

Completed as per
3-18-04 Meeting

Term and Conditions 2c

2. In order to minimize the likelihood of incidental take associated with short-term (direct and indirect) impacts to listed salmonids during Project construction and maintenance activities, the Corps shall do the following:
 - 2c. Prior to navigation channel construction and maintenance implementation, the Corps shall provide a “contractor compliance plan” to NMFS for review and approval. The plan must describe specific compliance monitoring actions, designed to minimize impacts to ESA-listed salmonids, that will occur during dredging and disposal actions, as described in 2001 BA table 7-4, 7-5, and 7-6. In addition, the contractor shall be required to report to the Corps any unanticipated or unusual events or visual observations (e.g., water surface oil slicks, injured/dead fish, and/or unusual colored or smelling sediments) that are not required in the contractor compliance plan. If take of ESA-listed species is observed during compliance monitoring, the NMFS shall be contacted immediately to determine the need for Project modification, mitigation, or cessation.

Action Plan: The Corps will request a compliance plan from our dredging contractors that incorporates all the minimization methods and best management practices described in Tables 3-1, 7-5 and 7-6 in the Amendment to the Biological Assessment. The contract will be written to ensure that these compliance measures are implemented. In addition the contract will include a clause that instructs the contract to report to the Corps inspector any unusual events or visual observations (oil slicks, dead fish or unusual appearing or smelling sediment that persists for at least 15 minutes). In the event that this occurs, or a take of ESA listed species occurs, the Corps will notify NOAA Fisheries and the U.S. Fish and Wildlife Service and a decision made about modifying the action.

The Corps will develop a similar compliance plan for it’s dredges and the plan will become part of the standard dredge orders.

Schedule: See 2a for schedule.

Table 3-1: Dredging Timing

| Construction Features | Type of Dredging | Timing |
|--|---|--|
| Navigation channel, including overdepth and over width dredging at depths greater than 20 feet | Hopper Pipeline Mechanical excavation | No timing windows No timing windows No timing windows |
| Turning basins at depths greater than 20 feet | Hopper Pipeline | No timing windows No timing windows |
| Rock removal with blasting | Mechanical excavation | November 1 to February 28 |
| Rock removal at depths greater than 20 feet | Mechanical excavation | No timing windows |
| Berths | Mechanical excavation | November 1 to February 28 |
| Ecosystem Restoration Features | | |
| Lois Island Embayment Habitat Restoration | Mechanical excavation Pipeline Hopper | No timing windows |
| Purple Loosestrife Control Program | | July 1 – October 31 (no dredging required; represents application timeframe) |
| Miller/Pillar Habitat Restoration | Pipeline | No timing windows |
| Tenasillahe Island Interim Restoration ¹ (Tidegate/Inlet Improvements) | Mechanical excavation | July 1 – September 15 |
| Tidegate Retrofits for Salmonid Passage | Mechanical excavation | July 1 – September 15 |
| Walker/Lord and Hump/Fisher Islands Improved Embayment Circulation | Mechanical excavation | July 1 – September 15 |
| Cottonwood/Howard Island Proposal ² Columbia White-Tailed Deer Introduction | Not Applicable | No timing window (no dredging required) |
| Tenasillahe Island Long-Term Restorations ³ (Dike Breach) | Mechanical excavation | July 1 – September 15 |
| Bachelor Slough Restoration ⁴ | Pipeline | July 1 – September 15 |
| Shillapoo Lake Restoration ⁵ | Mechanical excavation | July 1 – September 15 (inwater work only); balance of work behind flood control levees and thus no timing window |
| Mitigation Action | | |
| Martin Island Embayment | Pipeline | No timing window |

Table 7-5: Minimization Practices and Best Management Practices for Dredging

| Monitoring Action Number | Indicator | Measure | Justification | Duration | Management Decision |
|--|---|--|--|--|--|
| Hopper Dredging | | | | | |
| CA-1 | Entrainment (Survival) Benthic Invertebrates Deposit Feeders | Maintain dragheads in the substrate or no more than 3 feet off of the bottom with the dredge pumps running. | This restriction minimizes or eliminates entrainment of juvenile salmonids during normal dredging operations. | Continuous during dredging operations. | Maintain until new information becomes available that would warrant change. |
| CA-2 | Habitat Complexity Bathymetry & Turbidity Feeding Habitat Opportunity Suspension-Deposit Feeders Deposit Feeders Mobile Macroinvertebrates | Dredge in shallow water areas (less than 20 feet) only during the recommended ESA in-water work period for the Columbia River of November 1 until February 28. | Areas less than 20 feet deep are considered salmonid migratory habitat. Dredging or disposal in these areas could delay migration or reduce or eliminate food sources. | Continuous during dredging operations. | Maintain until new information becomes available that would warrant change. |
| Pipeline Dredging | | | | | |
| CA-3 | Entrainment (Survival) Benthic Invertebrates Deposit Feeders | Maintain cutterheads in the substrate or no more than 3 feet off of the bottom with the dredge pumps running. | This restriction minimizes or eliminates entrainment of juvenile salmonids during normal dredging operations. | Continuous during dredging operations. | Maintain until new information becomes available that would warrant change. |
| CA-4 | Habitat Complexity Bathymetry & Turbidity Feeding Habitat Opportunity Suspension-Deposit Feeders Deposit Feeders Mobile Macroinvertebrates | Dredge in shallow water areas (less than 20 feet) only during the recommended ESA in-water work period for the Columbia River of November 1 until February 28 <u>and July 1 – September 15 for certain ecosystem restoration measures (see Table 3-1).</u> | Areas less than 20 feet deep are considered salmonid migratory habitat. Dredging or disposal in these areas could delay migration or reduce or eliminate food sources. | Continuous during dredging operations. | Maintain until new information becomes available that would warrant change. |
| General Provisions For All Dredging | | | | | |
| CA-5 | Contaminants Water Column Habitat | The contractor will not release any trash, garbage, oil, grease, chemicals, or other contaminants into the waterway. | Protect water resources. | Life of contract or action. | If material is released, it will immediately be removed and the area restored to a condition approximating the adjacent undisturbed area. Contaminated ground will be excavated and removed, and the area restored as directed. Any in-water release will be immediately reported to the nearest U.S. Coast Guard Unit for appropriate response. |
| CA-6 | NA | The contractor, where possible, will use or propose for use materials that may be considered environmentally friendly in that waste from such materials is not regulated as a hazardous waste or is not considered harmful to the environment. If hazardous wastes are generated, disposal of this material will be done in accordance with 40 CFR parts 260-272 and 49 CFR parts 100-177. | Dispose of hazardous waste. | Life of contract or action. | If material is released, it will immediately be removed and the area restored to a condition approximating the adjacent undisturbed area. Contaminated ground will be excavated and removed, and the area restored as directed. Any in-water release will be immediately reported to the nearest U.S. Coast Guard Unit for appropriate response. |

Table 7-6: Best Management Practices for Disposal

| Monitoring Action Number | Indicator | Measure | Justification | Duration | Management Decision |
|---------------------------|---|--|---|--|---|
| Flow Lane Disposal | | | | | |
| CA-7 | Accretion/Erosion | Dispose of material in a manner that prevents mounding of the disposal material. | Spreading the material out will reduce the depth of the material on the bottom, which will reduce the impacts to fish and invertebrate populations. | Life of contract or action. | Maintain until new information becomes available that would warrant change. |
| CA-8 | Bathymetry & Turbidity (Survival) Suspended Solids | Maintain discharge pipe of pipeline dredge at or below 20 feet of water depth during disposal. <u>Exceptions are Miller-Pillar and Lois Island Embayment Ecosystem Restoration Features.</u> | This measure reduces the impact of disposal and increased suspended sediment and turbidity to migration juvenile salmonids, as they are believed to migrate principally in the upper 20 feet of the water column. | Continuous during disposal operations. | Maintain until new information becomes available that would warrant change. |
| Upland Disposal | | | | | |
| CA-9 | Suspended Solids Turbidity (Survival) Bathymetry & Turbidity | Berm upland disposal sites to maximize the settling of fines in the runoff water. | This action reduces the potential for increasing suspended sediments and turbidity in the runoff water | Continuous during disposal operations. | Maintain until new information becomes available that would warrant change. |
| CA-10 | Habitat Complexity, Connectivity Conveyance Insects Resident Macrodetritus, Microdetritus Large Woody Debris | Maintain 300-foot habitat buffer for <u>new upland dredged material disposal sites (e.g., Gateway 3 (W-101.0), Fazio B(W-96.9; interior ½), Mt. Solo (W-62.0) and Puget Island (W-44.0). Otherwise use existing dredged material disposal locations to avoid loss of previously non-impacted lands within the ESA salmonid Critical Habitat designated zone.</u> | Maintains important habitat functions. | Life of contract or action. | Maintain until new information becomes available that would warrant a change. |
| Shoreline Disposal | | | | | |
| CA-11 | Habitat Complexity Bathymetry & Turbidity Feeding Habitat Opportunity Suspension-Deposit Feeders Deposit Feeders Mobile Macroinvertebrates | <u>Disposal of material in shoreline areas will be done concurrently with the dredging operation. Timing restrictions will be based on the dredging operation not the shoreline disposal operation. Three erosive shoreline disposal areas only are proposed (Sand Island (O-86.2), Skamokawa (W-33.4) and Miller Sands Spit (O-23.5).</u> | <u>Shoreline disposal sites are highly erosive and do not provide much, if any juvenile salmonid habitat. Consequently it is not necessary to limit disposal actions to the inwater work period even though it is a shallow water area.</u> | Continuous during disposal operations. | Maintain until new information becomes available that would warrant change. |
| CA-12 | Stranding | Grade disposal site to a slope of 10 to 15 percent, with no swales, to reduce the possibility of stranding of juvenile salmonids. | Ungraded slopes can provide conditions on the beach that will create small pools or flat slopes that strand juvenile salmonids when washed up by wave action. | Continuous during disposal operations. | Maintain until new information becomes available that would warrant change. |

| Monitoring Action Number | Indicator | Measure | Justification | Duration | Management Decision |
|--|------------------|--|--|--|---|
| Ocean Disposal | | | | | |
| CA-13 | N A | Dispose of in accordance with the site management and monitoring plan, which calls for a point dump placement of any material from the project during construction. The plan is to place any construction material in the southwest corner of the deep water site. | This action minimizes conflicts with users and impacts to ocean resources. | Continuous during dredging operations. | Maintain until new information becomes available that would warrant change. |
| General Provisions For All Disposal | | | | | |
| CA-14 | N A | Dispose of hazardous waste. | The contractor, where possible, will use or propose for use materials that may be considered environmentally friendly in that waste from such materials is not regulated as a hazardous waste or is not considered harmful to the environment. If hazardous wastes are generated, disposal of this material will be done in accordance with 40 CFR parts 260-272 and 49 CFR parts 100-177. | Life of contract or action. | If material is released, it will immediately be removed and the area restored to a condition approximating the adjacent undisturbed area. Contaminated ground will be excavated and removed, and the area restored as directed. Any in-water discharge will be immediately reported the nearest U.S. Coast Guard Unit for appropriate response. |