



Whatcom Waterway Multiphase Remediation Project: Summary of Phase 1 Activities and Phase 2 Planning

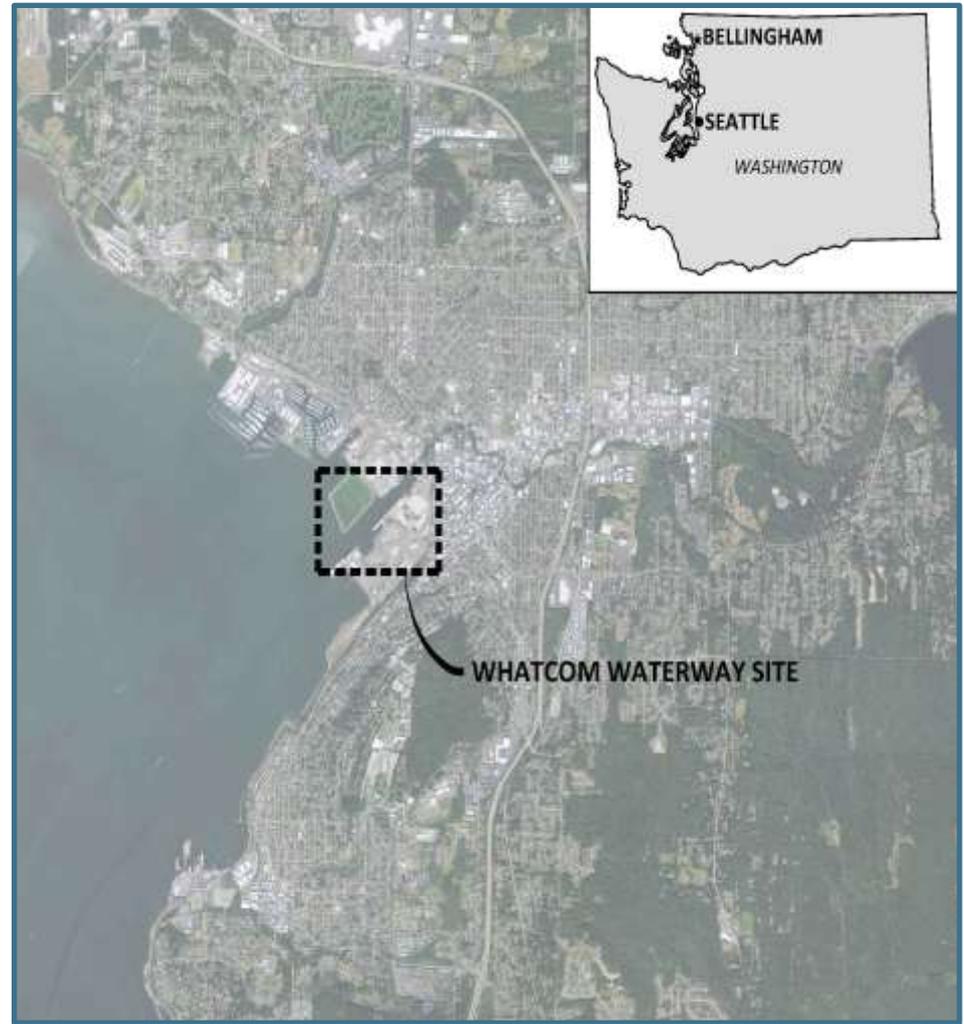


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Presentation Summary

- Site Background and History
- Phase 1 Summary
 - Remediation and Construction Overview
 - Construction Challenges
 - Results
- Phase 2 Planning
 - Remediation Overview
 - Land Use Planning
- Next Steps



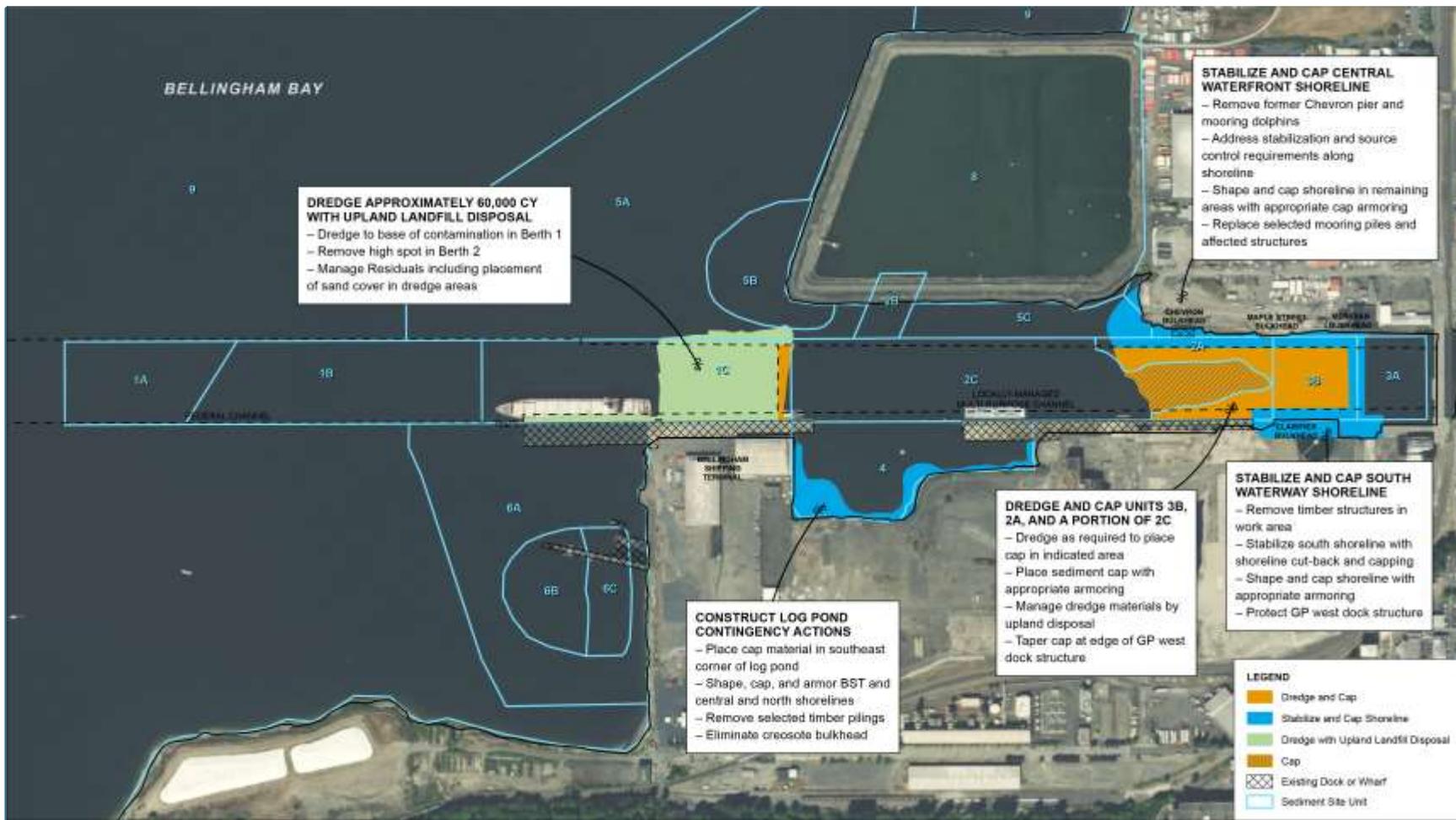
Site Background and History



Phase 1 Remediation/Construction Overview



Phase 1 Remediation/Construction Overview

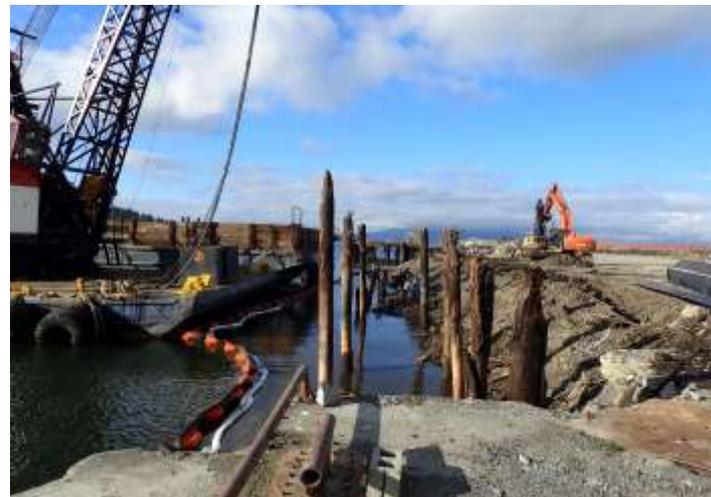


Phase 1 Remediation/Construction Overview

- Dredging for off-site disposal = 111,500 cy
 - Material barged to offload facility near Seattle, WA
- Engineered cap material placement = 12.9 acres
 - Sand, filter, and armor materials in engineered cap
- Residuals management cover material = 5.4 acres
 - Thin sand layer to mix with dredge residuals
- Shoreline remediation wall = 720 lineal feet
- Water quality monitoring
 - Silt curtains not required during dredging
 - Achieved turbidity requirements throughout construction

Phase 1 Construction Challenges

- Permitting
 - Pre-construction
 - Dredge material offload facility
- Shoreline/upland construction
 - Remediation wall
 - Shoreline debris
- Dredging and capping
 - Sequencing
- Waterway operations
 - Tenant coordination/schedule



Phase 1 Construction Results

- Pre-Construction
 - Unstable shoreline conditions
 - Failing structures
 - Source control concerns
- Post-Construction
 - Stabilized shoreline
 - New infrastructure
 - Source control addressed



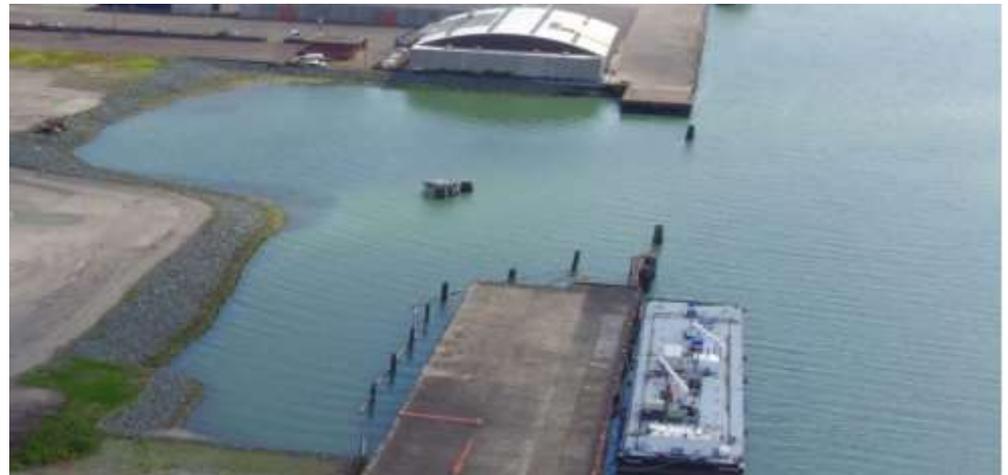
Phase 1 Construction Results (cont.)

- Pre-Construction
 - Vertical bulkhead
 - Clarifier structure and foundation
 - Shoreline debris
- Post-Construction
 - Softened shoreline
 - Clarifier removed
 - Access and upland development potential



Phase 1 Construction Results (cont.)

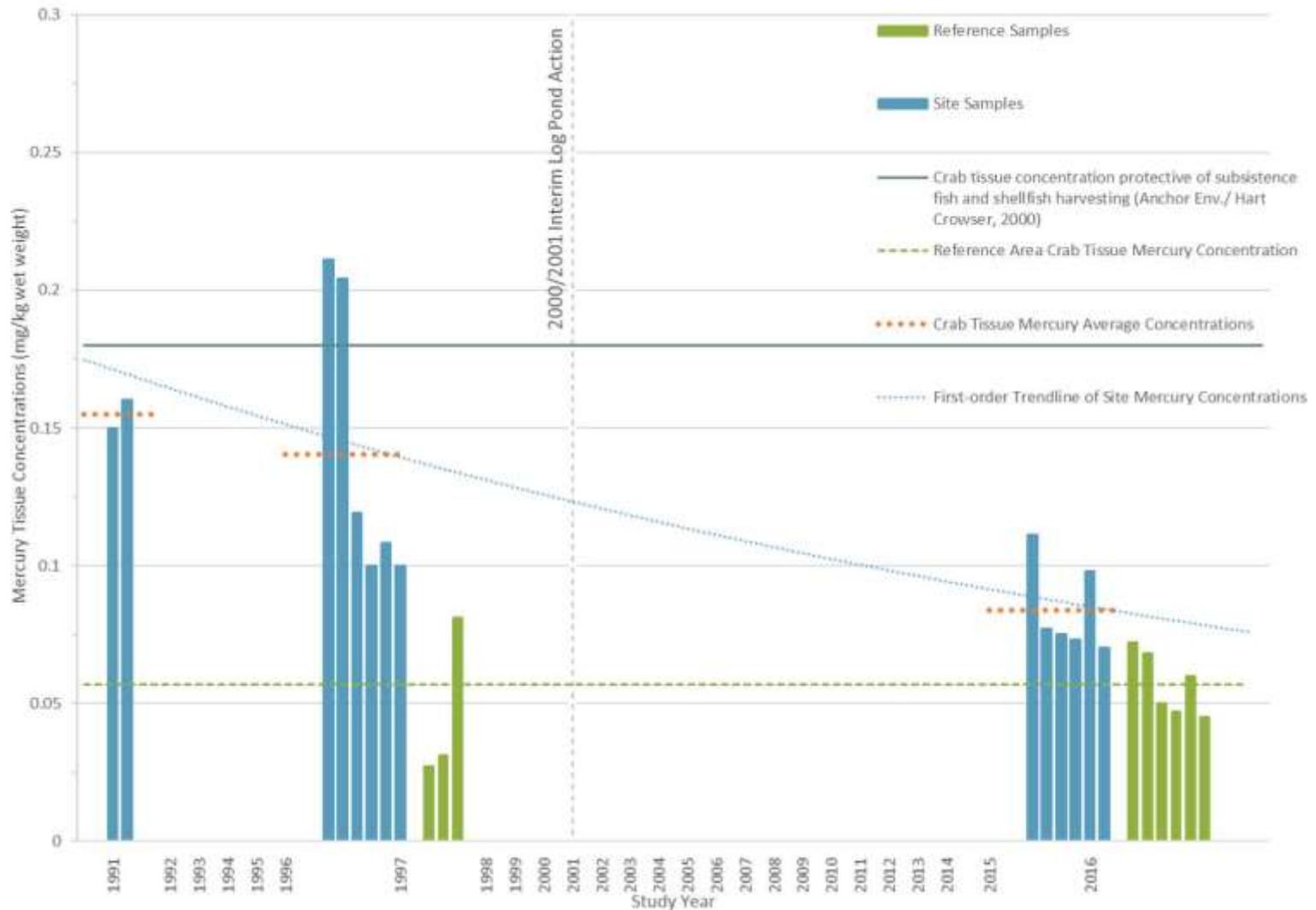
- Pre-Construction
 - Significant shoreline debris
 - Shoreline erosion
 - Derelict creosote piles/structure
- Post-Construction
 - Stabilized shoreline
 - Piles/structure removed
 - Additional cap material placed



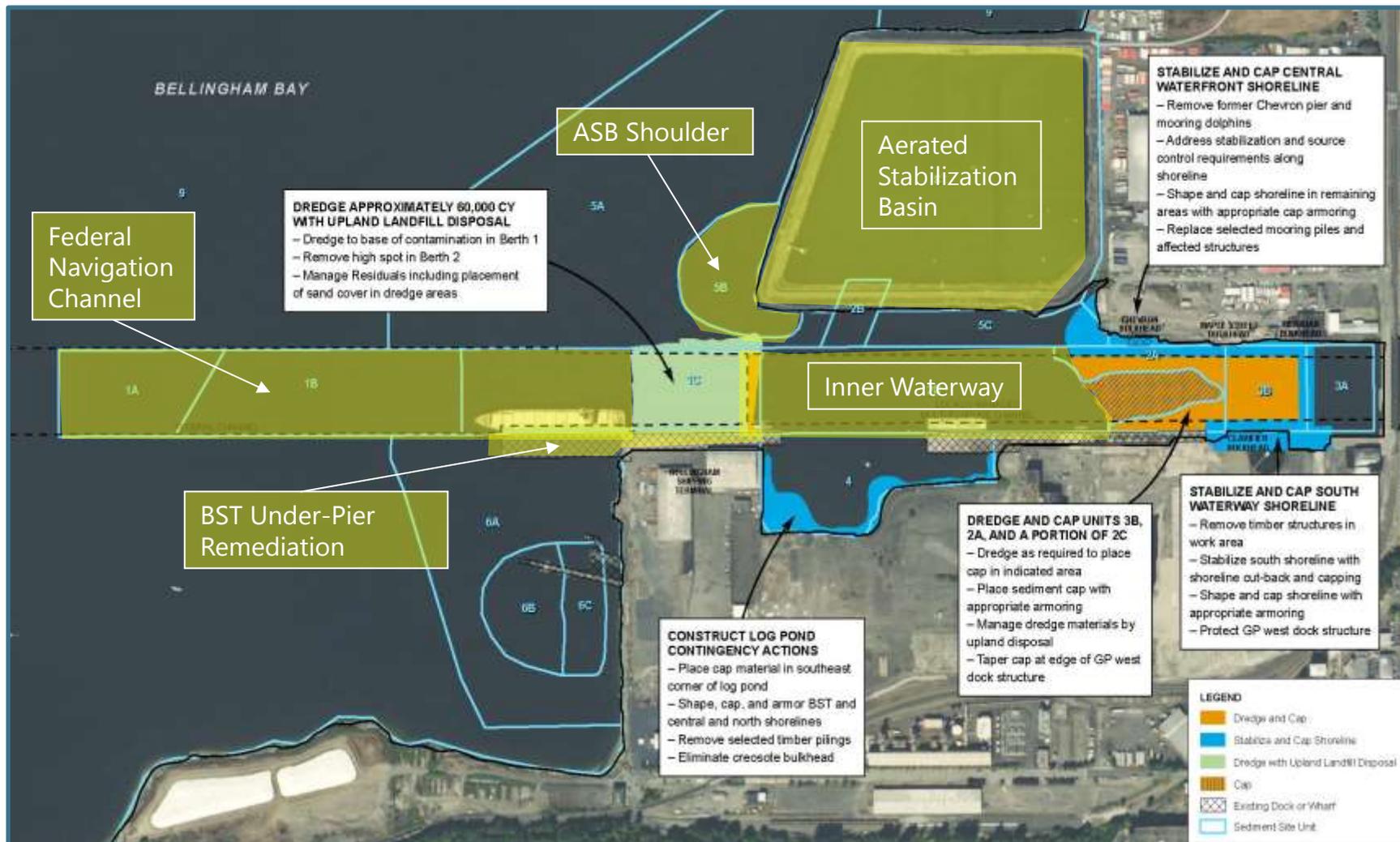
Phase 1 Construction Results (cont.)

- Full contamination removal from Bellingham Shipping Terminal (BST)
 - Post-dredge sampling did not require contingency re-dredging
- Engineered sediment caps proving effective
- Shoreline improvements supporting local land uses
- Ongoing decrease in mercury concentrations in crab tissue

Phase 1 Construction Results (cont.)



Phase 2 Remediation Overview



Phase 2 Remediation Overview (cont.)

- Material Volumes by Area (approximate)
 - Dredging
 - Aerated Stabilization Bank (ASB) = 310,000 cy
 - Federal Navigation Channel = 166,000 cy
 - BST Under-Pier Area = 9,400 cy
 - ASB Shoulder = 21,600 cy
 - Capping
 - Inner Waterway Sediment Cap = 76,000 cy
 - Dredge Residuals Management
 - Federal Navigation Channel = 25,000 – 35,000 cy

Phase 2 Land Use Planning

- Whatcom Waterway
 - Mixed industrial and recreational
 - Vessel maintenance and public access
 - Maintain operational elevation -18 feet mean lower low water within waterway



Phase 2 Land Use Planning

- BST
 - Deeper draft vessel bulk loading/unloading
 - Federal Navigation Channel considerations and maintenance



Phase 2 Land Use Planning (cont.)

- ASB
 - Previous consideration for marina development
 - Port considering other options



Next Steps

- Port of Bellingham to finalize future land use planning decisions
- Washington Department of Ecology coordination for Consent Decree Amendments (as necessary)
- Concept planning
- Pre-Remedial Design Investigation
- Remedial Design/Permitting/Construction
- Schedule
 - Begin agency coordination process in 2019
 - Design/permitting/construction TBD

Questions?

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