclides pose a threat. The Bi-State found that there were similar levels of radiation in lower river sediments as in sediment above Hanford.

33. Bioassays (Tier III) would be conducted on all sediments that contained contamination above screening levels if proposed to be dredged and placed into open-water unconfined. No sediment in the Columbia River had any contaminate at levels above screening levels so biological testing of these sediment is not necessary to determine the suitability if the material. Sediment in the Willamette River does have contamination above screening levels. Prior to dredging these materials would require higher levels of testing if the material were to be dredged and placed in an unconfined open-water disposal site. Tables are provided listing the results of the physical and chemical testing along with station numbers. Sample locations are shown in Plates 1 through 25.

34. ODEQ, WDOE, WDNR, and EPA reviewed the sampling plan including specific sample locations prior to sampling. Because of the dynamic nature of the shoals in the mainstem Columbia River where the material is continually reworked surface sediments are considered representative of the material to be dredged. As noted the high flows in the Columbia River are capable of the suspension and transport of even .50 mm grains. This insures homogenization of shoals so that the material proposed to be dredge is similar to the material sampled on the surface.

Corps of Engineers Response

predictions of future needs for bulk and container shipping are necessarily associated with the economies of these markets, a new assessment should be done to take into consideration the recent economic trends. More importantly, the document should acknowledge the unpredictability of the situation and plainly state that any economic analysis remains uncertain and dependent upon factors well beyond the Corps', sponsors', or anyone else's control. Finally, the Corps must factor in all costs of the project, not only direct navigation and dredging expenses. This is especially important in light of the economic benefit expected to be realized by the sponsors and the Corps.

35.

The Corps develops a simplistic benefit/cost ratio (BCR) analysis in which it looks primarily at the costs of constructing and maintaining the deeper channel versus costs saved by the shipping, container, and grain industries. DEIS, Appendix C. From comparing these two factors, the Corps concludes the net annual economic benefit will total \$39 million. Id. at 110. This overly simplistic analysis excludes several significant factors. These include: the loss of jobs for barge operators and lost revenue for barge companies; full costs of dredging and possibly developing current ports to accommodate the deeper draft; the temporary nature of the jobs created to accomplish the deepening; and the costs to repair the environmental damage which will inevitably result from the deepening. Since taxes, whether federal or local, will fund the cost of this project, the Corps has an obligation to disclose an accurate and comprehensive BCR analysis.

The economic analysis must acknowledge that, while certain industries may benefit from the deepening, others will suffer. For example, the DEIS justifies the need to deepen based on the time wasted in having barges back large ships out of several ports. It then explains how this practice wastes time and money. However, that conclusion comes only from the perspective of the shipping companies themselves, because the money they spend is earned by someone else. Every backing operation economically benefits barge companies, and the deepening may eliminate this source of income for barge operators. Furthermore, the laborers who must physically be present during these "wasted" backing processes receive hourly wages. The Corps neither addresses how, or if, this loss of income for them will be recovered, nor factors these losses into the BCR.

The DEIS fails to consider long-term economic consequences, particularly in terms of long-term employment. Even though the deepening may initially create jobs for dredge operators, the Corps' predictions indicate that long-term employment opportunities will decrease. Since one justification for the deepening is its feature of reduced maintenance dredging, this will reduce future long-term employment opportunities in this field. Also, if, as the Corps contends, the actual number of ships will not increase, no increase in dock and shipping jobs will likely occur.

The economic analysis should also acknowledge the speculative nature of the deepening project. As a niche market, Portland serves a small population of the shipping industry. The percentage of its container market remains relatively small, which the Corps acknowledges. DEIS at 3-2. Despite proclamations that the deepening does not intend to change the Columbia River ports'

35. We received many comments regarding the economic analysis and the 1997 Asian currency crisis and the fact that most of the work on the economics was completed prior to 1997. We have added additional information on these concerns to the final EIS and Economic Appendix C. The general consensus among major entities such as the World Bank, the International Monetary Fund, and the United States Department of Agriculture, is that the Asian economies have reached the trough of their downturn, and that those economies (along with the associated trade) are rebounding. The crisis has resulted in a short-term reduction in Columbia River exports, but the crisis does not represent a fundamental change in Asian economies that would result in a long-term decline or even stagnation of exports. Indeed, most forecasts call for Asian recovery to be well underway by 2001, and the first year that a deepened channel would be available is 2004.

Also, the suggestion that the channel could be configured less efficiently to increase jobs is interesting and focuses on giving more people a slice of the pie. From a federal perspective, it is preferable to increase the amount of pie available via improved efficiencies.

Our economic analysis has been performed using the regulations governing Corps studies. A detailed study of the exact monetary incidence of the benefits is outside the scope of the study, and is also outside the regulations guiding the analysis.

status as niche ports, however, the entire plan is designed to tap more fully into the container market. DEIS at 3-8. To date, grain shipping has not followed the deepening trend of container shipping. DEIS at 3-9. However, the container market shows a clear trend toward using larger and larger boats, and the Columbia River ports seem intent on gaining a piece of that market.

Whatever the motivation, this deepening will not likely prove to be the sound economic decision the Corps promises. First, as stated above, the shipping industry is naturally subject to the ebbs and flows of the market. These uncertainties must be factored in the BCR. Second, the Northwest as a whole has experienced a decline in its shipping business, quite apart from the presence or absence of a 43-foot channel. Seattle, for example, once served as one of the major Pacific Coast ports for the United States, rivaling its competitors in Long Beach and San Francisco. Recently, however, even this deep-water port has struggled to maintain the level it once did. Finally, no real guarantee may be made that the deepening will have any net economic benefit at all. As the Corps acknowledges, the trend in shipping has gone to larger and deeper-drafted boats. Many other dredging projects have been proposed throughout the United States, looking to deepen channels that already exceed 45 feet in depth. This points to the fact that the proposed deepening will be inadequate in its attempt to draw in bigger ships, and that, eventually, the Corps may decide that 43 feet isn't deep enough after all.

35. (cont)

Since the Corps behaves essentially as both the planner and contractor, it should bear the same responsibilities as any other contractor and provide detailed financial statement. Since the Corps is so actively pursuing many dredging projects throughout the country, it owes its employers (essentially, the taxpayers) a clear idea of what its goals really are. For example, a proposed deepening project in the Delaware River would only benefit 6 companies, none of whom have committed to paying to deepen their own ports. In essence, the Corps wants to deepen a river that even the beneficiaries don't care about. It may do this even without the guarantee that the beneficiary ports will be deep enough to make the project relevant. In the case of the Columbia, the Corps proposes essentially to offer a massive corporate subsidy to the shipping industry, even though the number of beneficiaries is small. Indeed, the Corps' plan, with its incomplete BCR and unreliable predictions, would likely fail in any nongovernmental, competitive operation.

Furthermore, since taxpayers will fund the deepening project, the Corps should openly acknowledge taxpayers' contribution, not only in terms of federal money, but also in terms of local contributions. Residents whose taxes will help fund the project should understand not only how the BCR has been calculated, but should also know exactly who benefits from the deepening project. The Corps should provide a detailed list of which corporations and industries will receive the greatest economic benefits from the proposed project. This list should also indicate which corporate and agricultural subsidies the beneficiaries already receive. The Corps' insistence that the deepening project will have a net economic benefit should indicate who exactly will derive that benefit.

Finally, the BCR should factor in costs of habitat restoration and wildlife recovery. The economic analysis of the costs and benefits of the project does not consider in adequate detail the

Corps of Engineers Response

36. potential impacts of this project on salmon recovery efforts. The states of Oregon and Washington have spent large amounts of money on salmon and steelhead recovery efforts in the Columbia and Willamette watersheds. If this project impacts the recovery of these species, then this money will have gone to waste. The DEIS should therefore consider this possibility as a potential cost of the project. The expensive salmon recovery efforts clearly show how high these costs can climb, as shown by a recent pledge of \$100 million by the federal government to help salmon recovery in the Pacific Northwest. Another likely cost which must be considered comes from the possible introduction of non-indigenous species. Clean-up costs in the Great Lakes have exceeded \$120 million dollars. David Davis, Deputy Director, Office of Water, U.S. EPA, Testimony in front of Congress, July 17, 1996, 1996 WL 10829741. The loss to sport and commercial fisheries will exceed \$500 billion over the next 50 years. Gary Edwards, Assistant Director for Fisheries, USFWS, Testimony in front of Congress, July 11, 1996, 1996 WL 10829512. The cost analysis must factor in economic losses to impacted fisheries and crabbing resources, reduced aesthetic values, lost wetlands, and harmed wildlife. It must also anticipate and calculate recovery costs.

C. Proposed disposal will detrimentally impact the crabbing industry and important epibenthic habitat.

Although the Corps devotes two volumes of appendices to the discussion of offshore disposal, it relies heavily on conclusory statements and insufficient study results. To comply with NEPA's requirement that the Corps provide a "full and fair discussion," the DEIS must thoroughly analyze all relevant issues, including those which point to detrimental impacts resulting from the disposal. Additionally, the DEIS must discuss cumulative and foreseeable future events. Finally, the Corps must comply with the Ocean Dumping Act in its development of offshore disposal sites.

1. The Corps must consider all impacts to the crab habitat.

37. In developing its disposal plan, the Corps must first establish baseline data about the marine habitat and resources affecting Dungeness crabs. In particular, it should detail life histories and habitat use for breeding, spawning, rearing, and nursery. Perhaps because little is known about population dynamics, the DEIS focuses only on the 6 1/4" legal male crab, which represents a very small section of the overall MCR crab population. However, to understand the impacts of disposal on this environment, the Corps must obtain baseline data on other aspects of the population, including segregation of the sexes, YOY (young of the year), and juveniles. Finally, the Corps must establish ecosystem requirements for sustained maintenance, including habitat and food source (such as *Corophium salmonis*) preservation. All of these basic life-cycle factors need further attention in the final EIS.

The Corps must then fully investigate and thoroughly discuss the impacts on the current marine environment, the epibenthic species, and the interrelated crabbing industry. Specifically, in the final EIS, the Corps should: 1) fully consider beneficial use sites; 2) address coastal erosion

36. Costs for wildlife and habitat mitigation are accounted for in the project mitigation plan. See Appendix G as well as the costs for ecosystem restoration features. Also, see our responses #15 and #18.

37. Additional information has been added to the final EIS on Dungeness crab and the commercial crab fishery. The currently proposed disposal sites minimize impacts to both crab and the crab fishery.

Corps of Engineers Response

37. (con't) parameters to accomplish adequate accretion; 3) establish marine resource baseline data; 4) establish resource food supplies and cover requirements; 5) consider stresses caused by fragmentation and over-crowding of the environment; 6) accurately estimate local economic harm to the fishing fleet and local communities; 7) perform thin-layer investigations to establish accumulation depths of disposal or levels of resource mortality; 8) conduct tests on biological or physical effects of depositing coarse grained sediments in the ocean environment; 9) assess the increased risk of marine casualty from direct burial, impaired respiration, burial of food and habitat, and impaired reproduction; and 10) examine all viable alternatives to the proposed disposal.

a. The thin-layer disposal method must be fully analyzed and tested.

The Corps proposes to shift from pinpoint to broad-based disposal. This rapid shift represents the Corps' preference to rely on unproven techniques in order to fulfill its need for extensive disposal sites. At the worst, this technique may pose substantial risk to our nation's marine resources and may set precedent for the rest of the nation. Notwithstanding such a grave prediction, the less cataclysmic impacts are quite severe. Rather than acknowledge the potentially serious impacts of this shift, the Corps uses inadequate testing and questionable conclusions to diminish the significance of the impacts. For example, throughout the DEIS, the Corps claims that annual maintenance will be less under the proposed deepening. However, it admits that "the average annual maintenance dredging of years 21-50 of the project cannot be forecast with any degree of certainty." DEIS at 4-10. It also acknowledges that present shipping demands for deeper and deeper channels will continue to escalate, placing more demands on ocean dumping. DEIS at 4-32. Even these acknowledgments, though, do not result in the Corps admission that proposed ocean dumping may be inadequate.

38. Nor do these acknowledgments negate the need to conduct acceptable test. Even if the marine environment may be able to assimilate a thin layer of disposal without noticeable consequences, little information exists about this type of disposal. Also, no field work is scheduled to establish disposal thresholds that minimize adverse impacts (including direct crab mortality and indirect results of habitat destruction). Without this critical information, the Corps cannot legitimately claim that the thin-layer disposal method will not harm or destroy the crab populations. Unfortunately, the Corps tries just that in the DEIS, without acquiring adequate data, conducting effective tests, or fully considering all reasonable alternatives to these disposal sites.

The proposed thin-layer disposal methods will cover seventy-five square miles. Because this practice requires a much larger surface area than "pin-point" disposal practices, any biological impacts from this method will affect a much broader area than has occurred to date off the Columbia River. The impacts of thin-layer disposal to resources off Oregon are not known and no pilot study has been proposed by the Corps. The Corps should conduct an impact assessment for this methodology prior to use in any new or existing (expanded) sites following the 1998 dredge/disposal season.

38. Thin layer disposal is no longer being considered.

Corps of Engineers Response

38. (cont) Rather than doing this, the Corps cites only one study to conclude the thin-layer disposal will succeed. Based on the findings of a single 1978 laboratory study investigating the ability of adult hard-shell crabs to dig out of various depths of deposited sand, the agencies proposed the thin-layer disposal method. AR Vol. 2 at 1484 (Chang and Levings). According to the 1997 EA, this method would release the dredged spoils over a large area and attempt to keep 90 percent of any mound thickness to 10 centimeters or less. The test cited in the DEIS fails to provide an accurate simulation of actual disposal in the ocean. For one thing, the test takes place in a small tank. For another thing, only adult hard-shell crabs were tested, and from their performance, the Corps has concluded that crabs will escape into the water column and avoid negative impacts of dredging. This conclusion, however, fails to fully account for critical features of the crab population. To begin with, by not testing juvenile and soft-shell crabs, the Corps ignores basic physiological processes of the crab, in that the hard shell grows in stages, and many parts of the Dungeness crab population will not have the protective hard outer shell. Also, the test only measures the single aspect of crabs moving into the water column. It neglects to mention that over 80% of the crabs which didn't escape into the water column died. DEIS, Appendix H, Exhibit F. It also fails to consider impacts of disposal on crab habitat, including its food sources, and crab life cycle. As the mating patterns of Dungeness crab are complex and not well understood, for the Corps to not actively consider disposal effects is nonsensical. Indeed, since the reproductive cycle is based on chemosensory mechanisms and occurs during a 24-hour window, disposal has the high potential to greatly affect the reproductive rates. Another test should be done to adequately assess potential harm to the Dungeness crab populations.

b. The Corps must test all dredged sediments.

39. The Corps claims all sediments headed for the ocean are clean sands and will have no significant impact to the ocean. DEIS at 6-11. However, analysis of sediments at site B indicate high concentrations of oils & grease. These carcinogens are known to cause high rates of mortality to YOY crabs. Unless proven otherwise, it should be assumed that disposal materials contain high concentrations of these lethal hydrocarbons. See Sea Grant circular in appendix. Indeed, the lower Columbia River below Astoria Bridge regularly exceeds screening levels for metals, chlorinated hydrocarbons, volatile solids, pesticides, polychlorophenols and polynuclear aromatic hydrocarbons. DEIS at 5-10. Considering these accumulated irregularities, the Corps must perform tests to detect and prevent bioaccumulation in the marine ecosystem. Without testing, carcinogenic accumulations can occur undetected.

c. The Corps must develop a monitoring plan to study long-term impacts of disposal.

40. In its 1983 comments to the EIS, the National Marine Fisheries Service noted that further study of the long-term impacts of dumping was needed, and recommended that the final EIS include plans for a long term monitoring program to assess potential adverse impacts to living marine resources at the disposal sites. In response, the Corps and the EPA promised to develop and implement a monitoring program. However, in the section entitled "Guidelines for the

39. The Corps is required to evaluate all sediments for suitability for in-water disposal in compliance with the Regional Dredged Material Evaluation Framework (November 1998) for the Columbia River management area and the national Dredged Material Testing Manual. The material proposed for open water disposal has been evaluated and determined to be in compliance with these manuals.

40. Concur with comment. The revised Management and Monitoring Plan can be found in Appendix H, Exhibit H.

40. (con't) Monitoring Plan.” the final EIS simply stated that most parameters did not need monitoring because the effects of the dredging would be minimal. DEIS, Appendix H, Exhibit G. It vaguely stated that the Corps and the EPA “may select appropriate species to monitor” but offered no further specifics. Id. To date, no monitoring of the effects of dredged material disposal on ocean crabs has been conducted. The final EIS should include a specific monitoring plan.

2. The DEIS must comply with the Ocean Dumping Act.

41. The Ocean Dumping Act prohibits any unauthorized ocean dumping of any material, and designates the Secretary of the Army (in practice, the Corps) as the permitting entity for the dumping of dredged materials. Before issuing a permit, the Corps must insure that “the dumping will not unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities.” 40 CFR § 224. In making this determination, the Corps must apply specific criteria established by the EPA. These criteria require the Corps to: (1) select sites particularly to avoid areas of existing fisheries or shell fisheries, 40 CFR § 228.5(a); (2) conduct a qualitative and quantitative assessment of potential effects on the marine environment and commercial fishing, 40 CFR §§ 227.17(a)(2), 227.19, 227.21; (3) dump only at disposal sites and under conditions that will insure no unacceptable interference with fishing, 40 CFR § 227.10(a); and (4) locate dumping sites beyond the edge of the continental shelf wherever feasible, 40 CFR § 228.5(e). Before a permit can issue, the EPA also must be given an opportunity to review the application and relevant information, and if the EPA declines to concur in the Corps’ finding, the permit cannot be issued. Here, in lieu of issuing a permit to itself, the Corps prepared a document entitled “Section 103 Evaluation” purporting to demonstrate compliance with the ODA criteria. Based on this document, the EPA concurred in the Corps’ finding that the ODA criteria were met. However, on its face, this document demonstrates that the Corps failed to comply with the ODA, and the EPA should not issue a concurrence.

41. Comments noted.

a. The Corps must avoid areas of existing fisheries or shell fisheries.

42. The ODA imposes several affirmative commands on the agencies to locate disposal sites in areas where they are not likely to interfere with living marine resources, particularly fisheries. The regulations are unequivocal in this regard: “[t]he dumping of materials into the ocean will be permitted only at sites in areas selected to minimize the interference of disposal activities with other activities in the marine environment, particularly avoiding areas of existing fisheries or shellfisheries.” 40 CFR § 228.5(a). Even if an agency concludes that disposal will not have an adverse impact on marine life, the regulations require the agency to locate the site outside the area of the fishery. Id. Thus, the Corps must locate the disposal sites for Columbia River dredge spoils outside the area of the existing Dungeness crab fishery regardless of their belief that thin-layer disposal will not adversely effect crabs. Far from complying with this requirement, the Corps failed to avoid the location of fisheries or shell fisheries in the DEIS. This omission is particularly glaring in light of the broad consensus among state agency officials, scientists, crab fishermen, and the Corps that sites North and South of the MCR are areas of productive

42. We have minimized the impact to commercial fisheries as required by the Ocean Dumping Act to the extent possible. The North and South sites have been eliminated. The timing of the use for Expanded Site E will be restricted as described in the Management and Monitoring Plan located in Appendix H, Exhibit H.

Dungeness habitat and a productive crab fishing ground. The Corps' failure to comply clearly violates the ODA.

42. (con't)

The ODA criteria contain another affirmative command to protect fisheries. "Wastes which may present a serious obstacle to fishing or navigation may be dumped only at disposal sites and under conditions which will insure no unacceptable interference with fishing or navigation." 40 CFR § 227.10(a). This requirement is clearly not met in the DEIS. Indeed, the Corps acknowledges that dumping even 10 centimeters of sediment may kill crabs. Cite. Thus, the disposal of dredged materials at the north - south sites presents a substantial risk of harming the Dungeness crab population. Accordingly, to insure no unacceptable interference with fishing, the Corps must avoid all dumping in any sites designated or known as productive Dungeness crab fishery. It should also limit disposal in site E to periods of low crab presence (generally acknowledged as mid-August).

b. Disposal sites must be small.

The ODA requires that the size of the sites be kept small. 40 CFR § 228.5(d). The agencies must assess the "[p]otential [of the dumping] for affecting the recreational and commercial values of living marine resources," specifically the impact on commercial fishing. 40 CFR § 228.6. The DEIS purports to demonstrate compliance with them simply by reciting a few conclusory sentences. For example, it states that "[t]he proposed ocean disposal would have no significant impact." DEIS at 9-2. This unsupported conclusion negates the acknowledged importance of the Dungeness crab fishery in this area, and ignores the widely-shared concern of experts that disposal of dredged material at expanded north- south sites is likely to have significant adverse effects on this species. In assessing disposal sites, the agencies must consider a site's "[l]ocation in relation to breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases." 40 CFR § 228.6(a)(2). Extended discussion of impacts to Dungeness crab was clearly warranted here, especially since expanded north - south sites are in areas that offer valuable refuge habitat to juvenile crabs, and expanded site E is an area that becomes dense with soft-shell crabs in late summer. These considerations are particularly important because the impacts of dredged material disposal are likely to be especially severe for juvenile and soft-shell crabs.

43.

c. The Corps must quantitatively and qualitatively assess potential effects.

Agencies must conduct a site-specific survey of proposed disposal sites, including evaluation of "[t]he impact of dumping on esthetic, recreational, and economic values ... on an individual basis". 40CFR§228.10. Rather than comply with this requirement, the Corps chooses to apply the results of an inadequate test done in a tank to the entire area. Furthermore, no surveying or monitoring has been conducted or planned in the DEIS.

44.

Not only do the ODA criteria repeatedly direct the agencies to evaluate the impact of the proposed dumping on the marine environment, but the regulations specifically require the

43. See our response #42.

44. We have minimized the impact to commercial fisheries to the extent possible as required by the Ocean Dumping Act. The Ocean Disposal Working Group has agreed to the currently proposed sites. The commercial crab fishery was represented in the working group and agreed that the currently proposed sites minimize the impact to the crab fishery.

Corps of Engineers Response

agencies to express that assessment in quantitative as well as qualitative terms. Thus, the “[p]otential [of the dumping] for affecting the recreational and commercial values of living marine resources,” “will be expressed, where possible, on a quantitative basis, such as percentage of a resource lost . . . or dollars lost in commercial fishery profits.” Id. Additionally, “a quantitative and qualitative evaluation [will be] made, where feasible, of the impact of the proposed dumping on each use [including] [c]ommercial fishing.” Id. The DEIS lacks any quantitative analysis or any explanation for the failure to conduct such analysis. The Corps should conduct tests that would provide far more accurate measures of crab distribution and disposal impacts than the information the agencies currently have.

45. (con’t)

Finally, new provisions of the Magnuson-Stevens Fishery Conservation and Management Act have not been considered in the DEIS. Upon the law’s implementation, the States of Washington and Oregon will have full authority to manage the entire crab resource out to two hundred miles. This draft must consider that new laws enacted by the coastal states will have direct effect on the ocean disposal of sediments.

D. Non-structural alternatives should receive greater consideration.

The draft EIS acknowledges that available water depths were not fully utilized by ships, including the deepest 10 percent of the fleet. DEIS at 4-4. It also accepts the possibility of improving the river stage forecasting system (Loadmax) to overcome limitations to the system. Id. However, it then dismisses the potential benefits of improving the system because of the difficulty in predicting them. DEIS at 4-5. It doesn’t explain why predicting outcomes from this system is any less certain than predicting outcomes from the deepening plan. Indeed, as stated above, the predicted benefits from the deepening will prove inaccurate when analyzed under current market conditions.

46.

The cost/benefit ratio for the Loadmax alternative is substantial. Improving the river stage forecast system would cost only about \$500,000, a fraction of the total cost of the construction alternatives. The annual operation costs would be equally minimal. DEIS at 5-5. Instead of spending any real amount of time with this alternative, however, the Corps chooses to piggyback the option on top of the structural alternatives. It then devotes significant analysis to these alternatives. See DEIS at 4-6 - 4-12. Under NEPA, the Corps has an obligation to fully explain and consider all alternatives, including the non-structural one. The Corps’ failure to do this not only violates the spirit of NEPA; it indicates that the Corps approached the DEIS as a means to rationalize a decision it had already made.

E. In light of recent changes in the Willamette River, this segment of the proposed dredging channel should be removed from consideration, and an independent EIS should be drafted for the Willamette River.

47.

The EPA has considered designating a 5.5-mile stretch of the Willamette River as a Superfund site. DEIS at 6-12. Areas beyond this 5.5-stretch have yet to be adequately studied for inclusion in the Superfund listing, but it remains highly likely that they would also receive Superfund

46. See our response #2 to the US Department of Interior letter regarding LoadMax. Additional information has been added to the final EIS.

47. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities.

Corps of Engineers Response

47. (con't) designation once they were studied. While the DEIS briefly refers to these possibilities, it falls short in its consideration of the Willamette River, and tries to compare its status with the less polluted Columbia River. Because the water and sediment qualities of the two rivers differ so significantly, and because different technique of dredging, disposal, and testing must be implemented to dredge the navigation channel in the Willamette, the Corps should develop an independent EIS for the Willamette in which it thoroughly discusses the status of this river and proposed actions specific to its condition.

1. The discussion of issues in the Willamette River must be presented in comparative and understandable form.

The DEIS bounces around significantly in its discussion of the Willamette River. Even though the Willamette drains into the Columbia, it must be considered and analyzed independently of the Columbia. Furthermore, this analysis must be coherent and presented in a clear manner. Unfortunately, the inadequate handling of the separate issues of the Willamette River prevents accurate assessments of the potential effects resulting from dredging and disposal of dredged materials. For example, the Corps discusses the difference between sediment in the Columbia and Willamette Rivers in several parts of the DEIS. However, it often transitions between the two rivers midsentence or midparagraph, which prevents the reader from developing a clear idea of the separate natures of the rivers or developing a clear understanding of the exact condition of the entire Willamette as a whole.

48.

To develop a more coherent and comprehensible document, the Corps not only should segment the Willamette River from the Columbia River final EIS, it should also address issues specific to the Willamette. First, it must address effects of dredging on listed Steelhead, not simply include them in listed salmon category or as aquatic species. Second, the Corps must accurately and adequately define the specific location and parameters of the dredging channel in the Willamette River. The Alternatives Chapter of the DEIS notes that "for much of [the Willamette] reach, the navigation channel has been defined as being bank to bank. DEIS at 4-60. However, other parts of the document indicate that the navigation channel does not encompass the entire riverbed. Cite. Not only are such inconsistencies impermissible under NEPA, but the manner in which they are interspersed throughout the document make commenting excessively difficult. Separating discussions about the Willamette River from the Columbia River will produce a better document.

2. Proposal that the federal navigation channel not be included in the possible Superfund listing is irresponsible and inappropriate.

49. At a recent meeting of various area environmentalists with Port of Portland, Oregon Department of Environmental Quality (DEQ), and Corps officials, Gayle Killam, the director of the River Network, asked DEQ what their official position on the dredging within the proposed Superfund area is. The DEQ representative stated that DEQ hadn't taken an official position yet. The Corps' technical and engineering representative said the Corps' position would be to request that

48. See our response #47.

49. The Corps has no position on the listing of the Portland Harbor as a Superfund Site, for or against. At the meeting referenced it was asked if the navigation channel was automatically included or could be excluded. There are consequences either way. If it is listed all navigational dredging whether new work or operation and maintenance (O&M) will cease. This means that all funding to evaluate dredged material proposed for dredging will cease. In addition all funding to find suitable dredged material disposal alternatives including pilot management and monitoring projects will cease. Funding may be available through other Corps programs but not through the navigation new work, O&M, or Section 312 programs.

the federal navigation channel not be included in the Superfund listing. He offered no reason for this, and no indication exists that federal channel deserves exclusion. This suggestion indicates a blatant disregard for the serious environmental status of the Willamette River, in terms of contamination and the disturbing lack of clear data on the entire stretch considered for dredging and deepening. It also indicates that the Corps has decided to pursue this project and views the DEIS as a necessary bureaucratic hoop through which it can justify its decision,

We request the Corps takes these comments into their full consideration as it develops the final EIS for the deepening project. We also hope the Corps takes a much more serious look at the many potential environmental consequences of the project, and works to develop a significantly less harmful plan.

Sincerely,



Melissa Powers

Volunteer,

Northwest Environmental Defense Center



Nina Bell,

Executive Director,

Northwest Environmental Advocates



Regna Merritt

Water Project Advocate

Oregon Natural Resources Council



Lynn Mattei

Wetlands Coordinator

Sierra Club, Oregon Chapter

cc: EPA, NMFS, FWS



TUALATIN Riverkeepers

16340 SW Beef Bend Rd. Sherwood, OR 97140
 (503) 590-5813 • fax: (503) 590-6702 • trlvrk@teleport.com
 www.tualatinriverkeepers.org



Feb. 5, 1999

District Engineer
 U.S. Army Corps of Engineer District, Portland
 Attn: CENWP-EC-E
 P.O. Box 2946
 Portland, OR 97208-2946

RE. Channel Deepening for the Columbia and Willamette Rivers

To Whom It May Concern,
 The Tualatin Riverkeepers offer the following comments regarding the US Army Corps of Engineers Draft Environmental Statement. Generally, we are concerned that the Statement does not adequately address certain environmental concerns.

Degradation of Critical Habitat

1. There is a need to consider the impact this project will have on Proposed, Threatened and Endangered salmonid populations on a watershed basis. The Tualatin River Steelhead Trout will likely be listed as Threatened in March 1999. We would like to be assured that migratory, spawning, and rearing habitat will not be degraded.

Loss of Wetlands

2. The loss of 38 acres of wetlands is disturbing. The multiple beneficial wetland functions need to be avoided. These benefits include provision of biodiverse habitat, storage of flood waters and filtering of surface water runoff. The cumulative impact of each of these lost benefits needs to be further assessed.

Water Quality

3. What is in store for the Willamette River? Will the Willamette be listing as a Superfund site to address the serious problems with toxic sediment? Dealing with this problem is likely to take years and may jeopardize 404 certification for this project.
4. The citizens of the Tualatin River watershed are making progress toward restoring and maintaining our waters. A huge investment of tax dollars has gone into this effort and the benefits are beginning to show. We are dependent on others outside our watershed to do their part and assure that our native fish have safe passage home. We urge you to thoroughly evaluate the impacts that channel deepening will have on water quality, fish, and wildlife habitat. The stakes are higher now than ever before.

Thank you for your consideration.

Sue Marshall
 Community Educator/Organizer
 Tualatin Riverkeepers

Corps of Engineers Response

1. A detailed discussion of the impacts of the proposed project to salmonids was provided in the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act requirements. As described in the EIS, the project is not expected to have a significant impact on salmonid populations in the river. The Corps coordinated with both WDFW and ODFW to determine appropriate salmon restoration measures to be implemented under ecosystem restoration. We have prepared a Biological Assessment for salmonid species and are currently seeking concurrence from the NMFS through their Biological Opinion. The USFWS, in cooperation with WDFW, ODFW, and NMFS, has prepared a Coordination Act Report with specific recommendations on natural resources and project-related impacts.
2. Impacts to wetlands have been minimized to the extent possible. The disposal plan has been revised; about 20 acres of wetlands would now be impacted. Full mitigation of impacts is planned, and wetland habitat development will be an emphasis of mitigation actions recommended by the interagency team participating in the mitigation planning effort. Also, the Shillapoo Lake restoration action would restore about 1,250 acres of valuable wetland and riparian habitat along the Columbia River near Vancouver.
3. Dredging the Willamette River is being delayed in order to allow coordination with ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.
4. Comments noted. The Corps is an active supporter of the salmonid recovery efforts in the Columbia Basin and has been working with the resource agencies on several programs.

NATIVE FISH SOCIETY

P.O. Box 19570
Portland, Oregon 97280
(503) 977-0287
Email: bmbakke@teleport.com

February 3, 1999

District Engineer Attn: CENWP-EC-E
U.S. Army Corps of Engineers, Portland District
P.O. Box 2946
Portland, OR 97208-2946

RE: Channel Deepening Project for the Columbia and Willamette rivers

The Native Fish Society would like our concerns about this project included in the public record.

The Army Corps of Engineers (COE), must consult with the National Marine Fisheries Service regarding fish habitat loss and potential harm to listed species. The Columbia River is critical habitat for Snake River chinook. The species now listed include steelhead, sockeye, and chinook. The NMFS is proposing to list more populations of these species and will add new species to the list of federally protected species such as chum salmon and sea-run cutthroat trout.

1. There is very little information on the use of the Columbia River estuary by salmon juveniles for foraging and rearing prior to entering the ocean, however, research on the Fraser River in British Columbia and the Sixes River in Oregon establish use of these waters by fall chinook especially. We ask to COE to do a thorough review of the scientific literature to evaluate the potential effects of the channel deepening project and spoils deposition on these species, especially fall chinook, and to structure the project to avoid negative effects on listed fish rearing and feeding in the estuary.

2. The productive capacity of the lower Columbia and Willamette Rivers has already been compromised by the filling in of wet lands associated with the river. These wetlands and side channel areas are important food production areas and a source of food for juvenile fish. Additional loss or further compromise of these areas by the proposed project should be evaluated against the historical loss of this environment and the effects of additional losses the project expects to promote. The DEIS proposes to sacrifice 38 acres of wetlands and to spread dredge spoils over 75 square miles of marine habitat. The effect of this proposal must be evaluated using the scientific literature and a risk analysis provided regarding effects on listed fish species and those that are proposed. Since there is not much data on this effect for the Columbia River, the COE will have to review data from other sources, some of which are mentioned above. It may be necessary to conduct additional research before the proposal can be finalized. Certainly, the COE will have to provide a long-term monitoring and evaluation plan for its project to evaluate the effect of the project and any mitigation measures adopted.

3. The continuing decline of Pacific salmonids and the failure of mitigation programs in the past recommend that prevention of damage to salmonid habitat be the priority of this project rather than uncertain mitigation measures. The EIS should fully discuss past mitigation measures for salmon and evaluate whether the objectives of those measures have been achieved. For example, the mitigation measures for COE dams on the Willamette and Snake rivers have not been achieved, even though some of those mitigation measures are over 50 years old. The COE evaluation of mitigation measures for salmonids should include a risk analysis based on the past

Corps of Engineers Response

1. A detailed discussion of the impacts of the proposed project to salmonids was provided in the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act requirements. As described in the EIS, the project is not expected to have a significant impact on salmonid populations in the river. The Corps coordinated with both WDFW and ODFW to determine appropriate salmon restoration measures to be implemented under ecosystem restoration. We have prepared a Biological Assessment for salmonid species and are currently seeking concurrence from the NMFS through their Biological Opinion. The USFWS, in cooperation with WDFW, ODFW, and NMFS, has prepared a Coordination Act Report with specific recommendations on natural resources and project-related impacts.

2. Impacts to wetlands have been minimized to the extent possible. The disposal plan has been revised; about 20 acres of wetlands would now be impacted. Full mitigation of impacts is planned, and wetland habitat development will be an emphasis of mitigation actions recommended by the interagency team participating in the mitigation planning effort. Also, the Shillapoo Lake restoration action will restore about 1,250 acres of valuable wetland and riparian habitat along the Columbia River near Vancouver.

3. See our response #1. The Corps is an active supporter of salmon recovery efforts for the Columbia Basin and has been working with the resource agencies on several programs to help restore salmonid populations and habitats. Also, ecosystem restoration actions incorporated into the proposed project would improve salmonid passage and habitat along the Columbia River.

Corps of Engineers Response

history of mitigation successes, and the likelihood that proposed mitigation measures will be successful. Since this project will affect listed native species, the mitigation measures should be constructed to specifically address these animals. The purpose of the ESA is to recover the native species in its natural habitat, which, by NMFS rule, includes the Columbia River where the proposed project is located.

The COE should also evaluate the migration patterns of listed salmonids and the effects of the project on migration. Adult chinook salmon tend to be deep water migrants and use obstructions, bottom topography, and currents for migration, resting, and cover. The effect of the proposed project on migration of listed species should be fully evaluated to determine whether the project will affect cover and resting habitats in the river for these fish. Disrupting the ability of adults to rest while migrating could increase spawning failure by causing them to exceed energy budgets and stored fat reserves. Also, by removing cover such as that provided by channel topography and structure, the project may be increasing the exposure of juvenile salmonids to predation from birds, fish and mammals. This effect should be fully evaluated. One of the limiting factors identified by research in Oregon estuaries is the lack of large wood associated with banks and channels. The proposed project will not be enhancing this type of cover and food producing habitat and could be removing more of it, so this should be evaluated. In terms of a mitigation plan the COE may wish to ask scientists to develop a plan using large wood for enhancement of cover for salmonids in the estuary.

3. (cont)

Year-round dredging and blasting poses a risk to listed salmonids in the river. This proposal should be fully evaluated in terms of causing harm and mortality to these fish. For example, I would assume the COE would not plan to blast when adult or juvenile salmonids are in the river. But then, when, exactly, would that time frame be? The migration timing of juvenile and adult salmonids would confine the project. Has the COE identified a period when listed salmonids would not be vulnerable to construction? This evaluation should be done to provide a window for certain construction actions such as blasting. The proposal for continuous work on the project is a high risk option that must be fully evaluated. Does the COE have a monitoring plan for blasting to evaluate the effect on listed salmonids? Monitoring will be very difficult to do because dead or injured fish are not readily available for surface detection. Monitoring gas bubble disease associated with the hydro-dams presents a similar problem that has not been solved. A monitoring and evaluation plan must be stated in the final EIS.

4.

The listed salmonids and those proposed for listing are declining because they are not productive enough to replace themselves. The smolt to adult survival rate SAR is too low for these animals to rebuild their numbers and to recover. The proposed project is likely to affect the salmonids at both the juvenile and adult stages. In combination with mortality at COE dams upstream from the proposed project, it is likely that the COE will be compounding the effect on salmonid survival and recruitment by adding the effect of the channel deepening project to that of the dams. Has the COE evaluated the cumulative impact of all its operations on the survival and recovery of listed salmonids? The final EIS should include this cumulative impact analysis.

5.

The ocean environment is considered a major limiting factor in salmon survival and it could be with us a long time. However, if the ocean conditions improve, the number of juveniles that make it to the ocean and survive to the adult stage may increase. Has the COE evaluated its options for carrying out the proposed actions by keying it to improved ocean survival? I ask this because a period of higher smolt to adult survival rates may be a better time to do a project that is likely to increase risk to listed fish. At this time, with very low smolt to adult survival rates, the risks the project imposes on listed fish may be excessive and unacceptable. For example, this year's spring chinook adult run to the Snake River is estimated to be 3,600 fish, the lowest run in history. This proposed project, if approved, will be operating when the juveniles from this run will be migrating down the Columbia River. The 1999 adult run of spring chinook is likely to result in local extinctions among the 40 subpopulations found in the Snake River basin. The

4. A blasting plan was developed in cooperation with both federal and state agencies. It incorporates proven methods to minimize impacts to fish in the vicinity of the blast. All blasting will be done during the approved in-water work period, which is a time when fish numbers are low.

5. See our response #3. All conclusions in the EIS are based on the best scientific information available for a given issue.

Corps of Engineers Response

proposed project would contribute to the risk the juveniles from this parent run would face on their seaward migration. Is this kind of ecological information taken into account when developing the DEIS? It would seem the COE, with its ESA responsibilities, would target the project at a time when it is expected to cause the least environmental damage rather than at a time when it may cause more or impacts would proportionally greater. It is possible that the COE channel project could increase the extinction rate on Snake River spring chinook because of its timing. This possibility should be fully evaluated including a risk analysis.

5. (con't) The COE should provide an analysis of this project based on environmental factors such as ocean productivity changes, and especially vulnerable listed species, to better address the project timing and day to day operations as they relate to risk of doing the project as proposed rather than at some other time. It appears that the COE project is driven by funding and administrative pragmatism rather than trying to fit the project into an environment where it would be expected to do less damage than it would if carried out according to present obligations. These factors should be discussed in the EIS.

The DEIS is based on assumptions and on a weak data base that does not lend itself to certainty in making predictions about environmental risk. By saying this, I am not questioning the integrity of the COE or its process, I am merely noting the problem of having a data base that help make decisions and impacts of those decisions more certain. With regard to the assumptions about effects of this project on salmonids, especially listed fish and their habitats, has the COE asked for an independent scientific review. I would recommend that this approach be taken. It could improve the EIS, improve the proposed action in terms of scheduling certain actions and improve the monitoring and evaluation needed to protect listed species.

Sincerely,



Bill M. Bakke, Director

Columbia Group Sierra Club
3701 SE Milwaukie Ave
Portland, OR 97202
February 3, 1999

Colonel Robert T. Slusar
Portland District
Corps of Engineers
P.O. Box 2946
Portland, Oregon 97208

Corps of Engineers Response

Dear Colonel Slusar:

1. The Columbia Group of the Sierra Club represents over 6,000 Oregonians living along the Columbia and Willamette Rivers from The Dalles to Astoria and south to McMinnville. We believe that the Draft Environmental Impact Statement (DEIS) fails to adequately consider both individual and cumulative impacts of the preferred alternative on the region's environment, relies on faulty economic data, and fails to adequately examine alternatives. After reviewing this document, we call upon the Corps to not only revise the document, but to do an analysis of the present ship canal on the local environment. Our concerns with the plan are as follows:

Environmental Impacts

2. Past and present dredging of the Columbia River channel has resulted in ocean dumping destroying crab habitat and created islands in the estuary, one of which is now home to the largest population of Caspian terns in the world. These terns may be eating as much as 20% of the Columbia River's endangered salmon as they migrate downstream. Recently, we have learned that the piled dikes that the Corps has placed along the river is a favored spot for cormorants and terns to rest and forage for juvenile salmon (Don Lyons, OSU, personal communication). We see little in the draft EIS to assure us that the Corps plans for a deeper channel, with more spoils to dispose of, will be any kinder to the environment. The new plan calls for more of the same—more pilings, more dumping of sand on estuary islands, more dumping in shallow bays which are vital salmon juvenile rearing areas, and more ocean dumping which may adversely impact crabs. The draft EIS indicates that the dredging may adversely affect sturgeon as well (Sec. 6.6.1.3). The plan also calls for dumping the sand on land, destroying agricultural land, riparian habitat, and wetlands. Furthermore, there is no plan in place for dealing with some of the extremely toxic soil that may be dredged up, particularly in the Willamette River.

3. The Columbia Group is also extremely concerned with the history of the shipping industry spreading exotic species around the world. David Pimentel, an ecologist at Cornell University, in a recent presentation to the American Association for the Advancement of Science, estimated that exotic species are costing the U.S. 123 billion dollars per year. Much of this damage is to aquatic systems. The DEIS pays only minimum attention to exotic species. It mentioned one such species, Asian clam, as being an important food source for young

1. Comments noted. See our responses to your specific comments below.

2. We have worked cooperatively with the interagency Caspian Tern Working Group on management solutions to tern predation on juvenile salmonids in the Columbia River estuary. We have implemented and/or cooperated in a number of management strategies so far in 1999. The Miller-Pillar ecosystem restoration action (pile dike field) is no longer included in the proposed project because of concerns with avian predation on juvenile salmonids. There will be no pile dike construction with the proposed action.

Comments regarding disposal sites proposed in the draft EIS has prompted changing the disposal plan in the final EIS. Concerning ocean disposal, further workshop meetings have been conducted. The North and South sites have been eliminated, and the currently proposed sites have reduced in size and located further offshore to minimize impacts to the commercial fishery. The Ocean Disposal Working Group has agreed to the currently proposed sites.

Upland disposal sites have changed as well, and impacts to agricultural land and wetlands has been reduced. Also, dredging the Willamette River has been delayed because of the potential listing of the Portland Harbor as a Superfund site. The EIS will be updated to reflect this information.

3. Although the introduction of invasive species is an important issue for the Columbia River, and is recognized as such in the EIS, we do not believe that deepening the channel would contribute to a potential increase in numbers or types of species. This issue is being addressed by multi-agency and industry working groups.

Corps of Engineers Response

salmon without analyzing whether the species it replaced may have been even more beneficial (Section 6.9). The DEIS calls for studies of the exotic species problem. We believe that there should be an action plan to prevent the spread of exotic species, and a system to bill the shipping industry for the resulting costs if those plans fail, before this dredging system is considered.

Economic Analysis

4. The Columbia Group finds the economic analysis hopelessly outdated. Much of the growth in shipping that the dredging is supposed to accommodate is due to rapid growth in Asia. Obviously, those trends have been reversed. Airlines are cutting back service to Asia, the same is no doubt true in the shipping industry. Before this proposal is considered, the economic analysis in the DEIS must be redone with more realistic projections.

Failure to adequately address alternatives

5. The DEIS fails to adequately address alternatives to channel deepening. Nowhere in the DEIS is there any mention of providing alternative transportation to the Puget Sound. Burlington Northern has recently upgraded their rail lines over the Cascades-will this result in traffic that would have gone through Portland being diverted through Tacoma or Seattle? There is a proposal to build a pipeline for oil products over Snoqualmie Pass. What impact will this have on Columbia River shipping? Neither of these two issues is addressed in the DEIS.

6. In the region, the Columbia River is being recognized less and less as a big hydroelectric turbine and shipping channel, and more and more for the creatures that live there - particularly for salmon. In recent years, we have become more aware of how the industrialization of the Columbia River has decimated salmon and that, in order to restore the salmon, breaching of the Snake River dams and possibly the drawing down of John Day Dam will be necessary. This will have an adverse impact on shipping upriver of Portland. What impact would these changes have on the economics of this project? It is not mentioned at all in the DEIS. Furthermore, if there are reservoir drawdowns, rail lines from Portland to Pasco and Lewiston will likely be upgraded. If that is the case, perhaps the rail lines should be improved downstream to Astoria or Longview and the channel only deepened part way up the Columbia. The option of transporting commodities to Astoria or Longview was given little attention in this DEIS.

Cumulative Environmental Impacts

4. The general consensus among major entities such as the World Bank, the International Monetary Fund, and the US Department of Agriculture is that the Asian economies have reached the trough of their downturn, and that those economies (along with the associated trade) are rebounding. The crisis has resulted in a short-term reduction in Columbia River exports. The crisis does not represent a fundamental change in Asian economies that would result in a long-term decline of exports. Indeed, most forecasts call for Asian recovery to be well underway by 2001, and the first year that a deepened channel would be available is 2004. Also, we have added updated export data to the EIS, and it supports the analysis in the report.

5. If it were more economical for Columbia River exports to be exported through other ports or by other means, then goods would not be exported via the Columbia River navigation channel.

6. The sensitivity analysis in the Economics Appendix C addresses concerns regarding reduction in tonnage due to drawdowns. It shows that all of the tonnage that arrives via barge could be removed from the benefit analysis without significantly impacting the benefits of the proposed project. Also see response #5.

Corps of Engineers Response

7. Comments regarding disposal sites proposed in the draft EIS has prompted the Corps and project sponsors to revise the disposal plan for the final EIS. There has been a reduction in the amount of agricultural and wetlands impacted. The anticipated impacts of the revised disposal plan is discussed in the final EIS and Appendix G.

8. Improved shipping does not in itself contribute to regional growth but it does increase the efficiency of moving goods. Portland is a major distribution center for import and export products. Improved shipping could lead to reduced emissions and traffic congestion when compared to rail and truck shipment.

9. A detailed discussion of the impacts of the proposed project to salmonids was provided in the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act requirements. If, at some future date, the lower Columbia River ports request Congress to authorize a study for further deepening, an EIS would be prepared to address the impacts of that action.

10. Comment noted.

7. The Columbia Group of the Sierra Club Is also concerned with the cumulative impact of more development. The DEIS says that dredging plan "would contribute to the cumulative loss [of agricultural land] that is occurring presently" (Section 6.12). Furthermore, some of the spoil is intended to convert wetlands to industrial land (Hayden Island). The impact of these actions should be more closely addressed by the DEIS.

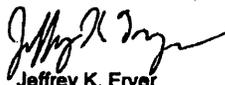
8. Furthermore, we believe that the DEIS should address region wide impacts. Schools and roads in the Portland metro area are at or exceeding capacity. Air quality in the summertime approaches polluted levels. How many more people will move to the Portland area because of the dredging project? The area is at, or near, full employment so new jobs will likely all be filled by people moving to the area.

9. The DEIS states (6.7.1) that "deepening the Columbia River navigation channel to 43 feet would not be expected to have any greater impact to the listed and proposed stocks of salmonid than the existing maintenance dredging program." As the Columbia Group testified at the November 12 Public Hearing, just what are those present impacts? What studies have been conducted to determine the impact of dredging on salmon that may spawn in these stretches of river? What are the impacts of the deeper channel and pile dikes on wetlands and riparian habitat along the shores of the river? How long will it be before the shipping industry wants the channel dredged, at taxpayer expense, to 45 or 50 feet? At what point do we say "NO", the Columbia River is a river, not a canal? We believe that there should be a study closely examining the environmental impacts of the present channel from Astoria to Lewiston, Idaho, before the channel deepening project is considered.

10. And, as we concluded in the November hearing, the Independent Scientific Review Group stated in its study of Columbia Basin salmon, we need to turn to more normative river conditions. Dredging a 43 foot channel down 115 miles of river goes in the wrong direction. We believe that the DEIS overestimates economic benefits and vastly underestimates ecological costs and therefore oppose this project.

We appreciate the opportunity to provide DEIS comments.

Sincerely,



Jeffrey K. Fryer
Chair
Columbia Group, Oregon Chapter
Sierra Club



AUDUBON SOCIETY OF PORTLAND

Inspiring people to love and protect nature.

February 5, 1999

Portland District Engineer
U.S. Army Corps of Engineers
Attn: CENWP-EFC-E
PO Box 2946
Portland, OR 97208-2946

RE: Columbia and Willamette Rivers Channel Deepening Project

Dear District Engineer,

On behalf of our 7,000 members, the Audubon Society of Portland submits these comments on draft Environmental Impact Statement (EIS) for the Columbia and Willamette River channel deepening project. The mission of our organization is to promote the understanding, enjoyment, and protection of the natural world, particularly native wildlife and its habitat. Our membership lives within the Columbia River watershed, and are concerned about actions which may further harm native species, their habitats, and the biological health of the watershed.

1. Comments noted. See our responses to your specific comments below.

1. In summary, we believe the draft EIS is inadequate as a basis to move forward with the channel deepening project as proposed. There are simply too many unknowns regarding the biological and toxicological effects of channel deepening on aquatic and terrestrial elements of the Columbia basin ecosystem. The draft EIS fails to display the net benefits of the proposed channel deepening project. The alternatives, except for the no-action alternative, fail to address how channel deepening operations are consistent with the region's efforts to recover imperiled salmon runs, or how the adverse environmental impacts can be adequately mitigated.

1. Economic Justification for the Project.

2. We are concerned by the one-sided nature of the economic analysis used to justify the channel deepening project. The draft EIS evaluates the project benefits to navigation without an equally rigorous evaluation of the project's costs to society due to loss of fishery and crabbing resources, lost wetlands, diminished water quality, and harm to wildlife and human health. We are interested in having the Corps disclose the project's "net benefits" for all of the alternatives presented in the draft EIS. While the navigation benefits may be greatest for the longest, deepest, and widest channel improvements for navigation, costs associated with such channel improvements may also be the greatest. These costs include not only the costs of dredging, disposal, and, mitigation, but also the costs of environmental degradation that cannot be mitigated.

2. As with all major federal actions, the EIS prepared for this action considers potential impacts of the action to the environment and compares impacts to alternatives including the no action alternative. The decision to recommend any action is based on consideration of monetary costs and benefits and non-monetary environmental effects.

Corps of Engineers Response

2. (con't) Another dimension missing from the draft EIS is analysis of the enormous amount of public and private dollars that have gone into recovery efforts for Columbia River and Snake River salmon and how this project will interfere with, frustrate, or impede those recovery efforts. This obvious cost of the project must be accounted for in the draft EIS.

2. Impacts on Fish Resources.

We could not locate any data in the draft EIS demonstrating how the project will provide benefits to fish resources. Considering the magnitude of dredging and disposal operations and their impacts, and the dire condition of Columbia River and Willamette River salmon and steelhead runs, the draft EIS does an inadequate job of reconciling these conflicts.

3. The National Marine Fisheries Service is poised to make additional listing and critical habitat decisions for Columbia River and Willamette River salmon and steelhead runs. These decisions further underscore the importance of maintaining and improving the integrity of the Columbia basin ecosystem if there is to be any hope of salmon recovery. The draft EIS fails to adequately address how channel deepening supports regional efforts to recover imperiled salmon.

A. Impacts of dredging and disposal operations.

The draft EIS fails to adequately describe how dredging and disposal of millions of cubic yards of sediment will NOT harm, trap, or harass listed endangered salmon and steelhead species. As dredging and disposal operations are planned to occur continuously for two years, how can the project avoid adverse effects on protected salmon and steelhead, especially during migration periods?

4. The draft EIS asserts that lower depths of the Columbia River are not critical salmon habitat, but fails to adequately describe how contamination of the upper water column due to dredging operations at benthic levels may adversely affect migrating juveniles and returning adult salmon. What is the impact of dredging operations on the food supply of migrating salmon? The entire Columbia River, from its mouth to its confluence with the Snake River, is designated under the Endangered Species Act (ESA) as critical habitat for Snake River Sockeye, Snake River spring and summer Chinook, and Snake River fall Chinook Salmon. It is unclear what criteria were applied by the Corps to determine that critical habitat for listed salmon species will not be adversely affected by the project.

B. Impacts of blasting operations.

5. Blasting will be used during dredging operations to produce desired channel depths and widths. The draft EIS is silent with regard to when blasting will occur, and to the exact quantity and duration of blasting operations. Will they occur during fish migration periods? The draft EIS acknowledges that blasting can damage and kill fish, but fails to quantify direct and indirect impacts to fish. The draft EIS must present more information about intended blasting operations and their impacts on salmon.

3. The Corps is an active supporter of salmon recovery efforts for the Columbia Basin and has been working with the resource agencies on several programs to help restore salmonid populations and habitats. Also, ecosystem restoration actions incorporated into the proposed project would improve salmonid passage and habitat along the Columbia River.

4. A detailed discussion of impacts of the proposed project to salmonids was provided in the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act requirements. All conclusions in these documents are based on the best scientific information available.

5. A blasting plan was developed in cooperation with both federal and state agencies. It incorporates proven methods to minimize impacts to fish in the vicinity of the blast. All blasting will be done during the approved in-water work period, which is a time when fish numbers are low.

Corps of Engineers Response

C. Water quality impacts.

The lower Columbia River is listed as a water quality limited (303d) under the Clean Water Act. We question how elevated dredging and disposal activities, outside of maintenance dredging operations, are permissible under the Clean Water Act (CWA). How is releasing of contaminants from sediment material consistent with the CWA?

6.

The draft EIS asserts that "sediment in the Columbia River navigation channel is not contaminated." What data is the Corps relying on to make this assertion? The draft EIS itself contains data which directly contradicts this assertion (see Appendix B of draft EIS). Channel sediments are contaminated adjacent to the Gateway area in Vancouver. Without actual data from channel sediments, it is not known whether screen benchmarks established by the Environmental Protection Agency and other federal agencies for toxic materials are exceeded. We urge the Corps to undertake comprehensive ecological risk assessments before authorizing any channel deepening dredging operations.

The water quality impacts of dredging and disposal operations are not adequately described in the draft EIS. What are the effects of increased turbidity, suspension of contaminated sediments, and decreased levels of dissolved oxygen on fish and other aquatic organisms? How will filling of 38 acres of wetlands benefit water quality of the Columbia and Willamette Rivers?

3. Impacts of Disposal Operations.

Much of the dredge material would be disposed of on existing wetlands or in the marine environment. Significant wetlands, such as those in the Gateway area in the Vancouver Lake Lowlands, are identified for fill in the draft EIS. We question how filling of these wetlands is consistent with section 404 of the CWA, the Corps own regulations, and Presidential Executive Orders for calling for wetland preservation.

7.

The draft EIS does an inadequate job of describing the cumulative impacts of continued wetland loss due to dredging operations. The loss of 38 acres of wetland habitat is significant. The historical loss of wetlands in the Columbia River estuary and associated freshwater habitats is well documented. Available data indicates that wetland mitigation projects are not effective in compensating for lost wetland values.

8.

For marine disposal, the Corps proposes a "thin layer" disposal technique which will place the dredge spoils on 75 square miles of productive marine habitat, within 13 miles of the mouth of the Columbia River. Much of the analysis of marine disposal in the draft EIS is based on a "what if" description of disposal scenarios. Much is unknown about the effects of marine disposal on benthic organisms and the fish populations that feed on them. For example, the ability of bottom feeding fish to move elsewhere to feed once prey are buried is not known. Also, grain size composition of disposal areas will determine which organisms colonize the deposits, and hence, the effects on fish populations. The draft EIS offers no mitigation for channel or marine dredge disposal. This omission does not seem justified.

6. See our responses #16, #27, #29-34 to the Northwest Environmental Defense Center regarding water quality impacts.

7. Impacts to wetlands have been minimized to the extent possible. The disposal plan has been revised; about 20 acres of wetlands would now be impacted. Full mitigation of impacts is planned, and wetland habitat development will be an emphasis of mitigation actions recommended by the interagency team participating in the mitigation planning effort. Also, the Shillapoo Lake restoration action would restore about 1,250 acres of valuable wetland and riparian habitat along the Columbia River near Vancouver.

8. Thin layer disposal has been dropped from consideration.

Corps of Engineers Response

4. Impacts on Wildlife Resources.

There are many federally listed wildlife species associated with the Columbia River estuary. Some of these include the Brown Pelican, Bald Eagle, Aleutian Canada Goose, Peregrine Falcon, Snowy Plover, Columbian White-tailed Deer, upper and lower Columbia River Steelhead, Snake River Steelhead, Snake River Sockeye Salmon, Snake River fall/spring/summer Chinook Salmon, and a number of marine species.

1. Bald Eagles

9.

There are 65 Bald Eagle nesting sites within the project area, yet the draft EIS downplays the potential impacts of the dredging operations on this species. Little attention is paid to nearshore dredging and disposal activity that could disturb eagles while nesting or foraging. Bald Eagles are making a come-back in Oregon, and are proposed for de-listing by the U.S. Fish and Wildlife Service, yet recovery goals have not been met for all Bald Eagle management areas in Oregon. Nesting sites along the lower Columbia River have had trouble producing young, and part of the problem is associated with contamination of food sources by toxic chemicals. The draft EIS does a very poor job of explaining how dredging will not release contaminants into the aquatic food chain and consequently will not affect Bald Eagle reproductive success.

2. Other Wildlife Species

We are concerned about the impacts of dredging and disposal on a variety of other wildlife species, including the Peregrine Falcon, Sandhill Crane, Dusky Canada Goose, Aleutian Canada Goose, river otters, and others. Part of our concern stems from the use of "indicator species" to assess habitat loss for all wildlife at disposal sites. For example, using the Canada Goose to represent species dependent on agricultural lands overlooks important habitat use differences by species such as the Sandhill Crane, listed as an endangered species in Washington State. Thus the impacts on some wildlife species such as the Sandhill Crane are undervalued. For other species such as the river otter, the toxicological effects of contaminants associated with dredging may likewise be underestimated.

Thank you for the opportunity to comment on the draft EIS.

Sincerely,



Paul Ketcham
Conservation Director

9. Comments noted. The issues you raise relative to bald eagles have been addressed in Section 6.7 of the EIS and the Biological Assessment submitted to the USFWS under requirements of the Endangered Species Act. The EIS explains that contaminants tend to attach to fine-grained sediments or organic material; and that since the material to be dredged from the Columbia channel is sand with low percent fines and organic content, contaminant release is not an issue.



O R E G O N T R O U T

TO: District Engineer, U.S. Army Corps of Engineers District, Portland
ATTN: CENWP-EC-E
P.O. Box 2946 Portland, OR 97208

COMMENTS
to the
U.S. ARMY CORPS OF ENGINEERS
regarding the
COLUMBIA RIVER CHANNEL IMPROVEMENT STUDY

Corps of Engineers Response

The Army Corps of Engineers has issued a Draft Environmental Impact Statement on the Columbia River Channel Improvement Study. Oregon Trout appreciates the opportunity to comment on the DEIS and offers the following remarks.

The actions proposed in the DEIS would violate the federal Endangered Species Act

The federal Endangered Species Act (ESA) states that each federal agency "shall ... insure [sic] that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical ..."¹ When a federal agency proposes to take action that may impact a listed species or its critical habitat, that agency is required to consult with the appropriate resource agency, here, the National Marine Fisheries Service, and obtain a biological opinion as to whether the proposed action is likely to violate the ESA.² Although the federal agency is not required to adhere to the findings in the biological opinion, acting contrary will likely be considered arbitrary and capricious.³

1.

The entire Columbia River, along with its estuarine areas and river reaches, from the mouth of the Columbia River to the confluence with the Snake River has been designated as critical habitat for Snake River sockeye and Snake River chinook.⁴ Because this habitat has been designated as critical, any adverse modification violates the ESA. Additionally, the ESA prohibits federal agencies from making an "irreversible or irretrievable commitment of resources" after its initial consultation with the appropriate federal agency.⁵ Oregon Trout is concerned that this project not only adversely impacts critical habitat, but that it also is an irretrievable commitment of at-risk stocks of aquatic species.

1. A detailed discussion of the impacts of the proposed project on listed species, especially salmonids, was provided in both the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act requirements. The NMFS determines Section 7 compliance of the proposed project. As described in the EIS, the project is not expected to have a significant impact on salmonid populations in the river. The Corps coordinated with both WDFW and ODFW to determine appropriate salmon restoration measures to be implemented under ecosystem restoration. We have prepared a Biological Assessment for salmonid species and are currently seeking concurrence from the NMFS through their Biological Opinion. The USFWS, in cooperation with WDFW, ODFW, and NMFS, has prepared a Coordination Act Report with specific recommendations on natural resources and project-related impacts.

¹ Federal Endangered Species Act, 16 U.S.C. § 1536(a)(2) (1994).

² *Id.*, 50 C.F.R. § 402.

³ *See eg.* Lone Rock Timber Co. v. U.S. Dept. of the Interior, 842 F.Supp. 433 (D.Or. 1994).

⁴ 50 C.F.R. § 226.22.

⁵ 16 U.S.C. § 1536(d).

Corps of Engineers Response

The planning area for this project is 105 miles in the lower Columbia River to the mouth of the Willamette River, and the Willamette River to Portland. In addition to being designated as critical habitat for Snake River sockeye and chinook, these stretches of river provide habitat for one other federally listed species, five proposed species, and one candidate species of anadromous fish: threatened lower Columbia River steelhead, proposed threatened Columbia River chum, proposed threatened lower Columbia River chinook, proposed threatened upper Willamette River chinook, proposed threatened upper Willamette River steelhead, proposed cutthroat trout, and candidate lower Columbia River coho.

2. See our response #1. The blasting plan was developed in conjunction with state and federal resource agencies. All blasting will be done during the approved in-water work period and will include proven measures to scare fish away prior to blasting. Additional information regarding your six examples of concern has been included in Chapters 5 and 6 of the FEIS.

2. Because activities conducted under the DEIS would occur continuously for a two year period, the activities would undoubtedly impact listed species. The DEIS admits "dredging may result in the entrainment of fish and other aquatic organisms."⁶ Additionally, the DEIS proposes to conduct underwater rock blasting activities in six sites along the Columbia and Willamette Rivers, and if they are conducted improperly, "internal organs and membranes [of fish species] will rupture which can lead to death."⁷ To avoid this situation, the Army Corps proposes to "scare fish away prior to the blast."⁸

The Army Corps also states that dredging will result in the "disruption of bottom habitat and loss of the benthic invertebrate community," and that disposal of dredged material will "smother" some species. Finally, the re-suspension of sediments that contain dioxin and other toxic materials will increase turbidity and contribute to bioaccumulation in present fish species.

All six of these examples (entraining listed species, rupturing the internal organs of listed species, scaring listed species, loss of food for listed species, smothering listed species, increasing toxicity levels in listed species) amount to "jeopardy" of listed species or destruction of critical habitat. Permitting the activities described in the DEIS would violate the Endangered Species Act.

Activities proposed in DEIS may violate the Clean Water Act

The project area includes the lower Columbia and lower Willamette Rivers. The lower Columbia River is water quality limited for bacteria, dissolved oxygen, temperature, total dissolved gas, and toxics (DDE, DDT, PCB, and arsenic), and the Willamette is water quality limited for bacteria, temperature, and toxics (mercury).

3. Conducting activities which would stir up nearly 20,000,000 cubic yards of toxic sediment would lead to substantially increased turbidity and toxicity levels, causing a measurable decrease in water quality. Not only does this violate the antidegradation policy of the Clean Water Act for high quality waters and water quality limited waters, but it also will likely impair the beneficial uses of the Columbia and Willamette Rivers.

3. Contrary to what you have stated, this project would not stir up any toxic sediments. Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

⁶ DEIS, at 6-19.

⁷ *Id.* at 6-20.

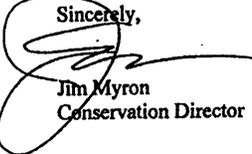
⁸ *Id.* at 6-21.

Corps of Engineers Response

Conclusion

4. Oregon Trout remains concerned about the Columbia and Willamette River project. The Army Corps appears to have given only token attention to the needs of numerous at-risk aquatic species without thoroughly considering the requirements of the Endangered Species Act or the Clean Water Act.

Sincerely,


Jim Myron
Conservation Director

4. Comment noted.

Mary Scurlock Adamson
10575 NW Skyline Boulevard
Portland OR 97231
503-735-1240

5 February 1999

Robert T. Slusar
District Engineer
U.S. Army Corps of Engineer District, Portland
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Corps of Engineers Response

Re: Draft Integrated Columbia and Lower Willamette Rivers Channel Improvement Study and Environmental Impact Statement

Dear District Engineer:

Please accept these brief comments on the proposed channel-deepening project for the Columbia and Willamette Rivers.

1. Comments noted.

1. I write in my several capacities as an attorney, a conservation professional, a resident of Northwest Portland and as the mother to two children who swim in the Willamette and Columbia Rivers during the summer.

My areas of concern primarily include: protection of aquatic habitat for fish and other aquatic species under the standards of the Endangered Species and Clean Water Act and assurances that public health will not be threatened.

Water Quality and the Clean Water Act: 401 Certification and EPA Approval

I question the basis for the finding that the proposal provides the basis for a finding be either the affected states (Section 401 authority) or the EPA (Section 309 Clean Air Act authority) that water quality standards – in all their aspects – are reasonably assured of being met.

2. Section 401 of CWA requires water quality certification of all federal permits - in this case, a Clean Water Act Section 404 permit. Section 404 of the Clean Water Act requires that all projects involving the discharge of dredged or fill material into waters of the United States be evaluated for water quality and other effects prior to making discharge. The draft evaluation of section 404 included in the DEIS states that the proposed action, including mitigation, would result in "no significant adverse effects on human health or welfare, municipal water supplies, plankton, fish, shellfish, or wildlife. Significant adverse impacts on life stages of aquatic life and

2. The EIS and Section 404(b)(1) Evaluation have been revised to provide additional information supporting our conclusions. The possible listing of the Willamette as a Superfund site occurred after the draft report was prepared. The local sponsors have requested that the Willamette River dredging be delayed. If the harbor is listed, no navigational maintenance or new work dredging can be conducted in the listed area under the Clean Water Act. If the harbor is not listed, dredging for the proposed project would not preclude cleanup activities but would enhance and perhaps extend the effort. The dredging in the Willamette River would require full compliance with all the laws including the Clean Water Act, Endangered Species Act, and the National Environmental Policy Act.

other wildlife dependent on the aquatic ecosystem, on ecosystem diversity, productivity, or stability, or on recreational esthetic, or economic values would not occur" (DEIS Exhibit D).

Similarly, what would be the basis for an EPA finding that this proposal is "environmentally satisfactory"?

2. (con't)

The basis for these conclusions is not found in the DEIS, and therefore, it is not clear that a basis for 401 certification and EPA approvals exist. Given the significant problems with sediments in the Willamette River, further analysis must be provided.

If approvals are to be limited to the initial phase of the project (my understanding is that the Corps' proposed channel deepening plan includes both rivers, with the intent to phase construction to delay the Willamette deepening procedures until the toxic sediment issues are worked out) does it make sense to go forward with the first phase of the plan knowing that the second phase may not be capable of passing certification requirements? Of primary concern is the fact that the draft EIS fails to address indirect impacts and possible future events related to the deepening project, including potential listing of the Willamette as a Superfund site.

Endangered Species Issues

The actions of the Corps have the potential to jeopardize, through direct take of species and degradation of habitat, the survival of imperiled salmonid species, bald eagles and Columbian white tailed deer to name a few. (Federally listed wildlife species associated with the Columbia River estuary include: the brown pelican, bald eagle, Aleutian Canada goose, peregrine falcon, snowy plover, Columbian white tailed deer, Upper and Lower Columbia River steelhead trout, Snake River Basin steelhead trout, Snake River sockeye salmon, Snake River fall/spring/summer chinook, and a number of whale and marine turtle species in the project's offshore region).

3.

Inexplicably, the DEIS discounts the potential impacts of the proposed deepening to threatened and endangered species. For example, 65 bald eagle nesting sites exist in the project area, but the DEIS doesn't adequately acknowledge potential harm resulting from proposed dredging and disposal activity. Nearshore dredging as well as disposal activity will drive bald eagles from nesting and foraging sites, and therefore, constitute harassment and harm, which is prohibited under the ESA. Furthermore, potential contamination in dredged sediments may lower reproductive success in bald eagle pairs. The DEIS does not address such concerns, as they state that no contaminants exist in the channel sediments. The project should consider any species that are likely candidates for ESA listing before the project is complete.

In order to complete the project in two years, the Corps plans to dredge year round, regardless of time periods established by specified State and Federal resource agencies to protect juvenile salmonids and smelt, sturgeon, and other threatened and endangered species and habitat. It is unclear whether the entrainment of salmon during this process meets the requirements for an Incidental Take Permit from the National Marine Fisheries Service. The basis for a finding that such activities will not significantly impair the survival and recovery of these species should be

3. A detailed discussion of the impacts of the proposed project on listed species was provided in both the EIS and Biological Assessments submitted to the NMFS and USFWS under requirements of the Endangered Species Act. The NMFS and USFWS determine Section 7 compliance for the proposed project.

This issues you raise relative to bald eagles have been addressed in Section 6.7 of the EIS and in the Biological Assessment, located in Exhibit G. The EIS explains that contaminants tend to attach to fine sediments or organic material, and that since the material to be dredged from the Columbia channel is sand with low percent fines and organic content, contaminant release is not an issue.

Alternative dredging methods are discussed in the EIS. The final dredging plan for construction will be developed to minimize impacts to species of concern. Restricting construction dredging from July to December will increase construction time from two years to four years.

Additional information has been added to the EIS concerning LoadMax and the regional port analysis.

Corps of Engineers Response

included in this document, just as it will be required to provide the basis for a no jeopardy finding from the Service.

3. (cont)

To provide a basis for a determination that direct and indirect impacts on listed species do not exceed the limits of take/jeopardy standards. The final EIS needs to include alternative procedures that will minimize or mitigate the impacts to these valuable resources – such as providing a schedule of in-water work occurring only when fish are least present. It should fully evaluate non-structural alternatives (developing an improved LOADMAX forecasting system) in order to avoid impacts from additional dredging and disposal on threatened and endangered species and habitat.

Conclusion: DEIS falls short on NEPA requirements

The intent of the NEPA process is to identify and address the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment. The DEIS fails to fulfill the purpose of NEPA because it:

4.

- * does not provide a "full and fair discussion" of significant environmental impacts in a manner as to avoid predecisional impact analysis;
- * does not present environmental impacts and alternative actions in a comparative form;
- * inadequately addresses direct, indirect, and cumulative environmental impacts relating to maintenance of the navigation channel; and
- * does not fully consider reasonably foreseeable significant adverse impacts, nor address the availability of information relating to these impacts.

Thank you for your consideration.

Sincerely yours,



Mary Scurlock Adamson

4. We disagree. All discussions and conclusions in the EIS are based on the best scientific information available for a given issue. The EIS compares impacts of proposed actions to the no action plan in Sections 2 and 6 of the report. Scoping for the study was initiated in 1994 in order to determine the significant issues to be addressed in the study. Specialized coordination meetings were held throughout the study process; Section 7 of the EIS and Appendix H, Volume III describe these meetings.

February 5, 1999

Corps of Engineers Response

To: District Engineer
U.S. Army Corps of Engineer District, Portland

From: Matthew Nahan
Mechanical Engineer, Ph.D.

Subject: DEIS - Channel Deepening Project for the Columbia and Willamette Rivers

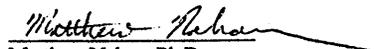
The Draft Environmental Impact Statement (DEIS) for the Cannel Deepening Project on the Columbia and Willamette Rivers requires further investigation and disclosure to uphold the NEPA the responsibilities of your office. Specifically, the following activities should receive further consideration:

1.
 - Determine the cumulative effects of dredging operations on the white sturgeon populations. Determination should address effects in relation to conditions considered necessary to support historic populations. Considered effects should include direct taking, harassment (stress), habitat disturbance and loss, impact of migration interference, short and long-term impact upon food supply quantity and content and impact of released toxins on tissue bioaccumulation. Measures should identify the distribution of total population loss and long-term health effects.
2.
 - Provide proof that the proposed action will result in "no significant adverse effects on human health or welfare, municipal water supplies, plankton, fish, shellfish, or wildlife. Significant adverse impacts on life stages of aquatic life and other wildlife dependent on the aquatic ecosystem, on ecosystem diversity, productivity, or stability, or on recreational esthetic, or economic values would not occur" (DEIS exhibit D). In particular, testing of toxins through-out the full depth and length of planned dredge area must be conducted. Testing must include a representation of the actual sediment composition including suspended fines. Impact of dredging upon toxin migration requires assessment, through-out the Pacific Ocean coastline as well as the Columbia and Willamette river planning area. Effects upon toxin migration should be related to cumulative health impact marine organism health.

1. See our responses #6, #7, and #8 to the National Marine Fisheries Service letter regarding sturgeon impacts. Some additional information has been added to the EIS concerning impacts to sturgeon.

2. We have revised the report and the Section 404(b)(1) Evaluation to provide additional information supporting this conclusion. Sections 5 and 6 of the EIS, as well as Appendix B, discuss in detail the testing methodology and analysis results for material to be dredged. Dredging the Willamette River, however, has been deferred. Further sediment quality evaluations will be required and conducted prior to any dredging activities on the Willamette River.

• Thank-you for your Efforts,



Matthew Nahan, Ph.D.
Corvallis, OR 97330
nahan@frl.orst.edu

535 N.W. 15th St.

District Engineer
U.S. Army Corps of Engineer District, Portland
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Corps of Engineers Response

Dear District Engineer:

Dredging and disposal activities will harm, trap, and harass listed endangered salmon and steelhead species. Critical habitat and salmon food sources will be destroyed and/or modified. Flowlane disposal of dredged

material will harm salmon. Dredging operations will interfere with salmon migration and constitute harassment as defined by the ESA. The DEIS does not provide well-founded and scientifically supported estimation of the time before complete repopulation of benthic organisms occurs after dredging and blasting activity. Nor does the DEIS explore the impact on salmon if their food source is destroyed, if only temporarily. The Corps acknowledges that blasting can cause mechanical damage to fish's internal organs, but does not provide data about the techniques the Corps intends to employ to avoid direct impact on salmon in its DEIS. (DEIS at 6-20.) The effects of increased turbidity on aquatic life must be addressed, including the impact of blasting and dredging operations, the suspension of contaminated sediments, and the potential for depressed levels of dissolved oxygen at dredge and disposal sites. The Corps' plans to dredge continuously for two years must be seriously reconsidered.

The Corps noted in 1975 that the species to be most impacted by dredging activities would be white sturgeon. However, the Corps has never adequately determined the cumulative effects of dredging operations on sturgeon populations, nor does it sufficiently assess potential impacts of the deepening and rock blasting on current sturgeon populations. Rather, the DEIS dismisses the potential of the dredging to entrain and harm significant numbers of sturgeon by dismissing its own testing techniques.

Studies that show a 3.5% immediate mortality rate of entrained juvenile sturgeon do not evaluate further loss of life resulting from stress and/or injury of those juveniles that survived the entrainment. To provide an adequate assessment of cumulative and future impacts on sturgeon populations, the Corps should: 1) calculate the total area of the navigation channel populated by sturgeon, 2) calculate the total decline in

sturgeon population resulting from dredging activities; 3) calculate total loss of sturgeon habitat resulting from dredging activities; and 4) calculate the predicted losses of sturgeon habitat and population resulting the proposed deepening and rock blasting.

Habitat degradation

The Corps has an obligation under Section 7. not to destroy or adversely modify designated critical habitat of the listed species. Various inaccurate or blatantly incorrect assumptions proliferate in the DEIS. To

begin with, the Corps inaccurately states that the lower depths of the Columbia River are not critical salmon habitat. However, the entire Columbia River, from the mouth to the confluence of the Columbia and Snake Rivers, has clearly been designated critical habitat for Snake River Sockeye Salmon, Snake River spring/summer Chinook Salmon, and Snake River Fall Chinook Salmon, "including all Columbia River estuarine areas and river reaches." Of the impacts of dredging on deep-water habitat the DEIS

states that "these impacts are not expected to be significant since benthic habitat of the 40-foot deep navigation channel is generally not considered productive." Where the Corps decides that the navigation channel doesn't fall into critical habitat. it seems to have done this on its own volition. rather than following any specific determination. Potential impacts to these populations must be adequately addressed in the

final EIS. The Corps identifies the loss of 38 acres of wetlands as "unavoidable impacts" of the project. By the end of the 1970s, tidally influenced wetlands in most Oregon and Washington estuaries had been reduced 50 to 95%. The DEIS does not address the cumulative impacts of continued wetlands loss. Further comments on these losses will become available in the next few days.

1. A detailed discussion of the impacts of the proposed proeject on salmonid species was provided in both the EIS and Biological Assessment submitted to the NMFS under requirements of the Endangered Species Act. The NMFS will determine Section 7 compliance for the proposed project. All discussions and conclusions in the EIS are based on the best scientific information available for a given issue. A blasting plan was developed in cooperation with federal and state resource agencies. It incorporates proven methods to minimize impacts to fish in the vicinity of the blast. All blasting will be done during the approved in-water work period, which is a time when fish numbers are low.

2. See our responses #6, #7, and #8 to the National Marine Fisheries Service letter regarding sturgeon impacts. Some additional information has been added to the EIS concerning impacts to sturgeon.

3. See response #2 concerning impacts to salmonids. Impacts to wetlands have been minimized to the extent possible. The disposal plan has been revised; about 20 acres of wetlands would now be impacted. Full mitigation of impacts is planned and wetland habitat development will be an emphasis of mitigation actions recommended by the interagency team participating in the mitigation planning effort. Also, the Shillapoo Lake restoration action would restore about 1,250 acres of valuable wetland and riparian habitat along the Columbia River near Vancouver.

Corps of Engineers Response

4. The Corps intends to implement a "thin-layer" disposal technique to place the dredge spoils on 75 square miles of biologically productive marine habitat, within thirteen miles of the mouth of the Columbia River. The DEIS states that "one consequence of thin-layer disposal is the burial of organisms living in and on the surface of the sea floor. The effect of this burial on fishes that prey upon these organisms will depend in part upon their ability to detect reduced abundance of prey in and on the thin-layered deposits, and thus continue moving to feed elsewhere." Studies must be conducted that can prove this ability before such a plan is implemented. Furthermore, "a second consequence of thin-layer disposal could arise from changes in the grain size composition of the surficial sediments, if the grain size composition of the dredged sediments differ markedly from those they bury. The grain size composition of sediments can influence which organisms colonize them and in what level of abundance, and therefore thin-layer disposal could change the overall quality of the sea floor affected as to its suitability for foraging fishes." Studies and/or monitoring schemes must be prepared before the final EIS can be completed. The DEIS offers no mitigation plan for estuary or ocean impacts from dredged material disposal.

4. Thin-layer disposal is no longer being considered.

Crabs and the Ocean Dumping Act:

The Corps will have to remove and dispose of 19 million cubic yards of sand, 220 thousand cubic yards of hard basalt rock, and 450 thousand cubic yards of gravel and boulders to deepen the channel to 43 feet (DEIS pages 4-8 and 4-9). Over the next 50 years, 191 million cubic yards of material will be dredged from the mouth of the Columbia River. During the next 20 years, over 91 million cubic yards of material will be removed and disposed of elsewhere in order to maintain the channel. The Corps states in its DEIS that such actions will have very little impact on habitat and wildlife health. The only ocean disposal alternative discussed is a 50 year plan. In it the Corps offers no baseline data on crabs, no thresholds, no monitoring, no mitigation, and no Regulatory Flexibility Analysis to determine the economic effect on small businesses.

5. Comments noted. Concerning ocean disposal, further workshop meetings have been conducted and the disposal plan has been changed. The North and South sites have been eliminated, and the currently proposed sites have been reduced in size and located further offshore to minimize impacts to the commercial fishery, including crabs. The Ocean Disposal Working Group has agreed to the currently proposed sites. We have minimized the impact to commercial fisheries as required by the Ocean Dumping Act to the extent possible. A Management and Monitoring Plan is located in Appendix H, Exhibit H. The EIS has been revised to reflect this information.

5. According to the Ocean Dumping Act (ODA), there are 11 specific and 5 general criteria in selecting ocean disposal sites. "Some of these are: to select sites particularly to avoid areas of existing fisheries or shell fisheries, to limit the size of sites in order to localize any immediate adverse impacts, to dump only at disposal sites and under conditions that will insure no unacceptable interference with fishing, to conduct a qualitative and quantitative assessment of the potential effects on the marine environment and commercial fishing, to create a buffer zone when site is in close proximity to area of unique or significant importance (ie. the mudhole,) and to protect spawning and nursery areas."

The Corps is planning to dump dredge spoils over 75 square miles at the mouth of the Columbia River. This will cover 56% of the zone of crab fishing, where Crabbers make 75% of their earnings. The Corps provides insufficient information regarding the disposal over such vast acreage of productive marine habitat. Inadequate studies have been completed to prove that thin-layer disposal (maximum 12 inches) will have non-significant impacts on marine life. "Based on what is known about the physiology and ecology of the Dungeness crab, dredged material disposal on areas where crab are living can be expected to have numerous adverse effects, including mortality through direct burial, impaired respiration, burial of food and protective habitat and impaired reproductive activity." (Beasley, p. 23) Differences in particle size between the ocean bottom and channel dredge spoils provide further reason to believe that recolonization rates at dumping sites would be affected. No system of monitoring toxics in the dredged material before ocean dumping has been proposed. The DEIS document asserts that no significant impact on crabs is "evident." What it should do is conduct studies that go beyond "pilot" level, and offer fair consideration of the alternative disposal sites: upland disposal, estuarine disposal, disposal off the continental shelf, and no ocean disposal.

Sincerely,



David Davies

539 Kensington Ave.
Astoria OR 97103
February 3, 1999

District Engineer, U.S. Army Corps of Engineers
Portland District
Attn: CENWP-EC-E, P.O. Box 2946
Portland OR 97208-2946

Corps of Engineers Response

I urge you to reconsider the negative environmental and public health effects which deepening the shipping channel in the Columbia River will have.

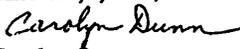
Specifically, I think the effect of dredging at the mouth of the Columbia will be to release both known, and as yet unknown, deadly toxins into the food chain: dioxin, heavy metals, pesticides, DDT, and radionuclides.

The Columbia River has received waste products and toxic materials for decades, both as a direct dump-site, as as an indirect dumpsite from tributaries. That lack of stewardship on our part, as citizens and as the various levels of government which represent us, is bad enough. At this point, our only shelter from our own mistakes is to be glad that gravity has taken the toxins to the bottom of the river, and, IF UNDISTURBED, pretty much keeps them there.

We all know that one dredging will call forth others. Let's look again at our priorities; let's have the full story in your final EIS in June.

Thank you.

Sincerely yours,


Carolyn Dunn

The material proposed to be dredged from the Columbia River is the same type of material that is currently dredged for maintenance. This material has been tested and evaluated, and is primarily sand and has a low percent of fines and organic material due to the constant reworking of the sediments by large flows in the Columbia River. When released from the dredge, sand settles very rapidly to the bottom and is not carried in suspension except under extreme flow conditions. Deepening of the channel in the Columbia River will not uncover or expose any material that is different from the material now dredged.

Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

February 5, 1999

District Engineer
U.S. Army Corps of Engineer District, Portland
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Corps of Engineers Response

RE: Comments on the Draft Integrated Feasibility Report for Channel Improvements and Environmental Impact Statement, Columbia and Lower Willamette River Federal Navigation Channel

The following elements are have not been adequately covered in or are missing from the DEIS:

ADEQUATE DATA TO DETERMINE PREFERRED ALTERNATIVE BASED ON THE GREATEST NET BENEFITS

In light of the study of the sediment contamination in the Portland Harbor area and the possibility that this area will be listed on the Superfund National Priority List, the costs to deepen that part of the project and to dispose of the contaminated sediment are unknown and cannot be included in the calculations.

1.

In fact, given that if the Portland Harbor area is listed as a Superfund site, no deepening or maintenance dredging will proceed, the Willamette portion of the project should be removed entirely. It would be irresponsible to even authorize the deepening of the Willamette portion given all the unknown factors at this time, such as the following:

- We do not know if it will be a federal Superfund site;
- We do not know what the impacts of digging deeper would be in this area;
- We do not have anywhere to put the material;
- We do not know the environmental and human health risks associated with deepening and moving the material;
- We do not know what the cost would be to deal with it;
- We do not need to deepen the channel to get the Corps help on cleanup, we can use the provision that allows clean up work at 75% cost share with a local sponsor, even without a new project.

2.

Also, in light of the Asian economic crisis, the commodity analysis used in the DEIS is outdated and may be erroneous in demonstrating need for the project. A new analysis should be completed that better estimates the future demand given the recent developments. There is a lesser demand for grain than when the economic analysis was completed (especially corn); we are not seeing the projected demand for grain as stated in the economic analysis, and we may not see the projected demand increase – a crucial factor in the benefits calculation – in the next several years.

1. Comments noted. The Corps has no position on the listing of the Portland Harbor as a Superfund Site, for or against. At the meeting referenced it was asked if the navigation channel was automatically included or could be excluded. There are consequences either way. If it is listed all navigational dredging whether new work or operation and maintenance (O&M) will cease. This means that all funding to evaluate dredged material proposed for dredging will cease. In addition all funding to find suitable dredged material disposal alternatives including pilot management and monitoring projects will cease. Funding may be available through other Corps programs but not through the navigation new work, O&M, or Section 312 programs.

2. We received many comments regarding the economic analysis and the 1997 Asian currency crisis and the fact that most of the work on the economics was completed prior to 1997. We have added additional information on these concerns to the final EIS and Economic Appendix C. The general consensus among major entities such as the World Bank, the International Monetary Fund, and the United States Department of Agriculture, is that the Asian economies have reached the trough of their downturn, and that those economies (along with the associated trade) are rebounding. The crisis has resulted in a short-term reduction in Columbia River exports, but the crisis does not represent a fundamental change in Asian economies that would result in a long-term decline or even stagnation of exports. Indeed, most forecasts call for Asian recovery to be well underway by 2001, and the first year that a deepened channel would be available is 2004.

Corps of Engineers Response

IMPACT OF OTHER RIVER MANAGEMENT DECISIONS ON THE COST AND MITIGATION ASSOCIATED WITH THE PROJECT

3. This DEIS has not taken account of the possible impacts of the Snake Dam removal and John Day draw down. How would the sediment loads in the river increase? What would they be carrying?

AVOIDED COSTS

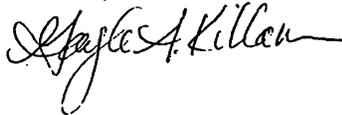
4. What is the cost that will be avoided with each alternative that was not chosen? Given that federal and state tax dollars will pay for this project, it is important to understand the alternatives based on their relative cost as well as the benefit – cost ratios.

DEEPENING PORT BERTHS

5. There has been little discussion about the costs of and risks associated with deepening the berths along the Willamette and the Columbia Rivers. Data have shown that the most contaminated sediment in both rivers is in the near shore areas. None of these costs or responsibilities are part of the "federal project" so they are not included in this analysis. These taxpayer costs and potential- environmental and human health risks will be faced by the region and should be presented as a necessary part of the project upfront.

-
6. After three years of working with the Corps and the Ports to try to address the environmental concerns of the project, many of my original concerns remain and many more have been added in the interim. Most of the individuals working on this analysis have been very interested in the environmental concerns, but, unfortunately, the DEIS has not responded to them. Perhaps some of the concerns have not been addressed because they are outside the scope and authority of the Corps or the NEPA process, but that does not make the concerns go away, nor will it prevent citizens from continuing to raise them.

Gayle Killam
2544 SE 31st Avenue
Portland, OR 97202



3. The dams in question provide minimal flow regulation for the mainstem Columbia River. Alterations in flow regimes, if those dams were ever drawn down, would have insignificant impacts on sediment discharged to the Pacific Ocean and on the maintenance-dredging forecast.

4. Alternatives considered in detail in the EIS are described and compared in Section 4, which includes an economic comparison. Our economic analysis has been performed using the regulations governing Corps studies.

5. The costs shown in the report for the 43-foot channel alternative include costs for turning basins and berthing areas which must be deepened in order to achieve the benefits of the project. Sections 4.6.1 and 4.6.3 of the EIS discuss this.

6. Comment noted.

February 2, 1999

District Engineer
U.S. Army Corps of Engineer District, Portland
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-29464

Corps of Engineers Response

Dear Sir/Madam,

1. As a concerned citizen of the state of Oregon, I have followed the planned deepening of the Columbia and Willamette Rivers very closely. While I support ideas that work to develop our state and improve opportunity for its people, I have several concerns with this particular project. I had hoped the draft environmental impact statement (DEIS) would alleviate my concerns, but instead, I have more concerns than before, rather than less. It is my feeling that while growth and development in Oregon is necessary and of itself a good thing. I am equally convinced that marginal net benefits of such large-scale benefits must be thoroughly evaluated and understood before we begin such a large-scale and environmentally sensitive operation as this channel-deepening project.

While I said I have several concerns after reading the DEIS, I will limit my written comments to two points 1) costs of mitigation and the "greatest net benefits." and 2) possible harm to fish and fish habitat.

1) Costs of mitigation and the "greatest net benefits."

2. Because Congress authorized the project as a "navigation project," the evaluation of this project's benefits (to compare [with] its costs) can only include the benefits to navigation. This means that the greatest possible benefits have been calculated by determining the benefits from the widest, deepest, longest possible alternative. I would argue that while large benefits may be realized, the loss of the largest quantity of valuable assets to the people of Oregon and Washington will also be lost; wetlands, water-quality (from stirred-up contaminated sediments), and aesthetic values. I feel the Corps has failed to offer a comprehensive analysis that evaluates the total net benefits from this project. Such an analysis must be considered **MANDATORY** before the Corps, the Port of Portland, and the people who value these resources can determine if this project carries the "benefits" that it promises. I also recommend that the Corps complete an assessment of cost avoided by a "No Action" alternative.

As I have said, I support growth and development that benefits our state. I also equally disapprove of growth for growth's sake. A detailed comprehensive economic analysis of the net benefits for the proposed project and each considered alternative must be present to the people who are being affected by this action before any further progress is made toward action.

1. Comments noted. See our responses to your specific comments below.

2. The economic analysis has been performed as per the regulations governing Corps studies. A detailed study of the exact monetary incidence of the benefits is outside the scope of this study, and is also outside of the regulations guiding the analysis.

2) Possible harm to fish and fish habitat

The dredging and disposal activities described in the DEIS paint a disturbing picture for the life cycle of highly-valued salmon runs in the lower Columbia and Upper Willamette areas. I see little evidence of how the Corps would plan on adapting their work to accommodate federally listed species of salmon and steelhead. The DEIS suggests the Corps' plans to dredge continuously for two years. In light of the probable impacts on threatened species, this plan must be seriously reconsidered. I have every faith that, once presented with the biological realities that this project presents for our depleted fish populations, changes will be adopted. I do feel it imperative that the Corps considers such realities before work is begun and a modified timeline and cost adjustment be completed to reflect changes, which will eliminate impacts on fish.

3.

Make no mistake, as presented this plan WILL harm threatened salmon and steelhead species and constitute harassment as defined by the ESA. As a specific example of my concern I offer this. The Corps acknowledges that blasting can cause mechanical damage to fish's internal organs, but does not provide data about the techniques the Corps intends to employ to avoid direct impact on salmon in its DEIS. (DEIS at 6-20.) In addition, critical habitat and salmon food sources will be destroyed and/or modified by the dredging plan. The DEIS does not explore the impact on salmon if their food source is destroyed, if only temporarily.

The threats to things that a large number of Oregonians and Washingtonians value are very real. Contaminated sediment is known to be at the bottom of the Willamette and Columbia Rivers and several federally listed species exist in these waters. Such large-scale construction can not avoid disruptions to the surrounding environment. The DEIS must suggest that the disruptions will be fully considered and a realistic assessment of those disruptions will be made. This DEIS seems to go to great lengths to avoid examining these real threats and chooses instead to dwell on the possible benefits. If TOTAL benefits are to be understood, those real costs must be subtracted from the possible benefits.

I thank you for your time and consideration in accepting my comments on this crucial decision for the people of the Northwest.

Sincerely,



Ted Gresh

1374 W. 4th St.
Eugene, OR 97402
541.334.6607

Corps of Engineers Response

3. A detailed discussion of the impacts of the proposed project on salmonid species was provided in both the EIS and Biological Assessments submitted to the NMFS under requirements of the Endangered Species Act. The NMFS will determine Section 7 compliance for the proposed project.

Alternative dredging methods are discussed in the EIS. The final dredging plan for construction will be developed to minimize impacts to species of concern. Restricting construction dredging from July to December, for example, would increase construction time from two years to four years.

All discussions and conclusions in the EIS are based on the best scientific information available for a given issue. A blasting plan was developed in cooperation with federal and state resource agencies. It incorporates proven methods to minimize impacts to fish in the vicinity of the blast. All blasting will be done during the approved in-water work period, which is a time when fish numbers are low.

The material proposed to be dredged from the Columbia River is the same type of material that is currently dredged for maintenance. This material has been tested and evaluated, and is primarily sand and has a low percent of fines and organic material due to the constant reworking of the sediments by large flows in the Columbia River. Deepening of the channel in the Columbia River will not uncover or expose any material that is different from the material now dredged.

The local sponsors have requested that the Willamette River dredging be delayed because of the possible listing as a Superfund site. No further studies of Willamette River sediments are anticipated at this time. Any future dredging in the Willamette River would require full compliance with all the laws including the Clean Water Act, Endangered Species Act, and the National Environmental Policy Act.

Stevens, Steven J NWP

From: Laurie Pavey [bigdog@spiritone.com]
Sent: Friday, February 05, 1999 7:10 AM
To: Steven J. Stevens
Subject: Dredging Columbia

--- begin forwarded text

Corps of Engineers Response

Date: Thu, 4 Feb 1999 20:35:12 -0800
To: Steven J. Stevens <Steven.J.Stevens@usace.army.mil>
From: Laurie Pavey <bigdog@spiritone.com>
Subject: Dredging Columbia
Cc:
Bcc:
X-Attachments:

Dear Mr. Stevens,
The Integrated Feasibility Report for Channel Improvements and Environmental Impact Statement has recently been offered to the public for our comment. I believe that alternatives to dredging must be explored. The impacts to the crab fishing industry are significant. The Batelle Study should be fully included in your document. Also note that impacts to sturgeon from entrainment are significant.

1.

Please explore the deep water port for Astoria options more closely, and keep in mind the economic impacts to the population below Longview.

A comprehensive risk assessment should be done at least for the fish and wildlife of the river and preferably for human health. The sediment issues especially in regards to the Willamette River have not been adequately addressed as required by the Clean Water Act.

Sincerely,

Laurie Pavey

--- end forwarded text

1. Alternative dredging methods are discussed in the EIS. The final dredging plan for construction will be developed to minimize impacts to species of concern. Concerning ocean disposal, further workshop meetings have been conducted and the disposal plan has been changed to minimize impacts to the commercial fishery, including crabs. The EIS has been revised to reflect this information.

Additional information has been added to the report concerning the regional port analysis. The material proposed to be dredged from the Columbia River is the same material that is currently dredged for maintenance. This material has been tested and evaluated, and is primarily sand and has a low percent of fines and organic material due to the constant reworking of the sediments by large flows in the Columbia River. Deepening of the channel in the Columbia River will not uncover or expose any material that is different from the material now dredged.

Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

Stevens, Steven J NWP

From: deBruler [cruwa@gorge.net]
Sent: Friday, February 05, 1999 3:59 PM
To: Steven.J.Stevens@USACE.ARMY.MIL
Subject: Greg deBruler's EIS Comments!

2/4/99

District Engineer
US Army Corps of Engineers
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Dear Colonel Robert T. Slusar:

Here are my comments for the record on the draft EIS for the Integrated Feasibility Report for Channel Improvements on the Columbia and Willamette rivers. For the past 11 years I have been studying the water quality problems with the Columbia River and in particular the Hanford Nuclear reservation in SE Washington State.

1.

In the last 11 years I have seen some pretty comprehensive EIS's and I have seen some that were written so poorly they were obviously written in hopes of slipping one by. The problem with the later is they make themselves easy targets for court challenges usually ending up in the cessation of the proposed project. This draft EIS is a perfect example of myopic scientific investigation built around gross assumptions. In some cases the science reportedly used is not based on science but political opinion.

In short, this EIS has failed in addressing a multitude of potential impacts from this proposed dredging project.

This EIS has not adequately analyzed the potential radioactive sediments that will be disturbed from this dredging project. Your citation in this study is not correct saying that there are no radioisotopes of concern because most those released during Hanford's operation have decayed away. For example, Neptunium 237 decays into Plutonium-239, which has a half-life of 24,000 years and Plutonium-240 with a half-life of 6,500 years. Both of these isotopes have been found in salmon, sturgeon and other species in the Columbia River. In the early 60's radiation was found down the central coast of Oregon and up the Washington coast. The Columbia River was so hot that the state of Oregon requested from the AEC shut down the reactors at Hanford. These isotopes are only just a few that are in the sediments of the Columbia River and not just the ones from atomic testing. Pockets of contamination could be found this must be assessed.

2.

The assumptions made from sampling you have done in the existing channel is not adequate and assumes this proposed extensive dredging operation will not release any contaminated sediment beside the channel. This is an erroneous conclusion and if you insist this is reality you need to explain in detail the provisions you are taking to prevent re-suspension of contaminated sediment.

From past experiences with the Corp. it appears that the standing operating procedure is to dismiss contaminated sediment as no problem, no significant impact. It makes you wonder what standard the core uses in assessing what is significant? It has been made very clear that the Corps doesn't even consider the impacts caused from the synergistic, additive effects in regards to heavy metals, chemicals and radioisotopes. Case in point was the dredging of the Port of Pasco and Port of Kennewick ports a few years ago where the Corp concluded like in this EIS's there were no contaminants of concern. After challenging this assumption Ecology and the Dept. of Health surveyed the sediments and found radioisotopes of concern.

This EIS had failed to adequately address all contaminants that will be put into suspension. It is easy to ascertain what contaminants you should screen for considering the NPDES permits.

Corps of Engineers Response

1. Comments noted.

2. The material proposed to be dredged for the proposed project from the mainstem Columbia River is the same type of material that is currently dredged for maintenance of the channel. Deepening of the channel will not uncover or expose any material that is different from the material now dredged. The material composing sand wave shoals is continually exposed, eroded, transported, deposited, buried, and reexposed as the sand wave bedform moves downstream. The material forming outline shoals do not vary (are homogeneous) because of their source of the sediment and similar depositional processes that form the shoal. Unlike the material behind McNary Dam radionuclides released from Hanford do not presently reside under a subsequently deposited cleaner layer of sediments in the project area. The slack water pool behind McNary provided a depositional sink for sediment. This allowed the original deposition of the bulk of the radioactive material to be deposited behind McNary Dam and then to be subsequently buried by cleaner sediments. This effectively provided an isolating cap of clean sediments. The same slack water flow regime does not exist in the project area requiring deepening by dredging an additional 3 feet.

The Bi-State Study states that radionuclides are the most studied contaminant in the Columbia River. The Bi-State Study conducted limited sampling and testing for radionuclides and reported the levels were similar to or less than those found above Hanford. The USGS conducted extensive studies of sediments in the early to mid-seventies. We are not aware of any health or environmental advisories that resulted from these extensive studies in the lower Columbia River. It is understood that the Oregon Dept of Health discontinued monitoring radionuclides in the Columbia River in 1995 after 30 years of monitoring.

Corps of Engineers Response

2. (cont) You have failed to adequately address dioxin and furans and the biological impacts that has already occurred in the Columbia river ecosystem and what the re-suspension will do to the already overly stressed eco-system.
- You have failed to adequately address the multitude of chemicals that cause endocrine disruption that are present in the sediment and failed to address the reproductive disorders that will occur from this extensive dredging operation. You must perform a comprehensive risk analysis.
- I can go on and on with a very long list of eco-toxicity impacts that may occur and that have not been adequately addressed. It is the Corps responsibility to adequately address all potential impacts. You have failed to assess virtually all ecological, human health, and cultural impacts that will occur from this proposed dredging.
3. The cultural impacts in this EIS' are an embarrassment. Shipwrecks are only one part of cultural impacts. Cultural impacts are protected under the Treaties and this EIS has failed to address the cultural impacts that will occur from the contamination of the ecosystem and the long-term impacts to the ecology of the aquatic system. Because of the delicate dependency web of aquatic species, the Corps must assess the long-term impacts to this web. It must assess key species in the dependency web that might be eliminated because of the disruption to their habitat.
- This EIS fails to address Treaty Rights and this proposed action clearly violates the Treaties.
4. It fails to assess the habitat of the Columbia River and Willamette River. It only addresses a few species ignoring other species that are an integral part of a healthy ecosystem. For some unexplained reason habitat is only really considered if it's on land. It is almost as though out of site out mind is the approach used in this EIS.
- The proposal for an ocean disposal option of over 75+ sq. miles fails completely to address the habitat destruction that will occur. It gives no consideration to the dependency web of the aquatic life in the ocean, and fails to assess the destruction of this delicate web of life. The Cousteau Institute would have a field day with this EIS and the lack of sufficient analyses.
5. Your thin layer ocean disposal has not been adequately addressed as far as how you will assure 100% thin layering over 75+ sq. miles. This EIS shows there is no requirement that thin layering will be used. Most all of the mitigation plans mentioned are only recommendations, in fact very little habitat mitigation will occur. The habitat mitigation dollars have not been fully assessed. Habitat destruction has not been fully assessed or characterized. Habitat mitigation has not been fully characterized, or addressed.
- The Battelle study clearly shows the impacts that will occur to the crab and you must include the whole study. The destruction will be much greater than projected in the prime habitat area because of the Corps historic inability in actually achieving consistent thin layering. These proposed sites clearly violate the Ocean Dumping Act, and violate the Coastal Zone Management Act because there is no way you could mitigate the damage and it fails to protect critical habitat. There is no mitigation planned for estuary or ocean impacts.
- Impacts to endangered species those listed and those yet to be listed have not been fully assessed. This proposal would violate the Endangered Species Act.
- This EIS fails to evaluate all potential alternatives, as example the construction of a deep water port at Astoria. Ecologically and economically this makes a lot more sense, yet no assessment of this alternative has been done.
6. This EIS mentions that channel deepening would be for 3 feet. No where in this EIS does it state that this is the maximum depth that will in fact be dredged. It appears that 3 feet was chosen because of a Congressional funding estimates. If more funding is made available in theory the channel could be made deeper perhaps another 4 feet, 7 feet etc. No where in this EIS have you addressed the additional impacts that would occur from the additional dredge material. This EIS must assess all potential impacts and any additional deepening must be assessed. Do not try

2 (continued). The Hanford Dose Reconstruction effort in its River Pathway does not identify sediment in the lower river as being a concern. We have not been able to find any report or studies that indicate that radionuclides present in the project area pose a threat to human health or have any adverse environmental effects due to dredging activities.

The sediments proposed to be dredged from the Columbia River have low percent fines and organic material due to the constant reworking of the sediments by the large flows in the Columbia River. Since the silts and clays are not deposited in the navigation channel or are soon removed by the process of winnowing and suspended transport the material proposed to be dredged is sand. Sand when released from the dredge settles very rapidly to the bottom and is not carried in suspension except under extreme flow conditions.

3. Cultural resources described in the report are defined by Section 106 of the National Historic Preservation Act of 1966. The resources discussed under this Act are historic properties, and prehistoric and historic archeological sites. Both historic and prehistoric cultural resources are considered in the EIS. The proposed action described in the EIS will have "no effect" on those prehistoric and historic sites identified. In areas where sites are recorded, no disposal will occur. Additional studies may be undertaken to identify site boundaries to ensure that any historic or prehistoric sites in disposal areas are avoided. In addition, some monitoring will occur in areas that are proposed for wildlife mitigation.

The EIS addresses the expected effects on the aquatic environment under other sections of the EIS and in coordination with those agencies responsible for their protection. The proposed action does not include treaty lands. Treaty Tribes and non-Treaty Tribes potentially affected by the proposed action were contacted and their comments requested.

4. We disagree. The EIS assesses all relevant habitat issues and potential impacts from the proposed action and alternatives.

5. Thin-layer disposal has been removed from consideration.

6. A detailed discussion of the impacts of the proposed project on listed species was provided in the EIS and Biological Assessments submitted to the NMFS and USFWS under the Endangered Species Act. The NMFS/USFWS will determine Section 7 compliance of the proposed project.

The regional port analysis has been revised in the report to reflect more accurate costs.

If, at some future date, the lower Columbia River ports request Congress to authorize a study for further deepening, an EIS would be prepared to address the impacts of the action.

and dredge deeper at a later date without going back through the EIS process. This is not a one size fits all EIS.

In closing I can only say that this EIS is not even close to being complete and considering the magnitude of this proposal it will take you many more years to adequately address these listed omissions.

I hope that the Corps does not think they are above the law and try and push this through. Rushing this EIS will only land the Army Corps into court and waste even more money.

Sincerely,

Gregory deBruler. PS. TA.
P.O. Box 667
Bingen, WA 98605

Stevens, Steven J NWP
From: Brimhall, Diana C NWP
Sent: Monday, February 08, 1999 10:24 AM
To: Hicks, Laura L NWP; Stevens, Steven J NWP
Subject: FW: Opposition to Columbia River dedging from Pacific Ocean to Portland

----- Original Message -----

From: Bradley, Sam E Jr NWP
Sent: Saturday, February 06, 1999 11:50 PM
To: CENWP-PA NWP
Cc: weblord@usace.army.mil; 'treeed'
Subject: RE: Opposition to Columbia River dedging from Pacific Ocean to Portland

I believe that this message was intended for you folks. Thanks. Sam.....

=====
Sam E. Bradley, Jr.
Program Manager
E-Mail Center of Expertise
US Army Corps of Engineers
<http://eml01.usace.army.mil/>

----- Original Message -----

From: treeed [<mailto:treeed@pacifier.com>]
Sent: Thursday, February 04, 1999 11:04 PM
To: weblord@usace.army.mil
Subject: Opposition to Columbia River dedging from Pacific Ocean to Portland

We oppose the corps plans to deepen the Columbia River channel between the Pacific Ocean and Portland based on the following: Year around construction will violate state and federal laws which protect endangered species habitat. Contamination from sediments will adversely affect water quality. The impact on commercially vaulable species including but not limited to Dungeness crab and flatfish has not been addressed. Mitigation plans for disposed dredged materials placed in both ocean and estuary are not included in your report. I am not sure if this is the proper location for this document to be filed, if it needs forwarding, would appreciate your help.
Ed & Tree Johnson PO Box 241 Cannon Beach, OR. 97110

Corps of Engineers Response

A detailed discussion of the impacts of the proposed project on listed species was provided in the EIS and Biological Assessments submitted to the NMFS and USFWS under the Endangered Species Act. The NMFS/USFWS will determined Section 7 compliance of the proposed project.

The material proposed to be dredged from the Columbia River is the same type of material that is currently dredged for maintenance. This material has been tested and evaluated, and is primarily sand. Deepening of the channel in the Columbia River will not uncover or expose any material that is different from the material now dredged. Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

Concerning ocean disposal, further workshop meetings have been conducted and the disposal plan has been changed. Tthe currently proposed sites have been reduced in size and located further offshore to minimize impacts to the commercial fishery, including crabs. We have minimized the impact to commercial fisheries as required by the Ocean Dumping Act to the extent possible. A Management and Monitoring Plan is located in Appendix H, Exhibit H. The EIS has been revised to reflect this information.

Feb. 5, 1999

District Engineer; Portland District
Attn: CENWP-EC-E
US Army Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

CC: Oregon Gov. John Kitzhaber

Corps of Engineers Response

Feedback on the Environmental Impact Study (EIS) to deepen from 40' to 43' the 115 mile shipping channel from the Pacific to Portland most of which is in the Columbia River. This is follow-up to my letter sent yesterday - it is attached.

We have endangered salmon now on the Columbia River and it is proposed many more salmon species will be listed as endangered soon (possibly in March the list gets bigger). The National Marine Fisheries Service in May of 1990 listed the wild Coho Salmon of the lower Columbia River and three other stocks of Snake River salmon as endangered or threatened (Oregonian 1/17/91, page D1, second paragraph "Scientists take to streams to count salmon").

1.

Years of built up sediment containing industrial waste when disturbed and suspended will hurt endangered and threatened salmon species. Your current EIS does not address this. The current plan is to have dredging operations working continuously for two years. "Superfund" money will be needed to disturb the Willamette river bottom. Portland-area sewers overflow directly into the river during high rain periods and the Willamette basin drains much industrial waste from paper mills and others. The Columbia is down-river from the Willamette where several more Columbia River mills add to the flow and create toxic-to-fish-waste which builds up on the channel river bottom. Disturbing the bottom all at once will hurt fish. Possibly on future Corps construction projects work could be staged over more time to reduce the impact on salmon. Salmon need to be given a break during annual migrations of both small fish down-river and big fish upriver - everything needs to be done to make it as easy as possible for fish in both directions. Especially during these annual salmon migration times dredge spoil toxins should not be suspended in the water for fish's sake.

2.

Your EIS needs to better address the huge salmon problem in the Columbia River. The current plan to suspend toxins 24 hours a day for two years into the river/ocean is not going to help the fish/bottom-life. My feedback is kill the 115-mile channel project now and spend the money doing something better for Oregon and fish.

Shaun Maki
P.O. Box 247, Warrenton OR 97146

1. A detailed discussion of the impacts of the proposed project on listed fish species was provided in the EIS and Biological Assessment submitted to the NMFS under the Endangered Species Act. The NMFS will determine Section 7 compliance of the proposed project.

2. Alternative dredging methods are discussed in the EIS. The final dredging plan for construction will be developed to minimize impacts to species of concern. Restricting construction dredging from July to December, for example, would increase construction time from two years to four years.

The material proposed to be dredged from the Columbia River is the same material that is currently dredged for maintenance. This material has been tested and evaluated, and is primarily sand. Deepening of the channel in the Columbia River will not uncover or expose any material that is different from the material now dredged.

Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.



CORVALLIS ENVIRONMENTAL CENTER

Phone: (541) 753-9211 Fax: (541) 753-4507 E-mail: ecenter@peak.org
214 SW Monroe Ave.
P.O. Box 2189
Corvallis, Oregon
97339-2189

Nancy Allen
- Director

Avery House Nature
Center (541) 758-6198
1200 SW Avery Park
Road
Corvallis, OR 97333

Connie Wieggers Barnes
- Nature Education
Program Director

Anne Minnich
- Program Coordinator

Board Members
Chris Beatty

Jessica Brown

Kelly Burnette
- Vice President

Amaris Franz
- Treasurer

Stacy Gaylord

John Ledges
- Editor

Matthew Nahan
- Secretary

Steve Northway

Rob Pabst
- President

Ashley Roorbach

2/4/99

District Engineer
U.S. Army Corps of Engineer District, Portland
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Comments on the Channel Deepening Project for the Columbia and Willamette
Rivers US Army Corps of Engineers Draft Environmental Impact Statement
(DEIS).

District Engineer:

We are concerned with the inclusion of the Willamette River in the proposal and with the potential impacts to water quality, salmon, and other aquatic species. The DEIS fails to address indirect impacts and possible future events related to the deepening project. The DEIS also fails to adequately address the effects of dredging on redistribution and resuspension of contaminants with sediments in the Willamette River. With the potential listing of the Willamette as a Superfund site, this evaluation is essential. We would request that adequate testing be conducted for contaminants to the depths proposed for deepening the channel. We also request that potential effects are assessed of the resuspension of contaminants with sediments on water quality, aquatic species, wetland, and other aquatic habitats. The effects of increased turbidity on aquatic life must also be addressed, including the impact of blasting and dredging operations, the suspension of contaminated sediments, and the potential for depressed levels of dissolved oxygen at dredge and disposal sites.

We urge you to reconsider the inclusion of the Willamette River in the proposal until adequate assessment have been done.

Sincerely,

Nancy Allen
Director
Corvallis Environmental Center

Corps of Engineers Response

Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

NCAP

Northwest Coalition for
Alternatives to Pesticides

February 5, 1999

District Engineer
US Army Corps of Engineer District, Portland
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Corps of Engineers Response

**Re: Proposed Channel Deepening Project for the Columbia
and Willamette Rivers**

On behalf of the Northwest Coalition for Alternatives to Pesticides (NCAP), I would like to submit the following comments on the US Army Corps of Engineers' Draft Environmental Impact Statement (DEIS) for the proposed channel deepening project for the Columbia and Willamette Rivers.

1. Comments noted. See our responses to your specific comments below.

- 1. The proposed project will further jeopardize the water quality, fish, and wildlife of the Willamette and Columbia Rivers.

The DEIS has major omissions and serious problems that must be addressed in order to protect the aquatic life and water quality of these rivers that are vital to the region. In particular, we ask that your agency address the following concerns:

1. The DEIS does not adequately address the threats to aquatic life and to water quality that will result from the dredging of sediments laden with toxic materials. Studies conducted by scientists at the US Geological Survey and other agencies indicate that the sediments in both rivers are contaminated with toxic substances, including pesticides, dioxins, and heavy metals. We are concerned that the proposed dredging will lead to the redistribution and suspension of those contaminants.

- 2. A detailed analysis of sediment studies and chemical testing is included in the EIS and Appendix B. The material proposed to be dredged from the Columbia River is the same type of material that is currently dredged for maintenance. This material has been tested and evaluated, and is primarily sand. Deepening of the channel in the Columbia River will not uncover or expose any material that is different from the material now dredged.

The DEIS recognizes this possibility; however, the Corps did not test particles of all sizes. Pesticides and other hazardous chemicals sorb to particles regardless of grain size.

Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which contain high levels of contamination. The local sponsor has requested that dredging of the Willamette River be delayed in order to allow coordination with the ODEQ investigation and remediation planning for the Portland Harbor. No further Corps studies of Willamette River sediments are anticipated prior to completion of the remediation plan. Further sediment quality evaluations will be required and conducted prior to any dredging and disposal activities. The Corps has and will continue to participate in USEPA's and ODEQ's efforts to clean up the Willamette River.

- 2. In addition, material may be suspended in the river as a result of the dredging, making substances that are toxic to aquatic life bioavailable. How will these suspended toxics move in the food chain and what organisms will be affected as a result?

Furthermore, the Corps failed to test sediment samples down to three feet, the level to which the proposed dredging would occur. The Corps' method of sampling to 10 inches does not recognize how dredging that has occurred previously has modified the composition of the channel bottom. Tests should be done down to the level of the proposed dredging.

P.O. Box 1393
Eugene, OR 97440
(541) 344-5044
(541) 344-6923 Fax
info@pesticide.org
http://www.efn.org/
ncap

Corps of Engineers Response

2. (cont)

Pesticides can be taken up from the water and accumulate in tissues of aquatic organisms, often becoming magnified thousands of times higher in an organism than in surrounding water. How will release of the toxic substances now buried in the sediment impact the entire aquatic ecosystem if chemicals like DDT are disturbed and biomagnify, as would be expected? How will such biomagnification affect threatened and endangered salmonid populations?

The Corps fails to take into account the full ramifications of the proposed action.

2. The DEIS fails to meet the requirements of the Clean Water Act. The DEIS states that the proposed action, including mitigation, would result in "no significant adverse effects on human health or welfare, municipal water supplies, plankton, fish, shellfish, or wildlife. Significant adverse impacts on life stages of aquatic life and other wildlife dependent on the aquatic ecosystem, on ecosystem diversity, productivity, or stability, or on recreational esthetic, or economic values would not occur" (DEIS exhibit D).

These sweeping conclusions are not effectively proven or referenced in the DEIS.

3.

How will the Corps address the substantial problems associated with sediments in the Willamette River? What will happen if the Portland Harbor is listed as a federal Superfund site? What are the indirect impacts of such a listing on the channel deepening project?

Section 404 of the CWA requires that all projects involving the discharge of dredged or fill material into waters of the United States be evaluated for water quality and other effects prior to making discharge. The Corps has failed to make a sufficient evaluation in this regard, and has failed to address indirect impacts and possible future events related to the deepening project.

At a time when our river systems are in critical condition, the deepening of the channel would be a grave mistake.

NCAP anticipates that the Final EIS will address these concerns and that the Corps will decide against this project in the interest of protecting our water quality and aquatic environments.

Sincerely,



Neva Hassanein, PhD

3. Comments noted. The Section 404(b)(1) Evaluation (Exhibit D) has been revised to provide additional information supporting this conclusion.



COLUMBIA RIVER UNITED

CRU

P.O. Box 1254
Hood River, OR
97031

503-387-3030

P.O. Box 912
Bingen, WA
98605

509-493-2808

February 4, 1999

Columbia River United
P. O. Box 912
Bingen, Washington 98605

District Engineer
US Army Corps of Engineers
Portland District
Attn: CENWP-EC-E
P.O. Box 2946
Portland, OR 97208-2946

Corps of Engineers Response

Dear Colonel Robert T. Slusar:

Thank you for the opportunity to comment on the draft EIS for the Integrated Feasibility Report for Channel Improvements on the Columbia and Lower Willamette Rivers. CRU represents a group of approximately 1400 citizens concerned about issues regarding the Columbia River and its ecosystem. We offer the following comments for incorporation into your final EIS on behalf of our group and as individuals.

1. Comments noted. See our responses to your specific comments below.

1. The proposal to deepen the channel from 40 to 43 feet as outlined will result in extreme environmental impacts and this must be admitted and more sufficiently addressed. The proposed channel deepening will provide no economic benefits for the communities surrounding the estuary and could affect many people who depend on the natural resources of the estuary and ocean for employment in both economic and cultural ways not addressed in the document.

The Draft EIS lists a preferred alternative that has the greatest environmental impacts and the lowest cost-to-benefit ratio without adequately addressing the economic benefits to be gained from this alternative. We suggest an independent economic study be included that justifies the chosen alternative (if it is justifiable) in a scientific manner. The questionable nature of the benefits does not justify the environmental degradation that will occur if you proceed with this plan. The Draft EIS is lacking in analysis of alternative evaluations, ocean disposal, threatened and endangered species, water quality impacts, especially those from contaminated sediment, economic impacts and mitigation.

CRU requests the final document reevaluate the alternatives and address in

Corps of Engineers Response

detail each of the following:

1. Sediment contamination problems are not adequately addressed for either river. The Bi-State study of 1991 found every sediment sample to be elevated for dioxins, yet the document states no sediment samples from the channel contained it. This is incorrect. Direct dioxin and furan testing of channel samples must occur prior to the project proceeding based on the high amounts found in sediment in the rivers to date. A screening is not adequate to meet Clean Water Act requirements. Analysis of sediment contamination must include **additive and synergistic effects** from contaminants along with **bioaccumulative and persistent factors** of these contaminants. Radioactive testing and direct dioxin testing must occur during the process with a mitigation plan in place if detected. A **comprehensive risk analysis** must be included for endangered species and must include bald eagles and mink and otter in the lower river. These species are already suffering population loss from contamination and these issues must be addressed. A human health risk analysis should also be included for additional contamination to salmon, sturgeon and crab. The Clean Water Act requirements are not proven or referenced sufficiently. Although mitigation of the Willamette sediments is mentioned, no plan or discussion is included on how the contaminated sediments would be removed without release into the environment in some way. Continuous monitoring of sediment must occur for both rivers. The stirring up of sediment alongside the channel in both rivers is also a concern that must be addressed as this is bound to occur.
2. The Draft EIS does not adequately evaluate alternatives and this must be expanded and improved. The non-structural alternative and the deep port alternative are two that are especially lacking. Both have less environmental damages potential and would be more beneficial to the region economically.
3. The Draft EIS does not adequately address the disposal options. There are no beneficial uses of the dredged materials. The proposed ecosystem restoration at Millar/Pillar should be removed. It would not benefit the ecosystem but would only increase the number of salmon lost to terns. The ocean disposal must be dealt with by offering other alternatives. The only one currently offered violates the Coastal Zone Management Act and the Ocean Dumping Act. The Batelle research which should be included in its entirety shows potential for significant crab mortality from thin layer ocean disposal. This should be admitted not dismissed. The proposal to dump on crab fishing sites is ridiculous and must be changed. A study of past

2. The material proposed to be dredged for the proposed project from the mainstem Columbia River is the same type of material that is currently dredged for maintenance of the channel. Deepening of the channel will not uncover or expose any material that is different from the material now dredged. The material composing sand wave shoals is continually exposed, eroded, transported, deposited, buried, and reexposed as the sand wave bedform moves downstream. The material forming cutline shoals do not vary (are homogeneous) because of their source of the sediment and similar depositional processes that form the shoal. Unlike the material behind McNary Dam radionuclides released from Hanford do not presently reside under a subsequently deposited cleaner layer of sediments in the project area. The slack water pool behind McNary provided a depositional sink for sediment. This allowed the original deposition of the bulk of the radioactive material to be deposited behind McNary Dam and then to be subsequently buried by cleaner sediments. This effectively provided an isolating cap of clean sediments. The same slack water flow regime does not exist in the project area requiring deepening by dredging an additional 3 feet.

The Bi-State Study states that radionuclides are the most studied contaminant in the Columbia River. The Bi-State Study conducted limited sampling and testing for radionuclides and reported the levels were similar to or less than those found above Hanford. The USGS conducted extensive studies of sediments in the early to mid-seventies. We are not aware of any health or environmental advisories that resulted for these extensive studies in the lower Columbia River. It is understood that the Oregon Dept of Health discontinued monitoring radionuclides in the Columbia River in 1995 after 30 years of monitoring.

The Hanford Dose Reconstruction effort in its River Pathway does not identify sediment in the lower river as being a concern. We have not been able to find any report or studies that indicate that radionuclides present in the project area pose a threat to human health or have any adverse environmental effects due to dredging activities.

The sediments proposed to be dredged from the Columbia River have low percent fines and organic material due to the constant reworking of the sediments by the large flows in the Columbia River. Since the silts and clays are not deposited in the navigation channel or are soon removed by the process of winnowing and suspended transport the material proposed to be dredged is sand. Sand when released from the dredge settles very rapidly to the bottom and is not carried in suspension except under extreme flow conditions.

3. Additional information has been added to the EIS concerning LoadMax and the regional port analysis.

Corps of Engineers Response

- dumping impacts on crab should be included as it has resulted in bed sterilization. There is no discussion of how thin layer dumping would be accomplished. Please include.
4. There are several threats to endangered species that are not adequately addressed or dealt with in the Draft EIS. The recommendation by Fish and Wildlife to stick to windows of working time for salmon recovery efforts should be incorporated into the plan. The excuse it would take longer than two years is not addressing the problem adequately. The time period for in water work should be developed specific to threatened and endangered species, smelt and sturgeon. The impacts must be included or discussed in truth, not summarily dismissed as insignificant.
 5. The economic impacts to commercially valuable and other important species are not addressed. The conclusion that no significant impacts will occur to Dungeness crab and flatfish from ocean disposal is an example of inadequately evaluated impacts. The long term mortality of white sturgeon from entrainment is not known or discussed and the impact on the species as well as the commercial impact must be addressed.
 6. Cultural impacts are dismissed without discussion simply by stating there are none. This is not true. Any possible impacts to the Tribes, to Treaty Rights and to fishermen and families relying on fishing in the estuary must be included.

In summary, the EIS has not justified the conclusions reached of no adverse significant environmental impacts. The summary statements throughout must be referenced or documented. The choice of an alternative with questionable economic benefits and severe environmental damage that is not adequately mitigated in the plan is not acceptable and must be changed to include more environmentally friendly alternatives and better economic evaluations. The alternative choice should be reconsidered.

Sincerely,



Cindy deBruler, Director
Columbia River United

4. The Miller-Pillar restoration action has been removed from the proposed action.
5. A detailed discussion of the impacts of the proposed project to listed species was provided in the EIS and Biological Assessments submitted to the NMFS and USFWS under Endangered Species Act requirements. The NMFS and USFWS will determine Section 7 compliance of the proposed project.
6. Additional information has been added to the EIS concerning these species and potential impacts from the proposed project.
7. Cultural resources described in the report are defined by Section 106 of the National Historic Preservation Act of 1966. The resources discussed under this Act are historic properties, and prehistoric and historic archeological sites. Both historic and prehistoric cultural resources are considered in the EIS. The proposed action described in the EIS will have "no effect" on those prehistoric and historic sites identified. In areas where sites are recorded, no disposal will occur. Additional studies may be undertaken to identify site boundaries to ensure that any historic or prehistoric sites in disposal areas are avoided. In addition, some monitoring will occur in areas that are proposed for wildlife mitigation. Also, the proposed action does not include treaty lands. Treaty Tribes and non-Treaty Tribes potentially affected by the proposed action were contacted and their comments requested.



OREGON
ENVIRONMENTAL
COUNCIL

Corps of Engineers Response

BOARD OF DIRECTORS

President

Ann Wheeler-Bartol
Bend

Vice President

Ed McNamara
Portland

Treasurer

Randy Pozdena
Portland

Lloyd Anderson
Portland

Susan Castillo
Eugene

Karla S. Chambers
Corvallis

Joseph Cortright
Portland

Angus Duncan
Portland

David Engels
Aurora

Karen Green
Bend

Jerome Lidz
Eugene

Steve Novick
Portland

Amy Patton
Tigard

Jesse Reeder
Lake Oswego

Bob Stacey
Portland

John Strawn
Portland

James Whitty
Portland

Executive Director
Jeff Allen

3 February 1999

Dear Mr. Willis,

On behalf of the Oregon Environmental Council, I am taking this opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Channel Deepening Project for the Columbia and Willamette Rivers. OEC has four specific concerns:

Our first concern addresses water quality issues. Under the Clean Water Act, water quality certification is required for all federal permits. Section 404 of the Clean Water Act requires that all projects involving the discharge of dredged or fill material into waters of the United States be evaluated for water quality and other effects prior to making discharge. The draft evaluation of section 404 included in the DEIS states that the proposed action, including mitigation, would result in

no significant adverse effects on human health or welfare, municipal water supplies, plankton, fish, shellfish, or wildlife. Significant adverse impacts on life stages of aquatic life and other wildlife dependent on the aquatic ecosystem, on ecosystem diversity, productivity, or stability, or on recreational esthetic, or economic values would not occur (DEIS exhibit D).

These conclusions are not proven or referenced to OEC's satisfaction in the DEIS.

The channel deepening project is not yet certified. It is not clear that it will ever become certified because of the significant problems with sediments in the Willamette River (see below). The Corps' proposed channel deepening plan includes both rivers, with the intent to phase construction to delay the Willamette deepening procedures until the toxic sediment issues are worked out. The draft EIS fails to address indirect impacts and possible future events related to the deepening project, including potential listing of the Willamette as a Superfund site.

OEC's second concern specifically addresses the contaminated sediments of the Willamette River. While the DEIS acknowledges the possibility that hazardous, toxic and radioactive wastes may be present in the navigation channel, the Corps

1. The 404 evaluation has been revised to more specifically address these and other factors.

2. Resuspension and redistribution of contaminants would be of concern in only limited areas of the Willamette River which likely contain high levels of contaminants. The local sponsor has requested that dredging of the Willamette River be delayed as part of the initial channel deepening project. Therefore, no further studies of the Willamette River sediments are anticipated in the immediate future. Further sediment quality evaluations will be required and conducted prior to any Willamette River dredging activities.



fails to adequately address the effects of dredging on redistribution and resuspension of those contaminants. Inwater disposal was suggested as one dumping method, but no possible level of success was indicated.

The draft did not chemically test samples with less than 20% fine grain material. The Corps attempts to justify this method of sampling because the materials beneath had larger grain size. However, larger grain size does not automatically preclude the existence of hazardous material. Even though finer-grained material chemically binds better than the larger-grained material, larger-grained material may nonetheless have chemical contamination.

In addition, material up to .50mm may become suspended in the river from dredging operations. Failure to test these materials prevents the Corps from adequately assessing the possible impacts of resuspending hazardous materials into the waters. The Corps needs to assess the potential effects of this resuspension on water quality, aquatic species, wetland, and other aquatic habitats.

The Corps did not test dredge samples lower than 10", though the preferred channel deepening alternative would excavate down 3 feet. Sampling the top 10 inches doesn't factor in the previous effects of dredging on the composition of the channel bottom. Through the process of dredging, finer grained material may have been redistributed to lower levels, and consequently, more hazardous wastes may lay below the 10 inches. The Corps needs to conduct adequate testing for such contaminants, to the depths that they would like to deepen the channel.

The Corps also did not consider an alternative that excluded dredging the Willamette. Due to differences in river bottom materials, as discussed above, it is entirely appropriate to consider severing the Willamette River from this project.

Our third concern is related to the potential damage the dredging operation may cause fish populations in both the Willamette and the Columbia. Dredging and disposal activities will harm, trap, and harass currently listed endangered salmon and steelhead species. Critical habitat and salmon food sources will be destroyed and/or modified. Flowlane disposal of dredged material will harm salmon. Dredging operations will interfere with salmon migration and constitute harassment as defined by the ESA. These concerns are also applicable to the salmonid species whose listings under the ESA will be announced in March 1999.

The DEIS does not provide well-founded and scientifically supported estimation of the time before complete repopulation of benthic organisms occurs after dredging and blasting activity. Nor does the DEIS explore the impact on salmon if their food source is destroyed, if only temporarily. Although the Corps acknowledges that blasting can cause mechanical damage to fish's internal organs, the DEIS does not provide data about the techniques the Corps intends to employ to avoid direct impact on salmon. The effects of increased turbidity on aquatic life must be addressed, including the impact of blasting and dredging operations,

3. See comment-response 16 to NEDC letter.

4. See response to comment 1 above.

5. See comment-response 18 to NEDC letter

the suspension of contaminated sediments, and the potential for depressed levels of dissolved oxygen at dredge and disposal sites. The Corps' plans to dredge continuously for two years must be seriously reconsidered in light of those effects.

6 The Corps noted in 1975 that the species to be most impacted by dredging activities would be white sturgeon. However, the Corps has never adequately determined the cumulative effects of dredging operations on sturgeon populations, nor does it sufficiently assess potential impacts of the deepening and rock blasting on current sturgeon populations. Rather, the DEIS dismisses the potential of the dredging to entrain and harm significant numbers of sturgeon by dismissing its own testing techniques. Studies that show a 3.5% immediate mortality rate of entrained juvenile sturgeon do not evaluate further loss of life resulting from stress and/or injury of those juveniles that survived the entrainment.

To provide an adequate assessment of cumulative and future impacts on sturgeon populations, the Corps should: 1) calculate the total area of the navigation channel populated by sturgeon; 2) calculate the total decline in sturgeon population resulting from dredging activities; 3) calculate total loss of sturgeon habitat resulting from dredging activities; and 4) calculate the predicted losses of sturgeon habitat and population resulting the proposed deepening and rock blasting.

7 Finally, OEC is concerned that alternatives to the dredging option, particularly the "Loadmax" alternative, were not given sufficient attention. Nor did the Corps consider an alternative that entirely excluded dredging the Willamette, despite the fact that, due to differences in river bottom materials (as discussed above) it is entirely appropriate to consider severing the Willamette River from this project. EPA rules call for serious consideration of alternatives that minimize environmental impacts. The DEIS fails to adequately explore dredging alternatives.

Thank you for this opportunity to comment on the DEIS. I hope these comments are helpful in your efforts to produce a more effective and comprehensive document.

Sincerely,



Karen Lewotsky, Director of Water Programs
Oregon Environmental Council
520 SW 6th, suite 940
Portland, OR 97204-1535
503.222.1963 x112
klew@orcouncil.org

6. See comment-response 13 to NEDC letter.

7. See response #2 to the U.S. Dept. of Interior letter. Additional information has been added to the Final EIS.

February 3, 1999

U.S. Army Corps of Engineers, Portland District
CEMWP, P.E. ATTN: Steven Stevens
P.O. Box 2946
Portland, Oregon 97208-2946

Re: Draft Integrated Feasibility Report for Channel Improvements and Environmental Impact Statement (DEIS)

Dear Mr. Stevens:

The following are Willamette Riverkeeper's comments to the draft Integrated Feasibility Report for Channel Improvements and Environmental Impact Statement in the Columbia and Lower Willamette River Federal Navigation Channel.

Willamette Riverkeeper was formed in 1996 in the tradition of Oregon's history of citizen led initiatives for the Willamette. Willamette Riverkeeper's mission is to work to make the Willamette River Watershed healthy for fish and wildlife, and safe for fishing and swimming, forever and for all. We are the only organization dedicated exclusively to the Willamette Watershed, and currently have a membership of over 400 concerned citizens.

Willamette Riverkeeper is very concerned about the proposal to deepen the Columbia and Lower Willamette. We believe that this project will have deleterious effects on the overall health of the watershed and that the Draft Environmental Impact Statement does not adequately address these effects.

Specifically, our concerns are:

(1) Threatened and Endangered Species

1.1 The DEIS does not even mention fish species that have been listed under the Endangered Species Act since the inception of the DEIS in 1994, nor does it mention species that are proposed for listing in March of this year. This omission renders the DEIS seriously outdated and therefore inadequate.

1.2 The DEIS concludes that adult and juvenile salmon will not be significantly impacted because they do not normally occur in the deep waters where the dredging will take place. (DEIS 6-37). However, the activities associated with the dredging will not be confined to the river bed - we assume that the dredging equipment will be floating on the surface of the water and there will consequently be significant activity at all river depths. The DEIS therefore does not adequately address impacts on threatened or endangered species because it only considers activities occurring at the bottom of the river.

1. See comment-response 18 to NEDC letter.

2 1.3 The only details concerning efforts to protect listed species during blasting are the use of smaller quantities of explosives and measures to "scare fish away prior to the blast." (DEIS 6-21). Since blasting activity has a high likelihood of resulting in a direct take of listed species, more detail must be provided about the specific methods that will be employed to protect fish, including data about the effectiveness of these methods.

3 1.4 The economic analysis of the costs and benefits of the project does not consider in adequate detail the potential impacts of this project on salmon recovery efforts in the Willamette Watershed. The state of Oregon is spending large amounts of money on salmon and Steelhead recovery efforts in the Willamette Watershed. If this project impacts the recovery of these species, then this money will have gone to waste. The DEIS should therefore consider this possibility as a potential cost of the project.

(2) Portland Harbor Contaminated Sediments

2.1 The Environmental Protection Agency is considering a 5.5 mile stretch of the Portland Harbor for possible inclusion on the National Priority List under CERCLA. In response a group of potentially affected industries calling itself the Portland Harbor Group has initiated a voluntary cleanup plan. The DEIS does not address how the channel deepening would be coordinated with activities related to the cleanup of the Portland Harbor sediments.

4 2.2 The DEIS does not adequately consider the effects of possible resuspension of contaminants in the Portland harbor on fish or water quality standards.

2.3 The study did not consider test dredge samples lower than 10" even though the preferred channel deepening alternative is to excavate three feet. The DEIS does not adequately account for the influence of past dredging (as well as other) activities on the distribution of contaminants within the sediment. Because of such activities, the top 10" is not necessarily representative of the sediment at lower levels and the DEIS provides no reasoning to support the claim that it is representative.

(3) Water Quality

5 The lower Willamette is listed under section 303(d) of the Clean Water Act as water quality impaired for temperature, as well as other pollutants. The DEIS fails to account for how the project or the increased shipping that will result from the project, will affect temperature or how it might impair other efforts to fix the Willamette's temperature problems.

(4) Economic Analysis

6 The economic analysis in the DEIS relies on economic data current through 1995. Given the changed economic conditions in Asia since 1995, this data should be revised.

2. A blasting plan was developed in cooperation with both state and federal agencies. It incorporates proven methods to minimize impacts to fish in the vicinity of the blast. All blasting will be done during the in-water work period when fish numbers are low.

3. See comment-response

4. See response to Oregon Environmental Council comment 2.

5. See comment-response

6. See comment-response 4 to Columbia Group Sierra Club letter.

(5) Division of the Project into phases

The Army Corps has suggested that the public provide separate comments for the Columbia River portion of the project and the Willamette portion of the project. We believe that this project should be divided into phases because the problems associated with dredging the Willamette portion are significantly greater than the Columbia portion. However, the DEIS makes no mention of such a division and should be accordingly revised. In particular, if the project is divided into phases, then there should be a separate economic analysis for each phase.

We are aware that many of the flaws contained in the DEIS are the result of events and conditions that have arisen since the study was initiated in 1994. Certainly the drafting process cannot be expected to account for every change that occurs during the process. However, the changes we have highlighted above are significant and should be addressed in order for the Final EIS to be an adequate statement of the impact of this project.

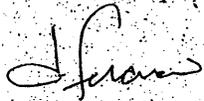
We look forward to your responses to these points and ask that you keep Willamette Riverkeeper informed on all future decisions and the progress of this process.



Michael Fife, Esq.



Rita Haberman, Co-director



Don Francis, Co-director

7. See response to OEC comment 2.

BOARD OF
DIRECTORS

Dick Belsey, M.D.
Portland

Mark Brown
Portland

Jane Haley
PRESIDENT
Portland

Elizabeth Jacobs
Portland

David Paul
Portland

Sara Perrin
SECRETARY
Portland

Sharon Saxe
Eugene

ADVISORY
COMMITTEE

Mary O'Brien, PhD.
CITIZENS FOR PUBLIC
ACCOUNTABILITY
Eugene

Norma Greer
NORTHWEST
COALITION FOR
ALTERNATIVES
TO PESTICIDES
Eugene

Laurie Valeriano
WASHINGTON
TOXICS COALITION
Seattle

February 3, 1999

District Engineer
U.S. Army Corps of Engineers District, Portland
Attn: CENWP - EC - E
P.O. Box 2946
Portland, OR 97208-2946

District Engineer:

On behalf of the Oregon Center for Environmental Health, our members and the citizens of the Portland metropolitan region, I am writing to provide comment on the Corps' recommendations regarding dredging of the Willamette and Lower Columbia River Basin. I would like these comments to become part of the public record.

The specific issue my organization is most concerned with is contaminated sediments. Both the USGS Willamette River Water Quality Study and the Columbia Basin Bi-State Study have revealed that these two rivers are highly contaminated with some of the most toxic chemicals ever produced. Carcinogenic and endocrine disrupting toxins are found routinely throughout the system in sediment samples, ambient water samples and fish, bird and mammal tissue samples. The Bi-State mammal study revealed that at this level of the food chain, these toxins are so concentrated, otters, eagles and minks are becoming reproductively non-viable in the lower basin.

Yet your EIS fails to adequately address the contaminated sediments issue. Testing should be done at sights throughout the basin and to depth of at least three feet. Sights of hand in describing sediments according to size and the dredge as something other than hazardous is a disservice to the public and must be stopped. These sediments are full of hazardous wastes and should be classified as such. Issues of re-suspension and disposal of this hazardous dredge also need to be addressed in the best interests of the public, not from an economic perspective alone. Dumping it in our communities and calling it beach enhancement is nothing short of criminal and will no longer be tolerated by an informed public.

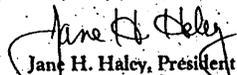
1. The Bi-State study sampled only 2 stations in the federal channel. Both of these were in the estuary. Contamination levels in these samples were mostly below detection limits, that is, extremely low. No constituent exceeded the established screening levels for the evaluation of dredged material in the Columbia River. Four out of the 69 total Bi-State sediment stations had contamination levels above the Dredged Material Evaluation Framework (DMEF)* screening levels. These stations were not near the federal channel and consisted of fine-grained material not typically found in the areas to be dredged.

Based on sediment sampling conducted by the Corps for this study, sediments that would be dredged to deepen the federal channel are below DMEF screening levels and are considered suitable for unconfined inwater disposal. See Sections 5 and 6 of the Main Report and Appendix B.

*Screening levels for Columbia River dredged material sediments have been adopted by the states of Oregon and Washington, the Corps, and EPA based on the direct results of effects based testing. The documentation of the evaluation process and screening level decisions are contained in the November 1998 Lower Columbia River Management Area Dredged Material Evaluation Framework, DMEF.

This entire document fails to identify and quantify the levels of contamination in the proposed dredge. It further fails to report on the risks to the public health and the environment from disturbing these contaminated sediments and, finally, promotes a plan for disposal that puts communities at even greater risk. This is a document clearly biased in favor of the economic interests who paid the bill and, as such, is not credible.

Very truly yours,



Jane H. Halcy

Jane H. Halcy, President
Oregon Center for Environmental Health

PERKINS COIE LLP

1201 THIRD AVENUE, 40TH FLOOR · SEATTLE, WASHINGTON 98101-3099
TELEPHONE: 206 583-8888 · FACSIMILE: 206 583-8500

February 4, 1999

Corps of Engineers Response

U.S. Army Corps of Engineers, Portland District
CENWP-PE-E
ATTN: Steve J. Stevens
P.O. Box 2946
Portland, OR 97208-2946

**Re: Comments on October 1998 Draft Integrated Feasibility Report
for Channel Improvements and Environmental Impact Statement**

Dear Mr. Stevens:

This firm represents Paul L. King, who lives and works in Clark County, Washington. We write this letter on Mr. King's behalf to comment on the Army Corps of Engineers' (the "Corps") October 1998 Draft Integrated Feasibility Report for Channel Improvements and Environmental Impact Statement ("DEIS"). As a Clark County resident, a recreational user of the Lake Vancouver area, and as one who takes a serious interest in the avifauna and other wildlife that inhabit the Lake Vancouver lowlands, Mr. King is deeply concerned about the adverse environmental impacts that will be caused by the Corps' proposed Columbia River channel deepening project.

1. Comments noted. See our responses to your specific comments.

1. It is important to note from the outset that Mr. King is not opposed to the channel deepening project (the "project") in its entirety. Rather, he is opposed to those aspects of the project that will be conducted in the vicinity of or otherwise impact areas designated in the DEIS as "Gateway 3" and "Gateway 5," properties that would be affected by dredging activity generally and by dredge spoils under the Sponsor's Disposal Plan. Based on studies conducted by the Corps, the Port of Vancouver, and biologists retained by Mr. King, it is evident that the project will result in significant and irreparable adverse impacts to valuable wildlife habitat--particularly avian habitat--at and near Gateway 3 and Gateway 5. Mr. King submits these comments because, based on applicable legal requirements, the DEIS fails to adequately disclose these impacts.

[15690-0014/SB990310.015]

2/4/99

In particular, as described in more detail below and in Exhibits A and B of this letter, the DEIS's alternatives analysis and its analysis of the project's environmental impacts to Gateway 3 and Gateway 5 are scientifically flawed and legally inadequate because, among other things:

- The DEIS alternatives analysis does not meet NEPA's legal requirements for adequacy.
 - The DEIS erroneously assumes that Gateway 3 and Gateway 5 do not contain wetlands.
 - The proposed filling of wetlands on Gateway 3 and Gateway 5 violates Executive Orders 11,990 and 11,988.
 - The proposed filling of wetlands on Gateway 3 and Gateway 5 violates the Clean Water Act.
 - The DEIS fails to consider the impacts of the project on bald eagle nests located on Gateway 3 and Gateway 5.
- The DEIS fails to disclose significant adverse environmental consequences of the project.
 - The DEIS fails to disclose potential sediment contamination adjacent to Gateway 3 and Gateway 5.
 - The DEIS fails to adequately examine the project's impacts on endangered, threatened and other significant species that nest, rest or forage on Gateway 3 and Gateway 5, including peregrine falcons, bald eagles, dusky Canada geese, and sandhill cranes.
 - The DEIS fails to address secondary growth and cumulative impacts of the project.
- The Corps failed to ensure the scientific integrity of its studies.

1. (con't)

1. (con't)

- The DEIS fails to address another agency's opposing views concerning the project's potential environmental impacts.
- The DEIS fails to disclose and resolve the conflict between the project and State controls on the development of Gateway 3.

Lacking adequate disclosure of the project's potential adverse environmental impacts with respect to Gateway 3 and Gateway 5, no decisionmaker is currently equipped to make reasoned, legally defensible decisions regarding the project's design, implementation, or mitigation measures on or in the vicinity of those properties. Consequently, Mr. King vigorously opposes both the dredging of sediments adjacent to Gateway 3 and the placement of sediments or other fill material on Gateway 3 and Gateway 5.

**I. TECHNICAL STUDIES USED AS THE BASIS FOR
THESE COMMENTS**

Four principal sources were used for the technical studies that support these comments: the DEIS and its Appendices; the Natural Resources Baseline, Port of Vancouver Columbia Gateway Master Plan, 1997 ("Port's Natural Resources Baseline"); comments on the DEIS prepared by Terry Huffman of Huffman & Associates and James Broadway of Turnstone Environmental, Inc. ("Huffman-Broadway Comments"); and comments on the DEIS prepared by Beak Consultants ("Beak Comments").

2.

The Huffman-Broadway Comments and the Beak Consultants Comments were prepared on Mr. King's behalf and are attached as Exhibits A and B, respectively. The Port's Natural Resources Baseline is attached as Exhibit C. While comments in this letter refer only to particular aspects of the Huffman-Broadway and Beak analyses, the Huffman-Broadway and Beak Comments in their entirety are incorporated into this letter by reference.

2. Comments noted.

II. THE PROPERTIES AT ISSUE: GATEWAY 3 AND GATEWAY 5

A. Gateway 3 and Gateway 5 Are Environmentally Sensitive Properties Threatened by the Project

Gateway 3 and Gateway 5 are part of the Lake Vancouver lowlands and are located near Lake Vancouver, the Shilapoo Wildlife Area and the Ridgefield National Wildlife Refuge. See, Site Plan, attached as Exhibit D. Gateway 3 totals approximately 500 acres in size; Gateway 5 is 550 acres.¹ The properties have never been subjected to industrial development; portions of both are used for cereal grain and silage corn production. Both contain sloughs and shallow depressional areas, and are separated by a flushing channel. The Port's Natural Resources Baseline indicates that significant wetlands are currently present on Gateway 3 (approximately 130 acres) and Gateway 5 (approximately 50 acres). Port's Natural Resources Baseline, Ex. D at 23, 24. Other areas on the properties could revert to wetlands if the current fanning or grazing activities were to cease. Huffman-Broadway Comments, Ex. A at 7.

The DEIS states that "wildlife use, particularly by waterfowl, is substantial on the 93-acre site [Gateway 3]." The DEIS also states that Gateway 3 "provide[s] cover and forage for rodents, thus attracting raptors and herons to forage in the area." DEIS at 6-63. A bald eagle nest is located on Gateway 3, possibly within the footprint of the proposed Gateway 3 disposal site area, and a second bald eagle nest is located on Gateway 5. See, DEIS at 6-36; Beak Consultants Comments, Ex. B at 5 and the Port's Natural Resources Baseline, Ex. D at 31.

B. This Letter Addresses the Project's Impacts on the Entirety of Gateway 3 and Gateway 5

The DEIS contains significant errors and ambiguities with respect to Gateway 3 and Gateway 5 and the extent of the fill planned for them. For example, it erroneously claims that Gateway 3 is 93 acres, when that property is actually nearly

¹ As discussed in Section II(B), the DEIS erroneously states that Gateway 3 is 93 acres.

3. Gateway 3 and Gateway 5 may be "environmentally sensitive properties" but they are not "threatened" by the project. The proposed disposal site for "Gateway 3" (G-3) is located on property owned by Port of Vancouver (POV). "Gateway 5" (G-5), although not a proposed disposal site, is also part of the POV's property. To the extent these comments address G-5, they are not accurate. As pointed out in the comments, neither the Least Cost Disposal Plan nor the Sponsor's Disposal Plan lists G-5 as a proposed upland disposal site.

To the extent any wetlands are identified on G-3 within or near the originally identified disposal footprint, the disposal site footprint is located so as to avoid impacting any wetlands to the fullest extent practicable, while still fulfilling the needs of the project.

The proposal to allow land currently in agricultural use to "revert" back to wetlands is too remote and speculative to warrant discussion in this DEIS. "NEPA does not demand a full discussion of land use alternatives 'whose implementation is deemed remote and speculative.'" Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 988 (9th Cir. 1985), quoting, Life of the Land v. Brinegar, 485 F.2d 460, 472 (9th Cir. 1973), cert. denied, 416 U.S. 961 (1974).

4. The DEIS described the originally projected 93 acre portion of G-3 designated as the proposed upland disposal site. The DEIS did not state that the legal lot or parcel commonly referred to as G-3 is only 93 acres. The comments' assertion that the DEIS "erroneously claim[ed]" G-3 was 93 acres is inaccurate. While the originally proposed upland disposal site located within G-3 was approximately 93 acres, the entire parcel size is much larger. In any event, the DEIS need not address the precise acreage of the legal lot or parcel in question.

The comments state that the DEIS is legally defective, ambiguous, and full of errors if it does not address all properties which may conceivably be used as upland disposal sites. An EIS need only discuss "reasonable alternatives" to the proposed action. 40 CFR § 1502.14(a). An EIS need not consider an infinite range of alternatives, only reasonable or feasible ones. City of Carmel-by-the-Sea v. U.S. Dept. of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997); Friends of the Earth v. Coleman, 513 F.2d 295, 297 (9th Cir. 1975).

¹ The comments cited an earlier version of the Carmel-by-the-Sea case (Comments, p.8), but that earlier opinion was withdrawn and replaced by the case cited here. 123 F.3d 1142 (9th Cir. 1997) (replacing the withdrawn Carmel-by-the-Sea opinion cited at 95 F.3d 892).

Corps of Engineers Response

500 acres according to its owner of record, the Port of Vancouver. Port's Natural Resources Baseline, Ex. D at 21.

4. (con't) In addition, although only a portion of Gateway 3 is listed as a preferred disposal site under the Sponsor's Disposal Plan and Gateway 5 is not listed as a preferred disposal site under either the Sponsor's Disposal Plan or Least Cost Plan, the Corps has indicated that it has not decided which disposal site alternatives it will ultimately pursue, leaving all potential disposal sites as viable options. Corps October 1998 Press Release. Moreover, the DEIS does not precisely indicate the location of the proposed Gateway 3 disposal site, nor does it include a wetland delineation for Gateway 3 or Gateway 5. And, the Port of Vancouver asserts it will use dredge spoils from the project to fill Gateway 3 and most of Gateway 5. See Port of Vancouver Master Plan, attached as Exhibit E; "Port Chiefs Discuss Channel-Deepening Project," Vancouver Columbian (1/15/99) attached as Exhibit F.

The DEIS fails to accurately describe Gateway 3 and Gateway 5; both properties continue to be considered as potential disposal sites; the DEIS does not identify with precision the proposed disposal site location on Gateway 3; the DEIS does not identify the size and location of wetlands on Gateway 3 and Gateway 5; and documents in the public record indicate that all of Gateway 3 and 5 will be filled or impacted. This letter comments, therefore, on project impacts to the entirety of Gateway 3 and Gateway 5.

III. THE DEIS ALTERNATIVES ANALYSIS DOES NOT MEET NEPA'S LEGAL REQUIREMENTS FOR ADEQUACY

5. The alternatives analysis is the "heart of the environmental impact statement." 40 C.F.R. § 1502.14. In the DEIS, the Corps must "rigorously explore, objectively evaluate and devote substantial treatment to each alternative." *Id.* A threshold legal requirement of NEPA is that the decisionmaker not take an uninformed action. See Marsh v. Oregon Natural Resources Council, 190 S. Ct. 1851, 1858 (1989).

The DEIS's evaluation of alternative disposal sites does not meet the alternatives analysis test: it is not accurate, much less "rigorous" or "substantial." In particular, with respect to the identification of Gateway 3 and Gateway 5 as potential disposal sites, the DEIS erroneously assumes there are no wetlands on Gateway 3 and

4 (continued). The DEIS contained no wetlands delineation for G-3 because no wetlands are proposed to be filled or impacted under the federal action.

The POV's contemplated development plans of its property are not directly at issue in the scope of this EIS. We disagree that the proposed federal action and the POV's contemplated development plans are "connected actions." The term "connected actions" stems from NEPA's implementing regulations. 40 CFR § 1508.25 addresses and defines the "scope" of an EIS. That section provides that *scope* consists of the range of actions, alternatives, and impacts to be considered in an EIS. To determine the scope of an EIS re: "actions," an agency considers 3 types of actions. The 3 actions include:

1) "*connected actions*," which means actions that are closely related and therefore should be discussed in the same EIS. Actions are *connected* if they:

a) automatically trigger other actions which may require EISs;

The POV's contemplated development of Gateway will not be "automatically triggered" by the federal action. See, e.g., Northwest Resource Information Center v. NMFS, 56 F.3d 1060, 1067 (9th Cir. 1995) (NRIC);

b) cannot or will not proceed unless other actions are taken previously or simultaneously;

POV's contemplated development plans for Gateway can proceed whether or not the federal action is approved, and vice versa. See, e.g., Sylvester v. US Army Corps of Eng'rs, 884 F.2d 394, 400-01 (9th Cir. 1989); &

c) are interdependent parts of a larger action and depend on the larger action for their justification.

The two projects are **independent** from one another, not **interdependent**. The federal action is not dependent upon the POV's contemplated development plans for Gateway for its justification. See, e.g., Western Radio Services Co., Inc. v. Glickman, 123 F.3d 1189, 1194-95 (9th Cir. 1997) (holding that a permit for a new radio tower and plans for an access road serving among other things the tower were not "connected actions"); Morongo Band of Mission Indians v. FAA, 161 F.3d 569, 580 (9th Cir. 1998) (holding that a proposed expansion project for LAX and a traffic controller "Arrival Enhancement Project" for the southern Cal. district have "independent utility" and are not connected actions).

2) "*cumulative actions*," which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same EIS (see comments and the response re: this issue under IV.A.4, and

Corps of Engineers Response

5. (con't) Gateway 5, fails to explore practicable alternatives to filling these wetlands as required by Executive Orders 11,988 and 11,990 and the Clean Water Act and makes inconsistent statements about the presence of bald eagle nesting sites on Gateway 3 and Gateway 5. These fundamental flaws and inaccuracies regarding the existing quality of Gateway 3 and Gateway 5 habitat indicate that decisions based on the DEIS's alternatives analysis will be without scientific support, unreasonable, and in violation of NEPA.

A. **The DEIS Erroneously Assumes that Gateway 3 and Gateway 5 Do Not Contain Wetlands.**

The DEIS states that upland disposal sites were screened using six environmental criteria, including proximity to wetland habitat.² DEIS at 4-15, 16. The DEIS recognizes that "[e]nvironmental issues related to endangered species and wetlands are especially sensitive in the lower Columbia River Study Area" and emphasizes that suitable sites must pass all environmental criteria: "the six environmental criteria were considered significant enough to restrict or prohibit disposal actions that might adversely impact them." DEIS at 4-15, emphasis added. According to the DEIS, then, properties containing wetland habitat are not environmentally suitable and must be eliminated from further consideration as disposal site alternatives.

6.

Both Gateway 3 and Gateway 5 contain wetlands of significant size. Appendix E of the DEIS, the HTRW Preliminary Assessment Screening Study (Oct. 1998), states that "wetlands cover much of [Gateway 3]." The Port's Natural Resources Baseline estimates that there are as many as 130 acres of wetlands on Gateway 3 and as many as 50 acres of wetlands on Gateway 5. Port's Natural Resources Baseline, at 23-24. And the wetlands analysis prepared by Huffman & Associates, Inc. and Turnstone Environmental Inc. on behalf of Mr. King also concludes that significant wetland areas are present on Gateway 3 and Gateway 5,

² Other environmental criteria include proximity to ESA critical habitat, bald eagle sites, productive shallow water habitat, beach nourishment sites and state/federal wildlife refuges. DEIS at 4-15, 16.

4 (continued).

3) "similar actions," which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.

Agencies should be given "considerable discretion" in defining the scope of an EIS, NRIC, 56 F.3d at 1067, quoting, Thomas v. Peterson, 753 F.2d 754, 758 (9th Cir. 1985), but must consider more than one action in a single EIS if they are "connected actions," "cumulative actions," or "similar actions." NRIC, *supra*. The scope of the channel deepening DEIS is described specifically in the DEIS (see DEIS § 1.4), and it properly excludes any analysis of the POV's contemplated development plans for Gateway. The POV's non-federal, contemplated plans are not "connected" to the federal action. See, Enos v. Marsh 769 F.2d 1363, 1371-72 (9th Cir. 1985) (agency's EIS did not have to consider non-federal shore facilities for a new deep-draft harbor project).

The Map accompanying Table 4-4 in the DEIS, entitled "Considered Sites - Reach 1," indicates the proposed disposal site within G-3, noting that it contains 69 acres. The location of the disposal site footprint on G-3 will be identified in the FEIS.

5. The DEIS alternatives analysis met NEPA's legal requirements for Adequacy. The comments fail to point out the case law limiting the alternatives analysis by a "rule of reason," Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992), clarifying that an agency need not consider an infinite range of alternatives, only reasonable or feasible ones. Carmel-by-the-Sea, 123 F.3d at 1155, citing, 40 CFR § 1502.14 (a)-(c). The "rule of reason" guides both the choice of alternatives, as well as the extent to which the EIS must discuss each alternative. Carmel-by-the-Sea, *supra*.

The DEIS considered many alternatives in addition to the preferred alternative, the Least Cost Disposal option. The DEIS discussed the "no-action" alternative, which is the ongoing maintenance dredging for the 40-foot navigation channel of the Columbia River. The Dredged Material Management Plan (1998), or the DMMP, was chosen to serve as the "no action alternative" by the Corps of Engineers. The DMMP evaluates the most efficient way to maintain the authorized 40-foot navigation channel in the future.

In addition, the DEIS discussed a non-structural alternative to the channel deepening proposals. This alternative proposed improving navigation by upgrading the existing river stage forecasting system, known as *LoadMax*. Further, based in part on public comments, the DEIS considers an alternative involving siting/constructing deep-draft regional port facilities closer to the mouth of the Columbia River. Finally, the DEIS addressed the options of a 41-foot, a 42-foot, and a 43-foot deep channel.

Corps of Engineers Response

6. (con't) with the potential of increased wetland areas on both properties through reversion if current farming activities are terminated. Huffman-Broadway Comments, Ex. A at 1.

In spite of its own technical documentation, the DEIS indicates that no wetlands are located on either the Gateway 3 disposal site or on Gateway 5. See DEIS Table 4-4, Disposal Site Screening Summary Chart, at 4-18. This conclusion contradicts all existing wetlands analysis regarding these sites and must be corrected. Based on the presence of significant on-site wetlands, both Gateway 3 and Gateway 5 fail the DEIS's environmental screening criteria and must be eliminated from further consideration as potential disposal sites.³

B. The Proposed Filling of Wetlands on Gateway 3 and Gateway 5 Violates Executive Orders 11,988 and 11,990.

7. The Sponsor's Disposal Plan proposes to place dredge spoils on a 93-acre (see, DEIS at 6-36) portion of Gateway 3 which, as discussed above, contains significant wetland areas. Gateway 5 also contains many acres of wetlands. Port of Vancouver documents indicate that the dredge spoils from the project will be used to fill approximately 400 acres of the approximately 500-acre Gateway 3 parcel and approximately half of the approximately 550-acre Gateway 5 parcel. Port of Vancouver Master Plan, Gateway Update (Mar. 1998), Ex. E at 2; "Port Chiefs Discuss Channel Deepening Project," Vancouver Columbian (1/15/99), Ex. F. Regardless of the precise amount of filling proposed, there can be no question that should any portion of Gateway 3 or Gateway 5 be utilized as a disposal site, wetlands will be impacted.

³. In light of the Corps' errors with respect to the presence of wetlands on Gateway 3 and Gateway 5, additional conclusions in the DEIS regarding wetlands are also incorrect. For example, the DEIS states that a total of 38 acres of wetlands on all affected properties would be destroyed under the Least Cost Disposal Plan, and a total of 30 acres of wetlands would be destroyed under the Sponsor's Disposal Plan. It does not, however, explain the method used to calculate those acreages. Based on the Corps' conclusion in Appendix E that wetlands cover much of Gateway 3, the Port of Vancouver's conclusion that Gateway 3 contains as many as 130 acres of wetlands, and the Huffman-Broadway Comments concerning the presence of wetlands on both Gateway 3 and Gateway 5, the Corps' conclusions regarding the total wetland acreage that will be destroyed under the Least Cost Disposal Plan or Sponsor's Disposal Plan are clearly inaccurate and must be corrected.

5 (continued). All of these alternatives, except for the structural alternatives, were dropped from further consideration because of the increased costs associated with construction, transportation, port facilities, and environmental needs, or a failure to fulfil the project's purpose. The alternative analysis satisfies both NEPA and the Clean Water Act. The DEIS correctly stated the size of the legal lot owned by the POV. No wetlands are planned to be filled as part of the federal action at the proposed G-3 disposal site.

6. We agree there are wetlands contained on the entire property denoted as Gateway 3. The spatial extent of the disposal footprint for the federal action does not impact any wetlands. Further, it is configured in such a manner to assure no wetland impact.

7. Executive Orders 11988, 42 Fed Reg. 26951 (1977), and 11990, 42 Fed Reg. 26961 (1977), direct federal agencies to minimize adverse effects of agency actions on floodplains and wetlands. (See also, 40 CFR 6, Appendix A, Statement of Procedures on Floodplain Management and Wetlands Protection). Disposal on G-3 will have no affect on the floodplain or flood levels.

The FEIS for the federal action identifies the specific size and location of the G-3 disposal site area "footprint." In addition, the footprint is sited so as to avoid filling or impacting any wetlands on G-3.

When proposing to fill wetlands or floodplains, the Corps is legally obligated by Executive Orders 11,988 and 11,990 to make a determination that "there is no practicable alternative" to the fill. The failure to make such a finding renders an EIS unlawful and inadequate. City of Carmel-by-the-Sea v. United States Dep't of Transp., 95 F.3d 892 (9th Cir. 1996).

7. (con't) The "no practicable alternative" determination required by Executive Orders 11,988 and 11,990 was not made for the Corps' alternative analysis at issue here. Indeed, the DEIS demonstrates exactly the opposite: the Loadmax would avoid filling wetlands (DEIS at 6-53); in-water disposal sites could be used under the no-action alternative (DEIS at 4-2, 3); and use of non-wetland, upland sites is also practicable under the Least Cost Alternative (DEIS at 6-26, 27.). Since Gateway 3 is an alternative disposal site only under the Sponsor's Disposal Plan (but not under the Corps' Least Cost Disposal Plan), it is clear that there are practicable alternatives to filling wetlands on that property. Similarly, since Gateway 5 is currently not listed as a proposed site under either the Sponsor's Disposal Plan or the Least Cost Plan, there are practicable alternatives to filling wetlands on Gateway 5.

The DEIS clearly demonstrates the Corps' failure to make a no practicable alternative determination with respect to the deposit of dredge spoils on wetlands generally, including those located on Gateway 3 and Gateway 5. As established by City of Carmel, this oversight renders the DEIS inadequate. And even if such a determination were made, specifically with respect to Gateway 3 and Gateway 5 the DEIS already demonstrates that there are practicable alternatives to filling both. Neither is suitable as a project disposal site.

C. The Proposed Filling of Wetlands on Gateway 3 and Gateway 5 Violates the Clean Water Act.

8. The Corps' failure to analyze practicable alternatives to filling wetlands on Gateway 3 and Gateway 5 also violates the requirements of Section 404(b) of the Clean Water Act and its implementing regulations (i.e., 33 C.F.R. § 336, 40 C.F.R. part 230). In particular, Clean Water Act regulations provide 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

8. Section 404(b)(1) of the Clean Water Act has not been violated in that no wetlands will be filled on G-3 as a result of the federal action.

8. (con't) consequences." 40 C.F.R. § 230. 10(a); 33 C.F.R. § 336. 1(a). Moreover, if a proposed discharge activity is not "water dependent," practicable alternatives "are presumed to be available." 40 C.F.R. § 230. 10(a)(3). Since the Corps has made no determination that filling wetlands on Gateway 3 and Gateway 5 is water dependent, and the DEIS shows that there are practicable alternatives to filling Gateway 3 and Gateway 5 that would have less environmental impact, (i.e., the Least Cost Disposal Alternative), the Corps' proposed fill of Gateway 3 and Gateway 5 violates the Clean Water Act.⁴

D. The DEIS Fails to Consider the Impacts of the Project on Bald Eagle Nests Located on Gateway 3 and Gateway 5.

9. According to the DEIS, an "alternate nest location of the Buckmire bald eagle pair was discovered on Gateway 3, adjacent to the disposal location, during 1998 surveys." DEIS at 6-36. This finding is consistent with an analysis of the project's wildlife impacts on and in the vicinity of Gateway 3 prepared by Beak Consultants. The Beak Consultants Comments note that a bald eagle nest is located on Gateway 3, Possibly within the proposed disposal area. Beak Consultants Comments at 5. Likewise, according to the Port's Natural Resources Baseline, a bald eagle nest is located on Gateway 5. Port's Natural Resources Baseline, Ex. D at 31.

The DEIS Disposal Site Screening Summary Chart indicates that there are no bald eagle nests within 1,500 feet of either Gateway 3 or Gateway 5. As discussed above, this conclusion is flatly contradicted by DEIS analysis, analysis by the Port of Vancouver, and analysis by Beak Consultants which find active eagle nests on both

9. The Disposal Site Screening table has been corrected. The presence of a bald eagle nest site adjacent to a proposed disposal site does not preclude dredged material deposition at that location. Temporal and spatial restrictions would be employed to preclude impacts to an active bald eagle nest location. The Biological Assessment for wildlife (Exhibit G) fully describes conservation measures to be employed to minimize disturbance to nesting bald eagles. The forthcoming Biological Opinion from the U.S. Fish and Wildlife Service will establish the specific conservation measures to avoid disturbing nesting bald eagles.

⁴ Should the Corps assert that the proposed fill of Gateway 3 or Gateway 5 is water dependent based on the Port of Vancouver's plans to construct new port facilities on Gateway 3 or Gateway 5, NEPA's prohibition of segmenting or piecemealing a project would be violated. The DEIS contains no analysis of the impacts of, or alternatives to, the Port of Vancouver's proposed fill and development of Gateway 3. If the Port of Vancouver's development of Gateway 3 were, in fact, a "connected action" justifying the water dependent nature of the Corps' fill of Gateway 3, all the impacts of the Port of Vancouver's development of Gateway 3 and Gateway 5 would have to be disclosed in the channel deepening EIS. 40 C.F.R. § 1508.25(a)(1). Since this has not been done, the Corps' proposal to fill Gateway 3 and Gateway 5 would violate NEPA because the impacts of the Port of Vancouver's proposed development, as a "connected action," are not disclosed or analyzed in the DEIS.

9. (con't) properties. The Screening Summary Chart must be corrected to indicate the presence of eagle nests on Gateway 3 and Gateway 5. Based on the Corps' screening criteria, both Gateway 3 and Gateway 5 are unsuitable as disposal sites.

**IV. THE DEIS'S ANALYSIS OF ENVIRONMENTAL
CONSEQUENCES IS SCIENTIFICALLY FLAWED AND
LEGALLY INADEQUATE.**

10. An EIS must take a "hard look" at the environmental consequences of a project to enable the decision maker to make an informed decision about whether to proceed. Marsh, 190 S. Ct. at 1858. In determining whether an agency has taken that hard look, courts examine, among other things, the level and amount of disclosure of potential environmental consequences, the scientific methods used for uncovering potential environmental consequences and whether the EIS discloses and addresses opposing agency and scientific views. See, eg., Friends of the Earth v. Hall, 693 F. Supp. 904 (W.D. Wash. 1988).

The DEIS fails all three "hard look" tests. First, it does not disclose numerous significant adverse environmental consequences that would be caused by channel deepening. Second, its scientific methodology is flawed because the Corps selected inappropriate indicator species for use in the HEP analysis. Third, the DEIS fails to consider the U.S. Fish and Wildlife Services' ("USFWS") opposing scientific views regarding the project's adverse consequences on wildlife. For these reasons, the DEIS's discussion of environmental consequences is inadequate.

**A. The DEIS Fails to Disclose Significant Adverse Environmental
Consequences of the Project.**

11. To meet the "hard look" requirement for disclosure of environmental consequences, an EIS must provide decision makers with "an environmental disclosure sufficiently detailed to aid in the substantive decision whether to proceed with the project." Friends of the Earth, 693 F. Supp. at 912. An EIS must be particularly thorough "when the environmental consequences of a federal action are great." Id. at 926. Only "remote or highly speculative" environmental consequences can be eliminated from discussion. Id. The DEIS does not disclose numerous adverse

10. The DEIS's analysis of environmental consequences is not scientifically flawed and is legally adequate. Each specific individual comment under this heading will be specifically addressed below. All conclusions in the FEIS are based on the best scientific information available on a given issue. We have addressed all environmental concerns that we were aware of plus those concerns identified by the resource agencies and/or general public during the course of public meetings and workshops, environmental roundtables, technical group meetings, responses to the DEIS and the U.S. Fish and Wildlife Service Coordination Act Report. Indicator species used in the HEP analysis were selected by an interagency team comprised of biologists from Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Washington Department of Environmental Quality, and the Corps. The indicator species selected were chosen to be representative of the habitats subject to impact from the proposed project. HEP analysis is a process to determine impacts to wildlife habitat and species and also serves as a means to measure effectiveness of suggested mitigation measures. The U.S. Fish and Wildlife Service has provided a Coordination Act Report, as required by law, to the Corps, which incorporates the comments of the Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, and the National Marine Fisheries Service. The Corps has given full consideration to the recommendations set forth in the Coordination Act Report and has responded to those recommendations in Exhibit C of the FEIS.

11. The DEIS adequately discussed potential significant adverse environmental consequences of the project. The "hard look" standard established by the courts is the required level of inquiry for an agency when conducting an EIS. The DEIS met the "hard look" standard for the following reasons.

Corps of Engineers Response

and significant environmental consequences of the project. Since none are remote or speculative, this failure results in a legally inadequate DEIS.

1. The DEIS Fails to Disclose Potential Sediment Contamination Adjacent to Gateway 3 and Gateway 5.

The DEIS states that "sediment quality in the Columbia River navigation channel is not contaminated." DEIS at 2-15. This statement is simply incorrect. The Corp's own sediment study indicates that the channel near and adjacent to Gateway 3 and Gateway 5 contains highly contaminated sediment; incorrectly assumes that contamination of sediments caused by deepening the channel will be the same as those for maintenance dredging; fails to analyze the impact of sediment discharge on "water quality limited" segments of the Columbia River; and fails to analyze the potential environmental impacts of depositing contaminated sediments on upland and wetlands areas. These gross oversights render the DEIS inadequate.

a) Corps' studies indicate that, in the vicinity of Gateway 3 and Gateway 5, the Columbia River Channel contains contaminated sediment.

12.

Appendix B of the DEIS indicates that the channel near and adjacent to Gateway 3 and Gateway 5 is a fine-sediment depositional area that contains the highest levels of all contaminants sampled in the lower Columbia River. DEIS App. B. See also Beak Consultants Comments, Ex. B at 1, 4. This conclusion appears to be based on a single surface grab sample for chemical analysis of this area, which is three kilometers long and represents some 600,000 m³ of sediment. This extremely limited sampling in an area with a high potential for contamination is inadequate and in violation of Corps sampling guidelines. Beak Consultants Comments, Ex. B at 1. Moreover, because the channel area adjacent to Gateway 3 and Gateway 5 is located just downstream of the mouth of the Willamette River, a segment of which is under review as a potential Superfund site, it is likely to be more contaminated than the Corps' superficial sampling indicates. *Id.* at 1-3.

11 (continued). Initially, it is premature to begin evaluating the legal adequacy of an EIS before the final EIS is filed. See, 40 CFR § 1500.3 ("It is the Council's [Council of Environmental Quality] intention that judicial review of agency compliance with these [NEPA] regulations not occur before an agency has filed the final environmental impact statement . . ."); see also, *Kleppe v. Sierra Club*, 427 U.S. 390, 406, n15 (1976). In fact, the lone authority relied on by the comments did not consider a draft EIS at all, let alone declare one legally inadequate. *Friends of the Earth v. Hall*, 693 F.Supp. 904 (W.D. Wash. 1988) (where agency failed to address in FEIS any environmental problems raised by comments of responsible parties to DEIS, among many other problems, court found EIS inadequate, and therefore held Corps decision to issue 404 permit was arbitrary and capricious).

Please see responses to each of your adverse impacts below.

12. The DEIS discussed the potential for sediment contamination, but found no significant sediment contamination concerns for the proposed channel deepening of the Columbia River. While samples collected from the Gateway 3 and 5 reach contained some of the highest concentrations of chemical contaminants found in the Columbia River, all values were below the screening levels established in the *Dredged Material Evaluation Framework, Lower Columbia River Management Area* (November 1998). The very high proportion of fine material in the samples from this reach does not necessarily indicate a deposition zone. The hydraulic conditions of this reach do not differ significantly from adjacent sand bed reaches. The fine material was found in samples that were obtained from below the current dredging prism and may be old riverbed material. The bathymetric analysis done to identify potential rock areas shows that the riverbed around CRM 100.5 had never been deeper than -48 feet CRD, indicating a hard bed material of either rock, gravel or silt/clay.

- b) **Sediments disturbed during channel-deepening may be more contaminated than sediments disturbed during channel maintenance.**

13. The DEIS asserts that sediments from current maintenance dredging are acceptable for uplands disposal and that sediments from deeper dredging will be substantially the same as those from maintenance dredging. Unlike maintenance dredging, however, which continuously removes recently deposited sediments, channel deepening will remove sediments five feet below the current floor of the navigation channel. These deeper sediments may contain contaminants discharged into the river by historical uses. The DEIS fails to discuss in sufficient detail the extent to which deeper dredging in the Columbia and Willamette Rivers will resuspend and redistribute toxic compounds.

- c) **The DEIS fails to analyze the impact of sediment discharge on "water quality limited" sections of the Columbia River.**

14. Both the Washington Department of Ecology and the Oregon Department of Environmental Quality have identified a segment of the Columbia River in the vicinity of Gateway 3 and Gateway 5 as "water quality limited" under § 303(d) of the Clean Water Act. Beak Comments, Ex. B at 3-4. New or increased discharges of these contaminants to the Columbia River, however minimal, are prohibited under the Clean Water Act unless the Washington Department of Ecology and the Oregon Department of Environmental Quality establish new Total Maximum Daily Load allocations for them, which is not expected to occur until 2001. Beak Consultants Comments, Ex. B at 4. Analysis of the water quality impacts of resuspending potentially contaminated sediments is required to bring the project into compliance with the Clean Water Act. The DEIS's failure to include such an analysis renders it inadequate.

- d) **The DEIS fails to analyze the potential environmental impacts of depositing potentially contaminated sediments on Gateway 3 and Gateway 5.**

15. The DEIS does not identify deposit sites for the potentially contaminated sediments located in the vicinity of Gateway 3 and Gateway 5. Based on the

13. The contaminant levels of the sand to be dredged during the channel deepening are expected to be similar to those of sand dredged during current channel maintenance because both actions would occur in the active sand wave zone. In the Columbia River, sand waves cover the riverbed, and are typically 4 to 8 feet high and 300 to 400 feet long in the navigation channel. In the navigation channel the sand waves generally have crest elevations of about -40 feet CRD, and trough elevation near -50 feet CRD. The sand waves migrate slowly downstream as sand erodes from the upstream face, deposits in the downstream trough, and is then buried by additional sand eroded from the upstream face. This movement occurs in a layer only a few sand grains thick above the bed. Through this mechanism, all the individual grains in a sand wave are exposed to flow, eroded, transported, deposited, buried, and then eventually exposed again as the sand wave migrates downstream. Through this process any fine material and potential contaminants would be washed away by the river's flow.

14. The DEIS addressed the potential impact of sediment discharge on "water quality limited" sections of the Columbia River, and found that no contaminants would be introduced as part of the proposed Columbia River navigation channel deepening. The sediments to be disturbed and/or removed during the channel deepening were found not to be contaminated, and the water quality limited (WQL) analysis does not apply. The dredged sediments, whether actually removed or simply disturbed, would have to contain some chemical element, compound, or contaminant for which the particular section of river was "listed" as WQL for there to be an issue. Based on the Corps sediment sampling and analysis, there are no such contaminants present, at least with respect to the Columbia River navigation channel.

According to the 1998 Oregon CWA 303(d) list for the Columbia River (from Tenasillahe Island to the Willamette River), the river is "WQL listed" for bacteria (in fall-winter-spring), dissolved oxygen (summer), pH (spring), temperature (summer), total dissolved gas (year-round), and toxics (PCB, DDE, & DDT). According to the navigation channel sediment tests performed, only one sample tested positive for any of the above listed toxics (PCB), but even then the PCB level detected did not exceed the established screening level.

15. (con't) Sponsor's Disposal Plan, however, it is reasonable to assume that they will be deposited on Gateway 3; if Gateway 5 is used as a disposal on subsequent fill site, then it is reasonable to assume that contaminated sediments will be deposited on that property as well. Given the environmentally sensitive nature of both sites, the DEIS' failure to address the adverse environmental impacts of the deposit of potentially contaminated soils on upland and wetland areas is a fundamental oversight that renders the DEIS inadequate.

2. The DEIS Fails to Adequately Examine the Project's Impacts on Endangered, Threatened and Other Significant Species.

Gateway 3 is intensively used by sandhill cranes (listed as endangered under Washington State's Endangered Species List) and dusky Canada geese for feeding and resting during each species' migration. As noted above, bald eagles nests have been found on Gateway 3 and Gateway 5; bald eagles are listed as threatened under the ESA. Peregrine falcons (listed as endangered under the ESA) hunt on or in the vicinity of both properties. Beak Comments, Ex. B at 9. Gateway 3 and Gateway 5 are also used by ducks and geese "in the thousands," for overwintering. Port's Natural Resources Baseline, Ex. D at 31. Within the adjacent Columbia River, 12 species of salmonids are listed as threatened or endangered under the ESA. DEIS at 2-19.

15. The DEIS adequately addressed the potential environmental impacts of depositing potentially contaminated sediments on Gateway 3, but found that the sediments impacted by the proposed channel deepening of the Columbia River navigation channel are not contaminated. G-5 is not part of either disposal alternative. For G-3, the Corps relied on evidence that, with the exception of the sediments from the Willamette River, the sediments dredged from the Columbia are not contaminated.

16. The DEIS adequately examined the project's potential impacts on endangered, threatened and other significant species, and will be supplemented in the FEIS by a Biological Assessment. Exhibit G contains the Biological Assessment for wildlife that identifies and discusses potential impacts to wildlife and wildlife habitat.

16.

The DEIS fails utterly to disclose potential adverse impacts of dredging and disposing contaminated sediments in the vicinity of and on Gateway 3 and Gateway 5. This oversight is serious. It is well documented that contaminants found in the sediments of the Columbia and Willamette Rivers, such as PCBs, DDE, PAH, dioxin and other toxic materials, have caused and are causing egg-shell thinning and mortality in bald eagles. Beak Comments, Ex. B at 5. Likewise, aquatic mammals exhibit reproductive abnormalities associated when the food chain is contaminated by such toxins. Beak Consultants Comments, Ex. B at 5-9.

Contaminant impacts to salmon are also likely to be significant. Salmon exposed to contaminants are subject to greater risk from pathogens, predation or mortality. Indeed, it appears likely that the projects dredging component, if taken without regard for salmon impacts, will violate the "take" prohibition of the ESA, 16 U.S.C. § 1538(a)(1)(b), and the duty of federal agencies to ensure that their actions

will not jeopardize the continued existence of listed species or adversely modify critical habitat for listed species, 16 U.S.C. § 1536(a)(2).

16. (con't)

In sum, the DEIS is inadequate because it fails to identify, discuss and analyze how the project, by increasing the ambient concentration of toxic contaminants, will adversely modify critical habitat of listed species located on or in the vicinity of Gateway 3 and Gateway 5, such as bald eagles, peregrine falcons, sandhill cranes and salmonids. Additional analysis must be undertaken to remedy this fundamental deficiency.

3. The DEIS Fails to Address the Project's Secondary Growth Impacts.

NEPA requires the Corps to analyze both the direct and the indirect environmental effects of the project. 40 C.F.R. § 1502.16. In contrast to the project's direct effects, like those to water quality and wildlife, indirect effects are those that are "caused by the action and that are later in time or farther removed in distance from the project, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Indirect effects may include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate." *Id.* These impacts are commonly called "secondary growth impacts."

17.

The DEIS devotes only one page to the project's secondary growth impacts. It concludes, without analysis or support, that "[c]hannel deepening in itself would not induce additional ship traffic. Likewise, it would not contribute to development of additional ports or port facilities." DEIS at 6-51. This statement is conclusory, contrary to common sense and is contradicted by the DEIS's technical appendices which disclose that the fleet will respond to channel deepening by increasing "the actual number of vessels and the percentage of vessels with deeper drafts." DEIS, Appendix C at 28.

An increase in the number or size of vessels entering Columbia and Willamette River ports will increase the volume of the commodities the ports will handle. An increase in the volume of commodities, in turn, will cause secondary growth impacts such as expansion of port facilities, increased number of truck trips from the ports to highways, increased demand for rail transportation, increased number of workers to

17. The DEIS adequately addressed the project's secondary growth impacts. "Indirect effects," or "secondary growth" impacts are defined as those effects "caused by the [proposed] action * * *." 40 CFR § 1508.8(b). The comments state that the channel deepening project is the "cause" of the Port of Vancouver's contemplated Gateway property development. As addressed elsewhere in these responses, neither the federal action nor the POV's contemplated Gateway development are dependent upon the completion of the other to justify its existence. Each project can stand alone on its own merit, and either project may proceed even if the other does not.

The channel deepening project addresses the existing situation of Panamax deep-draft ships calling on the Columbia River ports, and the ability of those ports to efficiently accommodate this type of vessel. Deepening the channel conceivably may "facilitate further growth" at the respective ports, or "induce additional development" of shore side facilities. However, based on the analysis of Morongo & Carmel-by-the-Sea, these types of new growth or development fail to qualify as "growth-inducing" impacts. Although "secondary impacts" were discussed in the DEIS generally (see EIS Chp. 6), the discussion of the POV's contemplated Gateway development is properly limited in the discussion related to channel deepening.

17. (con't) handle the increased volume of commodities, and all the secondary growth impacts associated with a larger work force. The Port of Vancouver and other ports have already announced plans to expand port facilities, presumably in part to handle an increase in the amount of cargo the larger deep draft ships will bring to the ports. Port of Vancouver Master Plan, Gateway Update, Ex. E at 2; "Port Chiefs Discuss Channel Deepening Project," Ex. F. Without an analysis of these secondary growth impacts, the DEIS is inadequate and fails to meet the requirements of NEPA.

4. The DEIS Fails to Address Cumulative Impacts of the Project.

18. The Corps is required to examine the project's cumulative impacts. 40 C.F.R. § 1502.16, § 1508.8. Cumulative impacts are defined as "impacts on the environment which result from the incremental impact on the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. The Corps must identify "all other actions -- past, proposed, and reasonably foreseeable -- that have had or are expected to have impacts in the same area" and "the overall impact that can be expected if the individual impacts are allowed to accumulate." City of Carmel-by-the-Sea v. United States Dep't of Transp., 95 F.3d at 892 (9th Cir. 1996). Because it fails to disclose the project's cumulative impacts on wetlands and other wildlife habitat (both within the channel and on adjacent upland areas) and on the aesthetics of the lower Columbia and Willamette River basins, the DEIS is inadequate.

a) The DEIS fails to disclose the project's cumulative impacts on wetlands and other wildlife habitat.

19. Over 50,000 acres of wetlands, nearly 18,000 acres of wetland/pastureland and 27,000 acres of willow swamp areas have been destroyed within the project area since the 1880s. DEIS at 6-57, 58. Yet the DEIS entertains the possibility of filling wetland habitats on Gateway 3 and Gateway 5 without analyzing the further, cumulative adverse impacts of the project on wetlands, farmland and willow swamp or on the avian, fish and wildlife resources whose survival depends upon the existence of those habitats.

18. The DEIS adequately addressed any potential cumulative impacts of the project. The DEIS recognized that the Columbia River has a history of channel deepening, as well as past and ongoing maintenance dredging. The DEIS also recognized the potential incremental impacts the dredging may have caused, and those potential impacts are addressed. However, the so-called "project in the pipeline" to which the comments refer, the Port of Vancouver's Columbia Gateway Master Plan, is not a cumulative impact action to the federal action. Nor is it a "connected" action (see response above under II.B) or a "secondary growth" action (see response above under IV.A.3) required to be addressed in this EIS.

The DEIS generally discussed the cumulative impacts associated with the federal action. DEIS § 6.12. However, because the POV's proposed, speculative development plans for its Gateway property do not satisfy the tests for cumulative, connected, or secondary growth actions, they need not and appropriately were not addressed in detail in the DEIS.

The federal action shares no "inextricable nexus" with any of the contemplated development plans described in the POV's Master Plan. Although the channel deepening and the POV's contemplated development plans for Gateway may conceivably be linked, the POV could sever that link by abandoning its Master Plan development plans for Gateway "without destroying the proposed action's [Corps channel deepening] functionality." Airport Neighbors Alliance, 90 F.3d at 431. "[A]n EIS need not be prepared simply because a project is *contemplated*, but only when the project is *proposed*." Wemberger v. Catholic Action, 454 U.S. 139, 146 (1981) (emphasis in original). With or without the POV's contemplated Gateway development, the federal action would still serve to improve deep-draft navigation along the Columbia River.

19. The DEIS adequately disclosed the project's cumulative impacts on wetlands and other wildlife habitat. For wildlife habitat, see Exhibit G. For wetlands, see our responses under Sections II and III.

Moreover, the DEIS fails to analyze the significant development projects currently proposed within the project area (i.e., projects in the "pipeline") that will have the same or similar impacts as the channel deepening project or that would not be undertaken without it. The Port of Vancouver, for example, has adopted a plan to convert Gateway 3 and Gateway 5 to industrial use as a part of its comprehensive plan. Port of Vancouver Master Plan, Ex. E. That conversion will require fill which will have similar impacts on wetlands and other wildlife habitat as the channel-deepening project. The Corps must analyze the cumulative impacts of the Port's comprehensive plan on the Gateway parcels if the Sponsor's Disposal Plan is to go forward.

19. (con't)

Within the channel itself, the DEIS states that impacts on benthic invertebrates will be minimal because deeper areas have lower densities of benthic invertebrates. This assertion ignores the fact that benthic invertebrates are currently located in deeper areas because the Columbia River channel has already been deepened more than 20 feet over time--to 20 feet in 1878, to 25 feet in 1899, to 30 feet in 1912, to 35 feet by 1935 and to 40 feet between 1962 and 1976. DEIS at 2-2. With each channel deepening, the habitat value for benthic invertebrates has diminished. The Corps is required to examine the cumulative impacts of successive channel deepening projects on the habitat for benthic invertebrates and the larger ecosystem. 40 C.F.R. §§ 1502.16, § 1508.8.

b) The DEIS fails to disclose the project's cumulative impacts on aesthetics.

The DEIS asserts that the aesthetics of the lower Columbia and Willamette River basins have not changed significantly in more than two decades. DEIS at 5-34. This conclusion ignores the dramatic changes in the Vancouver/Portland area that have taken place during that period of time. The DEIS fails to evaluate the further impacts on aesthetics that will occur as a result of project dredging and related wetland fill, farmland conversion, and consequent impacts on wildlife and wildlife habitat.

The DEIS's cumulative impact analysis does not permit a reasoned analysis of the project's cumulative impacts. It is, therefore, inadequate.

20.

20. The DEIS adequately addressed the project's cumulative impacts on aesthetics. "Aesthetics" are part of the "socio-economic" component of review under NEPA, and any impacts to aesthetics are adequately addressed in the DEIS. DEIS, 4-50 - 4-51; see also DEIS § 6.8.5 at 6-47. The comments present no evidence demonstrating even any potentially significant project impacts to "aesthetics," and therefore the FEIS need not address this issue to any greater extent. See, e.g., Goodman Group, Inc. v. Dishroom, 679 F.2d 182, 184-85 (9th Cir. 1982) (pointing out the burden is greater on the commenter to produce some evidence of a "causal nexus between the [proposed] project and a significant cultural impact" than for "physical effects on the environment"). Id.

Corps of Engineers Responses

B. The Corps Failed to Ensure the Scientific Integrity of Its Studies.

Analysis used to support conclusions reached in the DEIS must have scientific integrity. 40 C.F.R. § 1502.24. The DEIS fails to meet this standard because (a) the Habitat Evaluation Procedure ("HEP") fails to utilize backup population data essential to ascertaining whether a species should be designated as a "representative indicator species," and (b) the HEP fails to consider the project's impacts on sensitive species such as sandhill cranes and dusky Canada geese. See Beak Consultants Comments, Ex. B, at 9-11.

21.

In particular, the Corps uses mink to represent species dependent on wetland riparian habits, despite the extremely low occurrence of mink in the lower Columbia River. Beak Comments, Ex. B, at 8. Therefore, the project's impacts on mink are simply not indicative of its likely impacts on common species in the area. *Id.*

Similarly, the HEP's reliance on the Canada goose and mallard as indicator species for the effects of the project on birdlife does not accurately reflect the severity of the project's potential impacts on less common waterfowl, such as sandhill crane. Beak Comments at 11. With respect to conclusions reached in reliance on HEP analysis of project impacts on common and uncommon wildlife species, the DEIS is inadequate because the HEP lacks scientific integrity.

C. The DEIS Fails to Address Another Agency's Opposing Views Concerning the Project's Potential Environmental Impacts.

Failure to reflect opposing views of other agencies in the body of an EIS renders it legally inadequate. *Friends of the Earth*, 693 F. Supp. at 931. Merely including the comments in an appendix to the DEIS is insufficient to meet NEPA's requirements. *Id.* The EIS must inform decisionmakers of "the full range of responsible opinion on the environmental effects." *Id.* at 934. "Where the agency fails to acknowledge the opinions held by well respected scientists concerning the hazards of the proposed action, the EIS is fatally deficient." *Id.*

22.

The USFWS has prepared a detailed critique of the project, but the Corps simply attaches it, without comment, as an appendix to the main volume of the DEIS. The USFWS raises numerous concerns about the significant adverse effects of the

21. Wildlife species that were representative of wildlife habitats along the lower Columbia River were selected by the Interagency HEP team as HEP target species. Species were selected that were representative of agricultural croplands, wetland and riparian habitats. These were the habitats most likely to be affected by the proposed project. Population data were not used. The basic test was whether target species habitat models would reflect project-related changes in wildlife habitat, either from habitat loss or from mitigation actions to restore habitat. The comment used mink as an example of an incorrect indicator species as their present population is low. However, the mink model provides a good means to capture wetland and riparian habitat impacts. Habitat quality and quantity, not population levels of a particular species drive these models. While mink population levels may be low, potentially a response to environmental contaminants, the assessment of riparian habitat quantity and quality using the mink model is still appropriate and provides a good analysis of project impacts for this species and other species which also utilize these habitats.

The Canada goose habitat model has provided considerable insight into the level of project-related impacts to Canada geese in general. The model was derived to be representative of wintering Canada geese, of which Dusky Canada geese are a component. Winter foraging habitat requirements for the 5-plus subspecies of Canada geese that winter along the lower Columbia River and in the Willamette Valley are virtually identical, e.g. agricultural fields, particularly grass fields and harvested corn and grain fields. Lakes, farm ponds, rivers, gravel pits, flooded fields, and other bodies of water provide ample locations for night roosting and loafing activities. The results indicate that Canada geese will be impacted, through loss of 200 acres of agricultural habitat. However, the Canada goose population is currently 350,000 birds versus a historic level of approximately 30,000 birds. The loss of habitat for the species in general is considered negligible, particularly when management efforts are currently focused on reducing the population. Dusky Canada geese are managed intensively, primarily through restrictive hunting regulations, in order to maintain their population. Wintering habitat for dusky Canada geese is not a limiting factor, rather suitable nesting habitat on the Copper River Delta of Alaska is their limiting factor.

Wintering sandhill cranes do have a minor presence in the general project area, particularly in the Sauvie Island-Vancouver Lowlands area and to a lesser extent around Woodland. The Canada goose model is representative of impacts to this species as the model addresses agricultural cropland losses. The intensive waterfowl management actions at Sauvie Island Wildlife Management Area, Shillapoo Wildlife Management Area, and Ridgefield National Wildlife Refuge play a substantial role in this species wintering presence. Washington Department of Fish and Wildlife is currently moving forward to purchase Shillapoo Lake, which would add 1,000-plus acres to public wildlife management lands in the Vancouver Lowlands. The future presence of wintering sandhill cranes will be contingent upon the presence of large wildlife management areas. Agricultural croplands suitable for sandhill crane are diminishing due to urban-industrial-residential development and the change in agricultural crops from cereal grains, dairies and row crops to hybrid poplar plantations, nursery crops and caneberries.

Corps of Engineers Response

project on wildlife. Those concerns are either ignored or contradicted in a conclusory fashion in the body of the DEIS. For example, the USFWS report states:

Dredging activities could result in the resuspension of sediments in the water column during both dredging and disposal of dredged material. . . . Contaminated material containing low concentrations of organochlorine compounds, especially in the Willamette River, may pass the Corps testing requirements or screening levels and be dredged and disposed of in the flowlanes of the Columbia and/or the Willamette Rivers. Once in the flowlane fine materials containing organochlorines could accumulate in shallow areas, tidal flats, or other depositional zones, and thus become available to aquatic organisms. Low concentrations of persistent compounds such as some organochlorine pesticides, PCBs, dioxins, and furans can bioaccumulate within the food chain in these depositional areas and impair reproduction in top level predators. In addition, many of these organochlorine contaminants disrupt the immune or endocrine system (Colburn et al. 1993), and very low concentrations of the chemicals could adversely impact fish and wildlife during sensitive life stages.

22. (con't)

USFWS, Impacts of the Proposed Columbia River Channel Deepening Project on Fish and Wildlife Resources at 18 (Sep. 1998). Thus, the USFWS poses serious questions regarding the accuracy of the Corps' screening methodology; the DEIS either ignores or fails to adequately evaluate and address them.

For example, in spite of the USFWS analysis, the DEIS baldly asserts that "[t]he dredging and disposal of Columbia River material would have **no significant impact on sediment quality** in the ocean, river or in the upland disposal sites." DEIS at 6-11 (emphasis added). In another section, the DEIS acknowledges that "dredging has been suggested as a means wherein contaminants contained within the sediments can be resuspended and thus become available for uptake by bald eagles," and concludes that this type of sediment contamination is not a concern for the project because Columbia River sediments are not the type of sediment grains to which contaminants attach. DEIS at 6-41. This conclusion ignores the fact that studies cited

21 (continued). The Corps has no legal obligation under NEPA to "ensure the scientific integrity of its studies." As federal courts have frequently held in the context of preparing EIS's, "when specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." Price Rd. Neighborhood Ass'n, Inc. v. US Dept of Transp., 113 F.3d 1505, 1511 (9th Cir. 1997), quoting, Greenpeace Action v. Franklin, 14 F.3d 1324, 1332 (9th Cir. 1992) (internal citations and quotations omitted); Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 378 (1989).

The Corps is entitled to rely upon its own experts' studies, and under no circumstances need it affirmatively defend those studies' "scientific integrity." "Even when a[n] opposing party] presents expert opinions raising questions regarding an agency's analyses, methodology, and conclusions, such opinions have been viewed by the courts as 'a difference of scientific opinion.'" Hells Canyon Preservation Council v. Jacoby, 9 F.Supp.2d 1216, 1239 (D.Or. 1998), quoting, Greenpeace Action, 14 F.3d at 1333.

Accordingly, to the extent the comments question the Corps' experts, the "difference of scientific opinion" will not render the EIS inadequate. NEPA does not require a reviewing court to decide whether an agency's evaluation is based on the best scientific methodology available or to resolve disagreements among various scientists as to methodology. Hells Canyon, *supra*. Even if the comments had produced some evidence that the Corps' experts lack proper qualifications or relied upon flawed scientific methods (which they failed to do), that evidence would not discredit or otherwise render the Corps' studies unreliable or its EIS legally inadequate.

22. All comment letters received, whether from federal, state agencies, or the public, have been addressed and added to the FEIS. The U.S. Fish and Wildlife Final Coordination Act Report has also been added to the FEIS. The Corps of Engineers' responses to the specific recommendations in the Final Coordination Act Report are also included in the FEIS.

by USFWS demonstrating adverse impacts of contaminants on bald eagles and river otters were conducted within the lower Columbia River area. See Beak Consultants Comments, Ex. B at 1-3.

The USFWS also raises serious concerns regarding the upland disposal sites selected under the Sponsor's Disposal Plan, which concerns are ignored in the DEIS. For example, the USFWS states:

22. (con't)

While the Service does not, 'in general, object to the use of such sites for dredged material disposal, we do have reservations about some of these port sites because some of them support valuable wildlife habitat on site or are adjacent to such habitat, e.g. the Gateway 3 site.

USFWS Report at 31. With respect to mitigation proposed for riparian habitat losses, the USFWS states "this amount of dredged material would have a significant detrimental impact on many habitats and species within the lower Columbia River Basin." *Id.* The DEIS does not address USFWS's criticism of the Sponsor's Disposal Plan.

The DEIS fails to mention, let alone analyze, serious environmental concerns regarding the project raised by another federal agency. It is, therefore, "fatally deficient" pursuant to the standard set forth by *Friends of the Earth*.

V. THE DEIS FAILS TO DISCLOSE AND RESOLVE THE CONFLICT BETWEEN THE PROJECT AND STATE CONTROLS FOR GATEWAY 3 AND GATEWAY 5.

23.

The Corps is required to examine the environmental consequences of "possible conflicts between the proposed action and the objectives of Federal, regional, State, and local . . . policies and controls for the area concerned." 40 C.F.R. § 1502.16(c). A state control relevant to disposal site selection that the DEIS fails to consider is a Clark County Superior Court Order that requires the Port of Vancouver to prepare an EIS before it can fill or develop Gateway 3 or Gateway 5.

In particular, Judge Poyfair of the Clark County Superior Court has held that Gateway 3 and Gateway 5 (as well as the adjacent Gateway 2 and Gateway 4

23. The DEIS need not "resolve the conflict" between the project and state controls for Gateway 3, as no such "conflict" exists. The POV is obligated to comply with Judge Poyfair's Order, (Order Modifying Judgment, Clark County Superior Court, Washington, No. 94-2 01668 1, June 6, 1996), as well as all Corps requirements for necessary 404 permits, before any dredged material is placed on any delineated wetland as part of any development of the POV's Gateway property.

The comments state that, under Judge Poyfair's Order, the Corps "is prohibited from identifying Gateway 3 as a potential dredged material disposal site until (the POV) has completed its Environmental Impact Statement for the comprehensive scheme." (Emphasis added). This argument is both factually and legally inaccurate.

23. (con't) properties), are environmentally sensitive. As a result, the court enjoined the Port of Vancouver "from authorizing or taking any action to commence the development of the Port's downriver property for any specific development until the Port has prepared and issued a final Environmental Impact Statement addressing the plans for and environmental impacts to all of the downriver properties (Parcels 2, 3, 4 and 5)." Order Modifying Judgment at 4, attached as Exhibit G (emphasis added).

The Port of Vancouver has adopted a comprehensive scheme for development of Gateway parcels 2, 3, 4 and 5. Deposit of dredge spoils on Gateway 3 and Gateway 5 is a part of that development. Under the Order Modifying Judgment, the Port of Vancouver is prohibited from identifying either Gateway 3 or Gateway 5 as a dredge spoils disposal site until it has completed its EIS for the comprehensive scheme. That EIS has not yet been commenced. Since the DEIS fails to disclose and resolve the direct conflict between the project and the requirements of the Order Modifying Judgment, it is legally inadequate.

VI. CONCLUSION

24. For the reasons set forth above and in the attached Huffman-Broadway and Beak Consultants Comments, the DEIS is legally and scientifically inadequate. Of greatest concern to Mr. King is the DEIS's failure to identify, describe and address serious adverse environmental impacts to Gateway 3 and Gateway 5. Mr. King urges the Corps not to authorize disposal of fill material on Gateway 3 or Gateway 5 and to ensure that other activities related to the project do not adversely affect the avian, fish and wildlife resources that depend on those properties.

Respectfully submitted,

PERKINS COIE LLP

By Mark W. Schneider
Mark W. Schneider
Attorneys for Paul L. King

MWS:bal

[15690-0014/SB990310.015]

2/4/99

23 (continued). First, while the Corps could recommend G-3 as an upland disposal site as part of the federal action, the Corps is not the ultimate decision-maker regarding the selection of disposal sites – the ultimate decision-maker for this project is Congress. Judge Poyfair no doubt never intended his Order to bind the decision-making ability of Congress on a federally funded, Congressionally approved civil works project.

Secondly, Judge Poyfair's Order did not enjoin the Corps' identification of a potential upland disposal site as part of the channel-deepening project, or any other project. Rather, the Order enjoins the POV from "implementing any specific plan for industrial development" of the POV's Gateway property prior to the completion of the EIS. Judge Poyfair's Order,² p.3. The identification of a proposed upland disposal site on a fraction of the total area of G-3 cannot reasonably be termed "industrial development." In addition, as discussed above, the identification of G-3 as a potential disposal site is but one of many required legal steps that must be taken prior to any actual dredged material deposition. Indeed, were the site never identified, it could hardly be evaluated for possible significant adverse environmental impacts, as required under NEPA's EIS law and Judge Poyfair's Order.

24. For all the reasons discussed above, the DEIS was both legally and scientifically adequate. The DEIS adequately addressed and discussed both alternatives to the proposed 43-foot channel deepening project, as well as the reasonably foreseeable potential environmental impacts of the proposed project.

² Judge Poyfair's Order may also be found at Exh. G of King's Comments to the DEIS.

U.S. Army Corps of Engineers,
Portland District
February 4, 1999
Page 21

Enclosures:

	Tab
Letter from James E. Broadway, President, Turnstone Environmental, Inc. to Steven J. Stevens, dated December 11, 1998	A
Resumes of Terry Huffman; James E. Broadway (Attachment 1 to Turnstone Letter)	A1
Comments on: Draft Integrated Feasibility Report for Channel Improvements and Environmental Impact Statement, Columbia and Lower Willamette River Federal Navigation Channel (Attachment 2 to Turnstone Letter)	A2
Cover Letter and Comments on the Columbia River DEIS by Beak Consultants Incorporated, dated January 27, 1999	B
Calculated porewater concentrations in the Gateway sediment piles. Comparison to water quality criteria for protection of riparian wildlife.	B1
Resumes for Beak Consultants Incorporated	B2
Source material for Beak Comments	B3
Site Plan Illustrating Gateway 3 and Gateway 5, Section 4 of DEIS.	C
Natural Resources Baseline, Port of Vancouver Columbia Gateway Master Plan (Sept. 30, 1997)	D
Port of Vancouver Master Plan, Gateway Update (Mar. 1998)	E
"Port Chiefs Discuss Channel-Deepening Project," <u>Vancouver Columbian</u> (Jan. 15, 1999).	F
Order Modifying Judgment, <u>King v. Port of Vancouver</u> , No. 94-2-016681 (June 7, 1996)	G

U.S. Army Corps of Engineers,
Portland District
February 4, 1999
Page 22

cc: (w/enc.)

Mr. Paul L. King
The Honorable Gary Locke
The Honorable Thomas Fitzsimmons
Mr. Curt Smitch, Washington's Salmon Task Force
Washington Fish & Wildlife Commission
Mr. Larry Peck, Washington Department of Fish & Wildlife
Mr. Rick Vining, Washington Department of Ecology
The Honorable Charles Clarke, U.S. Environmental Protection Agency
U.S. Fish & Wildlife Service
Christine Valentine, Oregon Coastal Management Program

