LOWER DUWAMISH WATERWAY

FINAL CLEANUP PLAN

(also known as the Record of Decision, or ROD)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAY 28, 2015

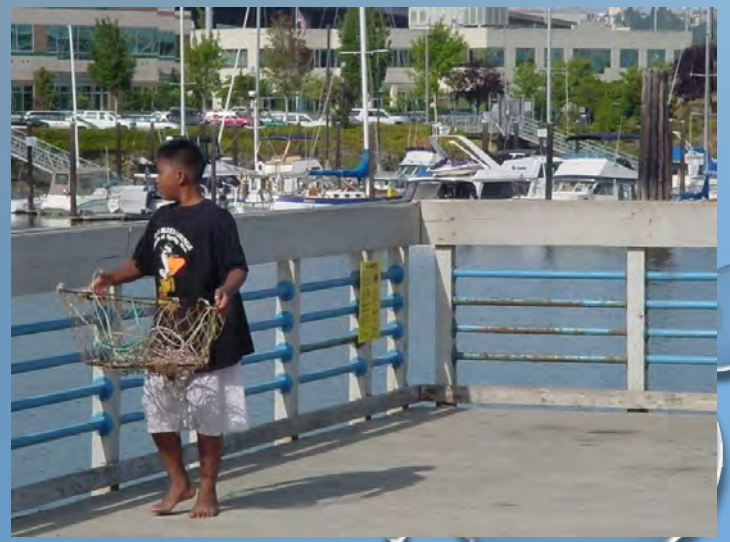
Why Clean Up the Duwamish Waterway?

- Over 100 years of industrial and urban use has polluted waterway mud (sediments)
- Mud is contaminated with harmful chemicals
- Resident fish and shellfish (like perch, sole, crabs) are unsafe to eat

Cleanup Objectives

- ***Reduce risks to:***

1. People who eat resident fish and shellfish.
2. People coming into contact (skin contact and ingestion) with contaminated sediments.
3. Bottom-dwelling organisms, such as crabs and clams.
4. Fish, birds, and mammals.



Key Parts of the Cleanup

Clean up early action areas

DEPARTMENT OF ECOLOGY
State of Washington

Source Control

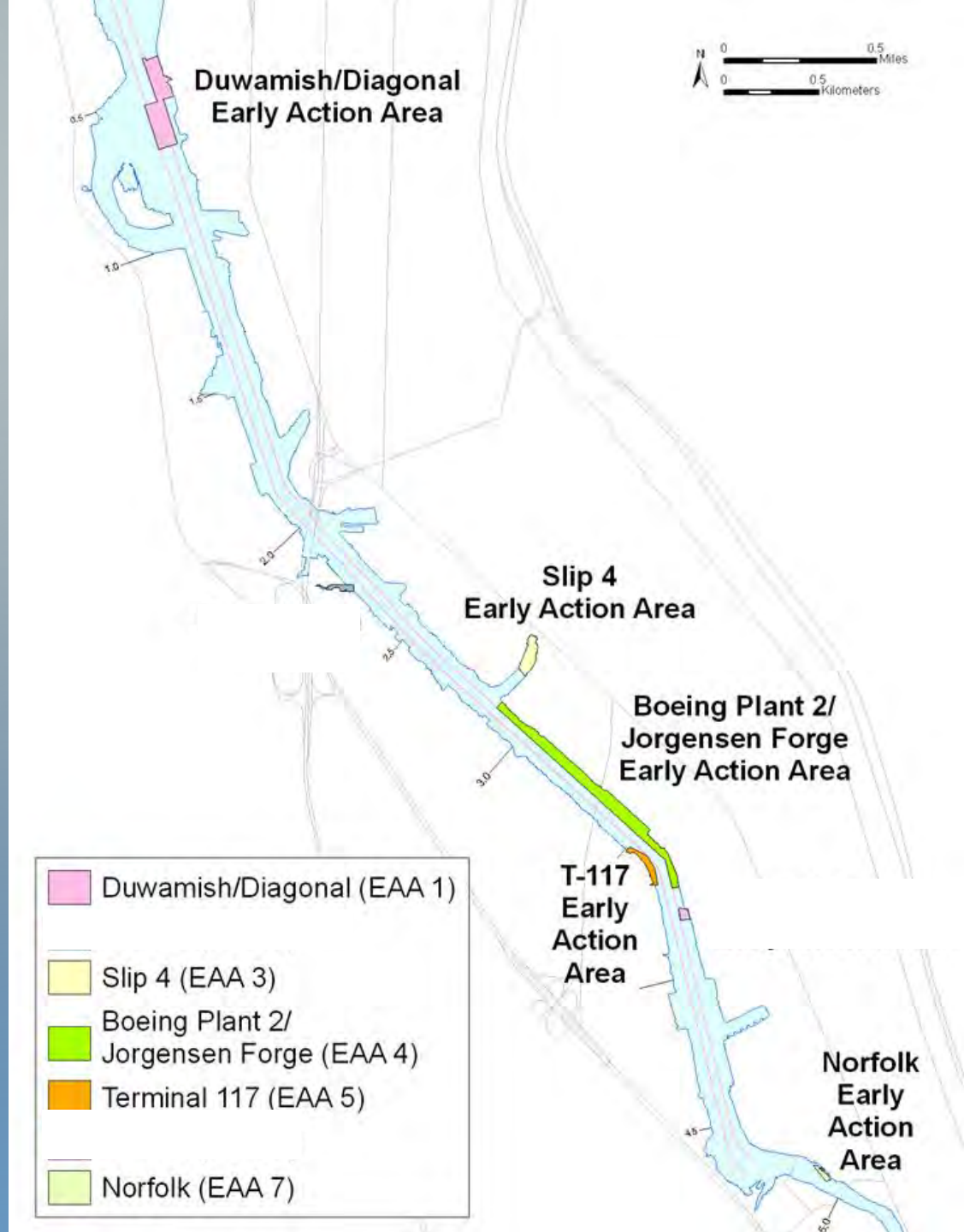
EPA United States Environmental Protection Agency Region 10

Sediment Cleanup

…towards a cleaner river…

Clean Up Early Action Areas

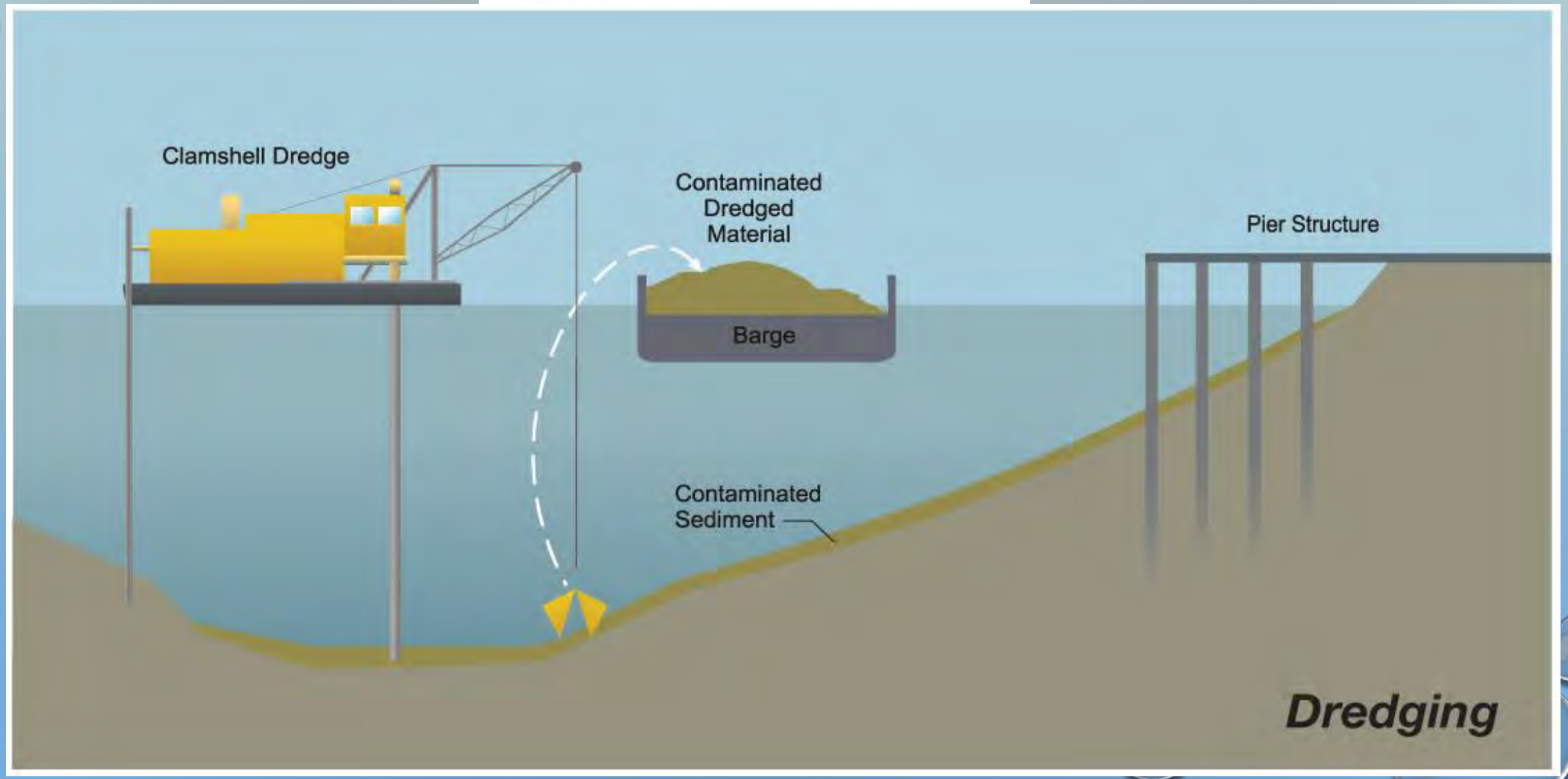
- Will be completed by the end of 2015
- Address 29 acres of the most contaminated areas in the waterway
- Remove approximately 280,000 cubic yards of contaminated sediments
- Projected to reduce surface sediment PCB concentrations by 50%



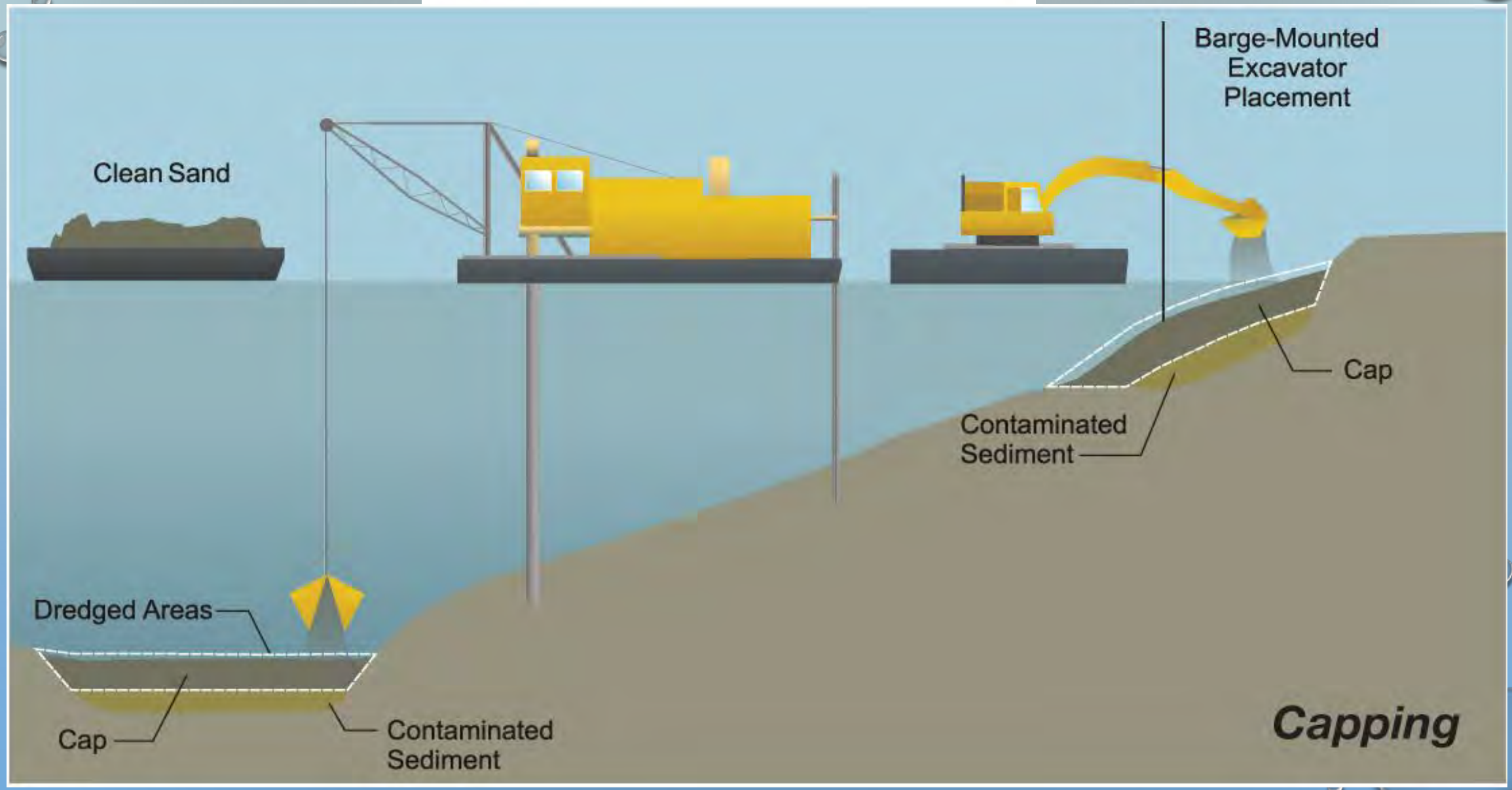
Coordination with Source Control

- Ecology will revise their approach to controlling sources to the Waterway. Industrial activity, rain runoff, and combined sewer overflows are all sources of pollution in the Duwamish.
- **When will sediment cleanup begin?** When Ecology determines on-going sources to the river are unlikely to cause recontamination of the sediments.

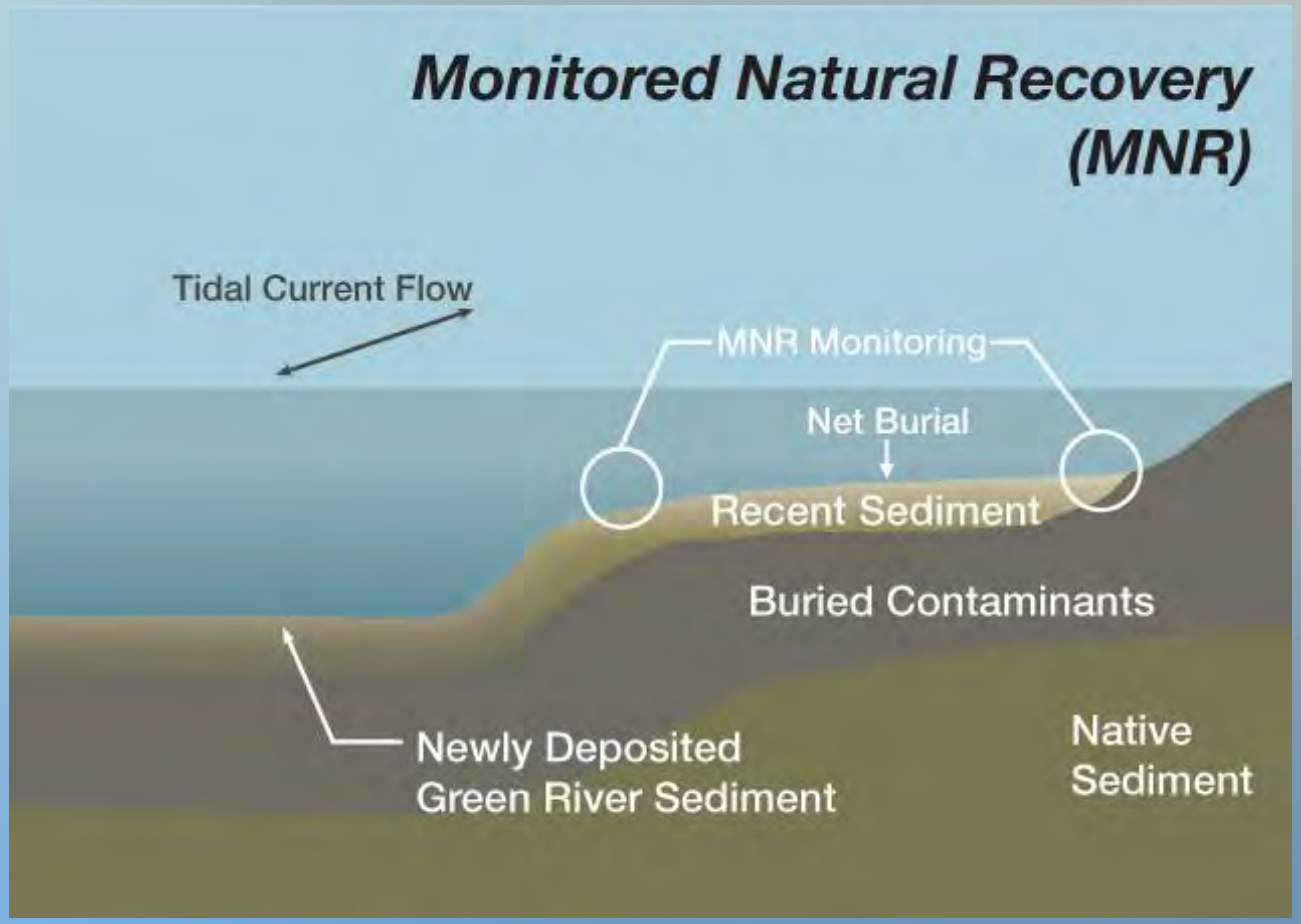
Removal

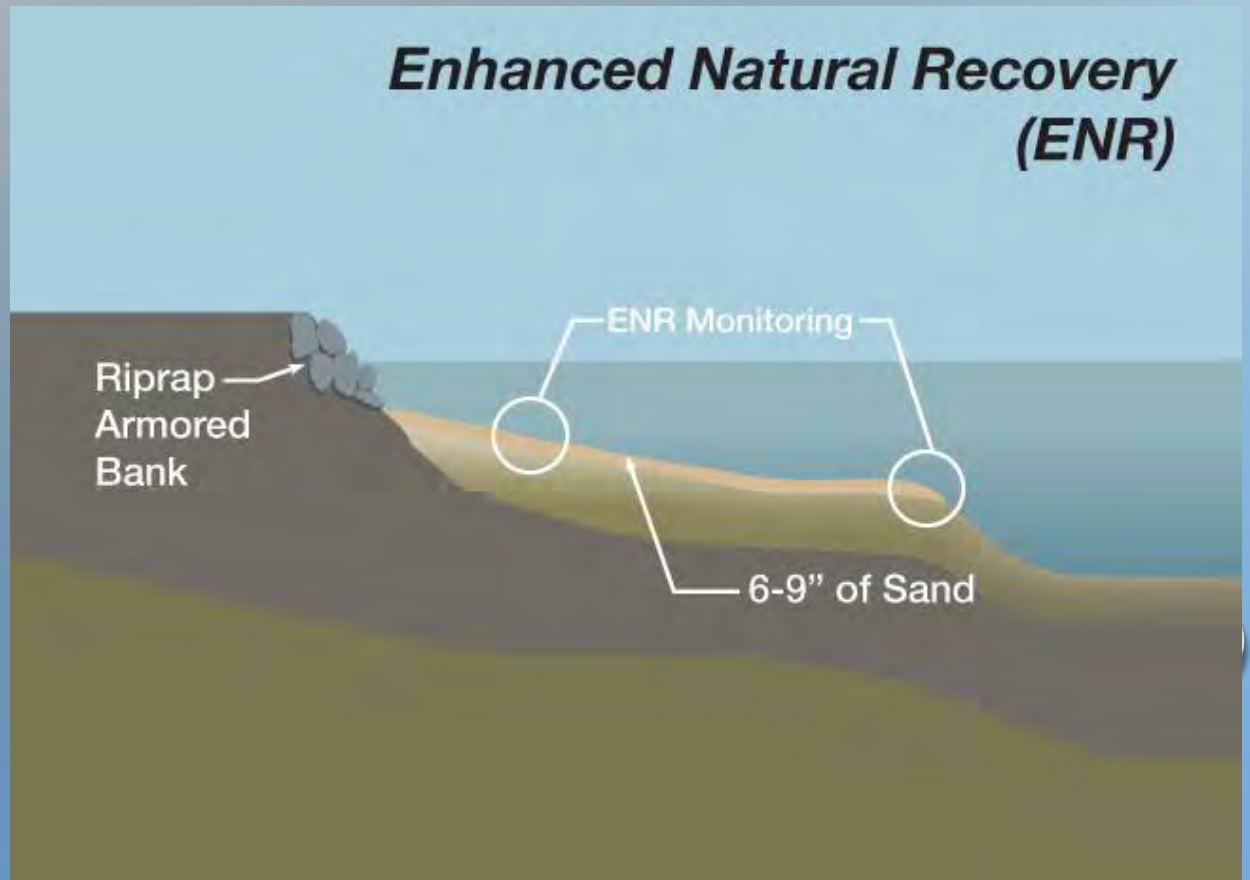

Clamshell Dredge
Contaminated
Dredged
Material
Barge
Pier Structure
Contaminated
Sediment
Dredging

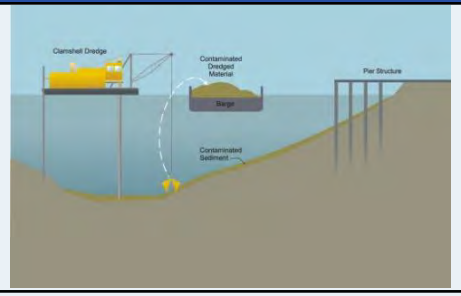
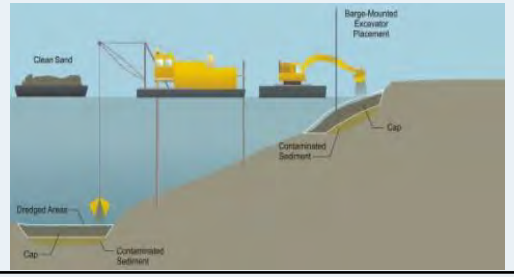
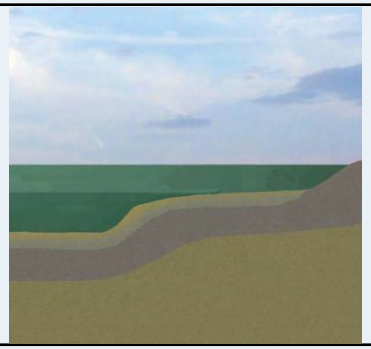
Containment



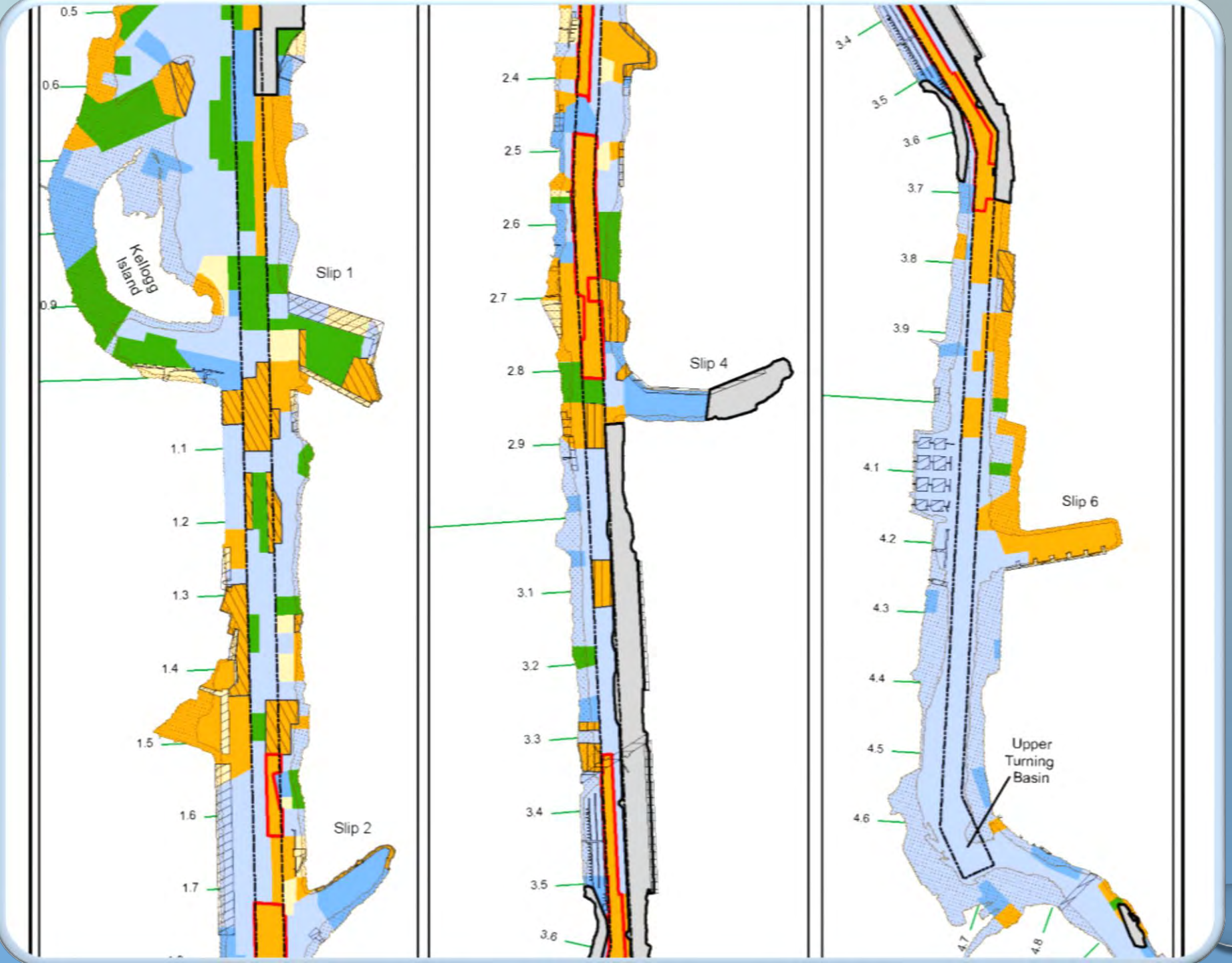
Natural Recovery





Remedy	Area	Time	Cost	Follow-Up
 ***Dredging***	105 Acres	7 Years	**$342 Million**	
 ***Capping***	24 Acres			
 ***Enhanced Natural Recovery (ENR)***	48 Acres			
 ***Monitored Natural Recovery (MNR)***	235 Acres	10 Years		
	412 Acres	**17 Years**		

EPA'S SELECTED REMEDY



- DREDGE
- PARTIAL DREDGE AND CAP
- CAP
- ENHANCED NATURAL RECOVERY
- MONITORED NATURAL RECOVERY TO SCO
- MONITORED NATURAL RECOVERY BELOW SCO
- EARLY ACTION AREAS

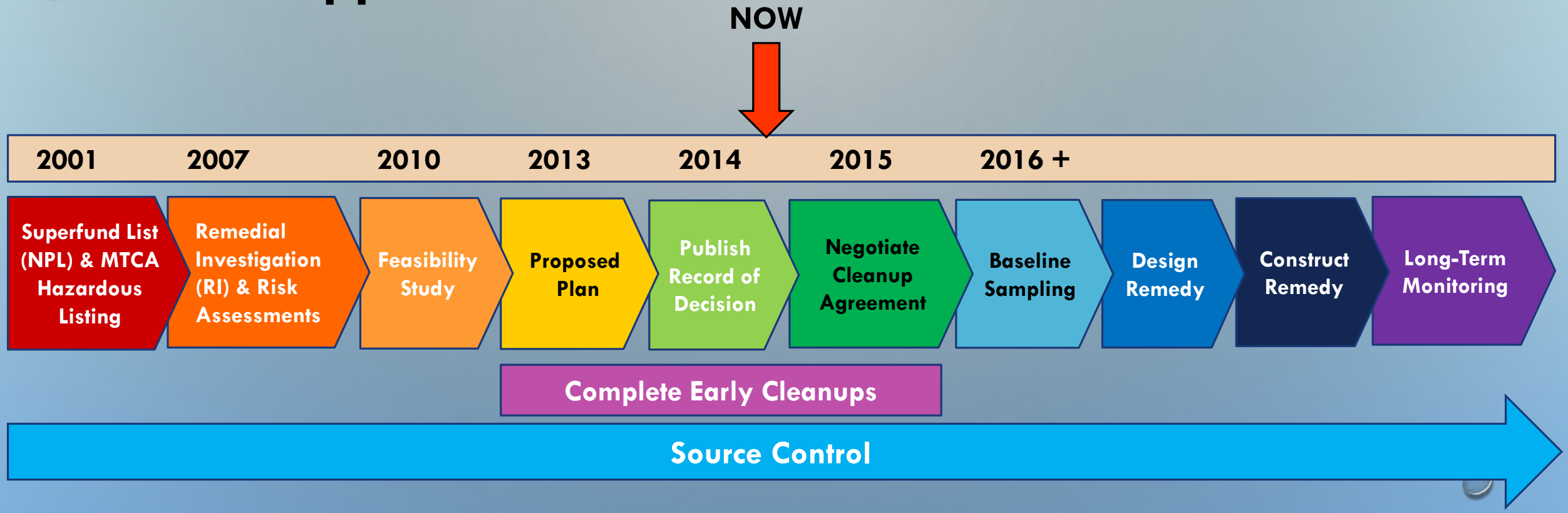
What has changed in the Cleanup Plan based on public comment?

- Requires more dredging of contaminated mud.
- Work with waterway businesses and users to ensure that the cleanup will be as compatible as possible with all uses of the waterway.
- Uses new sampling data to update dredging volumes and cost estimates

Together, the Final Cleanup Plan and cleanups in the Early Action Areas will…

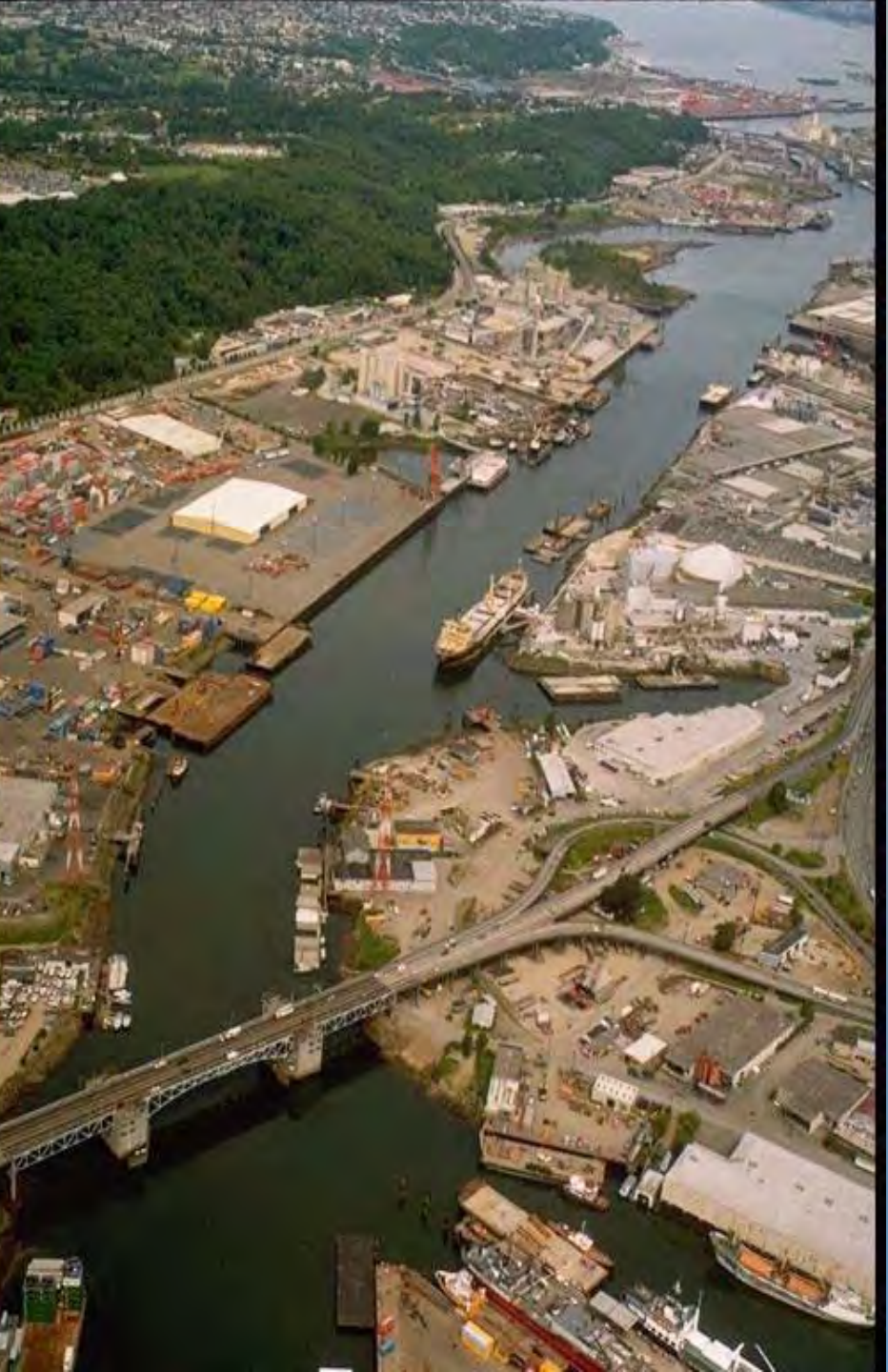
- Dredge, cap, and enhance natural recovery for over 206 acres;
- Remove over 1.2 million cubic yards of contaminated sediments; and
- Reduce PCB concentrations in the river by at least 90%

What Happens Next



Community Involvement

- Community input on the Proposed Plan helped shape changes in the Final Plan
- Fishers Study to learn about who fishes, cooks and eats resident fish and shellfish
- Revise the Community Involvement Plan
- Design of the Cleanup Remedy



Questions?