



Port of Seattle Habitat Restoration and Mitigation Bank Program

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AAPA Environment Committee
November 6, 2019





Port is in unique position

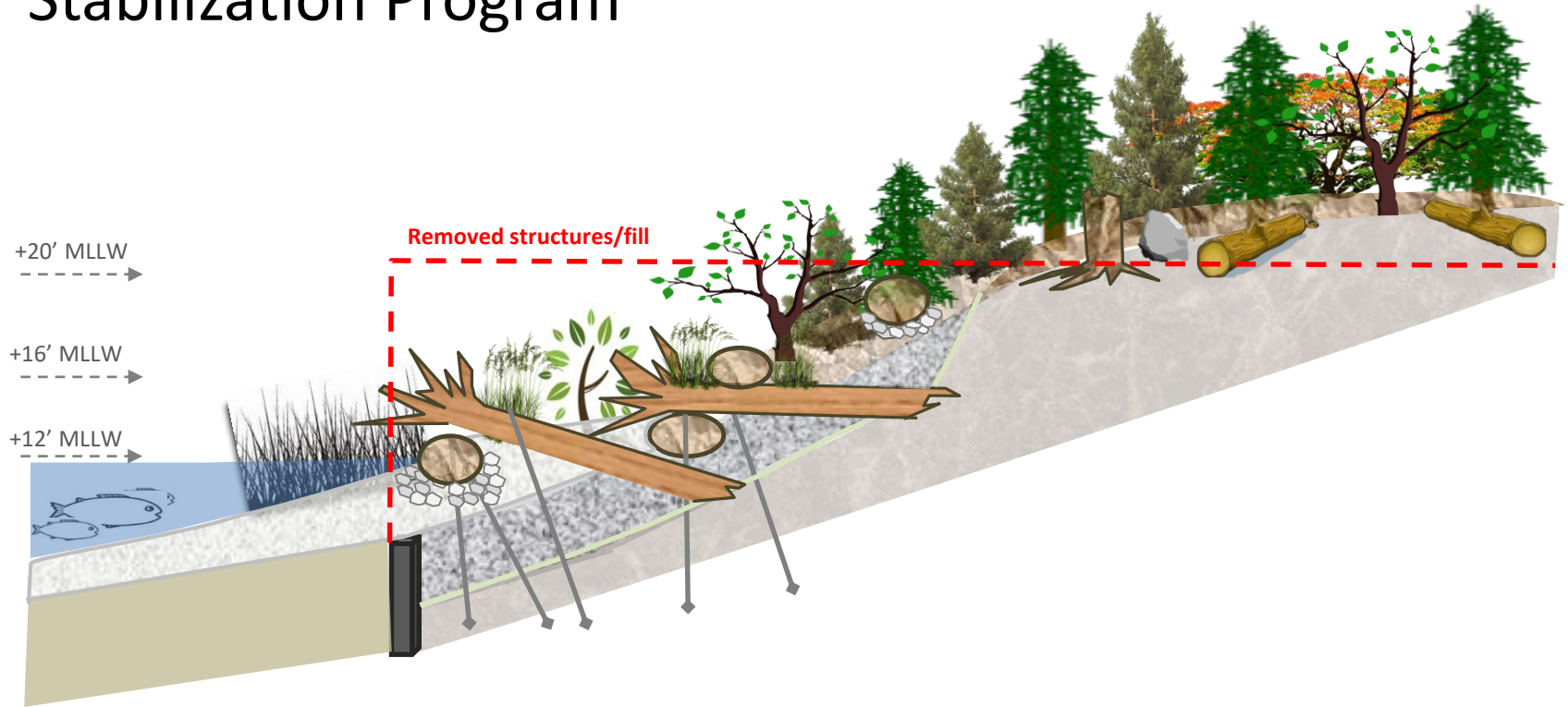
- Ownership of extensive shoreline in critical areas for listed species
- Provide compensatory mitigation
- Promotes climate adaptation & resilience
- Generate revenue (mitigation banking)
- Maintain social license to operate



- 31 habitat sites, 21 parks, 15.4 miles of shoreline
- Compensatory mitigation sites (12 acres)
- Community stewardship sites (18 acres)
- Multi-site mitigation bank (~75 acres)
- Alternative Bankline Stabilization Program
- Innovation (R&D)
 - Smith Cove Blue Carbon Pilot Project
 - Floating Wetland Islands (aka Bio-Barges)
 - Underwater Noise Reduction



Alternative Shoreline Stabilization Program



Alternative
Bankline Stabilization:
T-108
Pre-Project



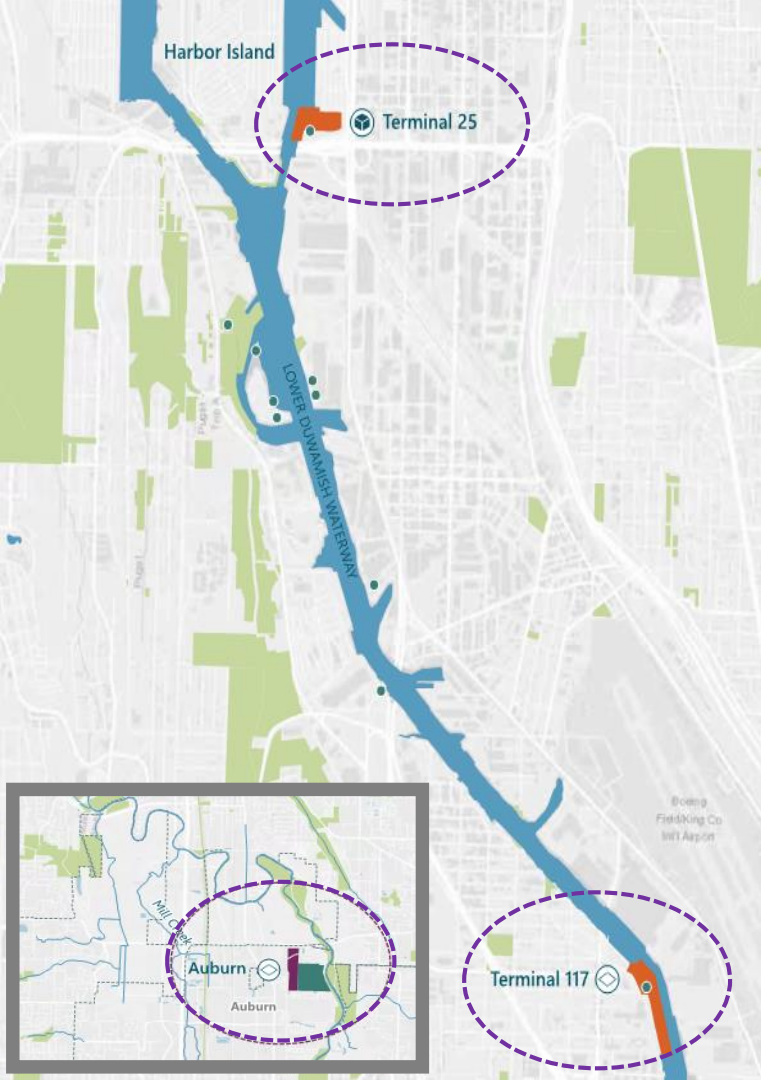
Alternative
Bankline Stabilization:

YEAR 1



YEAR 3





Mitigation Bank

- Prospectus submitted May 2019
- Main sites @ Terminal 117, Terminal 25, Auburn
- Marine, estuarine and freshwater habitat
- Service area = Green-Duwamish Watershed
- Mitigation market:
 - Wetland/stream (Section 404, Clean Water Act)
 - Listed species (Endangered Species Act)
 - Natural Resource Damages (CERCLA)
 - Floodplain storage (Municipal codes/FEMA)
 - Carbon?

Mitigation Bank (cont.)



- Derelict structure removal:
 - Terminal 5
 - Pier 34
 - Pier 16
 - Pier 48 (w/ Washington State Ferries)
- Other restoration projects
 - Terminal 115
 - Terminal 108
 - Terminal 107
 - Terminal 105



Multi-Site
Mitigation
Bank:

Auburn Wetlands



Umbrella Bank Project Sites

New
Mitigation
Bank Site
(34 acres)

New Off-
Channel Fish
Access Area
(11 acres)

Third Runway
Mitigation Site
(65 acres)



Multi-Site
Mitigation
Bank:

TERMINAL
25



Multi-Site
Mitigation
Bank:

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Multi-Site
Mitigation
Bank:

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117



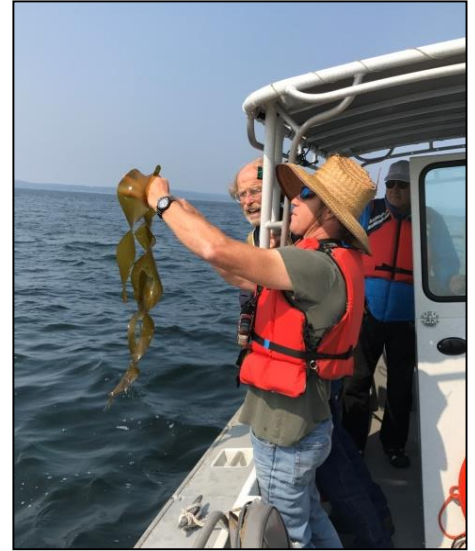
Multi-Site
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Challenges/Issues

- Corps slow/inefficient review and approval process
- Poor performance of competition creates skepticism
- Competition
- Constraints in restoring industrial areas
- Labor agreements and tribal concurrence
- Need for joint banks
- Washington State and NOAA developing a marketplace of conservation banks



Overall what is working



- Completed/submitted our Prospectus in May 2019
- NRD Credits protocol is in final form (about to be signed)
- First bank project (T117) is shovel ready and will be under construction 2020
- We are already receiving inquiries about credit sales even though we have not begun marketing
- We have some interest from Nature Conservancy to provide financing
- We successfully lobbied for \$10m in increased funding for Corps regulatory programs (passed through House)

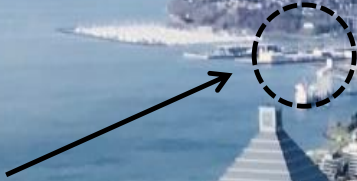
PORTfolio Research & Development:

Blue Carbon Habitat

- ❖ Blue carbon is carbon that's captured by nearshore processes
- ❖ Stored in biomass and sediments
- ❖ Mainly marsh, seagrass and algae



**Smith Cove
Blue Carbon
Pilot Project**



BLUE CARBON PILOT PROJECT

Step 1: Plant and install blue carbon enhancements:

- Kelp
- Eelgrass
- Shellfish beds
- Intertidal salt marsh
- Shoreline/riparian vegetation*

*Size/scope/schedule TBD

Step 2: Monitor project over time:

- Water Chemistry (pH)
- Carbon sequestration
- Beneficial habitat changes

Step 3: Report results

The blue carbon project team includes staff from the Port, Puget Sound Restoration Fund, NOAA, City of Seattle, UW and Grette Associates.

SMITH COVE "BLUE CARBON" PILOT PROJECT





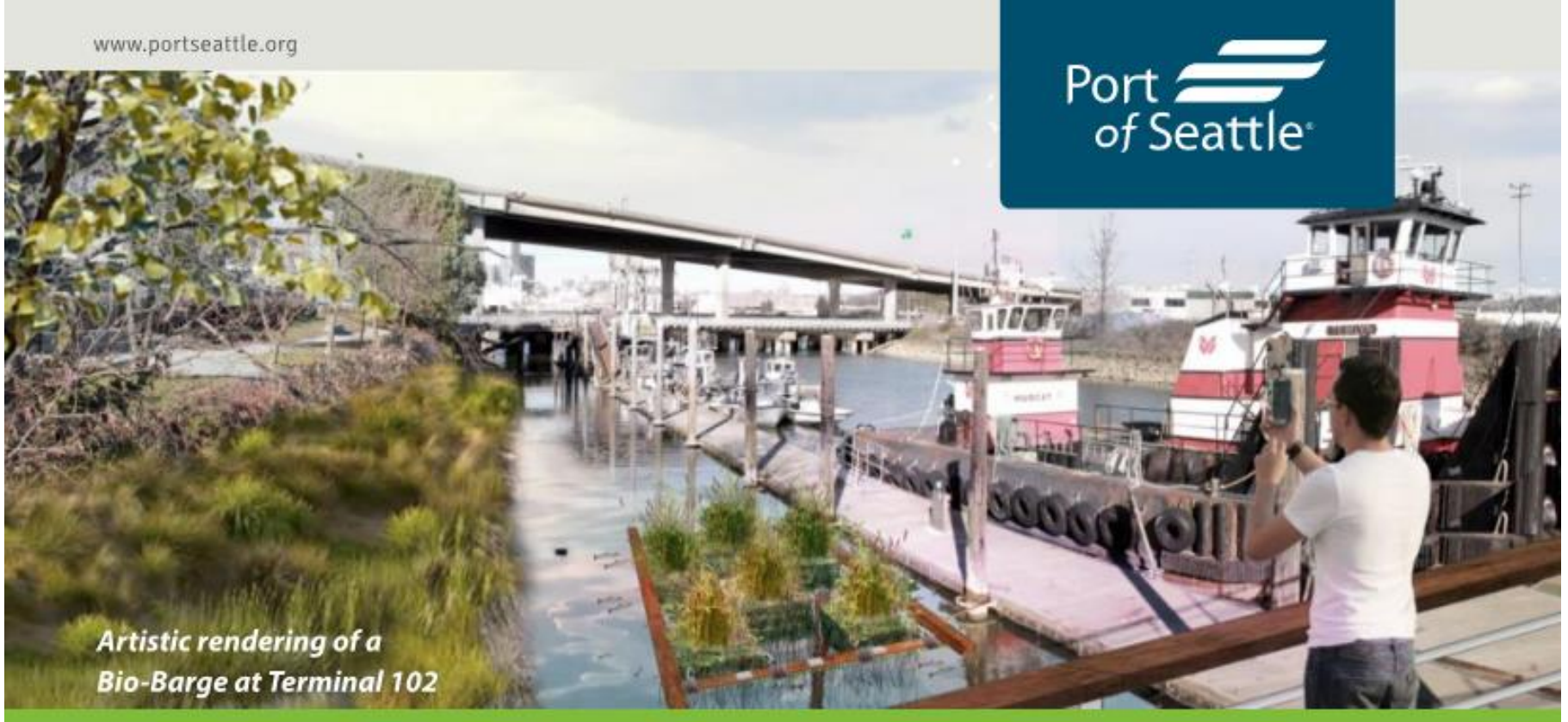
.2% of the Ocean Floor
10% of the Carbon

PORTfolio Research & Development:

Floating Wetland Islands (Bio-Barges)

www.portseattle.org

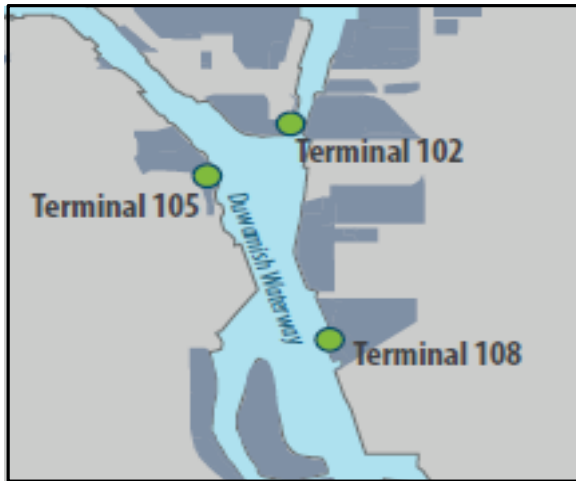
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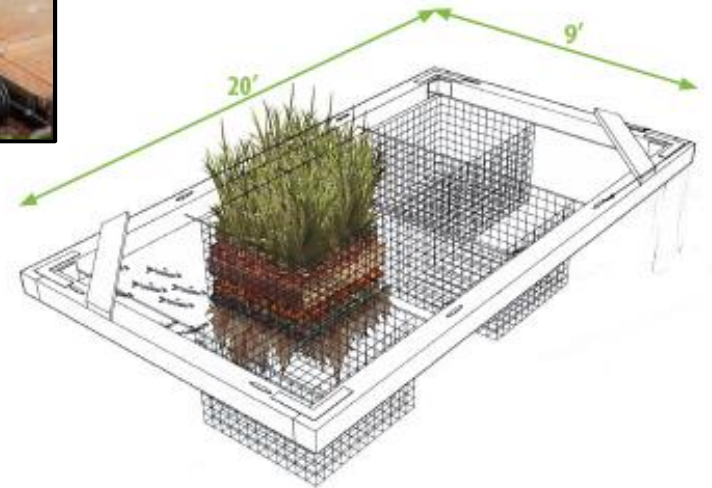
*Artistic rendering of a
Bio-Barge at Terminal 102*

PORTfolio Research & Development:

Floating Wetland Islands (Bio-Barges)



[GENERATION 1
BIO-BARGE VIDEO](#)







Thank you

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