

Challenges of Nearshore Habitat Creation in Two Superfund Sites

Duwamish River People's Park and
Shoreline Habitat (Former Terminal 117)
and Terminal 25 South Marsh Restoration

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Presentation Outline

- DRPP (former Terminal 117)
 - Background
 - Habitat Restoration Concept
 - Construction Challenges
- T-25S
 - Background
 - Concept
 - Regulatory Challenges



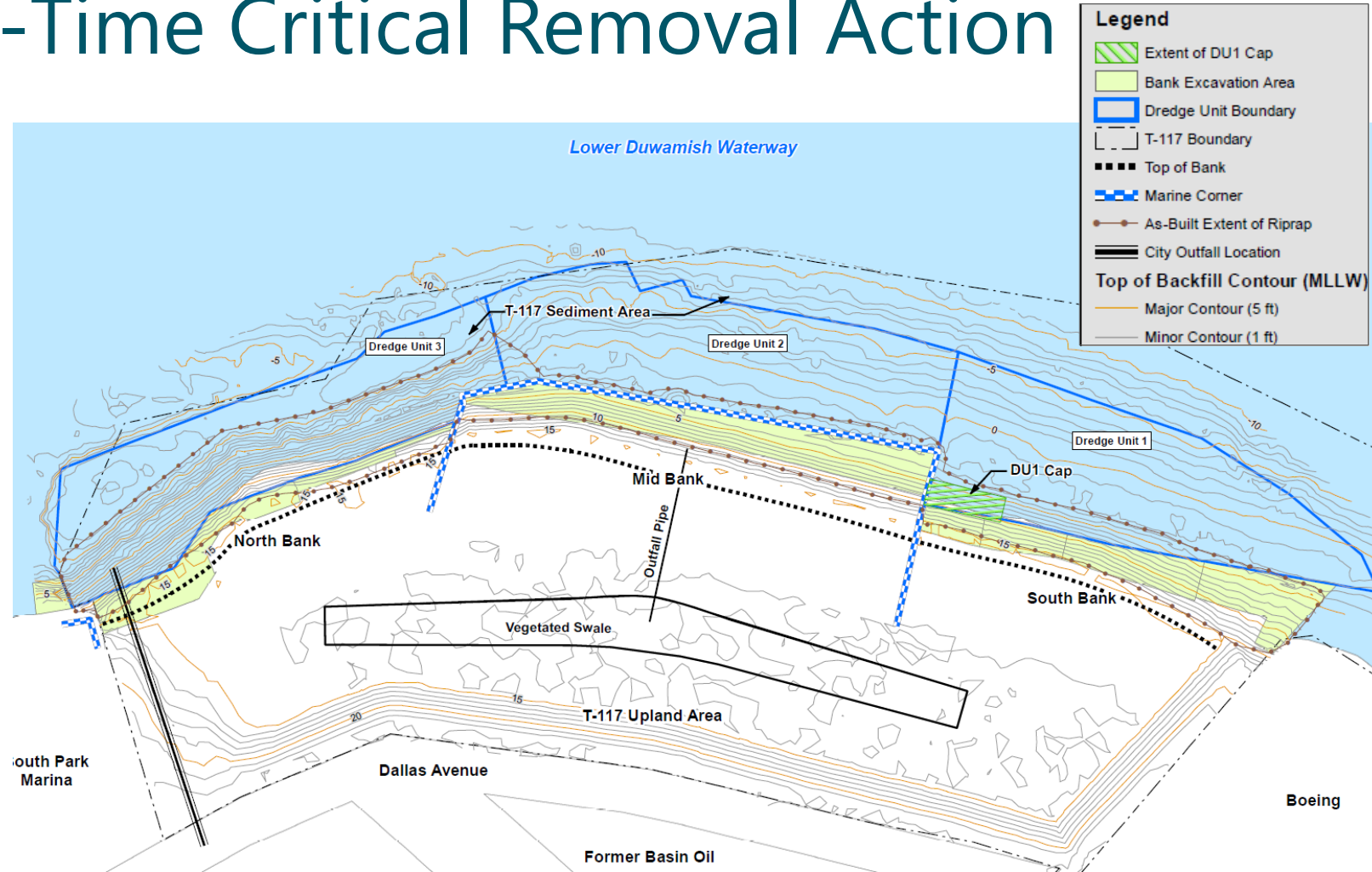
The Terminal 117 Story



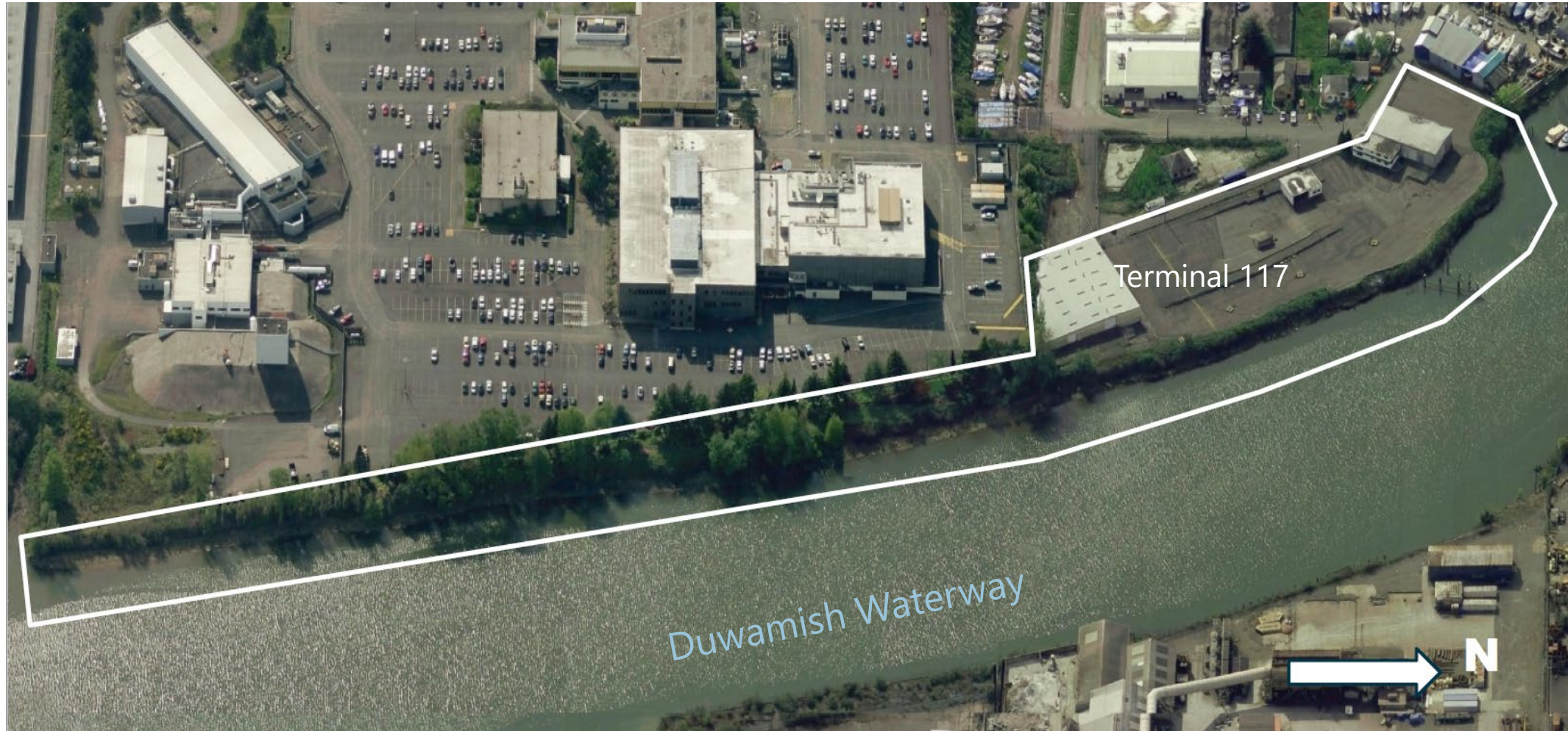
- 1930s to 1993: Duwamish Manufacturing Co & Malarkey Asphalt Plant
- 1999: Port acquires property
- 2003: EPA identifies site as EAA
- 2007: Duwamish Valley community advocates for public park and habitat reserve
- 2013: Phase 1 Removal Action
- 2020: Habitat construction begins

T-117 Phase 1 Non-Time Critical Removal Action

- Conducted between 2013 and 2015
- 76,000 tons of upland soil excavated
- 22,000 tons of sediment/debris removed
- Confirmation sampling met Removal Action cleanup objectives



Prior to Cleanup (2013)



Habitat Restoration Concept






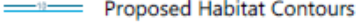
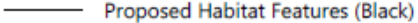
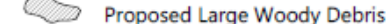
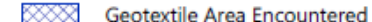



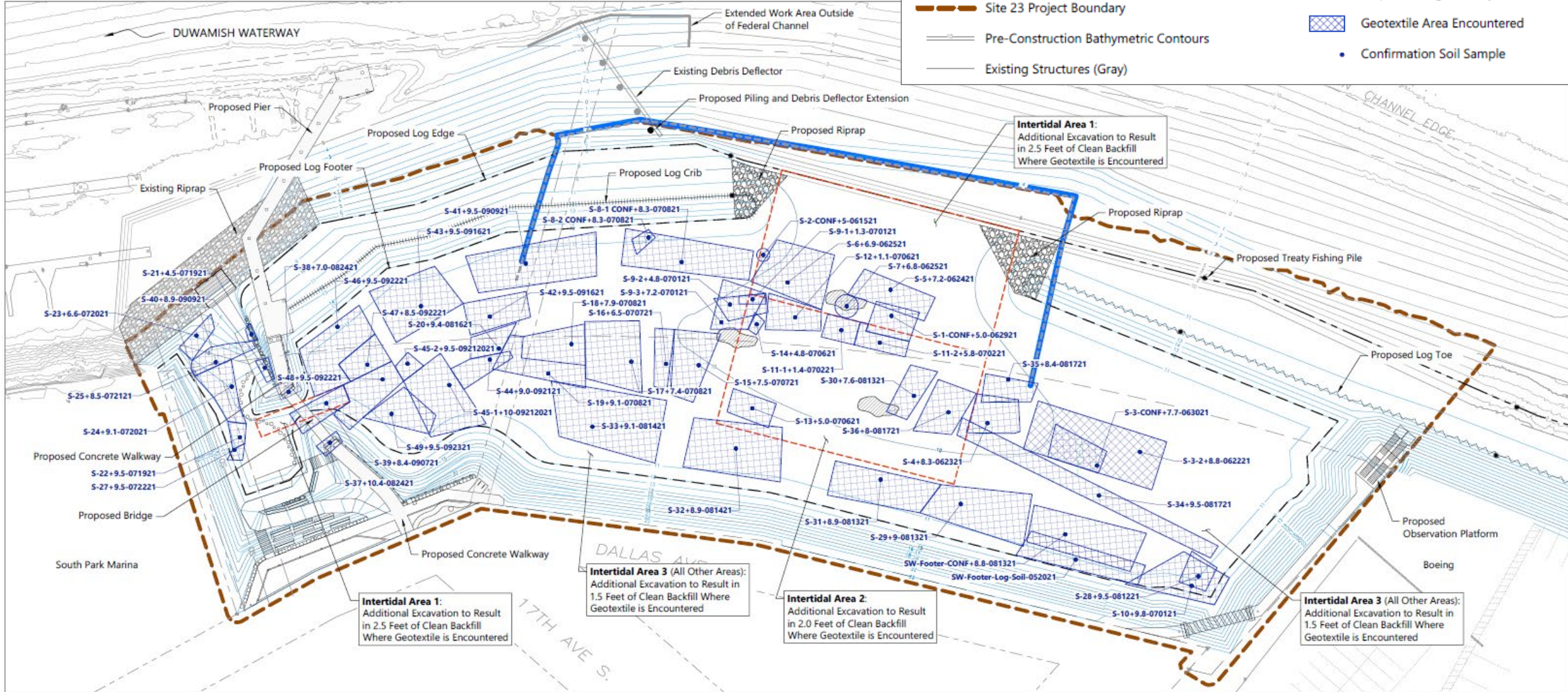
Habitat Restoration Project Design Requirements



Soil Management

LEGEND:

-  Sheet Pile Wall (Cut to grade in August 2021)
-  Intertidal Excavation Area
-  Site 23 Project Boundary
-  Pre-Construction Bathymetric Contours
-  Existing Structures (Gray)
-  Proposed Habitat Contours
-  Proposed Habitat Features (Black)
-  Proposed Large Woody Debris
-  Geotextile Area Encountered
-  Confirmation Soil Sample



Duwamish River People's Park and Shoreline Habitat

- 3,210 feet of shoreline restored
- 14 acres of high-priority habitat (Site 23)
- Important site for salmon recovery
- 40% increase in critical salmon habitat
- Shoreline access in EJ community
- Already approved for NRD credits
- CWA and ESA credits in process



Terminal 25 South



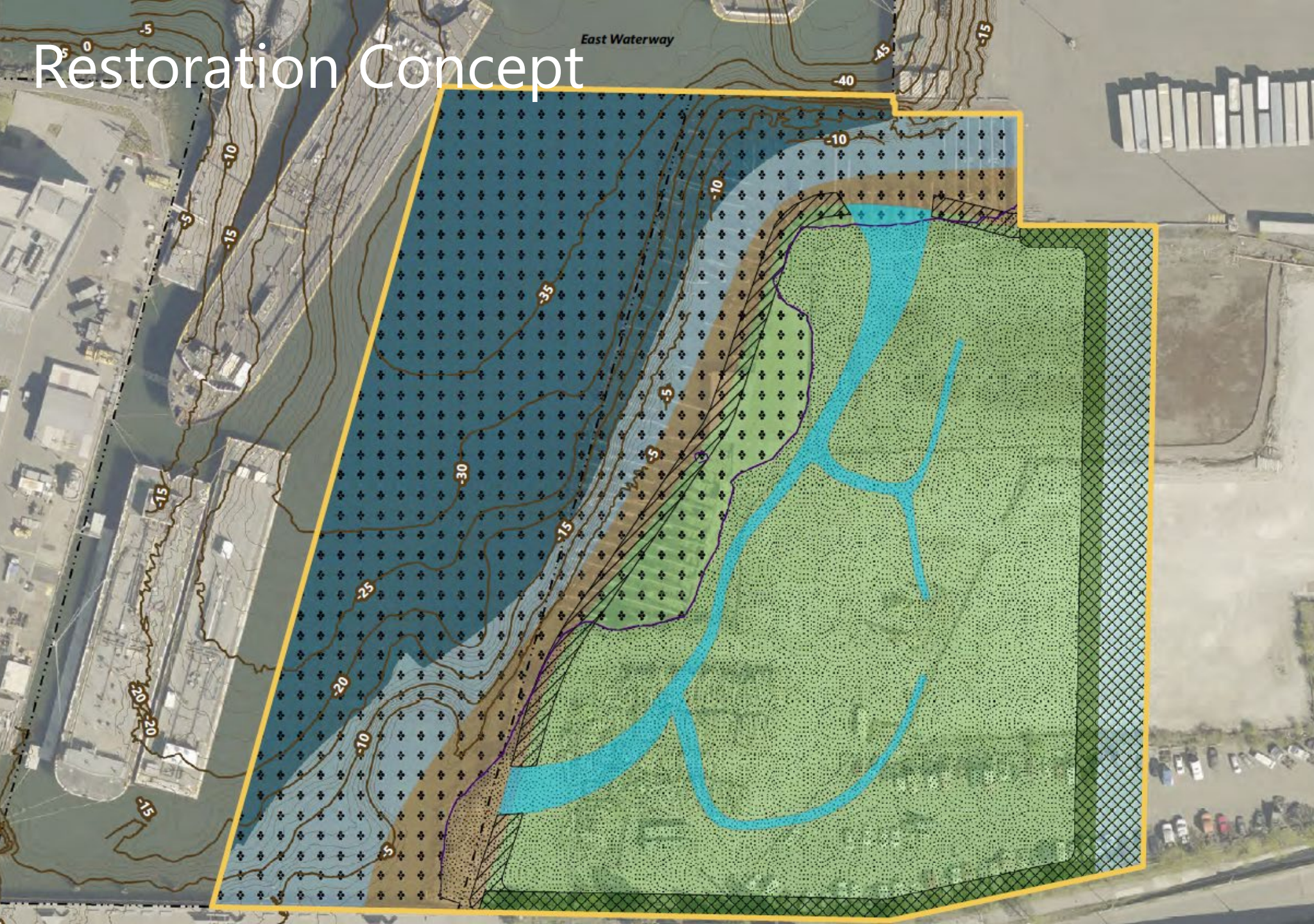
- The Port plans to construct a habitat restoration project at the Terminal 25 South Site
- Restoration will include:
 - Removal of > 5 acres of upland area
 - Removal of 5 acres of contaminated sediments
 - Restoration of marsh, intertidal, and subtidal habitat
 - Creation of off-channel emergent marsh and riparian habitat

Regulatory Context

- The Site is part of the EW OU of the Harbor Island Superfund Site
 - Proposed Plan expected next year
- The Port recently entered into an ASAOC with EPA to complete an EE/CA at T25S
- The NTCRA at T25S will complete the EW sediment remedy selected by EPA
 - Removal
 - Removal & backfill



Restoration Concept



LEGEND:

- Terminal 25 South Site
- MHHW Elevation
- Federal Navigation Channel
- Berm
- Incised Channel

Restoration Habitat Definition

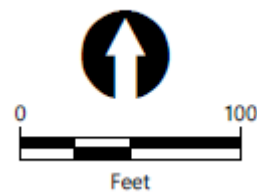
- Deep Subtidal – Fully Functional (<-14 feet MLLW)
- Shallow Subtidal – Fully Functional (-14 to -4 feet MLLW)
- Intertidal – Fully Functional (-4 to +6 feet MLLW)
- Off-Channel Emergent Marsh – Fully Functional (+6 to +12 feet MLLW)
- Riparian (>+12 feet MLLW)
- Stormwater Feature (0.5 acre)

Bathymetry Contours (feet in MLLW)

- 1-foot
- 5-foot

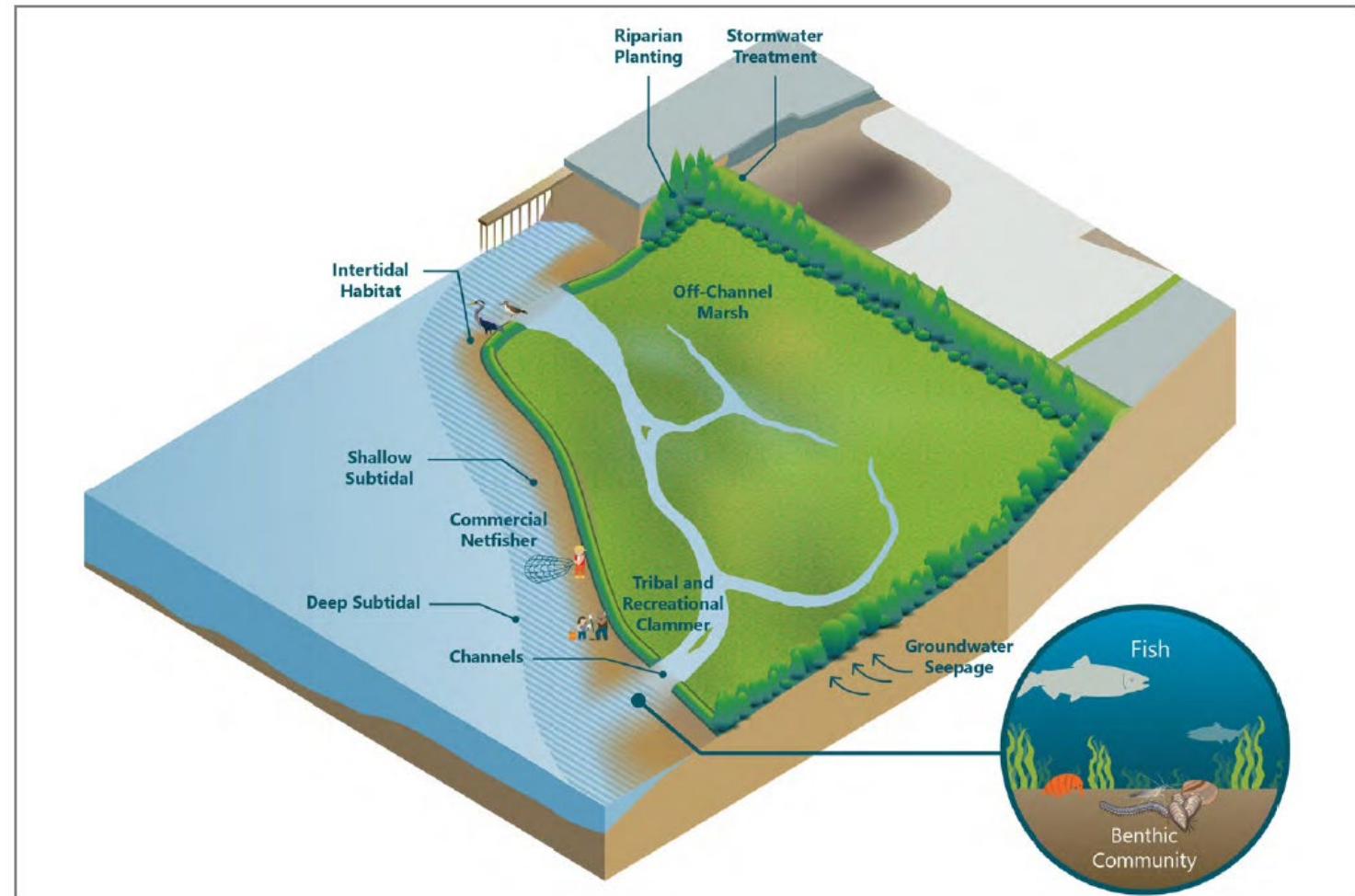
Site Plan

- Existing Sediment Area
- Future Modified Upland Area
- Future Sediment Area



Challenges

- Lengthy EE/CA process
- EPA requirements under CERCLA don't always align with NRD Trustee requirements
- East Waterway cleanup process/timing
- Recontamination concerns





Questions/ Discussion