STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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June 6, 2005

REGISTERED MAIL
RB 253 008 315 US

Robert E. Willis
Chief Environmental Resource Branch
U.S. Army Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

RE: Water Quality Certification Order 2529 for maintenance dredging of the Columbia River between RM 3 and RM 192

Dear Mr. Willis:

The above-referenced public notice for proposed work in waters of the state has been reviewed in accordance with all pertinent rules and regulations. On behalf of the State of Washington, the department certifies that there is a reasonable assurance the work proposed in the public notice will be conducted in a manner that will not violate applicable State water quality standards. This certification is subject to the conditions contained in the enclosed Order and may be appealed by following the procedures described in the Order. If you have any questions concerning the content of the Order, please contact Loreé Randall at (360) 407-6068.

Sincerely

Paula Ehlers, Section Manager
Shorelands and Environmental Assistance Program

PE:LR:dn
Enclosure

DEPARTMENT OF ECOLOGY

In the Matter of Granting a Water Quality Certification to: Portland District Corps of Engineers **In Accordance with 33 U.S.C. 1341 [FWPCA § 401], RCW 90.48.260, RCW 90.48.120 and WAC 173-201A WAC 173-201A**	)))))))	**ORDER No. 2529** Maintenance dredging of the lower Columbia River navigation channel to maintain the current authorized depths between RM 3 and RM 192.

TO: Robert E. Willis
Chief Environmental Resource Branch
U.S. Army Corps of Engineers
P.O. Box 2946
Portland, OR 97208-2946

The Portland District Corps of Engineers (Corps) submitted a request for a 401 water quality certification (401 Certification) from the State of Washington Department of Ecology (Ecology) pursuant to the provisions of 33 U.S.C. 1341 (FWPCA § 401). The request sought a 401 Certification for the Corps' proposed maintenance of the Columbia River navigation channel between river miles (CRM) 3 and 192. The Corps submitted a similar request to the State of Oregon Department of Environmental Quality (DEQ). The request for certification was made available for public review and comment, on January 21, 2005. The Corps, Ecology and DEQ also convened a joint public hearing on April 12, 2005 at which time additional comments were submitted pursuant to the analysis of the project under FWPCA § 401.

The proposed project involves the maintaining the lower Columbia River navigation channel from CRM 3.0 at the mouth to RM 192 and various side channels along the river. The dredging and disposal of sediment from the maintenance of the channel will occur in both Oregon and Washington.

The Corps proposes to dispose of the dredged material at a combination of sites: [1] in-water sites, such as re-handling and flowlane sites located in or near the mainstem reaches of the river; [2] shoreline or beach nourishment sites, and [3] upland sites.

Water Quality Certification Conditions:

In view of the foregoing and in accordance with 33 U.S.C. 1341, 90.48.260 RCW, 90.28.120 RCW and Chapter 173-201A WAC, a combined water quality certification (Order) is granted to the Portland District Corps of Engineers subject to the following conditions:

I. Short-term Modification to the Water Quality Criteria.

The dredging and disposal needed to maintain the navigation channel may result in the temporary exceedance of certain state water quality criteria or special conditions specified in Chapter 173-201A WAC. Under WAC 173-201A-110, Ecology may grant a "Short-term Modification" to allow for such exceedances of the criteria on a short-term basis when necessary or to otherwise protect the public interest". Ecology finds that maintenance of the navigation channel is an activity essential for the safe and efficient movement of commercial vessels to upriver ports. In

granting the following modifications, Ecology finds that supporting information clearly indicates the granting of mixing zones would not have a reasonable potential to: (1) cause a loss of sensitive or important habitat; (2) substantially interfere with the existing or characteristic uses of the lower Columbia River; (3) result in damage to the ecosystem; or, (4) adversely affect public health.

A. The project reach of the lower Columbia river is classified as Class A waters; thus, Class A water quality standards of 173-201A-030(2) apply, except as specifically modified by this order. Temporary dilution zones, or mixing zones, are authorized for dredging and/or disposal to allow for temporary exceedances of certain water quality standards as a result of disturbing in-place sediments. Within the mixing zones, except as noted, water quality criteria are modified as follows:

1. **Turbidity.** Class A water quality standards for turbidity are waived within the specified mixing zones as outlined within specific conditions of this Order.

B. **Mixing Zones.** Mixing zones and other applicable conditions are specified below under the separate categories of the project. The mixing zones are considered reasonably sufficient to allow for the temporary impacts of the project. All other applicable water quality standards shall remain in effect in the mixing zones and all water quality standards are expected to be met outside of the mixing zones.

C. **Duration of the Modification.** Per WAC 173-201A-110, a modification of a water quality criterion (such as turbidity) within a mixing zone is intended for short-term periods of time, *such as for hours or days rather than weeks or months*. In this case, Ecology finds that the effects of maintenance dredging are short-term in that dredging/disposal occurs at discrete and separate shoal locations (the entire channel does not need annual dredging) and that dredging at each shoal location is completed in a matter of days. However, within the context of this certification, no degradation of water quality will be allowed if such degradation is found to significantly interfere with or become injurious to characteristic water uses or cause long-term harm to the environment of the lower Columbia River.

II. In-water work windows:

A. Dredging in the Columbia River from CRM 106.5 to 125.3 shall only occur between August 1 and September 30 of any given year.

B. Dredging in the Columbia River navigation channel from CRM 6 to CRM 106.5 may occur at any given time during the year.

C. Dredging in areas supporting populations of Dungeness crab shall be limited to times of least crab abundance. Between CRM 3 and CRM 7 dredging is not allowed July 1st through December 31st.

D. Dredging in the described side channels and in any shallow water areas (less than 20 feet) shall occur only within preferred time window, November 1 to February 28 of any given year

III. Water Quality Monitoring

A. Turbidity monitoring with an appropriately and regularly calibrated turbidimeter shall be conducted and recorded as described below:

1. Monitoring shall occur each day during daylight hours when dredging and disposal is being conducted.

2. Samples shall be taken within the water column at 10 and 20 feet from the surface of the river, or other depths approved in writing by Ecology. Other depths that Ecology may approve must be representative of the levels of turbidity at the depth range used by cold water fish.

3. Samples must be taken every four hours at least 300 feet upcurrent (surface current) from dredging operations, upland return water discharge locations or beach nourishment sites to establish background turbidity levels for each monitoring cycle. Background turbidity in NTU, location, depths, and time must be recorded prior to monitoring downcurrent.

4. For dredging operations, upland return water discharges or beach nourishment sites samples must be taken every four hours at least 300 feet downcurrent from the point of discharge and no more than 150 feet laterally from the vessel. Turbidity in NTU, location, depths, and time must be recorded.

5. For in-water disposal operations samples must be taken once a day during daylight hours. Monitoring shall be conducted as described A.2, A.3 and as described below:

    a. Samples must be taken at least 300 feet downcurrent of the last discharge point (location of last pumping or after the doors have been closed) and no more than 150 feet laterally from the point of discharge. Turbidity in NTU, location, depths, and time must be recorded.

6. If the turbidity measurements taken at a 300 foot station are 1) greater then 5 NTU over background where the background is less then 50 NTU, or 2) more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU, the Corps is required to modify or stop the activity causing the problem. The Corps shall continue to monitor every two hours until the levels return to background. Once the levels have returned to background levels the Corps can resume sampling every 4 hours.

B. During dredging of a side channel dissolved oxygen levels shall be measured with an

appropriately and regularly calibrated meter and recorded as described below:

1. Monitoring shall occur each day during daylight hours when dredging is being conducted.

2. Samples shall be taken within the water column at 10 and 20 feet from the surface of the river, or other depths approved in writing by Ecology. Other depths that Ecology may approve must be representative of the levels of turbidity at the depth range used by cold water fish.

3. Samples must be taken every four hours at least 300 feet upcurrent from dredging operations. Dissolved oxygen levels, location, depths, and time must be recorded prior to monitoring downcurrent.

4. Samples during dredging operations must be taken 300 feet downcurrent (surface current) from the point of discharge (bucket, cutterhead, or draghead, whichever is being used). Dissolved oxygen levels, location, depths, and time must be recorded.

5. If dissolved oxygen levels fall below 6.0 mg/l, the Corps is required to modify or stop the activity causing the problem and continue to monitor every two hours until the levels return above 6.0 mg/l. Once the levels have returned to above 6.0 mg/l the Corps can resume sampling every 4 hours.

C. The designated person attending the monitoring equipment shall be responsible for immediately notifying the project foreman if the turbidity measurement exceeds the standards and if the dissolved oxygen levels fall below 6.0 mg/l.

IV. Reporting

A. The Corps shall submit a monthly monitoring report, highlighting any exceedances to Ecology. The monthly reports should include:

- monitoring locations;
- background levels of turbidity and dissolved oxygen (when applicable);
- turbidity measurements at required intervals and depths;
- dissolved oxygen levels at required intervals and depths (when applicable);
- when/if the activity is modified or stopped as a result of exceedances of levels of turbidity and/or dissolved oxygen;
- what actions were taken to modify the activities if the turbidity or dissolved oxygen levels were exceeded and/or how long the activity was stopped;
- what BMPs were used to bring the levels into compliance; and when the activity began again.

B. The Corps shall compile and submit an annual report to Ecology no more than 90 days after the dredging season ends. The annual report shall include:

- locations where dredging occurred;
- amounts of material dredged in all locations;
- disposal locations;
- summary of turbidity monitoring, including exceedances;
- descriptions of upland disposal locations during operations, including BMPs employed and effectiveness of those BMPs; and summary of results from dissolved oxygen monitoring.

V. **Dredging** - The Corps shall conduct its dredging activities according to the following conditions:

A. The following general condition applies to all dredging activities between CRM 3 and CRM 192:

1. Dredging operations shall be conducted in a manner that minimizes the disturbance or siltation of adjacent waters and prevents the accidental discharge of petroleum products, chemicals or other toxic or deleterious substances into waters of the State.

B. The following specific conditions apply to the specific dredging activity or the area of the river being dredged:

1. Clamshell Dredging:

a) Mixing Zone: 300 feet downcurrent from the point of discharge.
b) Each pass of a clamshell bucket shall be complete with no stockpiling done in the water. Dredged material shall not be stockpiled on a temporary or permanent basis below the ordinary high water line.
c) Large debris picked up by a clamshell dredge shall be removed from the dredged sediments prior to disposal at a flowlane disposal sites. Large debris includes old pilings or sinker logs [longer then three feet or greater than one foot in diameter], tree stumps, and man-made materials such as scrap metals, car bodies, broken concrete or asphalt and the like.
d) The Corps shall only use a clamshell dredge to dredge the side channel to Ilwaco and Chinook.

2. Hopper and Pipeline Dredging:

a) Mixing Zone for Pipeline Dredging: 300 feet downcurrent of the point of discharge.
b) Mixing Zone for Hopper Dredging with Bin Overflow: 300 feet downcurrent from the point of discharge.
c) Hopper and pipeline dredges shall be operated with the intake at or

below the surface of the sediments being removed during all periods of operation. Reverse purging of the intake line shall be held to an absolute minimum.

VI. Dredged Material Disposal.

A. The Corps shall continue to develop a regional sediment management (RSM) program that encompasses the maintenance of this project as well as other Columbia River navigation projects. Highest priority shall be given to placing dredged material at nearshore sites that have been shown to be highly erosive. When available for use, the Corps shall fully integrate the use of these sites into this project.

B. A qualitative assessment of sediments is necessary to determine the suitability of sediments for the disposal options resulting in discharges to waters of the State of Washington. For the maintenance project, the disposal options include flowlane, beach nourishment, and upland disposal. The disposal options that will result in discharges of effluent to waters of the state include beach nourishment and upland disposal.

1. The sediments to be dredged from the navigation channel have been determined to be suitable for the above disposal options based upon the results from sediment sampling surveys. Sediment survey of the channel was undertaken for the proposed Deepening Project (Siipola, 1997) and was done in conformance with the sediment evaluation guidelines developed for application to the lower Columbia River, the *Dredged Material Evaluation Framework* dated December 1998.

2. All dredge material from the side channels shall be tested for contaminant concentrations before dredging to help determine the appropriate disposal methods.

   a) The sampling and analysis plan for each side channel shall be submitted to Ecology for review and approval no less than 60 days prior to a planned dredging event.
   b) Testing results shall be provided to Ecology for review and approval prior to dredging.

C. **Flowlane Disposal:**
The following conditions apply to disposal of dredged material in the flowlane of the Columbia River:

1. Mixing Zone [for disposal by hopper, bottom dump scow, or down spout]: 300 feet downcurrent of the point of discharge.

2. Disposal of material shall be conducted in a manner that prevents mounding of the disposed material.

3. Flowlane disposal by a hopper dredge or a bottom dump scow is approved provided the disposal sites are located:

   a) waterward of the minus 20-foot contour, Columbia River Datum (CRD); and,
   b) to the greatest extent practicable, flowlane disposal sites shall be selected so that disposal material (i) disperses into or immediately adjacent to the mainstem navigational channel; (ii) is not likely to cause significantly increased shoaling in downstream side channels or to shoreline facilities such as docks, wharfs, vessel slips and marinas; and (iii) is not likely to cause a significant adverse alteration of bottom habitats critical to the life history of white sturgeon.

4. Flowlane sites may be used for the disposal of sediments dredged by pipeline provided the dredged material is discharged through a downspout that is lowered at least 20 feet into the water column.

5. Flowlane disposal of sediment in areas supporting populations of Dungeness crab shall be limited to times of least crab abundance. Between CRM 3 and CRM 7 flowlane disposal is not allowed July 1st through December 31st .

6. Flowlane disposal shall not occur during the period of peak Eulachon outmigration (between the 8th and 20th weeks of the year) within the identified spawning areas (CRM 35 – CRM 75). If in-water disposal is essential during the period of peak outmigration, then the Corps shall further study the potential for Eulachon losses as a result of dredged material disposal impacts. Appropriate mitigation measures shall be developed based on the study outcomes.

B. Beach Nourishment:

The following conditions apply to dredging operations that involve the unconfined or partially confined disposal of dredged material on or immediately adjacent to the shoreline. Historically, this manner of disposal has been used primarily for erosion control, such as to protect property or structures, to nourish actively eroding beaches, and to fill fish stranding sites. Shoreline disposal may also be done to enhance, restore or create various riverine habitat features such as a spit or lagoon.

Beach nourishment is the most common shoreline disposal activity and is done by pumping a slurry of sand and water directly onto an actively eroding beach. The sand settles out on the beach while the turbid water or runoff flows back into the river.

1. Mixing Zone: 300 feet downcurrent of the point of discharge.

2. Shoreline disposal operations, and particularly beach nourishment, may result in

the placement of dredged material waterward of the ordinary high water mark. In such cases, the disposal site shall be regraded to an approximate slope of 10 to 15 percent, with no swales.

3. Impacts to riparian vegetation at shoreline disposal sites shall be avoided or minimized whenever possible.

4. Erosion control measures shall be carried out to prevent the wind erosion of dredged material back into the channel.

C. Upland Disposal by Pipeline Dredge:

The following conditions apply to pipeline operations that pump dredged material to an upland site or confined disposal facility (CDF). Typically, a CDF consists of the following design features: [1] Earthen dikes that form the perimeter of the facility. [2] A weir structure that provides flow control and retention of the solid fraction of dredged material. [3] An outlet structure that conveys the turbid water fraction of dredged material [effluent] to a single point of discharge. The point of discharge may be a nearby surface water, wetland or bare ground.

1. Mixing Zone [for Single-point Effluent Discharge]: 300 feet downcurrent of the point of discharge.

2. CDF Design and Operation. The following "best management practices" pertain to the design and operation of a CDF:

   a) The CDF should be designed to provide the maximum practical degree of solids retention during operation, and for the entire life of the site.
   b) The outfall should be located so as to provide the maximum amount of dilution or dispersion of the effluent and to minimize any potential scour or erosion effects to more sensitive aquatic resources such as small tributaries and sloughs, shallow tide flats, and wetlands.
   c) To the greatest extent practicable, CDF sites shall be stabilized to prevent significant offsite erosion of the dredged material by either water or wind transport.

VII. Emergency and/or Contingency Measures.

A. If dredging/disposal operations are found not to be in compliance with the provisions of this Order, or result in conditions causing distressed or dying fish, the operator shall immediately take the following actions:

1. Cease operations.

2. Assess the cause of the water quality problem and take appropriate measures to

correct the problem and/or prevent further environmental damage.

3. In the event of finding distressed or dying fish, the operator shall collect fish specimens and water samples in the affected area and, within the first hour of such conditions, make every effort to have the water samples analyzed for dissolved oxygen and total sulfides. Ecology may require such sampling and analyses before allowing the work to resume.

4. Notify the Ecology and the Department of Fish and Wildlife of the nature of the problem, any actions taken to correct the problem, and any proposed changes in operations to prevent further problems.

VIII. Spill Prevention and Control.

A. Any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, is prohibited.

B. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into state waters. Proper security shall be maintained to prevent vandalism.

C. In the event of a discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of any spilled substances and used cleanup materials.

D. Spills into state waters, spills onto land with a potential for entry into state waters, or other significant water quality impacts, shall be reported immediately to Ecology's Southwest Regional Office at (360) 407-6300 (a 24-hour phone number).

IX. Duration of Water Quality Certification. This Order is effective on June 6, 2005 and expires on June 23, 2008. Continuing maintenance dredging covered under this Order beyond June 23, 2008 will require separate certification.

A. Ecology reserves the option to reassess the terms of this Order and amend or revoke, as necessary, in the event that:

1. new sources of potential contamination are discharged or otherwise stand to significantly affect the quality of sediments dredged from the lower Columbia River navigation channel; or,

2. new information indicates that dredging and/or disposal activities are having a significant adverse impact on water quality or characteristic uses of the lower Columbia River.

X. Notification

A. The Corps (Portland District) or its designated contractor shall notify Ecology at least 14 days prior to the pre-construction meeting in any year. The Ecology person to contact is Loree' Randall at (360) 407-6068.

B. The Corps (Portland District) or its designated contractor shall notify Ecology at least 14 days prior to the scheduled start of dredging in any year. The Ecology person to contact is Loree' Randall at (360) 407-6068.

C. The Corps (Portland District) or its designated contractor shall notify Ecology upon completion of dredging in any year. The Ecology person to contact is Loree' Randall at (360) 407-6068.

XI. Other Requirements.

A. Other individuals are allowed, at the discretion of the Corps, to dredge commercial grade sediments from the navigation channel. In Washington waters, all such work by others is subject to the conditions contained in this Order.

B. Copies of this Order shall be kept on the job site and readily available for reference by the Corps, Ecology personnel, the contractor, and other appropriate state and local government inspectors.

C. Ecology retains jurisdiction to make modifications hereto through a supplemental order(s), if it appears necessary to protect the public interest during the construction and monitoring of this project.

D. This certification does not exempt and is provisional upon compliance with other statutes and codes administered by federal, state, and local agencies.

XII. Penalties. Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

XIII. Appeal Process. You have the right to appeal this Order 2529 to the Pollution Control Hearings Board. Pursuant to chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology, within thirty (30) days of the date of your receipt of this document.

To appeal this action or decision, your notice of appeal must contain a copy of the Ecology order, action or decision you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 - 6th Avenue SE, Rowe Six, Bldg. 2
P.O. Box 40903
Lacey, Washington 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, Washington 98504-7608.

In addition, please send a copy of your appeal to:

Loree' Randall
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

For additional information: Environmental Hearings Office Website: http://www.eho.wa.gov

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Ch. 43.21B RCW.

Dated 6·6·05 at Lacey, Washington

Paula Ehlers

Paula Ehlers, Section Manager
Shorelands and Environmental Assistance Program
Department of Ecology
State of Washington