

CENWP-OP-NW (1130-110-04-B02)

MEMORANDUM FOR DISTRICT COMMANDER

SUBJECT: Maintenance Dredging of the Columbia River (RM 3 to 106.5)

1. In accordance with 33CFR, Part 337.6, Subject Statement of Findings is enclosed for your signature.
2. The Statement addresses maintenance dredging of the Federally authorized 40-foot navigation channel from RM 3 to 106.5 in the Columbia River. Approximately 4 to 6 million cubic yards will be removed by pipeline dredge, clamshell dredge, or hopper dredging. The work may occur year around to prevent hazardous conditions from developing, but normally occurs between 1 June and 31 October. Some maintenance dredging occurs between March and June if restrictive shoaling is present in the channel during that timeframe.
3. The conditions and provisions of the enclosed water quality certifications from the States of Oregon and Washington will be followed to the extent practicable to minimize environmental effects.
4. If you have questions regarding this matter, please contact Jon Gornick of my office at extension 4341.

Encl

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THOMAS E. SAVIDGE, P.E.  
Chief, Operations Division

## STATEMENT OF FINDINGS

### References:

1. Department of Army, Corps of Engineers, Portland District, Public Notice NWPOP-CLA-F00-003, Maintenance Dredging of Columbia River (RM 3 to 106.5), dated February 11, 2000.
2. Dredged Material Management Plan and Supplemental Environmental Impact Statement dated June 1998, Finding of No Significant Impact, Section 404(b)(1).
3. General and Specific conditions and provisions of Oregon and Washington Water Quality Certifications (enclosed).
4. Biological Opinion - Columbia River Operation and Maintenance Dredging prepared by the National Marine Fisheries Service, Northwest Region, September 15, 1999.

**I. Description of Work:** The proposed work involves the redistribution of sedimentary material from the Columbia River portion of the Columbia and Lower Willamette Rivers Federal project channel. The authorized project is 40 feet deep, 600 feet wide and extends from RM 3 to 106.5 on the Columbia River. The channel authorization allows for over depth dredging of up to 5 feet to ensure that the authorized depth is maintained between dredging operations. Shoals vary from year to year, but generally form first on the channel edges and build toward the middle of the channel. Depending on the need for maintenance, approximately 4-6 million cubic yards of sands per year will be removed by pipeline dredging, clamshell dredging, or hopper dredging. The work may occur year around to prevent hazardous conditions from developing, but normally occurs between 1 March and 30 November.

**II. Location:** Columbia River Deep Draft Navigation Channel, Pacific County, Washington; Wahkiakum County, Washington; Cowlitz County, Washington; Clark County, Washington; Clatsop County, Oregon; Columbia County, Oregon; Multnomah County, Oregon.

**III. Purpose:** Maintenance dredging of the Federal Project to provide the authorized depth of 40 feet below Columbia River Datum (CRD).

**IV. Findings:** The following are considered pertinent in evaluation of this work and consideration of comments received from the public notice.

A. Federal Agencies:

1. No comments were received from the National Marine Fisheries Service (NMFS). However, NMFS issued a Biological Opinion on the Corps of Engineers' Columbia River Channel Operation and Maintenance Program on September 15, 1999, including specific, non-discretionary terms and conditions. Compliance with these terms and conditions will exempt the Corps from the prohibitions of Section 9 of the Endangered Species Act (ESA).

2. A letter was received from Region X of the Environmental Protection Agency (EPA), dated March 14, 2000, confirming that material from the navigation channel is suitable for unconfined open-water disposal. EPA further stated that periodic review of sediment quality data by the Corps and EPA is expected to occur pursuant to the Dredged Material Management Plan (DMMP) and confirmatory testing, as needed, performed in accordance with the procedures established in the Dredged Material Evaluation Framework, Lower Columbia River Management Area (DMEF, 1998). EPA has no objection to the continued use of disposal areas and techniques proposed for this next 5-year cycle, but clarified the status and use of ocean disposal sites. At present, only maintenance material from the Mouth of the Columbia River federal navigation project is approved for disposal in the ocean dredged material disposal sites. Final site designation of sites "E" and "Deepwater" will authorize disposal of dredged material from the river channel at the new sites in accordance with requirements of their Site Monitoring and Management Plans.

3. A letter was received from the U.S. Department of the Interior, Fish and Wildlife Service (USFWS), dated March 17, 2000, stating that no action will be taken by the Service at this time because of limited funding and staff. However, this letter should not be construed as assisting the Corps in meeting its regulatory responsibilities under the Endangered Species Act of 1973, as amended, especially in regard to the southwest Washington/Lower Columbia River ESU for coastal cutthroat trout which is currently proposed as threatened. The Service requests that the Corps be required to adhere to all conditions and requirements specified by other Federal and State resource agencies.

B. State and Local Agencies:

1. No comments were received from the Oregon Department of Fish and Wildlife (ODFW).

2. A letter was received from the Oregon Department of Land Conservation and Development (DLCD), dated March 13, 2000, stating certain coastal zone issues associated with channel maintenance. The following is a summarized list of the issues:

a. Flow lane disposal in areas over 65 feet deep would be inconsistent with local policies of the Oregon Coastal Management Program.

b. The Department is concerned with any increase in ocean disposal volumes prior to having new ocean disposal sites (i.e., expanded Site E and the Deepwater site) available for use.

c. The Department remains concerned about potential impacts at estuarine disposal sites. Therefore, it is imperative that the Corps continues to coordinate with DLCD on estuarine disposal issues, requesting coastal zone review of any significant changes in disposal practices.

d. Past and future use of the Miller Sands and Welch Island disposal sites must be addressed in the Columbia River Dredged Material Management Plan (CRDMMP), part of the Clatsop County comprehensive plan and the Oregon Coastal Management Program.

e. The Corps will need to initiate coastal zone review for pile dike construction at Miller Sands and channel modifications at river miles 28-33, if and when they are to be pursued.

3. A letter was received from the Oregon Department of Environmental Quality, dated June 5, 2000, certifying that the subject project complies with the Clean Water Act and state water quality standards, if the conditions contained in the letter are made a part of the Federal permit (see enclosed letter).

4. A letter was received from the Washington Department of Ecology, dated June 5, 2000, certifying there is reasonable assurance the activity proposed in the public notice will be conducted in a manner that will not violate applicable State water quality standards. This water quality certification, with modification, is subject to the conditions contained in the enclosed Order.

#### C. Individuals and Organized Groups:

1. A letter was received from Vera Jensen, a resident of Puget Island, dated March 7, 2000. She proposes that the Corps replace pile dikes that were removed along Puget Island, dredge the mouths of all the sloughs and creeks where siltation is a problem, use the dredge spoils to nourish the adjacent beaches, and protect the fish in whatever manner is necessary, at any cost.

2. A letter was received from Bob Warner, a resident of Vancouver, Washington, who states that he is not in favor of deepening or widening the present channel in the Columbia River, and is more in favor of less intrusion than the annual maintenance work presently done.

3. A letter was received from Ruth D. Edmondson, a resident of Puget Island, dated March 15, 2000. She has the following observations:

a. Dredging primarily should coincide with those calendar periods with the smallest salmon runs.

b. When aligning channel reaches, great care should be given to moving the channel further away from improvements along the banks. In the Willow Grove area, and on Puget Island and River Ranch in Oregon, beach nourishment would be in order.

c. If the channel west of Skamokawa is realigned, great care should be taken to protect the Skamokawa waterfront, the slough, and Vista Park.

4. A letter was received from the Columbia River Pilots, dated March 31, 2000, underscoring the importance of timely channel maintenance dredging in the Columbia River. The pilots stated that timely maintenance dredging is essential to the safe passage of ships because it provides sufficient and predictable under-keel clearance, and adequate margins of safety, especially for the largest vessels transiting the river.

5. In a letter dated March 23, 2000, the Port of Vancouver, one of the non-Federal sponsors for the 40-foot channel, expressed its support for continued maintenance of the project as described in the Public Notice.

6. In a letter dated March 31, 2000, the Port of Longview, as one of the sponsoring ports for the 40-foot channel project, urged the Corps to continue, without interruption, its ongoing maintenance of the federal navigation channel in the Columbia River.

7. In a letter dated March 31, 2000, "K" Line America, Inc. voiced its strong support for the continued maintenance dredging on the Columbia River.

8. A letter was received from the Columbia Deepening Opposition Group, dated April 2, 2000, discussing four areas of concern:

a. CDOG believes that the timing of maintenance dredging operations should be structured to be sensitive to fish migration (including smelt).

b. CDOG believes that more chemical testing of sediments in the Columbia River should be conducted, specifically in the areas where 100 feet of advance width maintenance is performed. CDOG feels that screening levels used by the Corps are often far in excess of what may be harmful to health.

c. CDOG would like the Corps to mitigate for maintenance dredging and disposal in the Columbia River because of the historic damages it feels have occurred as a result of this activity.

d. CDOG believes that most of the clean sands in the Columbia River should serve a beneficial use.

e. CDOG feels that estuary islands must no longer be used for dredged material.

f. CDOG feels that ocean disposal of material from this project should not even be considered.

g. CDOG would like the Corps to end all flow lane disposals associated with this

project for a variety of reasons.

9. A letter was received from the Washington Public Ports Association, dated April 3, 2000, urging support for the continued maintenance and operation of the Columbia and Willamette 40-foot Federal Navigation Channel.

10. In a letter dated April 4, 2000, Salmon For All protested the proposal to deposit any additional dredge spoils on Rice Island and Miller Sands given the less than successful attempts to discourage colonization of the Caspian tern population. They also feel that beneficial uses of dredged material such as beach nourishment on Benson Beach must be further explored as a disposal option.

11. A letter was received from the Columbia River Crab Fisherman's Association (CRCFA), dated April 4, 2000, which laid out several concerns, mostly related to ocean disposal of dredged material and related impacts. The following are CRCFA comments related to the Columbia River Navigation Project:

- a. Mitigation must be forthcoming for negative impacts to aquatic resources in the estuary system.
- b. Loss of deep-water sturgeon habitat needs to be further addressed.
- c. Creation of additional tern and other salmon predator habitat needs elimination.
- d. Biologic timing windows for all aquatic species needs development.
- e. Analysis of side slope adjustments must be monitored for encroachment of contaminated sediments entering the channel and dredged as a result of future maintenance dredging.

12. At the Public Hearing on Maintenance Dredging of the Columbia River (RM 3 to 106.5) on April 4, 2000, James R. Townley, Executive Director of the Columbia River Steamship Operators Association, commented in writing. The presence of an effective, reliable maintenance dredging program is an important consideration in the choice ship owners and operators make when selecting a port. The absence of such a program raises serious questions of navigation safety and predictability of vessel scheduling. The importance of allowing and encouraging an aggressive maintenance dredging program cannot be overstated and should not be underestimated.

13. In a letter dated April 4, 2000, the Port of Portland declared it supports maintenance dredging of the Columbia River deep-draft navigation channel as a necessary activity to assure the safety and reliability of maritime trade to and from the public and private docks in the Portland Harbor. The Port remains fully committed to fulfill its non-Federal sponsorship responsibilities for the maintenance of the 40-foot channel under the terms of local cooperation for the project.

14. In a letter dated April 4, 2000, the Port of Kalama declared its strong support for the continued maintenance dredging of the Columbia River Navigation Channel.

15. In letters dated from March 24 through April 4, 2000, the following groups urged the approval of the maintenance dredging in the Columbia River 40-foot Federal Navigation Channel:

International Brotherhood of Painters & Allied Trades, AFL-CIO, CLC, District Council #5  
Cascade General, Portland Shipyard  
Amalgamated Transit Union, Division 757  
Columbia Pacific Building and Construction Trades Council, AFL-CIO  
International Union of Operating Engineers/Local 701  
W.G. Moe & Sons  
Kalama Export Company LLC  
International Longshoremen's & Warehousemen's Union, Local #21  
International Longshore and Warehouse Union, Local 4  
Oregon State Building & Construction Trades Council  
Northwest Oregon Labor Council, AFL-CIO  
Metal Trades Council of Portland and Vicinity, AFL-CIO  
Oregon Machinist's Council  
Oregon AFL-CIO  
Washington State Potato Commission

16. At the Public Hearing on Maintenance Dredging of the Columbia River (RM 3 to 106.5) on April 4, 2000, Stacey and Kathleen Pritchard of Rainier, Oregon commented in writing that they are very much in favor of the Corps of Engineers continuing the annual maintenance dredging.

17. A letter was received from the Columbia River Estuary Study Taskforce (CREST), dated April 6, 2000, which expressed concerns with water quality and coastal zone consistency issues related to the subject Public Notice.

a. CREST is concerned that the Corps is proposing ocean disposal of upriver maintenance material without adequate site capacity and before new sites have been designated.

b. CREST believes the exclusionary sediment characterization is inadequate for ocean dumping.

c. CREST is concerned that exact locations of advance maintenance dredging areas outside the navigation channel are not presented in the Public Notice, and therefore, it is impossible to determine if sediment sampling and analysis has taken place at these locations.

d. CREST believes that disposal at Rice Island and Miller Sands should cease until it is clear that the Corps is able to fulfill the requirements in the Terms and Conditions of the NMFS maintenance dredging Biological Opinion.

e. CREST believes that advance maintenance dredging and upland/beach disposal work occurring outside the navigation channel must follow state and federal agency timing guidelines for in-water work outside the main navigation channel.

f. CREST believes that the Corps is required to obtain local plan amendments before disposing any dredged material in estuary areas deeper than 65 feet, and to continue to use Miller Sands and Welch Island as dredged material disposal sites.

18. An electronic message was received from the Oregon Chapter Sierra Club, dated April 7, 2000, urging the following changes be made to the dredging maintenance project:

a. No more dredge spoils must be deposited which will create any additional habitat for Caspian terns. This means that Rice Island should no longer be used for spoils.

b. Flowlane discharge must be prohibited. This discharge damages habitat along the bottom of the river which may be essential to the food chain in the river.

c. Ocean disposal of materials from this project should be eliminated. Ocean disposal adversely affects numerous species important to fishermen (crabs) as well as disrupting the food chain in near shore areas.

d. Dredging has adversely affected aquatic life, including salmon, in the Lower Columbia River for decades. To date, there has been no mitigation program. There must be an annual, ongoing mitigation program for as long as there is an ongoing dredging program. This program must have a fixed restoration goal that takes into account current impacts, as well as past damage caused by the shipping channel. We would recommend some fixed goal each year, say 50 acres of wetlands restored annually.

e. The timing of dredging operations should be conducted so as to minimize adverse impacts on aquatic life.

19. A letter was received from Northwest Environmental Advocates (NEA), dated April 7, 2000, stating their concerns:

a. NEA is concerned that the Corps is proposing to dispose of sediments from the river into two insufficient ocean sites and one unapproved ocean site that is based on an as yet unapproved project. It states that this issue must be resolved and upon resolution, a new public notice must be issued.

b. NEA is concerned with the dumping of uncharacterized, potentially contaminated river sediments in the ocean.

c. NEA claims that the Corps has not coordinated with agencies, commercial fishers, and other ocean user groups to establish management and biological monitoring plans for the new ocean disposal sites.

d. NEA feels that all over-width dredging, upland, and shoreline disposal work which occur outside the navigation channel must adhere to timing guidelines of state and federal agencies in order to protect the estuary's natural resources and remain in compliance with Policy 3 of the Columbia River Estuary Dredged Material Management Plan (CREST, 1986).

e. NEA feels that disposal on Rice Island cannot go on until the Corps fulfills the requirements of the terms and conditions as laid out by the NMFS Biological Opinion for maintenance dredging.

f. NEA feels that sediments closer to the banks of the river have a greater potential for containing contaminants and that impacts to water quality cannot be estimated by the reviewing state agencies without specified locations and sediment testing at over-width dredging sites.

g. NEA feels that the States should be given time to review the new material pertaining to dredging impacts that was released during the FEIS channel deepening process, before being requested by the Corps to re-issue certifications for maintenance dredging.

20. A letter was received electronically from Jon Westerholm, Columbia River gillnetter and representative of the Columbia River fishing organizations Salmon For All and Columbia River Fishermen's Protective Union. He suggests that the Corps work more directly with the public individuals and groups more affected by maintenance dredging of the ship channel, and that the Corps take a leadership role in trying to preserve and improve the river environment in the process. Mr. Westerholm would like to see the following more environmentally friendly changes in maintenance dredging take place:

a. Timing windows must be adhered to.

b. Disposal, for the most part, must be on uplands, not islands, with the exception of ship wake eroded beaches and levees. No more Rice Islands.

c. Drastically reduce flow lane dumping.

d. No open ocean crab dumping.

e. Testing continually to prevent harm to shallower side channels from reduced flow, warmer water temperatures, and increased contaminated sediments.

21. A group of landowners along Ostervold Road on Puget Island sent a letter, signed by each landowner, requesting that the Corps place sand from the next scheduled maintenance dredging along the beach in front of their properties as it has over the past 40 years.

22. At the public hearing for maintenance dredging of the Columbia River (RM 3 to 106.5), held on April 4, 2000, in Astoria, Oregon, a total of 32 people testified. Many of these later submitted written comments, therefore, comments from their oral testimonies will not be repeated. For those who gave only oral testimony, their comments will be listed following this paragraph.

a. Bill Hebert, resident of Astoria, expressed concern that dredging redistributes contaminants in the river.

b. Rosina Williamson, resident of Stella, Washington, is concerned with erosion of her beach at RM 56.3. She feels that there ought to be a fund to help those like herself maintain their shoreline because of the erosion caused by ship wakes.

c. Don Wagmer, regional administrator for the Washington Department of Transportation, had two points to make. First, that the Columbia River continue to be maintained as a viable link in transportation. Secondly, that as the Corps goes about maintaining the river, it keeps in mind that the river is a natural jewel and should be kept that way for years to come.

d. Mack Funk, port manager in Ilwaco, Washington, posed a series of questions (9 total) to the Corps. The following is a list of those questions:

1. With the Endangered Species Act, why is the Corps allowed to dredge year round, but local ports are only allowed to work during four months in the wintertime?

2. What testing does the Corps perform of the sediments?

3. Why doesn't the Corps place the sediments from the Mouth of the Columbia River in a beneficial upland location such as the replenishment of Benson Beach at the north jetty at Ft. Canby State Park?

4. What mitigation is the Corps performing for the current in-water disposal of dredged materials?

5. What's the Corps doing to protect commercial crab fishing?

6. Before the Corps built the jetties at the mouth of the river, Baker Bay averaged over 11 feet deep. Now Baker Bay averages one and a half deep, and those figures are at low tide. What does the Corps propose as compensation for the damages to the Ilwaco communities?

7. What corrective action does the Corps propose to repair the loss of natural habitat?

8. What does the Corps propose in order to restore the water depth in Baker Bay and the free access to the Port of Ilwaco?

23. Thron Riggs, Columbia River Bar Pilot, expressed his concern with any suspension of maintenance dredging because of the potential economic or environmental effects that could ensue. He stated the potential impacts resulting from the curtailment of maintenance dredging include the increased risk of ship groundings or collisions, exacerbated highway congestion, or the loss of family wage jobs.

24. Paul Vik, resident of Puget Island, shared Rosina Williamson's proposal for a fund to be created that would compensate property owners along the Columbia River with the loss of their property.

25. Glenn Vanselow, executive director of Pacific Northwest Waterways Association, stated that there is broad regional support for continued maintenance of the channel, not just in the lower Columbia River.

26. Milton Gadgell, owner of Pacific Salmon Charters in Ilwaco, Washington, expressed his opinion that the Corps should do something to keep cormorants off pile dikes, rehabilitate disposal islands to keep the terns off and prevent sand from blowing back into the river, and provide more help to the downstream ports, for example, with dredging their harbor entrances.

27. Don McDaniel, resident of Astoria, expressed his opinion that although the people living near the Mouth of the Columbia River recognize the importance of maintaining the channel and the importance of international commerce, they are concerned with the toxins and all the other adverse effects which could arise as a result of improper methods of dredging.

28. Paul Aldinder, resident of Puget Island, would like to see the Corps continue to place sand along the beaches of Puget Island.

29. George Kiepke, Clatsop County commissioner, appealed to the Corps to come into compliance with all the permits that Clatsop County has issued for the past dredging program, and to file all the necessary permits through Clatsop County for the next dredging process.

30. Don Riswick, commercial gillnetter, asked if there was going to be any testing of the materials to be dredged. He talked about the slime program from 1961. He recommended that a deep water port be built at Tongue Point.

31. Steve Gray, commercial fisherman, crab fisherman, gillnetter, had a couple of concerns. He would like Baker Bay and Chinook channels put in the normal maintenance dredging program. He also feels that the Corps needs to sit down with the crab industry and

discuss mitigation for dumping in the ocean.

D. Corps of Engineers Environmental Assessment: All factors relevant to the proposed work were considered in accordance with applicable regulations and the Chief of Engineers policy.

E. Other Considerations and Determinations:

1. Temporary turbidity is anticipated during dredging operations, but it is not expected to be of sufficient magnitude or duration to have a significant adverse effect on fish and other aquatic life forms.

2. The project is not expected to usurp any public rights to navigation or recreation, nor is it expected to have a significant adverse effect on the area's scenic value.

3. There are no known archaeological or historic sites in the area to be affected by the project.

4. No wetland areas will be negatively affected by the maintenance project. Every effort will be made to avoid unnecessary impacts to riparian vegetation at disposal sites during disposal operations.

5. The work will be done in accordance with the terms and conditions of the September 1999 Biological Opinion for Columbia River Maintenance Dredging, issued by the National Marine Fisheries Service for the protection of threatened and endangered salmon stocks. However, the following exceptions must be noted. The hazing of terns off Rice Island has been stopped through a court injunction and the Corps cannot currently comply with this term and condition of the Biological Opinion. The Corps will continue to work with NMFS, USFWS and others on a long term plan to address avian predation on juvenile salmon and steelhead in the estuary. All dredge range markers will be removed from the river by September 30, 2000, except for the ranges on Desdemona Sands and Tansy Point. Four of these structures are located in water and will remain permanently as private aids to navigation for use by the Columbia River Bar Pilots. The Corps believes that these structures are low enough in the estuary that they should not contribute to salmon predation. The Corps is requesting from NMFS that no pipeline entrainment studies in side channel areas with waters less than 20 feet deep will be conducted since no pipeline work is currently being performed for Corps maintenance dredging. These channels are being maintained with hopper and/or clamshell dredging. The Corps is also requesting extensions to the work windows at the Vancouver to The Dalles project (through March) and the Skipanon Channel project (through October) based on results from entrainment studies conducted with hopper dredges.

6. Sediments to be dredged from this project have been and will continue to be evaluated in accordance with procedures outlined in the "Dredged Material Evaluation Framework (DMEF), Lower Columbia River Management Area, November 1998", which follows the

guidelines of the Clean Water Act and Marine Protection Research and Sanctuaries Act. The most recent collection and testing (physical and chemical) of sediments from the main Federal navigation channel in the Columbia River was conducted for the Columbia River Channel Improvements Study in 1997. Based on evaluation of these sediment samples, the sediments have been determined to be suitable for unconfined aquatic disposal.

7. Over-width dredging, up to 100 feet outside the navigation channel, will be restricted to locations having encroaching shoals where high volumes of material are required to be dredged to maintain the authorized project depth for deep draft vessels between dredging operations. Without the employment of over-width dredging, the channel would quickly reshale and redredging would be required in the same dredging season.

8. Flow lane placement of dredged material will occur in depths between 45 and 65 feet in locations within or adjacent to the Federal navigation channel. Flow lane placement would occur in depths over 65 feet only between RM 30 and 33 in the Oregon half of the navigation channel, between RM 54 and 56.3 in the Oregon half of the navigation channel, and between RM 72.2 and 73.2 in the Washington half of the navigation channel. Placement between RM 30 and 33 will not occur until agency studies of sturgeon use and feeding habits have been addressed (see paragraph 10 below). The Corps will comply with the Oregon Coastal Management Program to the maximum extent practicable.

9. Placement of dredged material on Welch Island (O-34.0) and Miller Sands (O-23.5) has occurred on a regular basis for over 20 years. This action has undergone several public reviews during that time with no adverse comments from State and local planning agencies. The Corps has submitted an application for plan/zoning amendment to Clatsop County. This amendment would designate the Welch Island site and a portion of the Miller Sands site as disposal sites in the local plan.

10. Multi-agency (both State and Federal resource agencies) studies are being conducted on both smelt and sturgeon. One study will assess the distribution and location of smelt in the Columbia River in order to conduct dredging operations that will minimize or avoid impacts to this species. The other study will assess the use and feeding habits by sturgeon in the navigation channel from RM 30 to 35 in order to manage the flow lane placement of dredged material and avoid or minimize impacts.

11. Prior to placing dredged material from RM 3 to 28 in ocean disposal sites, the Corps will coordinate with the Ocean Disposal Task Force consisting of State and Federal resource agencies, commercial crab fishermen, and other interested parties. If quantities of dredged material vary significantly from those proposed in the 1998 DMMP/SEIS, a separate public notice will be issued addressing the changes.

12. Placement of dredged material on Benson Beach is currently being studied. However, Benson Beach would not be a replacement or an alternative site for dredged material from the estuary. It would not be economically feasible at this time to place all this material along with

material from maintenance dredging at the Mouth of the Columbia River on Benson Beach. Additional equipment would be required and it would cost significantly more (several million dollars) than our current maintenance practice. Portland District has received a letter from Pacific County indicating an interest in initiating a study under other authorities that could allow the Corps to place dredged material directly onto Benson Beach. We also understand that the Southwest Washington Coastal communities are working with their congressional representatives to seek authority and funding for the Corps to place dredged material directly onto Benson Beach.

13. Maintenance dredging will occur primarily between June 1 and October 31. Dredging outside this period may occur if shoals develop that restrict deep draft navigation in the Federal channel.

14. The Corps will continue to coordinate with the Washington Department of Ecology to develop, plan and implement a monitoring program within the limits of our authorities. The monitoring program will help determine the benefits of the Corps Columbia River Navigation project on sediment availability and movement with particular emphasis on the entrance to the Columbia River and nearby coast.

15. The Corps will attempt to accommodate other concerns to the extent practicable within the limits of its authorities.

#### **V. Conclusions:**

A. In balance, adverse effects are acceptable, beneficial effects are specifically identifiable, and the project, as conditioned, is in the general public interest.

B. In accordance with 33 CFR 230, on the discharge of dredged or fill material, an environmental evaluation has been completed. A Record of Decision, a Coastal Zone Consistency Determination, a Supplemental EIS and a Section 404(b)(1) evaluation, dated June 1998, are available in the Environmental Resources Section at Portland District.

C. The project will be completed as described in the public notice and with the conditions noted in the water quality certifications from the States of Oregon and Washington.

