

**Columbia River Channel Improvement Project
Addendum**

November 2003

COLUMBIA RIVER CHANNEL IMPROVEMENT PROJECT

Purpose

This addendum is provided to update the January 2003 Columbia River Channel Improvement Project Final Supplemental Integrated Feasibility Report and Environmental Impact Statement (Final SEIS) to reflect changes in recommended project features as a result of coordination of the final report with the states of Oregon and Washington.

2003 Final Supplemental Integrated Feasibility Report / Environmental Impact Statement (Final SEIS)

The Final SEIS, dated January 2003 was prepared to document additional information, environmental analyses, and project modifications resulting from consultation of the project under Section 7 of the Endangered Species Act; to update the disposal plan; to update the project economics; and to comply with NEPA requirements and with the Washington State Environmental Policy Act (SEPA).

Several additional ecosystem restoration features and evaluation actions were proposed for implementation to benefit the recovery of listed salmonids and other fish and wildlife resources, to avoid impacts to marine resources at the Deep Water Ocean Disposal Site, and to retain sand in the estuary. Creating the Lois Island restoration feature during construction would use sand that would otherwise have been disposed of in the ocean. Under the January 2003 plan, no ocean disposal was proposed during construction and the first 20 years of maintenance. Construction volumes were updated using 2001-2002 hydrographic survey data. Other items updated include a reduction in rock excavation; utility relocations; additional information on crab, smelt, sturgeon, and fish stranding gained from data collection conducted with the federal and state resource agencies; additional information on sediment transport and consistency with coastal programs; and modification to some of the upland disposal sites to avoid impacts to resources and habitat. Project economics were reexamined to evaluate the sensitivity of the fleet and commodity forecasts, and changes to shipping operations in the Portland area. Each of the inputs to the benefit and cost calculations were reviewed and updated using the most current data available.

For the Columbia River portion of the project, a comparison showing what changed between the authorized project and the modified project presented in the Final SEIS are presented in Table 1.

Table 1. Columbia River Channel Improvement Project Comparison

Action	1999 Final IFR/EIS for the Columbia River	Final SEIS for the Columbia River
Navigation Feature		
Dredging Volume (construction)	18.4 million cubic yards	14.5 million cubic yards
Rock Volume	590,000 cubic yards	490,500 cubic yards
Basalt	173,000 cubic yards	50,500 cubic yards
Cemented Cobbles	417,000 cubic yards	440,000 cubic yards
Disposal		
Upland Disposal Sites Areas	1,681 acres	1,630 acres
Agricultural Crop Land	200 acres	172 acres
Wetlands	20 acres	16 acres
Riparian Habitat	67 acres	50 acres
Mitigation Sites		
Woodland Bottoms	132 ac - agricultural land 43 ac - riparian forest 97 ac - wetlands	Same as 1999 Plan
Martin Island	159 ac - riparian forest 39 ac - wetlands	159 ac - riparian forest 23 ac - wetlands
Webb Site	74 ac - wetlands	Same as 1999 Plan
Ocean disposal site use	Construction and maintenance, 37 mcy over 20 years	None during construction if the Lois Island ecosystem restoration feature is fully implemented; none anticipated during the first 20 years of maintenance if Miller-Pillar and existing disposal sites in the estuary are used.
Utility Relocations	5 on the Columbia River	None on the Columbia
ESA Consultation		
Monitoring Actions	Included	Strengthened and clarified
Minimization and BMPs	Included	Strengthened and clarified
In-water Work Windows	None	Specified
Adaptive Management	Included	Strengthened and clarified
Ecosystem Restoration Features		
Shillapoo Lake	1,250 acres	470-839 acres
Miller-Pillar	Not Included	235 acres
Lois Island	Not Included	191 acres
Purple Loosestrife Control	Not Included	CRM 18-52
Tenasillahe Island (Phased Implementation)	Not Included	New
Interim (Phase 1)	Not Included	92 acres
Cottonwood-Howard (Phase 2) Columbian White-tailed Deer Reintroduction	Not included	650 acres Columbian white-tailed deer; 60 acres tidelands
Long-term (Phase 3)	Not Included	1,778 acres
Bachelor Slough	Not Included	85 acres of in-stream restoration, 6 acres shoreline riparian restoration, 46 acres of riparian restoration upland
Ecosystem Evaluation	Not Included	6 actions added
Adaptive Management	Not Included	Included
Costs and Benefits		
Columbia River NED Costs	\$154,224,000	\$118,924,000
Columbia River NED Average Annual Benefits	\$28.0 million	\$18.8 million
NED Benefit-to-cost Ratio	1.9	1.7
Columbia River Costs - Proposed Plan	\$160,884,000	\$133,629,000

Note: See Table 2 (pages 6-7) for comparison to final selected plan.

2003 State Approvals

The project modifications addressed below arise from conditions stipulated by the states of Oregon and Washington following their review of the project under the Clean Water Act (CWA) and Coastal Zone Management Act (CZMA). The Corps of Engineers received the states' CWA Section 401 Water Quality Certifications and CZMA consistency concurrences on June 23, 2003. The Corps considered whether another supplemental EIS was required under NEPA and SEPA based on the states' conditions and concluded that another supplemental EIS was not required.

In anticipation of requests for state approvals, the Corps and Sponsor Ports met frequently with state and local jurisdictions beginning in September 2000. Coordination with Oregon State agencies included the Oregon Department of Environmental Quality, Department of Land Conservation and Development, Oregon Department of Fish and Wildlife, Department of Geology and Mineral Industries, Division of State Lands, and the Governor's office. Coordination with Washington State agencies included the Department of Ecology, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, Washington State Parks, and the Governor's office. Coordination with local jurisdictions included Clatsop County, Oregon, and Pacific County, Wahkiakum County, Cowlitz County, Clark County, the City of Longview and the City of Vancouver, Washington, and the Columbia River Estuary Taskforce.

The states' conditions that are relevant to the project presented in the Final SEIS affected two of the ten ecosystem restoration actions, a portion of one of the proposed wildlife mitigation actions and the beneficial use of dredged material. The Corps evaluated the potential effects of the project modifications to determine whether any of the changes warrant re-initiation of Endangered Species Act (ESA) consultation, determined that the project modifications do not require reinitiation of consultation. By letters dated November 13, 2003, NOAA Fisheries and U.S. Fish and Wildlife Service were notified of this determination and each responded with their concurrence by letters dated December 19 and December 16, 2003, respectively.

Miller Pillar Ecosystem Restoration Feature. The State of Oregon's 401 certification and CZMA concurrence disallow the creation of 235 acres of tidal marsh habitat¹ at the Miller-Pillar ecosystem restoration feature located between Miller Sands and Pillar Rock Islands. The state indicated that creation of this ecosystem restoration feature would impact an existing commercial drift net fishing site and would, therefore, be inconsistent with the state's enforceable CZMA policies. This feature has been removed from the selected plan. As proposed in the Final SEIS, this feature was to be constructed utilizing maintenance material from the deepened channel over an approximately 15-year period. This material will now be disposed of at existing upland sites within the

¹ As proposed in the BA and considered in the BiOp, this ecosystem restoration feature was to have created 160-170 acres of shallow water and flats habitat. The change to 235 acres of tidal marsh habitat was done in consultation with Oregon, the Services and other stakeholders.

estuary (Rice Island, Miller Sands Spit, Pillar Rock Island) until capacity is exhausted at these locations. Thereafter, material would be placed in an EPA-approved ocean disposal site. This option is discussed in the Final SEIS and would be implemented under Section 101(b)(13) of the Water Resources Development Act of 1999.

Lois Island Ecosystem Restoration Feature. Although the State of Oregon 401 certification and CZMA concurrence allowed implementation of restoration on 191 acres for the Lois Island ecosystem restoration feature, they included conditions on its construction that significantly exceed the Federal standard (33 CFR 335.7). The State of Oregon currently allows Clatsop County to operate and manage a 1,029-acre select area fishery (SAF) for commercial gillnetters at Tongue Point, which encompasses the area of the Lois Island ecosystem restoration feature. This restoration feature has been reduced in size from the 357 acres considered in the BiOp to 191 acres to minimize the impact of the ecosystem restoration feature on commercial fishers. The habitat type to be restored has also been modified from shallow subtidal and tidal sand flats habitat considered in the BiOp to the current proposal of tidal marsh habitat at the request of the agencies and local interests.

Under the state's conditions, if this restoration feature were to be constructed, the Corps would be required to increase spring Chinook production by 500,000 smolts at each of two other select area fishery sites, Young's Bay and Blind Slough. The Corps would also be required to evaluate water quality and conduct a test fishery program at a potential new select area fishery site at Grant Slough (just upstream of the current Blind Slough site). Additionally, the Corps would be required to fund the operation of the relocated fishery at Young's Bay and Blind Slough for 10 years. The state further imposed a 75% performance measure at two years post-implementation of the restoration feature for plants, benthic invertebrates and fish.

The Lois Island embayment ecosystem restoration feature, as proposed in the Final FEIS is still the Corps' environmentally preferred alternative consistent with the federal standard and regional salmon recovery objectives. However, unless circumstances or the conditions imposed by the State of Oregon change, the Corps will dispose of the 6 million cubic yards of dredge material previously proposed for the restoration feature at an EPA-approved ocean disposal site. This option was considered in the 1999 IFR/EIS, ESA consultation and conditioned in the state approvals and would be implemented under Section 101(b)(13) of the Water Resources Development Act of 1999.

Martin Island Embayment – Tidal Marsh Development for Wildlife Mitigation Purposes. The State of Washington's 401 Certification disallows the creation of 16 acres of tidal marsh habitat² in the Martin Island embayment wildlife mitigation site. The 401 Certification indicates that the embayment provides an important

² As proposed in the BA and considered in the BiOp, this Project element was to have created 32 acres of habitat. The reduction to 16 acres was done in consultation with Washington, the Services and other stakeholders.

recreational boat use area and the creation of tidal marsh habitat beneficial to listed salmonids would interfere with recreational use of the area. Consequently the State of Washington will not allow fill material to be placed in any part of the embayment.

The Martin Island embayment wildlife mitigation action has been eliminated from the Project due to the state's requirements. The plan will now include the 80-acre riparian forest replacement mitigation required under the 401 certification and dredged material that would have been placed in the Martin Island embayment will now be disposed of either at upland disposal sites (e.g., Martin Bar, Washington and/or Reichold, Oregon) or through flow-lane disposal. These alternatives were covered in the Final SEIS and are within the authority of Section 101(b)(13) of the Water Resources Development Act of 1999.

Table 2 presents a summary of the changes from the 1999 authorized project, the 2003 Final SEIS, as well as the changes that resulted from the State approvals.

Table 2. Columbia River Channel Improvement Project Comparison 1999 through present

Action	1999 Final IFR/EIS for the Columbia River	Final SEIS for the Columbia River	Changes Resulting from the State Decisions
Navigation Feature			
Dredging Volume (construction)	18.4 mcy	14.5 mcy	Same as Final SEIS
Rock Volume	590,000 cy	490,500 cy	Same as Final SEIS
Basalt	173,000 cy	50,500 cy	Same as Final SEIS
Cemented Cobbles	417,000 cy	440,000 cy	Same as Final SEIS
Disposal			
Upland Disposal Sites Areas	1,681 acres	1,630 acres	Same as Final SEIS
Agricultural Crop Land	200 acres	172 acres	Same as Final SEIS
Wetlands	20 acres	16 acres	Same as Final SEIS
Riparian Habitat	67 acres	50 acres	Same as Final SEIS
Mitigation Sites			
Woodland Bottoms	132 ac - agricultural land 43 ac - riparian forest 97 ac - wetlands	Same as 1999 Plan	Same as 1999 Plan
Martin Island	159 ac - riparian forest 39 ac - wetlands	159 ac - riparian forest 23 ac - wetlands	239 ac - riparian forest 7 ac - wetlands
Webb Site	74 ac - wetlands	Same as 1999 Plan	Same as 1999 Plan
Ocean disposal site use	Construction and maintenance, 37 mcy over 20 years	None during construction if the Lois Island ecosystem restoration feature is fully implemented; none anticipated during the first 20 years of maintenance if Miller-Pillar and existing disposal sites in the estuary are used.	Construction and additional O&M after the estuarine sites are used to capacity
Utility Relocations	5 on Columbia River	None on the Columbia	Same as Final SEIS
ESA Consultation			
Monitoring Actions	Included	Strengthened and clarified	Additional conditions added by States
Minimization and BMPs	Included	Strengthened and clarified	Same as Final SEIS
In-water Work Windows	None	Specified	Additional conditions added by States
Adaptive Management	Included	Strengthened and clarified	Additional conditions added by States

Table 2. (Continued)

Action	1999 Final IFR/EIS for the Columbia River	Final SEIS for the Columbia River	Changes Resulting from the State Decisions
Ecosystem Restoration Features			
Shillapoo Lake	1,250 acres	470-839 acres	Same as Final SEIS
Miller-Pillar	Not Included	235 acres	Not Included
Lois Island	Not Included	191 acres	Not Included
Purple Loosestrife Control	Not Included	CRM 18-52	Same as Final SEIS
Tenasillahe Island (Phased Implementation)	Not Included	New	Same as Final SEIS
Interim (Phase 1)	Not Included	92 acres	Same as Final SEIS
Cottonwood-Howard (Phase 2) Columbian White-tailed Deer Reintroduction	Not included	650 acres Columbian white-tailed deer; 60 acres tidelands	Same as Final SEIS
Long-term (Phase 3)	Not Included	1,778 acres	Same as Final SEIS
Bachelor Slough	Not Included	85 acres of in-stream restoration, 6 acres shoreline riparian restoration, 46 acres of riparian restoration upland	Same as Final SEIS
Ecosystem Evaluation	Not Included	6 actions added	Same as Final SEIS
Adaptive Management	Not Included	Included	Additional conditions added by States
Costs and Benefits			
Columbia River NED Costs	\$154,224,000	\$118,924,000	\$120,649,000
Columbia River NED Average Annual Benefits	\$28.0 million	\$18.8 million	\$18.8 million
NED Benefit-to-cost Ratio	1.9	1.7	1.66
Columbia River Costs – Proposed Plan	\$160,884,000	\$133,629,000	\$135,597,000

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Section 101(b)(13) of the Water Resource Development Act of 1999 authorized the deepening of the Columbia and Lower Willamette Rivers Federal Navigation Channel to 43 feet, ecosystem restoration features, and fish and wildlife mitigation as identified above.

This addendum incorporates the revisions identified in this report into the authorized project. These include all features discussed in the Final SEIS except: two of the ecosystem restoration features (Lois Island and Miller Pillar) proposed in the Final SEIS: and, creating tidal habitat in the Martin Island Embayment. Construction material that would have created Lois Island will be disposed in the ocean at an EPA approved site. As a result of these revisions and modifications, the project total cost is \$135,597,000, an increase of \$1,968,000, as presented in Table 2 of this addendum. While annual benefits remained unchanged, annual costs for the navigation features increased from \$118,924,000 to \$120,649,000, yielding an NED benefit-to-cost ratio of 1.66 to 1.

To comply with the Clean Air Act, the Corps has determined that no conformity determination is required under General Conformity rules in 40 C.F.R., Part 93 and OAR 340-250 because: (1) the total of direct and indirect emissions of carbon monoxide, oxides of nitrogen, and volatile organic compounds resulting from the federal action are each below the applicable de minimis thresholds, and (2) the proposal does constitute a “regionally significant action.”

Recommendations

Five ecosystem restoration features described in the Final SEIS were not included in the 1999 Report of the Chief of Engineers. Two of these features were subsequently not approved by the states of Oregon and Washington. The three ecosystem restoration features authorized in 1999 are: tidegate retrofits for salmon passage; Walker-Lord and Hump-Fisher Islands Improved Embayment Circulation; and, Shilapoo Lake restoration. The Purple Loosestrife Control Program, Tenasillahe Island (Phased Implementation) and Bachelor Slough ecosystem restoration features were recommended to be part of the overall project in the Final SEIS and continue to be recommended. Of the three ecosystem restoration features recommended in the Final SEIS, Purple Loosestrife Control Program would be constructed under the Chief of Engineer’s discretionary authority and Tenasillahe Island and Bachelor Slough would be constructed under the Continuing Authorities Program.

It is recommended that all other project changes, as presented in this addendum, be approved. The proposed changes are within the Chief of Engineers discretionary authority for implementation under the existing project authorization.