
EXHIBIT G
BIOLOGICAL ASSESSMENT
WILDLIFE



DEPARTMENT OF THE ARMY
PORTLAND DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2946
PORTLAND, OREGON 97208-2946

Reply to
Attention of:

JUL 2 1999

Engineering and Construction Division

Mr. Russell D. Peterson
Field Supervisor
U.S. Fish and Wildlife Service
2600 SE 98th, Suite 100
Portland, Oregon 97266

Dear Mr. Peterson:

Your letter of June 28, 1999 requested clarification on the proposed project description for the Columbia River Channel Deepening to be presented in the Final Environmental Impact Statement. Four specific information requests were made, e.g.,

1. Dredging methods under consideration;
2. Sites proposed for placement of dredged materials;
3. Effects to listed species expected to occur as a result of proposed dredging and disposal; and
4. Any actions proposed to reduce or avoid adverse effects to listed species.

Dredging methodology remains the same as described earlier in Draft Environmental Impact Statement (DEIS). Hopper and pipeline dredges will accomplish the majority of work. Clamshell dredges will be used in certain situations. Hopper and clamshell dredges will discharge their material at flowlane sites, Harrington Sump and offshore. Pipeline dredges will discharge their material at identified disposal sites (see Table 4.9 below).

Both the least cost and sponsor's disposal plans have changed since the preparation of the DEIS. The changes are the result of physical changes in the river, land use changes, and environmental issues raised during review of the draft report. There was a significant reduction in the required construction dredging in the vicinity of Columbia river miles (CRM) 97 to 101 that allowed for the removal of two disposal sites, Sauvie Island (O-98.5) and the North Dike Field (W-96.5) from the least cost plan. Expansion of facilities at Morse Sand and Gravel allowed elimination of the Morse Pit (O-80.0) and expanded use of the Reichold site (O-82.6) in the sponsor's plan. That change, plus environmental concerns at Martin Island (W-80.0) resulted in the elimination of the Martin Island disposal site in the least cost plan. Peavy Oval (W-73.5) was dropped from both plans because of environmental concerns. To compensate for dropping Peavy Oval and W-72.2 (Northport), W-71.9 was added and the Cottonwood Island site was expanded to provide additional disposal. The Goble Quarry site (O-65.7) in Rainier was eliminated from both plans because of planned industrial development and replaced with an expanded International Paper site (W-67.5) in both plans. The sponsor's plan added a beach nourishment site at Skamokawa (W-33.4), to be used as a sand source for Wahkiakum County. The final change was the removal of the Millar-Pillar in-water fill that was part of both disposal plans and the ecosystem restoration plan.

The modified least cost and sponsor's disposal plans are summarized in Table 4-9. The net result of the changes has been a reduction in overall disposal area required, and the least cost and sponsor's plans are more similar and only differ in two areas. The sponsor's plan replaces site W-95.7 and some in-water disposal with site W-101.0 (Gateway 3), and substitutes O-91.5 (Lonestar gravel pit) for O-90.6 (Scappoose Dairy).

The Sponsor disposal plan will represent the proposed plan in the Final EIS. The Service should base their biological opinion on the Sponsor disposal plan. Portland District recommends that the Service incorporate by reference or inclusion the project description presented in the Final EIS into the Biological Opinion to ensure accuracy of the project description in the Biological Opinion. The District will furnish the Service the pertinent chapter(s) of the FEIS prior to conclusion of the Biological Opinion.

Table 4-9. Summary of Modified Disposal Plans

| SITES CONSIDERED ^{1/} | TYPE OF DISPOSAL SITE | DISPOSAL HISTORY ^{2/} | ALTERNATIVES | | |
|--|-----------------------------|-----------------------------------|--------------|-------------|-------------|
| | | | NO ACTION | LEAST COST | SPONSOR |
| CRM 3 to 106 (in or adjacent to channel) | Open Water, Unrestrained | Used ^{1,2,3} | 45-65' deep | 50-65' deep | 50-65' deep |
| Hayden O-105.0 | Upland | Used ^{1,2,3} | 79 acres | 102 acres | 102 acres |
| Gateway 3 W-101.0 | Upland | New | | | 69 acres |
| Fazio S & G W-97.1 | Upland | Used ^{2,3} | 27 acres | 27 acres | 27 acres |
| Adjacent Fazio W-96.9 | Upland | New | | 17 acres | 17 acres |
| W-95.7 | Upland | New | | 25 acres | |
| W-95.8 | Upland | Used ³ | 13 acres | | |
| Lonestar O-91.5 | Gravel Pit | New | | | 45 acres |
| Scappoose Dairy O-90.6 | Upland | New | | 107 acres | |
| RR Corridor O-87.8 | Upland | Used ³ | | 12 acres | 12 acres |
| Austin Point W-86.5 | Upland | Used ³ | | 26 acres | 26 acres |
| Sand Island O-86.2 | Beach Nourish | Used ^{2,3} | | 28 acres | 28 acres |
| Reichold O-82.6 | Upland | Used ³ | | 49 acres | 49 acres |

Table 4-9 (Continued). Summary of Modified Disposal Plans

| SITES CONSIDERED ^{1/} | TYPE OF DISPOSAL SITE | DISPOSA L HISTORY ^{2/} | ALTERNATIVES | | |
|-----------------------------------|-----------------------------|---------------------------------------|----------------------|------------|------------|
| | | | NO ACTION SPONSOR | LEAST COST | LEAST COST |
| Martin Bar W-82.0 | Upland | Used ³ | | 32 acres | 32 acres |
| Martin Is Mitig. W-80.0 | In-water | New | | 34 acres | 34 acres |
| Lower Deer Is. O-77.0 | Upland | Used ³ | | 29 acres | 29 acres |
| Sandy Island O-75.8 | Upland | Used ^{2,3} | 30 acres | 30 acres | 30 acres |
| Northport W-71.9 | Upland | Used ^{2,3} | | 27 acres | 27 acres |
| Cottonwood Is. W-70.1 | Upland | Used ^{2,3} | | 62 acres | 62 acres |
| Howard Is. W-68.7 | Upland | Used ^{2,3} | 200 acres | 200 acres | 200 acres |
| International W-67.5 | Upland | Used ^{1,2} | | 29 acres | 29 acres |
| Rainier Beach O-67.0 | Upland | Used ³ | | 52 acres | 52 acres |
| Rainier Indust. O-64.8 | Upland | Used ^{1,2,3} | 53 acres | 53 acres | 53 acres |
| Lord Is. Upstrm O-63.5 | Upland | Used ^{1,2,3} | 28 acres | 46 acres | 46 acres |
| Reynolds Alum. W-63.5 | Upland | Used ^{1,2,3} | | 13 acres | 13 acres |
| Mt. Solo W-62.0 | Upland | New | | 50 acres | 50 acres |
| Hump Island W-59.7 | Upland | Used ^{1,2,3} | 69 acres | 69 acres | 69 acres |
| Crims Island O-57.0 | Upland | Used ^{1,2,3} | 51 acres | 40 acres | 40 acres |
| Port Westward O-54.0 | Upland | Used ³ | | 50 acres | 50 acres |
| Brown Is. W-46.0/46.3 | Upland | Used ^{1,2,3} | 72 acres | 72 acre | 72 acres |
| W-45.0 | Upland | Used ^{2,3} | 15 acres | | |
| Puget Is. (Vik) W-44.0 | Upland | New | | 100 acres | 100 acres |
| James River O-42.9 | Upland | Used ^{1,2,3} | 59 acres | 59 acres | 59 acres |
| W-42.5 | Upland | Used ^{2,3} | 28 acres | | |
| Tenasillahe Is. O-38.3 | Upland | Used ^{1,2,3} | 42 acres | 42 acres | 42 acres |

Table 4-9 (Continued). Summary of Modified Disposal Plans

| | | | | | |
|--------------------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Welch Island O-34.0 | Upland | Used ^{2,3} | 42 acres | 42 acres | 42 acres |
| W-33.4 | Beach Nourish | Used ^{2,3} | | 11 acres | 11 acres |
| Pillar Rock Is. O-27.2 | Upland | Used ^{1,2,3} | 56 acres | 56 acres | 56 acres |
| Miller Sands O-23.5 | Beach Nourish | Used ^{1,2,3} | 151 acres | 151 acres | 151 acres |
| Rice Island W-21.0 | Upland | Used ^{1,2,3} | 228 acres | 228 acres | 228 acres |
| CRM 21.0 Harrington Point Sump | Open Water, Unrestrained | Used ^{1,2,3} | 118 acres | 118 acres | 118 acres |
| Ocean | Designated Open Water | New | Designated Open Water | Designated Open Water | Designated Open Water |
| WRKE-1 | Open Water, Unrestrained | New | | 82 acres | 82 acres |
| WRKE-2 | Open Water, Unrestrained | New | | 38 acres | 38 acres |

Table Legend:

1/ Sites Considered: "W"/"O" refer to the Washington or Oregon shoreline respectively; the number refers to approximate river mile on the navigation channel.

2/ Disposal History Based on 1995 information:

- 1 - Site has been used within the last 2 years
- 2 - Site has been used within the last 10 years
- 3 - Site was used over 10 years ago

Effects to listed species expected to occur as a result of proposed dredging and disposal plans in the FEIS are identified in the enclosure (Exhibit D) by site and listed species. Exhibit D was previously provided to the Service with the original biological assessment. As the proposed plan is slightly different from that presented in the DEIS, we have updated Exhibit D to reflect those modifications. We will also report those changes in the text of this letter. Please note that names for disposal sites, ecosystem restoration locations and wildlife mitigation sites that are proposed for use in the FEIS are highlighted through use of bold text in Exhibit D. Our determinations for listed species at those sites not previously addressed in the DMMP are also reported in bold text. We have retained ESA determinations for those disposal sites identified in the Dredged Material Management Plan or that were previously considered for disposal purposes, but that are not proposed for use, in Exhibit D, to maintain continuity between the DMMP, DEIS and the forthcoming FEIS.

Two disposal sites, W-71.9 and W-33.4, were not addressed in the Columbia River Channel Deepening biological assessment previously forwarded to your office. Our biological assessment for these two sites follows. W-71.9 is a previously used dredged material disposal site that lies adjacent to W-72.2 and was selected as a replacement location for W-72.2 which had been withdrawn by the sponsor because of development requirements. Issues and concerns for listed species at W-71.9 are identical to those previously reported for W-72.2 for any listed species. Consequently, it is our determination that use of W-71.9 for disposal purposes will have no effect on any listed species.

W-33.4 is also a previously used dredged material disposal location. The site is the shoreline adjacent to Skamokawa Park at Skamokawa, Washington. The park and W-33.4 are used for recreational purposes and the Port of Skamokawa also borrows material from W-33.4 for commercial sales. The only listed species known to frequent the vicinity of W-33.4 is the bald eagle. This species occasionally perches in conifers and/or snags immediately downstream of W-33.4 and in one spike-topped conifer near the upstream end of the park. Perched eagles at W-33.4 are typically observed during the winter when recreational use at Skamokawa Park is negligible. Their use at other times of the year would be expected to be minimal. Disposal operations at this location would be short term in duration, e.g., 1-3 days because the site has very limited capacity. It is our determination that the use of W-33.4 may effect, but is not likely to adversely affect, bald eagles. Our determination is no effect for all other listed species for site W-33.4.

Your letter of June 28, 1999 also requested a list of actions proposed to reduce or avoid adverse effects to listed species. We propose to implement those conservation measures agreed upon in the DMMP Biological Opinion for both Columbian white-tailed deer and bald eagles. We are also recommending additional conservation measures for CRCD, to address impacts to Columbian white-tailed deer at W-44.0.

Columbian White-Tailed Deer: As proposed in our DMMP letter of February 23, 1998 and accepted in your response letter dated February 24, 1998, the Corps, with implementation of the DMMP, would seed with grasses and legumes that acreage at W-46.0/46.3 and O-42.9 impacted by disposal operations to offset impacts to Columbian white-tailed deer. This provision of forage is to offset loss of forage resources associated with the disposal sites. Monitoring to assure forage stand establishment and reseeding during the next planting season, if necessary, would occur. We propose to implement these same conservation measures for these locations with implementation of the CRCD project.

Impacts to Columbian white-tailed deer associated with disposal use of W-44.0 would be offset by purchase of an equal amount or greater of lands, e.g., 100+ acres on Puget Island or on the Oregon mainland near Westport, Oregon. Land purchased would be restored to white-tailed deer habitat, primarily by the establishment of riparian forest habitat. This Conservation Measure would assure long term protection of Columbian white-tailed deer habitat. The Corps intent would be to turn the purchased land over to the U.S. Fish and Wildlife Service for management in conjunction with the Julia Butler Hansen Columbian White-tailed Deer National Refuge.

Bald Eagle: For the DMMP, the Corps committed to annually funding the bald eagle occupancy and productivity flights conducted by the Oregon Cooperative Wildlife Research Unit, Oregon State University, either for the 20-year duration of the DMMP or until bald eagles are de-listed. This commitment would be maintained for the CRCDD project. The Corps commitment to funding these aerial surveys will provide additional information on an annual basis on existing territories and identify the location of new bald eagle nest sites within the project area. The Corps will thus be able to determine on an annual basis if there is a conflict between use of a dredged material disposal location and nesting bald eagles. Where conflicts are identified, additional conservation measures will be employed to avoid take. Where active nests are located, dredged material will be placed 1,500 feet or greater from the active nest prior to August 1. Where spatial avoidance is not suitable, temporal restrictions on disposal site use will be employed. Temporal restrictions would typically be lifted after August 1 based upon the assumption that most fledging occurs prior to August 1. Additional monitoring of nest sites will be employed in areas where dredging actions are imperative to determine when actual fledging occurs or a specific nesting effort has failed, thus potentially enabling dredging operations to be initiated prior to August 1. Further consultation with the U.S. Fish and Wildlife Service would be initiated when use of an alternate disposal site, distance setbacks and/or timing restrictions are not practicable with respect to dredging operations. Consultation with the Service would also be initiated if new disposal sites not addressed in the FEIS were to be used for disposal.

Willamette River and Contaminated Sediments Issues: As stated in our letter of April 22, 1999, we propose to seek authorization for CRCDD construction but will delay implementation of the Willamette River portion of the channel improvement project until the contaminated sediments issue is resolved. The Services letter of February 24, 1998 that concluded consultation for the DMMP, included a recommendation to further conserve the Columbian white-tailed deer and bald eagle, e.g. "3) notify the Service if areas of fine materials or contaminated sediments are encountered and provide sediment testing data to the Service prior to the dredging operation. If sediments are contaminated, reinitiation of consultation may be necessary." The Corps will base sediment testing upon criteria established in the interagency publication "Dredged Material Evaluation Framework, Lower Columbia River Management Area, November 1998." We have enclosed a copy of that manual for your reference.

Based upon criteria in that manual, if the results of the grain size analysis are less than 20 percent fines and total volatile solids are less than 5 percent, then the dredged material may qualify for unconfined aquatic disposal based on exclusionary status (see Table 5-1 of manual). If the results fail either guideline then the sediment must undergo bulk sediment analysis to test for chemicals of concern.

If you have questions or need further information, please contact Geoff Dorsey, of my staff, at (503) 808-4769.

Sincerely,

A handwritten signature in black ink, appearing to read "Howard B. Jones". The signature is written in a cursive style with a large initial "H".

 Howard B. Jones, P.E.
Chief, Engineering and Construction
Division

Enclosures

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED (Proposed Sites (FEIS) are in Bold) | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Paintbrush | Bradshaw's Lomatium | Neilson's Checkermallow |
|---|--------------------------|-----------------------------|-----------------------|--|--|-------------------|----------------------|-------------------|-----------------------------|-------------------|--------------------------|---------------------|-------------------------|
| CRM 3-106.3; 5'-65' deep in or adjacent to channel | Open Water, Unrestrained | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Hayden O-105.0 | Upland/Beach Nourish | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Gateway 3 W-101 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - May Affect; Adverse. Conservation Measures Recommended | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-98.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-97.1 | Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| W-96.9 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-96.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-95.7 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Dairy | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Austin Point | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED (Proposed Sites (FEIS) are in Bold) | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---|--------------------------|-----------------------------------|-----------------------------|----------------------|---|----------------------|----------------------------|----------------------|-----------------------------------|----------------------|--------------------------------|------------------------|---------------------------|
| W-95.8 | Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Lonestar | Gravel Pit | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| RR Corridor | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-86.2 | Beach Nourish | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-82.6 Reichhold | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-82.0 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Morse Pit | Gravel Pit | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Marlin Island | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-77.0 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-75.8 | Beach Nourish/ Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Peavey Oval | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-72.2 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-71.9 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-70.1 (Cottonwood Is) | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-68.7 (Howard Is.) | Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |

Exhibit D – Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED (Proposed Sites (FEIS) are in Bold) | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---|--------------------------|-----------------------------------|-----------------------------|----------------------|----------------------|----------------------|----------------------------|----------------------|-----------------------------------|----------------------|--------------------------------|------------------------|---------------------------|
| W-67.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-67.0 Rainier Beach | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-65.7 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-64.8 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-63.5 | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| W-63.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-62.0 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-59.7 | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-57.0 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| Port Westward | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-46.0/46.3 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |

Exhibit D – Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED (Proposed Sites (FEIS) are in Bold) | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer May Affect - Adverse; Conservation Measures Proposed | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---|--------------------------|---|-----------------------------|---|---|----------------------|----------------------------|----------------------|-----------------------------------|----------------------|--------------------------------|------------------------|---------------------------|
| W-44.0 | Upland | DMMP - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-45.0 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-42.9 | Upland | DMMP - Not Likely to Adversely Affect; Conservation Measures Required | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| W-42.5 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-38.3 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-34.0 Welch Is. | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| W-33.4 | Beach Nourish | No Effect | No Effect | No Effect | Not Likely to Adversely Affect | No Effect | No Effect | No Effect | No Effect | No Effect | No Effect | No Effect | No Effect |
| O-27.2 Pillar Rock | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED (PROPOSED SITES (FEIS) are in Bold) | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howella | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---|--------------------------|-----------------------------|-----------------------|------------------|---------------------------------------|------------------|----------------------|-----------------|-----------------------------|-----------------|--------------------------|---------------------|------------------------|
| O-23.5 Miller Sands | Beach Nourish | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| W-21.0 Rice Island | Beach Nourish/Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| RM 21.0 Harrington Point Sump | Open Water, Unrestrained | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Ocean | Designated Open Water | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |

Ecosystem Restoration Actions

| RESTORATION SITES (Sites Proposed are in Bold Text) | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howella | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---|--------------------------|-----------------------------|-----------------------|-------------------|---------------------------------|-------------------|----------------------|-------------------|-----------------------------|-------------------|--------------------------|---------------------|------------------------|
| Miller/Pillar Pile | | | | | | | | | | | | | |
| Dike Field and Disposal | | | | | | | | | | | | | |
| (Proposal Withdrawn in FEIS) | Open Water, Unrestrained | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Shilapoo Lake | Not Applicable | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Tidegate Retrofits | Not Applicable | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| River Flow and Circulation Improvements | Not Applicable | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| Wildlife Mitigation Actions | | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Painbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---|-------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------|-------------------|----------------------|-------------------|-----------------------------|-------------------|-------------------------|---------------------|------------------------|
| MITIGATION SITES (Sites Proposed are in Bold Text) | | | | | | | | | | | | | | |
| Joslin Mitigation Site (Site Not Proposed in FEIS) | Not Applicable | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Sauvie 94 Mitigation Site (Site Not Proposed in FEIS) | Not Applicable | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Woodland Bottoms Mitigation Site | Not Applicable | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Martin Island Mitigation Site (34 Acres) | In Water Disposal | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Webb Mitigation Site | Not Applicable | CRCIS - May Affect (Beneficial) | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon State Office
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266
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Reply To: 8330.3742(99)
File Name: 99TA374.wpd

June 28, 1999

Howard Jones
Portland District, Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

Subject: Project Description for the Columbia River Channel Deepening (1-7-99-TA-374,
x-ref. 1-7-99-F-280, 1-7-98-I-432, 1-7-98-I-138)

Dear Mr. Jones:

We are aware that the proposed project description for the Columbia River Channel Deepening has changed since the biological assessment was received by this office on September 24, 1998. As you may recall, we requested clarification of the determination of the effects of the project on Peregrine falcons on October 26, 1999. On April 23, 1999, we received a revised project description, stating that dredging of the Willamette River was no longer considered part of the proposed project. We continued consultation on this action, but it has become apparent through phone conversations with Geoff Dorsey, of your office, that the proposed action has been substantially altered from that described in the biological assessment.

In light of the proposed changes, the Service no longer has all of the information necessary to complete formal consultation on the proposed Columbia River Channel Deepening as outlined in the regulations governing interagency consultations (50 CFR §402.14). To complete the initiation package, we will require the following information as par of a revised project description (see 50 CFR §402.14(c)) of the proposed Columbia River Channel Deepening:

1. Dredging methods under consideration;
2. Sites proposed for placement of dredged materials;
3. Effects to listed species expected to occur as a result of proposed dredging and disposal; and
4. Any actions proposed to reduce or avoid adverse effects to listed species.

The formal consultation process for the project will not continue until we receive all of the information; or a statement explaining why that information cannot be made available. We will notify you when we receive this additional information; our notification letter will also outline the dates within which formal consultation should be complete and the biological opinion delivered on the proposed action.

APR 22 1999

Engineering and Construction Division (1165-2-26a)

Russell D. Peterson, State Supervisor
U.S. Fish and Wildlife Service, Oregon State Office
2600 SE 98th Avenue, Suite 100
Portland OR 97266
Attn: Laura Todd

Dear Mr. Peterson:

The issue of contaminated sediments in the lower Willamette River is presently a high profile issue with strong federal, state, city and local interest. The Service expressed their concerns in October 26, 1998 letter regarding potential adverse impacts to peregrine falcons that might arise from dredging contaminated sediments in the Willamette River upon implementation of the Columbia River Channel Improvement Project (CRCIP; reference 1-7-98-I-432). Your letter stated the Service's belief that, "the resuspension of contaminated sediment is likely to result in adverse effects that constitute harm and harassment of peregrine falcons, and therefore, formal consultation and receipt of an incidental take permit are necessary.

We propose to seek authorization for CRCIP construction but delay implementation of the Willamette River portion of the channel improvement efforts until the contaminated sediments issue is resolved. This would allow for all interested parties to address contaminated sediment concerns, including the Service's concern over Willamette River sediments. The Service's four specific information requests, in order to complete the formal consultation for peregrine falcons, are anticipated to be answered during future efforts by all interested parties. They were:

1. The location of contaminated sediments that may be dredged;
2. The proposed method of dredging these materials;
3. The location of contaminated dredged material disposal sites; and
4. The proposed method of disposal of contaminated materials.

Once a resolution of the contaminated sediment issue in the Willamette River has been attained, the Corps would seek to implement deepening of the Willamette River navigation channel. Consultation with the Service for peregrine falcons and other listed species would be reinitiated at that time for the Willamette River segment of the overall project. The issue of take and whether an incidental take permit would be necessary would be addressed during that consultation.

Your letter of October 26, 1998 did not indicate any concerns for other listed species relative to the Corps biological assessment for CRCIP. Our determination(s) for each listed species are listed by action in the attached table (Enclosure 1). We request a letter of concurrence on listed species for the CRCIP, including peregrine falcons, given the aforementioned proposal and our existing determinations. Please provide a concurrence letter by May 15, 1998 for inclusion with the final Environmental Impact Statement for the project.

Sincerely,



Howard B. Jones, P.E.

Chief, Engineering and Construction Division

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Palmbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|--|--------------------------|-----------------------------|-----------------------|------------------------------|--|-------------------|----------------------|-------------------|-----------------------------|-------------------|-------------------------|---------------------|------------------------|
| CRM 3-106.3; 5'-65' deep in or adjacent to channel | Open Water, Unrestrained | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Hayden O-105.0 | Upland/Beach Nourish | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Gateway 3 W-101 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Adversely Affect | CRCIS - May Affect; Adverse. Conservation Measures Recommended | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-98.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-97.1 | Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| W-98.9 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-96.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-95.7 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Dairy | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Adversely Affect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Austin Point | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |

Exhibit D – Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howella | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---------------------------|-----------------------|-----------------------------|-----------------------|-------------------|---|-------------------|----------------------|-------------------|-----------------------------|-------------------|--------------------------|---------------------|------------------------|
| W-95.8 | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| Lonestar | Gravel Pit | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| RR Corridor | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-86.2 | Beach Nourish | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-82.6 Reichhold | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-82.0 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Morse Pit | Gravel Pit | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| Martin Island | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect; Adverse Conservation Measures Recommended | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-77.0 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-75.8 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | CRCIS - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| Peavey Oval | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-72.2 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-70.1 (Cottonwood Is) | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-68.7 (Howard Is.) | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| W-67.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---------------------------|-----------------------|---|-----------------------|-------------------|--|-------------------|----------------------|-------------------|-----------------------------|-------------------|--------------------------|---------------------|------------------------|
| O-67.0 Rainier Beach | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| O-65.7 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-64.8 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-63.5 | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| W-63.5 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-62.0 | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-59.7 | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-57.0 | Beach Nourish/ Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| Port Westward | Upland | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-46.0/46.3 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect; Conservation Measures Required | DMMP - No Effect | DMMP - No Effect | CRCIS - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer May Affect - Adverse; Conservation Measures Proposed | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Painbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|---------------------------|--------------------------|--|-----------------------|--|---------------------------------------|-------------------|----------------------|-------------------|-----------------------------|-------------------|-------------------------|---------------------|------------------------|
| W-44.0 | Upland | DMMP - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - Not Likely to Adversely Affect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect |
| W-45.0 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-42.9 | Upland | DMMP - Not Likely to Adversely Affect; Conservation Measures Required | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| W-42.5 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-38.3 | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-34.0 Welch Is. | Beach Nourish/ Upland | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |
| O-27.2 Pillar Rock | Upland | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - Not Likely to Adversely Affect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect | DMMP - No Effect |

Exhibit D -- Determination of Effect Summary, Endangered Species Addressed for CRCIS

| DISPOSAL SITES CONSIDERED | TYPE OF DISPOSAL SITE | Columbian White-tailed Deer | Aleutian Canada Goose | Peregrine Falcon | Bald Eagle | Marbled Murrelet | Western Snowy Plover | Brown Pelican | Oregon Silverspot Butterfly | Water Howellia | Golden Indian Paintbrush | Bradshaw's Lomatium | Nelson's Checkermallow |
|-------------------------------|--------------------------|-----------------------------|-----------------------|------------------|---------------------------------------|------------------|----------------------|-----------------|-----------------------------|-----------------|--------------------------|---------------------|------------------------|
| O-23.5 Miller Sands | Beach Nourish | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| W-21.0 Rice Island | Beach Nourish/Upland | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| RM 21.0 Harrington Point Sump | Open Water, Unrestrained | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |
| Ocean | Designated Open Water | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP - Not Likely to Adversely Affect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect | DMMP- No Effect |

Ecosystem Restoration Actions

| Miller/Pillar Pile Dike Field and Disposal | Open Water, Unrestrained | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
|--|--------------------------|-------------------|-------------------|-------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Shillapoo Lake | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
| Tidegate Retrofits | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
| River Flow and Circulation Improvements | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |

Wildlife Mitigation Actions

| Joslin Mitigation Site | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
|----------------------------------|--|-------------------|-------------------|-------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sauvie 94 Mitigation Site | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
| Woodland Bottoms Mitigation Site | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
| Martin Island Mitigation Site | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |
| Webb Mitigation Site | | CRCIS - No Effect | CRCIS - No Effect | CRCIS - No Effect | CRCIS - May Affect (Beneficial) | CRCIS - No Effect |



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Oregon State Office

2600 S.E. 98th Avenue, Suite 100

Portland, Oregon 97266

(503) 231-6179 FAX: (503) 231-6195

FEEL-L

Reply To: 8330.4324 (98)
File Name: crcdPEFA.wpd

October 26, 1998

Howard B. Jones
Portland District, Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

Subject: Informal consultation on Columbia River Channel Deepening and its effects on Peregrine falcons (1-7-98-I-432)

Dear Mr. Jones:

We are writing to express our concerns regarding impacts of the referenced project on the Federally threatened Peregrine falcon (*Falco peregrinus*). Our comments are provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). These comments are provided in response to your letter dated September 24, 1998, received in this office September 25, 1998.

The proposed project consists of dredging the Columbia and Willamette Rivers to a depth of 43 feet and disposal of dredged material at approved sites. It is our understanding that the proposed project includes the possibility of dredging contaminated sediments from the Willamette River. The dredging of these materials could cause contaminated sediments to be reintroduced to the water column. The dredging and resuspension of contaminated sediments may augment toxins already affecting the resident Peregrine falcons in the Willamette and Columbia Rivers downstream of the proposed project.

The biological assessment indicated that the Corps determined the proposed project would not be likely to adversely affect Peregrine falcons. However, the Service believes that the resuspension of contaminated sediment is likely to result in adverse effects that constitute harm and harassment of Peregrine falcons, and therefore, formal consultation and receipt of an incidental take permit are necessary.

In order to complete formal consultation, the Service will need the following information:

1. The location of contaminated sediments that may be dredged;
2. The proposed method of dredging these materials;
3. The location of contaminated dredged material disposed sites; and
4. The proposed method of disposal of contaminated dredged materials.

If you have any questions or need more information, please contact Laura Todd or Rollie White at (503) 231-6179. Thank you for your cooperation in the effort to protect endangered and threatened species.

Sincerely,



Russell D. Peterson
Acting State Supervisor



DEPARTMENT OF THE ARMY
PORTLAND DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2946
PORTLAND, OREGON 97208-2946

Reply to
Attention of:

SEP 24 1998

Planning and Engineering Division

Mr. Russell D. Peterson
Field Supervisor
U.S. Fish and Wildlife Service
2600 SE 98th, Suite 100
Portland, OR 97266

Dear Mr. Peterson:

Pursuant to the requirements of the Endangered Species Act, we are providing a biological assessment for threatened and endangered species, which may occur in the vicinity of the Columbia River Channel Improvement Study. The study area encompasses lands adjacent to and waters of the Columbia River from river mile 3.0 to 106.5 and the Willamette River from 0.0 to 11.6.

The biological assessment addresses those species listed by the Service in their letter dated January 8, 1997; reference number 1-7-97-SP-074 (Oregon State Office) and 1-3-97-SP-113 (Western Washington Office). Effects of the proposed action vary by listed species and dredged material disposal location along the Columbia and Willamette River.

If you have any questions, or need further information concerning this project, please contact Geoff Dorsey of my staff at 808-4769.

Sincerely,

for 
Howard B. Jones, P.E.
Chief, Planning and Engineering Division

Enclosures



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon State Office
2600 S.E. 98th Avenue, Suite 100
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PE-E

Reply To: 8330.1384 (98)
File Name: 981138.WPD

February 24, 1998

Howard B. Jones, P.E.
Department of the Army
Portland District, Corps of Engineers
P.O. Box 2946

Dear Mr. Jones:

This is in response to your February 23, 1998, letter, that was received by facsimile on February 23, 1998, transmitting an addendum to your January 7, 1998, letter and biological assessment of the impacts of the Columbia River Dredge Material Management Study (DMMS) to listed threatened and endangered species along the Columbia River (river mile 3.0 to 106.5) and Willamette River (river mile 0.0-11.6). The DMMS describes the Dredged Material Management Plan (DMMP) to be implemented by the Army Corps of Engineers (Corps) for operation and maintenance (O&M) dredging of the Columbia River Navigation channel. The addendum provides additional information relative to the Columbian white-tailed deer (*Odocoileus virginianus leucurus*) and bald eagle (*Haliaeetus leucocephalus*) in response to our letter dated February 19, 1998 (Case number 1-7-97-I-127). The following comments are provided on Columbian white-tailed deer and bald eagle in response to the additional information contained in your February 23, 1998, letter. Our comments on other listed species in your biological assessment (e.g., Aleutian Canada goose (*Branta canadensis leucopareia*), peregrine falcon (*Falco peregrinus*), marbled murrelet (*Brachyramphus marmoratus*), western snowy plover (*Charadrius alexandrinus nivosus*), brown pelican (*Pelecanus occidentalis*), Oregon silverspot butterfly (*Speyeria zerene hippolyta*), water howellia (*Howellia aquatilis*), golden Indian paintbrush (*Castilleja levisecta*), Bradshaw's lomatium (*Lomatium bradshawii*), and Nelson's checkermallow (*Sidalcea nelsoniana*)) were provided in our February 19, 1998, letter.

We have reviewed the addendum and biological assessment. The addendum proposes to seed areas 0.42.9 and W-46.0/46.3 with grasses and forbs in the fall after deposition of dredge material as a conservation measure for Columbian white-tailed deer. Reseeding of these particular disposal areas with a pasture mix of grasses and clovers would provide forage

resources for Columbian white-tailed deer, thereby minimizing long-term losses of forage which may result from repeated dredge material placement.

The addendum also indicates that the Corps will commit to annually funding the bald eagle occupancy and productivity flights conducted by the Oregon Cooperative Wildlife Research Unity, Oregon State University either for the 20-year duration of the DMMP or until bald eagles are de-listed. The Corps commitment to funding these aerial surveys will provide additional information on an annual basis needed to identify the location of any new bald eagle nest sites within the project area. This new information will be used to supplement current information on existing and proposed disposal locations so that conservation measures to avoid take of nesting bald eagles can be determined and implemented. The Corps' addendum indicates that where sufficient area is available, dredged material will be placed greater than 1,500 feet from actual nest locations. Based upon information that fledging generally occurs prior to August 1, the Corps will also employ timing restrictions to after August 1 to avoid disturbance to active nest sites.

Also, the biological assessment states that "Contaminated sediments, which may be encountered in the environment in the Willamette River, would be disposed of in an approved manner to contain contaminants and prevent their reentry into the environment. Currently, maintenance dredging actions in the Willamette River avoid sites where contaminated sediments may be a concern." Currently, new bald eagle territories have been established on the Willamette River and on the Columbia, both upstream and downstream from the mouth of the Willamette. The foraging habitat of these eagles is largely unknown. If the action changes and contaminated sediments are planned to be dredged, eagles foraging in or near the lower Willamette River or its mouth could be impacted by resuspended organochlorine contaminants. If this occurs, reinitiation of consultation may be necessary.

Based upon available information, the Service concurs with the Corps' determination of not likely to adversely effect the Columbian white-tailed deer and bald eagle, provided that the following measures are implemented as described in your addendum:

- 1) disposal areas at O-42.9 and W-46.0/46.3 impacted during the year are reseeded with a grass and legume mixture in the fall.
- 2) the Corps closely coordinate with Oregon State University's Cooperative Wildlife Research Unit to obtain nesting chronology information to determine probable fledging of birds at active nest sites, so that extension of timing restrictions beyond August 1 may be implemented if needed to avoid disturbance to late fledging bald eagles.

With incorporation of the above measures as described in your January 7, 1998, biological assessment and February 23, 1998, addendum, the requirements established under section 7(a)(2) and 7(c) of the Endangered Species Act of 1973, as amended (16 USC 1531 et. seq.), have been met, thereby concluding the consultation process.

To further conserve the Columbian white-tailed deer and bald eagle, we recommend that the Corps:

- 1) monitor the success of reseeded efforts at O-42.9 and W-46.0/46.3. If seeding fails, measures to reseed the area will need to be implemented during the next available planting season.
- 2) the Corps reinitiate consultation with the Service if conservation measures identified in your February 23, 1998, addendum cannot be implemented and dredge material placement may occur within 1,500 feet of an active bald eagle nest site within the bald eagle breeding season.
- 3) notify the Service if areas of fine materials or contaminated sediments are encountered and provide sediment-testing data to the Service prior to the dredging operation. If sediments are contaminated, reinitiation of consultation may be necessary.

Should new information indicate listed or proposed threatened or endangered species to be present in your project area or impacts occurring beyond those currently assessed, the Corps should be aware of its continuing responsibilities as described in sections 7(a) and (c) of the Act. If you have any questions regarding this letter, please contact Diana Hwang or Jeremy Buck at (503) 231-6179.

We appreciate your efforts to conserve listed species.

Sincerely,


for Russell D. Peterson
State Supervisor

Attachments

cc: R1 FWE-SE
PFO-ES
FWS, Attn: A. Clark; Julia Butler Hansen NWR
OSU, Attn: B. Anthony/F. Isaacs, Cooperative Wildlife Research Unit
ODFW (Nongame)



DEPARTMENT OF THE ARMY
PORTLAND DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2946
PORTLAND, OREGON 97208-2946

REPLY TO
ATTENTION OF:

Planning and Engineering Division

Feb 23, 1998 *JLD*

Mr. Russell D. Peterson
Field Supervisor
U.S. Fish and Wildlife Service
2600 SE. 98th, Suite 100
Portland, Oregon 97266

Dear Mr. Peterson:

Pursuant to your letter of February 19, 1998, regarding concerns for offsetting potential impacts to Columbian white-tailed deer and bald eagles arising from implementation of the Columbia River Dredged Material Management Study (DMMS), Portland District has developed the following conservation measures. The DMMS describes the Dredged Material Management Plan (DMMP) to be implemented for operation and maintenance (O&M) dredging of the Columbia River Navigation Channel. This letter serves as an addendum to the biological assessment previously forwarded to your office covering the DMMS and DMMP.

The biological assessment identified potential impacts to Columbian white-tailed deer at disposal sites O-42.9 and W-46.0/46.3. Potential impacts to deer at these locations was associated with loss of forage resources that presently occur on these two existing dredged material disposal sites. Site O-42.9 was previously used by Fort James paper corporation for experimental trials with sludge residues as a soil amendment. They established a stand of grass on the disposal site. Although experimental efforts have been discontinued, a stand of grass remains on the location. Site W-46.0/46.3 at the very upstream tip of Puget Island has been primarily used as a beach nourishment disposal location in recent years. The upland portion of the existing disposal site has not received material in a decade or longer, thus a sparse grass-forb community with scattered clumps of shrubs and cottonwoods has developed.

An average dredged material volume has been calculated for O-42.9 and W-46.0/46.3; volume placed will vary depending upon shoal extent in the channel. Volumes to be dredged in the initial DMMP implementation years will be higher as the conversion is made from beach nourishment disposal to upland disposal. Disposal efforts at O-42.9 would occur approximately every third year. Material volume is estimated to average 43,000 cubic yards for each event. We anticipate that only portions of O-42.9 would be used in any given year, although exceptions are possible.

Exhibit C

Disposal of material at W-46.0/46.3 would occur annually and average 160,000 cy. Material volumes initially placed at W-46.0/46.3 will exceed the average and then reduce in future years as material is entrapped in the upland disposal site. All or a substantial portion of this disposal site may be impacted in the initial years of the DMMP. Thereafter, lesser portions of the disposal site would be impacted in any given year.

We propose as a conservation measure to seed areas at O-42.9 and W-46.0/46.3 with grasses and forbs. Reseeding of the area supporting grasses and forbs and impacted by dredged material disposal at each disposal site would offset any forage resource loss to deer. A commercial pasture mix of grasses and clovers would be used to reseed the disposal areas. Disposal operations typically occur in summer; reseeded operations would be implemented in the fall immediately after deposition of dredged material. A conventional grass seed drill would be used for stand establishment. Operations in this manner would ensure that forage resources, at or above current levels, are continually available for Columbian white-tailed deer.

The concern expressed regarding bald eagles dealt with the potential for impacts to newly established nesting territories that occurred on or adjacent to dredged material disposal sites. Currently, the Corps funds the Oregon Cooperative Wildlife Research Unit, Oregon State University, to conduct annual bald eagle occupancy and productivity flights along the lower Columbia River downstream of Portland. These flights, which occur in April, May and/or June, serve to document bald eagle use of existing territories and to identify new bald eagle territories along the river.

We would implement a procedural conservation measure to avoid take situations for nesting bald eagles. The procedural process follows. Results from each flight are initially provided telephonically to Portland District shortly after completion of each survey. We then review the information provided to determine if there are bald eagle territories active on or adjacent to disposal sites. The preferred alternative in the Supplemental Environmental Impact Statement identifies those dredged material disposal sites that will be used over the 20 year period that the Dredged Material Management Plan (DMMP) would be in place. Thus, determination of potential impact to newly established territories can be quickly determined upon receipt of flight information, review of the established list of disposal sites, and a check with our Waterways Maintenance Section to determine disposal sites actually proposed for use in any given year.

Several courses of action, predicated upon the annual aerial survey results, will be employed by Portland District to avoid a take situation should an active bald eagle territory occur on or adjacent to an identified dredged material disposal site. Alternate disposal sites, where available,

will be used to avoid impacting an active nest. Where sufficient area is available at a designated disposal site, dredged material disposal and associated site development actions will be restricted to those portions of the site greater than 1,500 feet from the actual nest location. Timing restrictions will be employed where necessary, with disposal actions restricted to occurring after August 1. Fledging of young should occur prior to August 1. Additional monitoring of nest sites will be employed where O&M dredging is imperative, to determine when actual fledging occurs or a specific nesting effort has failed. Information from additional monitoring efforts will then be used to determine timeframes for disposal operations that are imperative to implement.

The actions outlined would be employed on a site specific basis for disposal operations in order to avoid a take situation but still accomplish operation and maintenance dredging of the channel to maintain navigation. Consultation with the U.S. Fish and Wildlife Service will be triggered when use of an alternate disposal site, distance setbacks and/or timing restrictions are not practicable with respect to maintaining navigational safety on the Columbia River.

Dredged material disposal sites not in the preferred alternative but identified for disposal use subsequent to the SEIS would require a separate Environmental Assessment complete with biological assessment for listed species prior to their use.

Portland District is committed to annually funding the bald eagle occupancy and productivity flights conducted by the Oregon Cooperative Wildlife Research Unit, Oregon State University. This commitment would extend for the 20-year duration of the DMMP or until bald eagles are de-listed.

If you have any questions, or need further information concerning this project, please contact Geoff Dorsey of my staff at 808-4769.

Sincerely,



Howard B. Jones, P.E.
Chief, Planning and Engineering Division

Copy Furnished:

CENWP-PE-E, (Stevens)

CENWP-PE-E (Dorsey)

CENWP-CO-NW (Gornick)



United States Department of the Interior

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Reply To: 8330.1274 (98)
File Name: 98i127.wpd

February 19, 1998

Howard B. Jones, P.E.
Department of the Army
Portland District, Corps of Engineers
P.O. Box 2946

Dear Mr. Jones:

This is in response to your letter dated January 7, 1998, that was received by us on January 9, 1998, transmitting your biological assessment (Appendix A) of the impacts on threatened and endangered species which may occur in the vicinity of the Columbia River Dredged Material Management Study (DMMS). The study area encompasses the Columbia River from river mile 3.0 to 106.5 and the Willamette River from river mile 0.0-11.6. The biological assessment includes the Army Corps of Engineers' (Corps) determinations for the Columbian white-tailed deer (*Odocoileus virginianus leucurus*), Aleutian Canada goose (*Branta canadensis leucopareia*), peregrine falcon (*Falco peregrinus*), bald eagle (*Haliaeetus leucocephalus*), marbled murrelet (*Brachyramphus marmoratus*), western snowy plover (*Charadrius alexandrinus nivosus*), brown pelican (*Pelecanus occidentalis*), Oregon silverspot butterfly (*Speyeria zerene hippolyta*), water howellia (*Howellia aquatilis*), golden Indian paintbrush (*Castilleja levisecta*), Bradshaw's lomatium (*Lomatium bradshawii*), and Nelson's checkermallow (*Sidalcea nelsoniana*). The following comments are provided as part of an ongoing informal consultation.

The U.S. Fish and Wildlife Service (Service) has reviewed the biological assessment and requests additional information regarding the Corps' project and determination on two species, the Columbian white-tailed deer and the bald eagle. Specific concerns and information needs were discussed with Geoff Dorsey during a telephone conversation on February 18, 1998, and are summarized below.

The biological assessment indicates the project is not likely to adversely affect the Columbian white-tailed deer. However, the biological assessment indicates that at three disposal sites, e.g. O-42.9, W-46.0 and W-46.3, the project will result in the loss of vegetation which will preclude use of habitat by Columbian white-tailed deer. Available information indicates that the species may be present and utilize these areas. The loss and degradation of habitat is a contributing factor to the decline of the species. No measures have been presented in the biological assessment to offset habitat values which will be lost as a result of dredge material placement at these three areas. Disposal site O-42.9 is approximately 53 acres, and W-46.0 and W-46.3 are approximately 72

acres. The Service believes restoration or enhancement of vegetation at these areas are needed to minimize loss of habitat values for Columbian white-tailed deer. The Service requests that the Corps address how the habitat loss or degradation of nearly 125 acres of Columbian white-tailed deer habitat over a 20-year project life will be minimized.

The biological assessment provides a thorough analysis of impacts to existing bald eagle nesting territories. New bald eagle territories and new nests within territories have appeared along the Lower Columbia River each year and are likely to continue to appear in the near future. New nesting territories may pose the greatest risk for take from otherwise routine operations and maintenance activities unless specific procedures are incorporated to assure new sites are identified, annual operations reviewed in relation to these new sites, and measures implemented to avoid impacts where necessary. The Service recognizes the support the Corps has provided in recent years to bald eagle productivity surveys along the Columbia River. However, the statement "the survey is expected to continue in the near future" is rather vague and does not provide any assurance that the Corps will implement efforts to identify new nest sites into the future. The Service believes that continuation of these surveys on an annual basis for the life of the project is an important and feasible measure needed to identify new nest sites so that impacts may be avoided. The Service requests clarification on the Corps' intent and role to conduct or complete surveys to acquire the information needed to avoid impacts at bald eagle nest sites and direct or modify dredging operations and maintenance activities each year. Additional procedural details on actions the Corps will take to conduct additional reviews of impacts to bald eagles, measures to be implemented to avoid impacts, and initiation of consultation with the Service when appropriate is also recommended.

The biological assessment includes "no effect" determinations for the peregrine falcon, western snowy plover, brown pelican, marbled murrelet, Aleutian Canada goose, Oregon silverspot butterfly, water howellia, golden Indian paintbrush, Nelson's checkermallow, Bradshaw's lomatium. The Service has reviewed the information provided in your biological assessment on these species. The Service has no new information to provide at this time which would require additional consideration or review of your "no effect" determination for these species.

The Service is aware of the Corps' time frame for completion of this consultation. The Service appreciates the extension to February 24 granted by your agency for review of this biological assessment. We would appreciate timely response to the concerns and information requests contained above so that we may either complete this informal consultation or advise your agency of any need for formal consultation promptly. If you have questions regarding comments in this letter, please contact Diana Hwang at (503) 231-6179.

Sincerely,


for Russell D. Peterson
State Supervisor

cc: R1 FWE-SE
PFO-ES