



**US Army Corps
of Engineers**
Portland District

Columbia River Channel Improvement Project





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Project History

- Congressional Study Resolution Aug 89
- Feasibility Study Initiated Apr 94
- ✓ Draft Feasibility Report/EIS Oct 98
- ✓ Final Feasibility Report/EIS Aug 99
- Oregon CZMA Dec 99
- USFWS and NMFS Bi-Ops Dec 99
- Project Authorization Dec 99



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Project Features

Navigation Improvements and Ecosystem Restoration



Monetary Benefits
Benefit-to-Cost Ratio

Non-Monetary Benefits
Habitat units, etc.



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Project Description

Authorized Project WRDA 2000

- Existing 600 foot wide channel deepened from the authorized depth of 40 feet to 43 feet
- Columbia River 3-106.5 and Willamette River 1-11.6
- Willamette River construction deferred
- Total dredging prism 45 to 48 feet CRD
- 5-turning basins on the Columbia River
- 29-upland disposal sites
- Ecosystem Restoration Features



Project History Continued

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- NMFS Bi-Op Withdrawn Aug 00
- State Water Quality Denials Sep 00
- Corps Re-initiates Consultation Sept 00
- Corps Decides to Supplement Jan 02
 - Integrated Feasibility Report/EIS
 - Washington State Environmental Policy Act
Port of Longview; Lead Agency
- NMFS and USFWS Bi-Ops May 02
- ✓ Draft Supplemental Report Jul 02



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Project Updates and Changes Since 1999

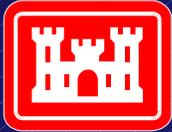
- 3 Years of data on Smelt
- 3 Years of data on Sturgeon
- Reduction in Rock Blasting
- Revised Dredging Quantities
- Additional Information on Dungeness Crab
- ESA Consultation;
 - 6 New Ecosystem Restoration Features
 - Research and Monitoring Actions
- Revised Costs and Revised Benefits



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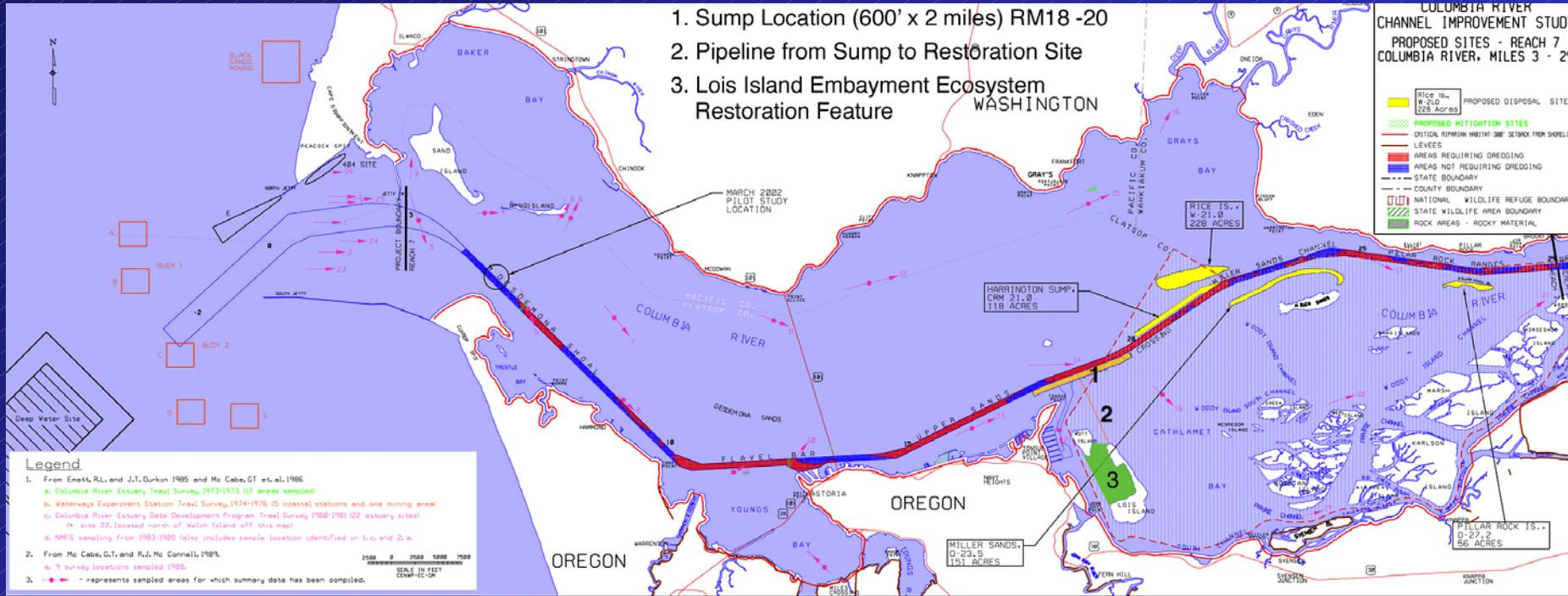
Ecosystem Restoration Components

- **Shillapoo Lake Restoration**
- **Tide-box Retrofits**
- **Lord/Walker Hump/Fisher Improved Circulation**
- ✓ *Lois Island Embayment Habitat Restoration*
- ✓ *Miller/Pillar Habitat Restoration*
- ✓ **Purple Loosestrife Control Program**
- ✓ **Tenasillahe Island Interim and Long-term Restoration**
- ✓ **Columbian White Tailed Deer Introduction**
- ✓ **Bachelor Slough**



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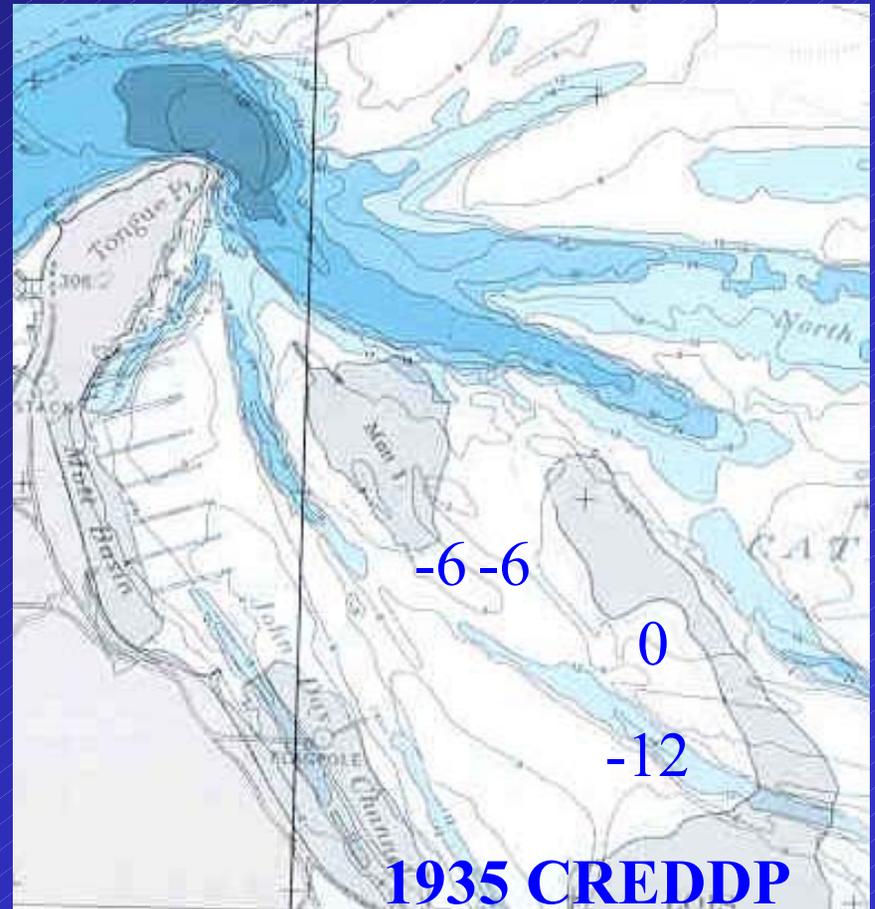
Columbia River Estuary Ocean – RM 29





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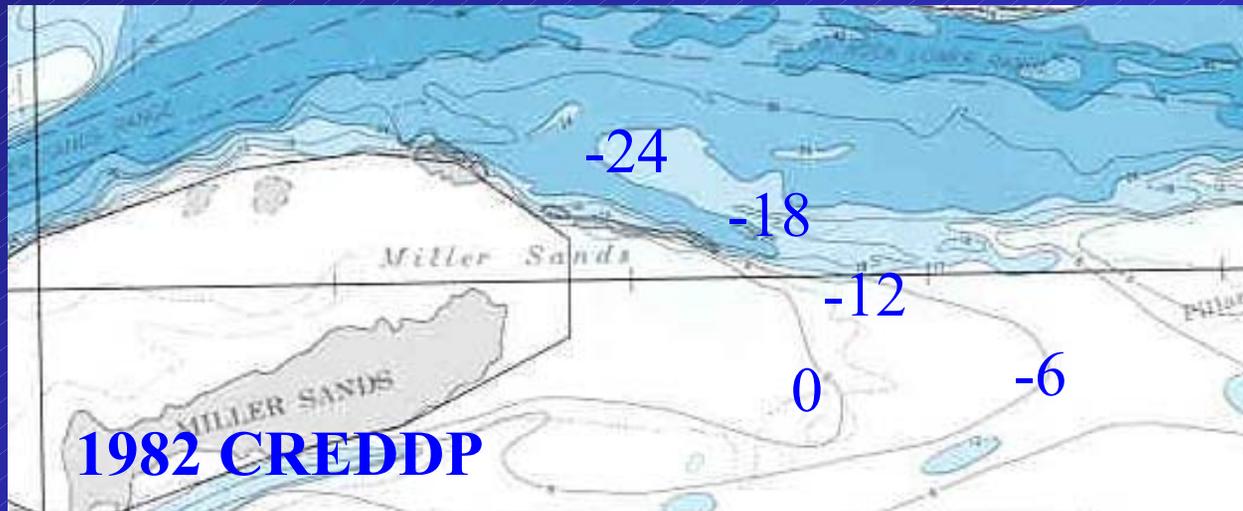
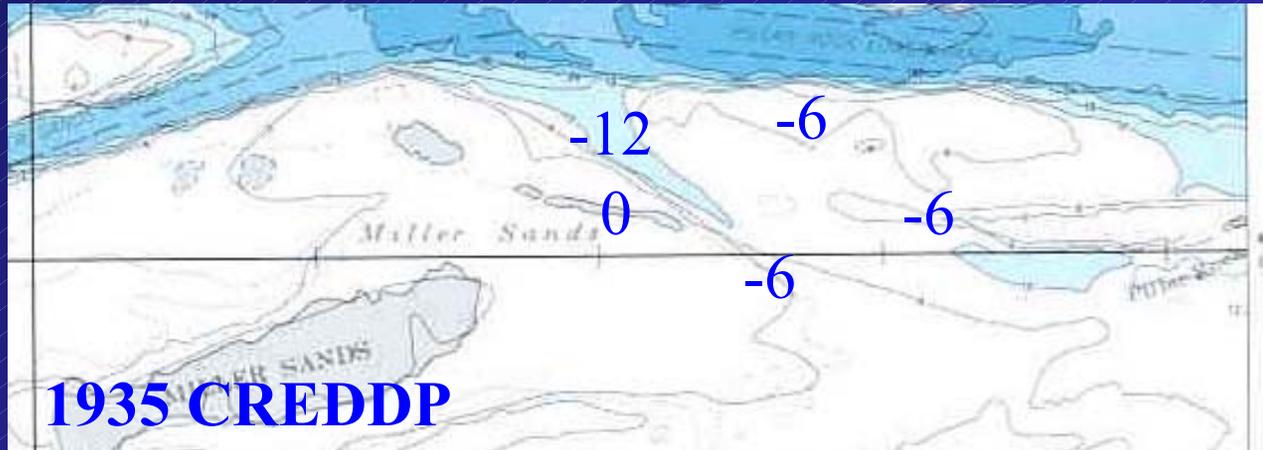
Lois-Mott Island CRM19





Miller-Pillar Pile Dikes

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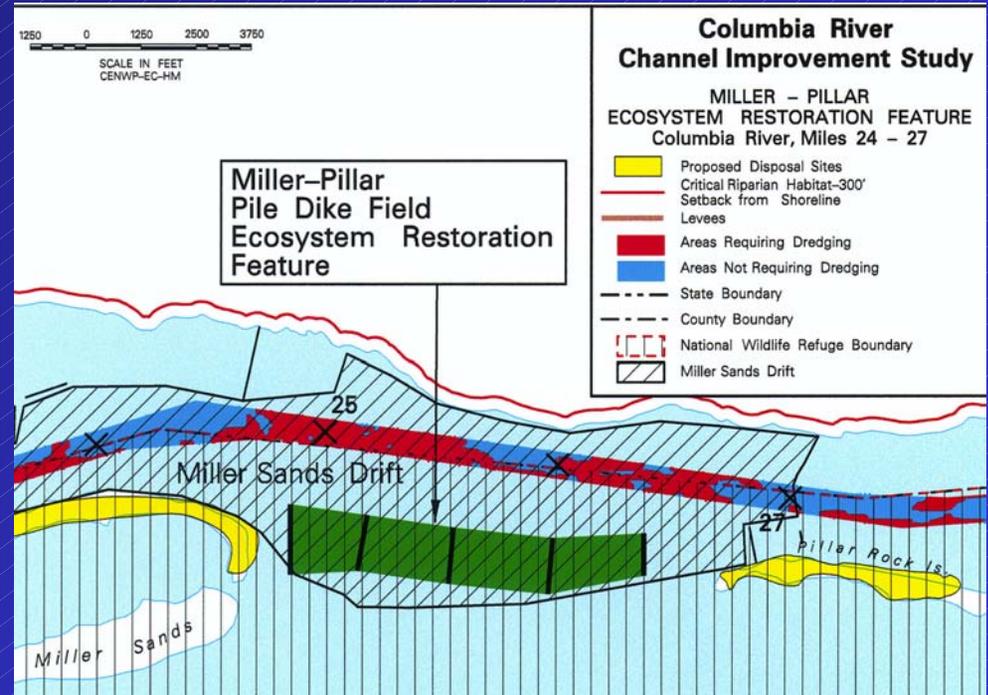
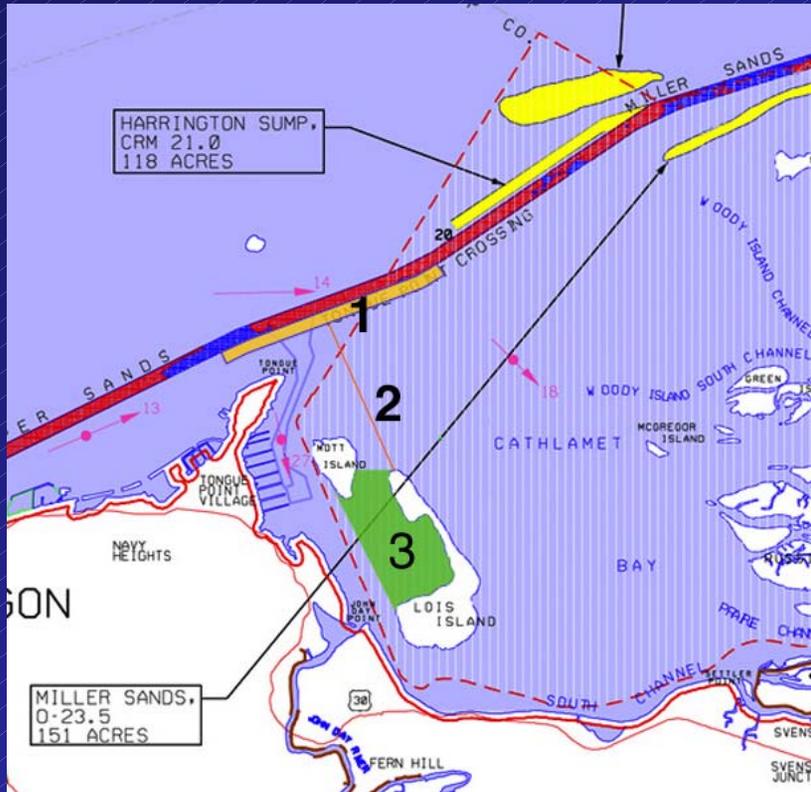
Use of Dredged Material for Ecosystem Restoration

Where environmentally beneficial use of dredged material is the least cost, environmentally acceptable method of disposal, it is cost shared as a navigation cost. (ER 1105-2-100)



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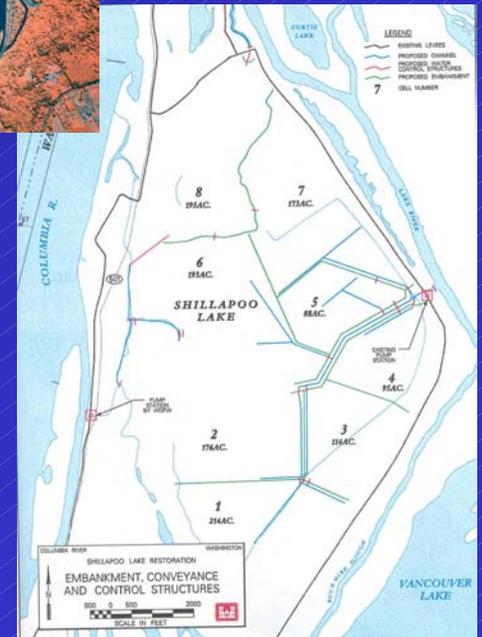
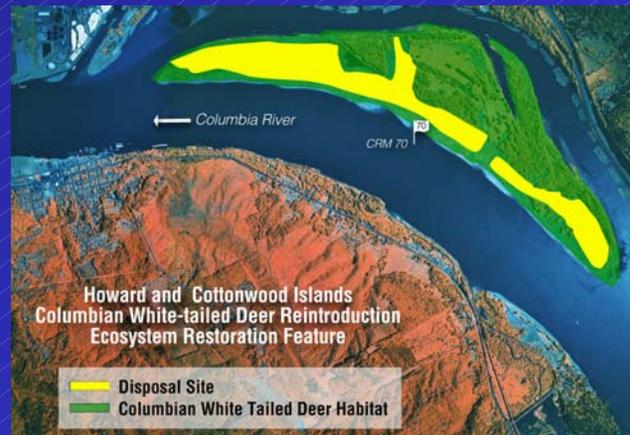
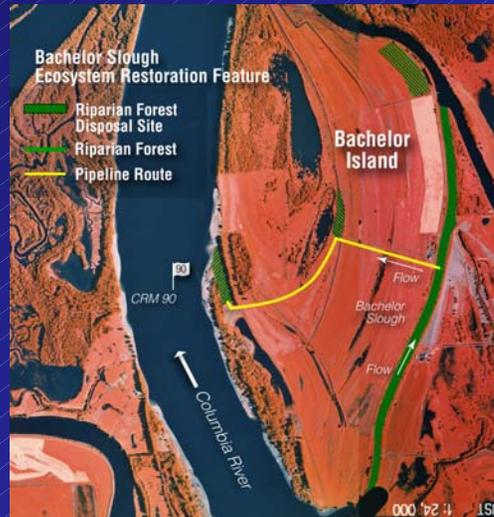
Restoration Features *Included in BCR*





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Restoration Features *Not Included in BCR*





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Corps' vs Sponsors' Plan

ER 1105-2-100

Corps' Plan

- Maximizes National Economic Development Benefits (NED)
- Policies and Regulations consistent across the Nation
- Federal appropriation decision-making utilizing BCR

Sponsors' Plan

- Sponsors may deviate from the NED Plan
- Sponsors must pay all incremental costs associated with the deviations



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Corps vs Sponsors' Plan Costs

Plan	Contract Costs in the BCR	Restoration Costs <i>not</i> in the BCR	Total Project Costs
Corps	\$129 m	\$20 m	\$149 m
Sponsor's	\$136 m	\$20 m	\$156 m



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Producing the BCR

Costs

Construction Costs of Navigation Features

First Cost	\$129 m
Interest During Construction	<u>\$ 4 m</u>
Total First Cost Rounded	\$133 m

Annualized Costs

First Costs (6-1/8%, 50 yrs)	\$ 8.6 m
O&M Dredging	\$ 3.7 m
Mitigation monitoring & land	<u>\$.3 m</u>
Total Average Annual Costs	\$ 12.6 m



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Producing the BCR

Benefits

Average Annual Benefits

Corn	\$ 3.9 m
Wheat	\$ 2.2 m
Barley	\$.2 m
Soybeans	\$ 1.0 m
Containers	<u>\$11.1 m</u>
Total Rounded	\$18.3 m



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Producing the BCR

Benefits and Costs

$$\frac{\text{Average Annual Benefits}}{\text{Average Annual Costs}} = \frac{\$18.35}{\$12.58} = 1.46$$

By Corps regulation BCRs above unity are reported to only one decimal place

Therefore **BCR = 1.5 : 1**



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Public Process

- Astoria Information Meeting Jul 29
- Vancouver Public Hearing Jul 31
- Cost/Benefit Technical Panel Aug 5-9
- Longview Public Hearing Sept 5
- Astoria Public Hearing Sept 10
- Public Comment Ends Sept 15



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Next Steps

- Respond to Comments
- Revise Report
- Circulate Final Supplemental Document
- Water Quality Certification
- Coastal Zone Consistency Determination
- Record of Decision