
CHAPTER EIGHT

PROJECT

IMPLEMENTATION

8. PROJECT IMPLEMENTATION

8.1. Identification of Sponsors

No updating of the existing information in this section was necessary for the Final SEIS (see the Final IFR/EIS, August 1999).

8.2. ^{revised} Cost Allocation and Apportionment

For the Final SEIS, Table S8-1 was updated for the 43-foot Columbia River Channel Improvement Project.

Table S8-1. Executive Fully Funded Cost Summary

Least Cost Disposal Plan (in \$1,000s)	
General Navigation Features (GNF) - Cost Shared	Total
Channel and Turning Basins	\$55,438
Rock	\$19,195
Mitigation Construction	\$477
Contingency	\$12,486
Engineering and Design	\$1,758
Supervision and Administration	\$8,262
Monitoring	\$11,550
Total GNF	\$109,166
Non-Federal	
Local Service Facilities (LSF)	\$942
LERRD*	\$18,542
Utilities (to be paid by the permit applicant)	\$0
Total Non-Federal	\$19,484
10% GNF = \$10,917 < LERRD = \$18,542 No Extra 10%	
Navigation	
Federal Share (75% GNF = \$109,166 x 0.75)	\$81,874
Non-Federal Share (25% GNF + LERRD + LSF = \$25,955+\$19,484)	\$46,775
Ecosystem Restoration	\$16,448
Federal Share (65%)	\$10,691
Non-Federal Share (35%)	\$5,757
<i>Per Section 210 of WRDA 1996, the non-federal cost for ecosystem restoration projects is 35 percent of all construction costs, including LERRD, and 100 percent of OMRR&R**</i>	
Total Federal Cost (\$81,874+\$10,691)	\$92,565
Total Non-Federal (\$46,775+\$5,757)	\$52,532
TOTAL	\$145,097

*LERRD =lands, easements, rights-of-way, relocation, and disposal sites.

**OMRR&R = operation, maintenance, repair, replacement, and rehabilitation.

Table S8-1 (continued). Executive Fully Funded Cost Summary

Locally Preferred Disposal Plan (LPP)	
(Proposed Action, in \$1,000 - Effective Pricing Level, October 2002)	
LPP Cost	\$147,414
Federal	\$92,565 \$NED Cap on Federal Investment
Non-Federal	\$54,849
	Non-Federal
	Berths
	Real Estate Already Owned
	Cash
	State of Washington
	State of Oregon
	\$54,849
	\$942
	\$9,649*
	\$44,259
	\$22,129
	\$22,129

* Value from 1999 Final IFR/EIS

In addition, the non-federal sponsor would be responsible for \$15,569 per year to be provided to the Federal Government to cover incremental O&M costs for the Locally Preferred Disposal Plan.

8.3. Non-Federal Cost Sharing

No updating of the existing information in this section was necessary for the Final SEIS (see the Final IFR/EIS, August 1999).

8.4. Division of Responsibilities

No updating of the existing information in this section was necessary for the Final SEIS (see the Final IFR/EIS, August 1999).

8.5. Sponsor's Support

No updating of the existing information in this section was necessary for the Final FEIS (see the Final IFR/EIS, August 1999).

8.6. ^{revised} Implementation Process

The following updated information has been added to this section for the Final SEIS. Figure S8-1 has been replaced by Table S8-2 and shows the major milestones and assumptions for project implementation. The Draft SEIS was circulated for a 60-day public review and comment period. Three public meetings and one information meeting took place during this period. A technical panel review of the costs and benefits also occurred during the 60-day comment period. This Final SEIS is being circulated for a 30-day comment period. It is anticipated that a *Record of Decision* for the Final SEIS would be issued in spring 2003.

Table S8-2. Proposed Project Implementation Schedule

Milestones	Start	End
60-day Public Review	15 July 2002	16 September 2002
Astoria Information Meeting	29 July 2002	29 July 2002
Vancouver Public Meeting	31 July 2002	31 July 2002
Panel Technical Review	4 August 2002	9 August 2002
Longview Public Meeting	5 September 2002	5 September 2002
Astoria Public Meeting	10 September 2002	10 September 2002
Revise Report	16 September 2002	20 January 2003
Final Public Review	31 January 2003	2 March 2003
Record of Decision	April 2003	April 2003

The construction phase is anticipated to begin in federal Fiscal Year 2004 and completion in federal Fiscal Year 2006. It is anticipated that the construction phase will consist of the following contracts.

1. Pipeline Dredging Contract
2. Hopper Dredging Contract
3. Rock Removal Contract
4. Mitigation Sites Construction Contract
5. Numerous contracts to construct the restoration features; the exact grouping of these contracts has not been decided.

Construction is anticipated to begin in February 2004 with some of the ecosystem restoration features, followed by the construction of the mitigation sites. Shillapoo Lake, Tenasillahe interim actions, translocation of Columbian white-tailed deer, tide gate retrofits, improved embayment circulation at Walker-Lord and Hump-Fisher Islands, and Bachelor Slough would be constructed in 2004. The purple loosestrife control program is a 5-year effort beginning in 2004. Dredging could start as early as July 2004 and last for 24 months. The Lois Island embayment ecosystem restoration feature requires the use of dredged material to accomplish the restoration and will be constructed during the months of November to February due to ESA concerns. Lois Island embayment would be constructed beginning in November 2004 and be completed with construction material in February 2006. Miller-Pillar requires the placement of five pile dikes, and it is anticipated that three of these pile dikes, per agency coordination, would be driven from October 2005 through June 2006. The remaining two pile dikes would be constructed following the results of the monitoring actions. Maintenance material from the deepened channel would be placed at Miller-Pillar for approximately 15 years following construction.

8.7. ^{new} Changes to the Real Estate Plan

This new section has been added for the Final SEIS. Some adjustments/additions to the real estate requirements for the project were identified during the ESA consultation process and following the analysis of updated 2001 and 2002 hydrographic survey data. Minor changes have been identified for the dredged material disposal plans contained in the 1999 Final

IFR/EIS. Significant changes to real estate requirements have been identified, due in large part to additional ecosystem restoration features being added to the channel improvement project, together with ecosystem evaluation actions and monitoring actions associated with dredging and disposal. These changes to real estate requirements are grouped for discussion purposes in accordance with the anticipated nature of the project's use.

8.7.1^{new} Disposal Plan Modifications

Based on reduced dredging volumes predicated on updated hydrologic survey data, and the new ecosystem restoration features that require dredged material for their construction, modification is required for five upland disposal sites cited in Appendix D, Real Estate Plan, 1999 Final IFR/EIS. Disposal site O-63.5, Lord Island Upstream, requires modification to reflect a reduced acreage requirement change from 46 acres to 25 acres. This change is required for both the Corps least cost disposal plan and Sponsors' preferred disposal plan; the cited 13-year easement remains the appropriate real property interest for both plans.

Disposal site O-57.0 (Crims Island) requires modification to reflect acreage increases to 46 acres from 40 acres.

Disposal site O-42.9, James River, requires modification so as to reflect a reduced acreage requirement change from 59 acres to 53 acres. This change is required for both the Corps least cost disposal plan and sponsors' preferred disposal plan; the cited 20-year easement remains the appropriate real property interest for both plans.

Disposal Site W-101.0, Gateway Parcel 3, requires modification so as to reflect a reduced acreage requirement change from 69 acres to 40 acres. This change applies to only the sponsors' preferred disposal plan and the cited "fee title" interest remains the appropriate real property interest.

Disposal Site W-70.1, Cottonwood Island, will require no acreage change; however, a change in the project required real property interest is required from cited 20-year easement to full "fee title" interest. Due to restrictions placed on the sale of "fee title" interest in Washington State-owned lands, the WDNR-owned component of disposal site W-70.1 shall continue to reflect a project required 20-year use agreement or easement interest in sponsors' preferred disposal plan. The more extensive real property interest is appropriate, predicated on the newly identified Cottonwood-Howard Island Columbian white-tailed deer restoration feature requiring "fee title" interest acquisition for all the remaining non-disposal site acreage, portion, of the affected private ownership. This change in project required real property interest is appropriate for both the Corps least cost disposal plan and sponsors' preferred disposal plan.

Disposal Site W-68.7, Howard Island, requires modification to reflect a reduced acreage requirement that requires a change from 362 acres to 200 acres. This change is required for both the Corps least cost disposal plan and sponsors' preferred disposal plan and is predicated on the newly identified Cottonwood-Howard Island restoration feature's use allocation of all the island's non-disposal site acreage for deer habitat. The sponsors'

preferred disposal plan also requires a change from cited 20-year easement interest to full “fee title” interest requirement for the 156.5 acre privately-owned component of disposal site W-68.7. Due to restrictions placed on the sale of “fee title” interest in Washington State owned lands, the WDNR-owned component of disposal site W-68.7 shall continue to reflect a project required 20-year use agreement or easement interest in sponsors’ preferred disposal plan. All the above identified disposal plan modifications have been taken into account in the updated real estate cost estimate contained in the Final SEIS.

8.7.2^{new} Modifications to the Original Ecosystem Restoration Features

Two of the three separate and distinct ecosystem restoration features identified in Appendix D, *Real Estate Plan*, 1999 Final IFR/EIS require some modification as part of the Final SEIS. The Shillapoo Lake restoration feature requires modification to reflect a reduced acreage due to a change in development plans involving two of the original eight diked cells envisioned for construction to restore wetland and riparian habitat at Shillapoo Lake. The two cells that are withdrawn from the restoration project (Cells 1 and 8) constitute 409 acres of the originally anticipated 1,252 acres of restored wetland and riparian habitat and are part of the WDFW ownership. Two cells, encompassing approximately 369 acres remain in private ownership and may or may not be included in the restoration feature depending upon acquisition actions underway between WDFW and the landowners. Based on these factors, the acreage requirement for Shillapoo Lake will change from the original 1,252 acres to approximately 470 to 839 acres of project right-of-way. The WDFW ownership, together with one private owner, constitutes the identified 470 to 839 acres of project right-of-way. The WDFW still plans on purchasing the remaining ownership using funding provided in large part from the Bonneville Power Administration’s Wildlife Mitigation Program. The Shillapoo Lake restoration feature is still predicated on WDFW’s acquisition of all identified rights-of-way acreage. The restoration feature involves construction of hydraulic control structures desired by WDFW, together with all operation and maintenance being a WDFW responsibility, a no cost “Cooperative Agreement” is identified as the appropriate instrument by which the local sponsors secure all needed real property interests. Therefore, no estimated LERRD credit is allocated for this ecosystem restoration feature.

The second ecosystem restoration feature identified in Appendix D, *Real Estate Plan*, 1999 Final IFR/EIS that requires modification, is the action to improve embayment circulation at two island complexes by constructing connecting channels at the upstream end of Walker-Lord and Hump-Fisher Islands. It was initially thought all project right-of-way required for these actions was below the ordinary high water line of the Columbia River and as such, construction would be accomplished by exercising the rights of Navigation Servitude. Based on updated information, it appears that 1.3 acres (Walker-Lord) and 3.6 acres (Hump-Fisher) of required project right-of-way is above the ordinary high water line. The identified upland acreages are owned by the State of Oregon (Division of State Lands) and WDNR; the local sponsors will need to secure a perpetual “Channel Improvement Easement” for project use of these upland acres.

No updating is necessary for the ecosystem restoration feature for retrofitting existing levee tide gates with fish slides.

8.7.3^{new} Modifications for the Additional Ecosystem Restoration Features

During the ESA consultation process, additional ecosystem restoration features were identified for inclusion in the channel improvement project. These features are discussed in detail in Chapter 4 of the Final SEIS. Because they are varied with regard to the parties' task responsibilities and future operation and management requirements, their real estate requirements are discussed individually. All restoration features will be cost shared by the sponsor ports.

8.7.3.1.^{new} Lois Island Embayment Habitat Restoration

This restoration feature restores 191 acres of tidal marsh habitat between Lois and Mott Islands. Construction of a 600-foot wide by 2-mile long (145 acres), temporary in-water sump would occur immediately adjacent to the south side of the designated navigation channel. A pipeline dredge will extend for about 11,000 feet across the estuary waters from the temporary construction sump to the embayment area. Hopper dredges will be used to deposit dredged material in the sump as required. All project right-of-way required for this restoration feature is below the ordinary high water line of the Columbia River and as such, will be accomplished by exercising the rights of Navigation Servitude. Pipeline dredging to take material from the temporary sump to the Lois Island Embayment would occur during the November to February in-water work window.

8.7.3.2.^{new} Purple Loosestrife Control Program

This restoration feature is a 5-year effort to assist multiple entities ongoing efforts to establish bio-control of purple loosestrife, an invasive species in the Columbia River estuary. This action will be confined to CRM 18-52. Helicopter surveys will be used to help identify the actual targeted stands and to monitor progress during the 5-year effort. Boats and/or Hovercraft will provide access to the targeted stands for herbicide and/or mechanical treatments. All project right-of-way required for this restoration feature lie below the ordinary high water line of the Columbia River and as such, will be accomplished by exercising the rights of Navigation Servitude.

8.7.3.3.^{new} Miller-Pillar Habitat Restoration

This restoration feature will create 235 acres of tidal marsh and intertidal flats habitat between Miller Sands and Pillar Rock Islands in the Columbia River estuary. This area is currently an erosive area of the river just south of the authorized navigation channel. This feature includes construction of three pile dikes during the initial construction phase and two additional pile dikes pending the results of monitoring results to evaluate this feature. The placement of dredged material within the constructed Miller-Pillar pile dike field will complete this feature. The pile dike field, including associated bird excluders, is to be maintained by the Corps as a navigation feature. All project right-of-way required for this restoration feature lies below the ordinary high water line of the Columbia River and as such, will be accomplished by exercising the rights of Navigation Servitude.

8.7.3.4.^{new} Tenasillahe Island Phased Restoration

This restoration feature is planned as a three-phase effort, clearly with the final “long-term” phase being predicated on achieved environmental results separate from the success and/or failure of the interim restoration action. The purpose of this phased approach is to provide valuable habitat to ESA listed stocks.

Phase one, the interim feature, involves conducting hydraulic engineering analysis for fish of inlet channel and control structures, and tidegate structures that would allow ingress and egress of Columbia River waters to sloughs/backwater channels interior to the existing levee currently protecting an approximately 1,778 acre portion of Tenasillahe Island. Tenasillahe Island is a large natural island in the Columbia River estuary and its levee-protected acreage is owned in entirety by USFWS and is part of Julia Butler Hansen Columbian White-tailed Deer National Wildlife Refuge. Predicated on engineering feasibility, as determined by the engineering analysis, construction of two controlled inlets would occur at separate levee locations at the upstream end of the island so as to allow Columbia River flows into the headwaters of two interior sloughs. This, coupled with retrofitting improvement features for two downstream tidegates, comprises the construction features of the interim restoration action. Each one of these construction features would require the use of about 0.5-acre construction sites. Pre- and post-construction monitoring of the Tenasillahe phased restoration would cover a 12-year time period. The interim action requires the use of varied USFWS owned lands, and as post-construction operation and maintenance of the four constructed features will be accomplished by USFWS as part of their ongoing day-to-day operations, a no cost “Special Use Permit” is identified as the appropriate instrument by which the local sponsors would secure needed real property interests for all interim restoration actions. Therefore, no estimated LERRD credit is allocated for the interim action.

Phase two of this action is intended to provide secure habitat for Columbian white-tailed deer on Cottonwood-Howard Islands, with the expectation of achieving a secure and viable subpopulation as defined in USFWS’s recovery plan. Cottonwood-Howard Islands comprise about 920 acres above the ordinary high water line of the Columbia River and in effect constitute a single island mass. Historically, they were separate islands but due to their use as dredged material disposal sites they were, in effect, connected. The upstream and downstream portions of the islands were designated for dredged material disposal and access of dredging-related equipment in the 1999 Final IFR/EIS. The restoration feature calls for use of all the islands acreage, outside of the two actual designated disposal sites, to be used for Columbian white-tailed deer restoration. The use allocation of the 920 upland acres is as follows: 262 acres designated for disposal site use (Howard and Cottonwood Islands), 8 acres for equipment access, and 650 acres for restoration feature use. The restoration acreage includes the designated 300-foot wide riparian buffer between the river’s shore and the actual designated disposal sites, together with all the remaining island acreage. The ownership of Cottonwood-Howard Islands is comprised of two private holdings and WDNR ownership. As previously stated, due to the dual subject project requirements for Cottonwood-Howard Islands, “fee title” acquisition is now identified as the appropriate real property interest for the local sponsors to acquire from the two private ownerships. Due to restrictions placed on

the sale of “fee title” interest in Washington State lands, the approximately 158.5-acre WDNR ownership will continue to reflect a 20-year use agreement or easement interest requirement for dredge material disposal.

It also is important to note that one of the private owners also owns 60 acres of adjacent tidelands to Howard Island and good real estate practice will require purchase of “fee title” interest to those tidelands in conjunction with the acquisition of the upland acreage. The real estate costs associated with acquisition of the tidelands is reflected as a restoration feature component in the Final SEIS. Translocation of the white-tailed deer will be accomplished with the help of the USFWS. A no cost “Special Use Permit” with the USFWS is identified as the appropriate instrument by which the local sponsors would secure needed real property interests necessary for implementation of this part of the restoration feature. The USFWS also is identified for involvement with the feature’s habitat operation and maintenance and monitoring efforts.

The final phase is the long-term restoration action involving restoring the 1,778-acre levee protected portion of Tenasillahe Island to full tidal circulation. This would be accomplished by removal of downstream plugs (tidegates) on the internal drainage channels and removal of upstream levee sections to open historic upstream connections to these interior channels. These construction actions clearly have a significant effect on USFWS’s use of the affected 1,778-acre parcel. Post-construction monitoring of the acreage to verify environmental outcomes is also a component of this long-term feature. Again, this long-term restoration action is only proposed for implementation based on the achievement of off-site environmental actions (delisting of Columbian white-tailed deer) and as the long-term action clearly requires the full committed use of USFWS’s ownership as inter-tidal acreage, a no cost “Special Use Permit” is identified as the appropriate instrument by which the local sponsors secure needed real property interests necessary for the implementation of this action. Also, there are no identified operational and management actions required for the long-term action.

8.7.3.5. ^{new} Bachelor Slough Restoration

This restoration feature is intended to improve in-stream salmonid habitat and create riparian habitat along Bachelor Slough, a 2.75 mile-long side channel to the Columbia River. The restoration feature calls for dredging the entire slough (85 acres) and all project right-of-way required for this portion of the restoration feature which lies below the ordinary high water line of Bachelor Slough will be accomplished by exercising the rights of Navigation Servitude. Three upland sites have been identified for dredge material placement; one site owned by WDNR and two sites owned by USFWS. The WDNR owned 17-acre disposal site is located outside the flood protection dike on the Columbia River side of Bachelor Island. Both USFWS sites are located within Bachelor Island’s flood protection dike and when combined total 29 acres.

It should be noted that the Bachelor Slough restoration feature is only proposed for implementation based on suitability of the sediment chemistry for upland disposal and availability of adjacent targeted disposal sites. Sediment sampling in Bachelor Slough is the

first task to be accomplished and as stated previously, access to Bachelor Slough will be accomplished by exercising the rights of Navigation Servitude.

For the WDNR-owned lands, a short term use agreement or “dredge material disposal easement” is identified as the appropriate real property interest to allow for project use. The restoration feature’s use of USFWS lands includes not only the temporary use of the 29 acres contained within the two designated disposal sites, but the corresponding temporary use of lands between Bachelor Slough and the three disposal sites for dredging-related transport equipment. Upon completion of dredging action, the three disposal sites afford the bare mineral soil necessary for natural reestablishment of riparian forest habitat. The USFWS also is identified for involvement with post-construction riparian forest operation and maintenance and monitoring efforts. Based on USFWS level of involvement with this restoration feature, a no cost “Special Use Permit” with USFWS is identified as the appropriate instrument by which the local sponsors would secure the needed real property interests necessary for implementation of this portion of the restoration feature.

A second component to this restoration feature involves restoration of riparian forest along a narrow 6-acre strip of land located immediately adjacent to the left bank of Bachelor Slough. The scarification and sloping of this strip of land will create the bare mineral soil necessary for natural reestablishment of riparian forest habitat. The 6-acre strip of land is in WDNR ownership and its use will also be required during the dredging operation to allow for dredge material transport. Based on varied restoration actions required use for the 6-acre parcel, a no cost “Cooperative Agreement” with WDNR is identified as the appropriate instrument by which the local sponsors secure the needed real property interests necessary for implementation of this portion of the restoration feature.

8.7.4^{new} Ecosystem Evaluation Actions

During the ESA consultation process, the need for additional studies designed to provide useful information to aid in the recovery of salmon was highlighted and ecosystem evaluation actions were identified that, when accomplished, will contribute to the knowledge base of indicators for salmonids. The evaluation actions are to begin prior to project construction and continue up to 3 years after construction. All project right-of-way required for the accomplishment of these ecosystem evaluation actions is located on lands below the ordinary high water line of the Columbia River and as such, will be accomplished by exercising the rights of Navigation Servitude.

8.7.5^{new} Monitoring Actions Associated with Dredging and Disposal

During the ESA consultation process, the need for additional monitoring actions for analyzing the affects of project dredging and disposal actions was identified. Four specific monitoring tasks are proposed. Two of these tasks are to occur within a 7-year time period (2 years before, 2 years during and 3 years after construction), one of the monitoring tasks occurs 3 years after construction, and one task will occur for the entire life of the project. It appears all project right-of-way required for accomplishment of these monitoring actions is either located on lands below the ordinary high water line of the Columbia River, and as

such, will be accomplished by exercising the rights of Navigation Servitude, or achievable utilizing disposal site lands, mitigation site lands and/or ecosystem restoration feature lands upon which the local sponsors have secured appropriate real property interests necessary for project use.

8.8. ^{new} Royalty Fees for State-owned Dredged Material

This new section has been added for the Final SEIS. More information also is located in Exhibit K-6, *Royalty Fees for State Owned Dredged Material* (revised). Washington and Oregon laws require that royalties be paid to the respective state for dredged material (sand) removed from the Columbia River navigation channel and subsequently used for commercial purposes. The Oregon Division of State Lands and the Washington Department of Natural Resources, who administer the sand and gravel program for their respective states, have indicated a need to be able to track the location and volume of dredging, dredged material placement at upland disposal sites, and the sale of the dredged material from the channel improvement project. These materials, such as sand taken from the Columbia River channel, are at a premium and are being used for fill material related to construction, roads, filters for city water systems, golf courses, and sand for concrete and all of its many uses.

If the location and volume of dredging, as well as the placement of dredged material at upland disposal sites, are not adequately tracked during dredging and disposal operations for the channel improvement project, Oregon and Washington revenues from royalty fees generated from the sale of dredged material could be reduced.

The Corps will add a requirement to the channel improvement project construction contract that the contractor report directly to the Oregon Division of State Lands and the Washington Department of Natural Resources with the information needed to track dredging locations, volume, and dredged material placement. Therefore, the ability to track the royalty fees paid to Washington and Oregon from the sale of dredged material should be improved.