

BATTELLE 2023 SEDIMENTS CONFERENCE

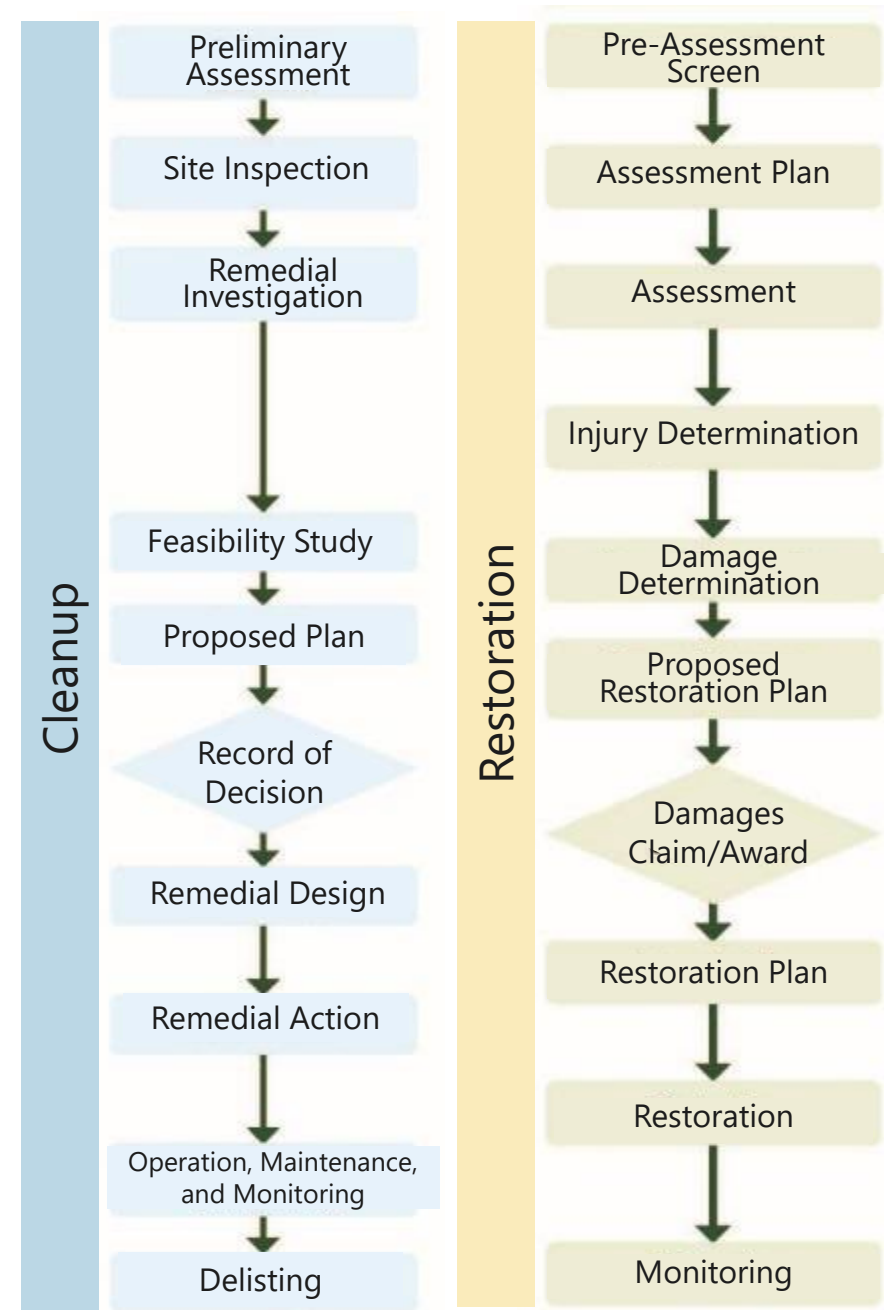
Integration of Cleanup and Restoration: Successful Puget Sound Case Studies

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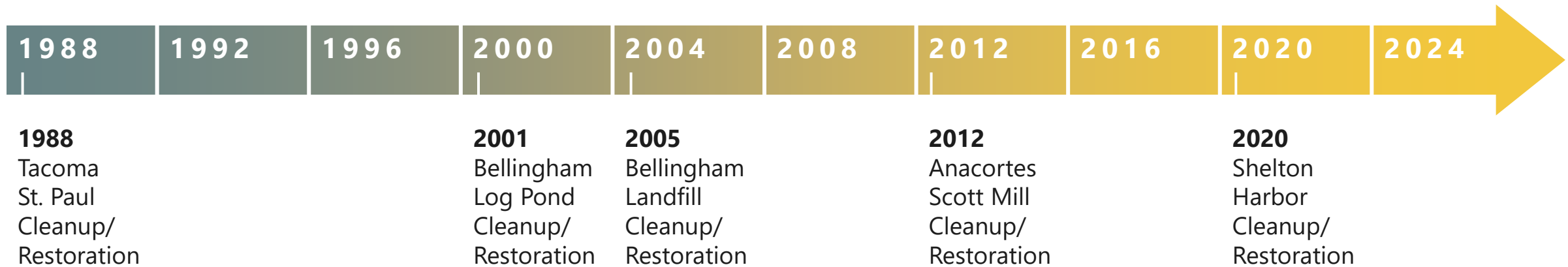
Cleanup and Restoration Processes

- Two seemingly similar processes with potential integration efficiencies
- Different regulatory programs, leadership, and stakeholders
- Many efforts to integrate cleanup and restoration in the past 35 years

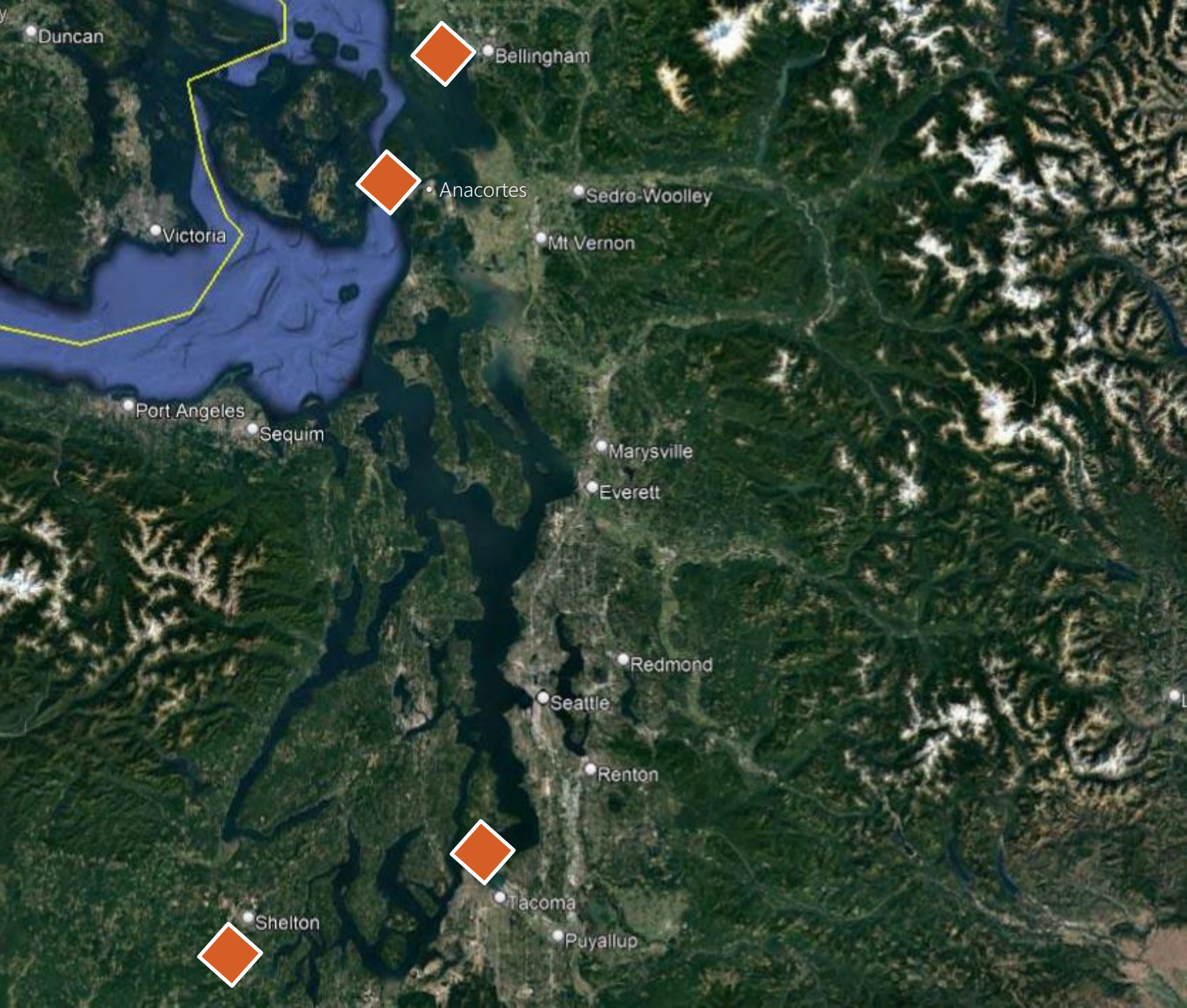


Puget Sound Cleanup/Restoration Integration

- Many cleanup/restoration integration efforts have fallen short, but five integration efforts were widely viewed as successful:

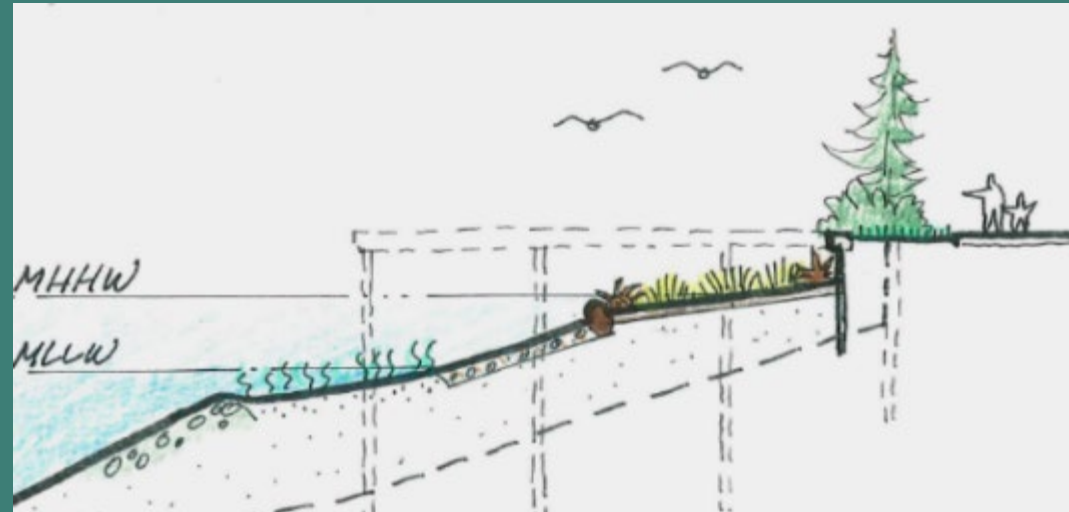


Successful Puget Sound Cleanup and Restoration Integration Sites



CHALLENGE

What have we learned from successful cleanup and restoration integration?



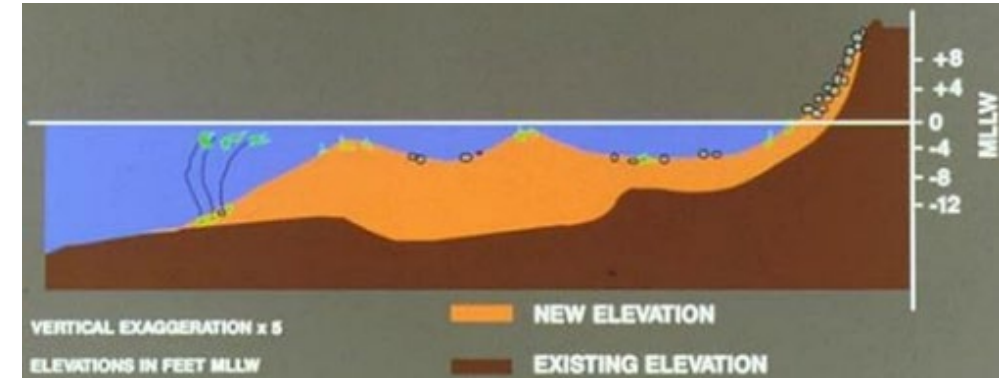
Tacoma St. Paul Waterway

- Part of Commencement Bay
Nearshore/Tideflats Superfund Site
 - First sediment cleanup megasite in United States
- St. Regis/Champion/Simpson mill facility
- Accelerated cleanup and restoration actions prior to Superfund decisions; concurrent with site redevelopment
- Extensive stakeholder involvement
 - National Audubon Society, Sierra Club, and Puyallup Tribe
 - Opportunity to restore priority intertidal habitats



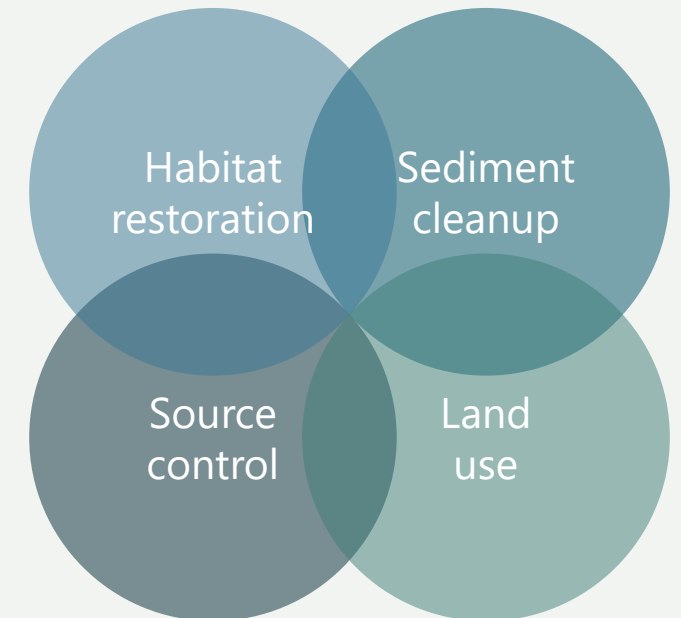
Tacoma St. Paul Waterway

- 1988 integrated clean navigation dredging and cap/restoration construction
- 2-foot-thick sediment cleanup cap; up to 20 feet placed to restore intertidal habitat
- Cobbles and boulders placed for long-term stability and habitat diversity
- 15-year detailed post-construction monitoring and adaptive management
- All cleanup/restoration criteria achieved
- Cleanup/NRD closure with Consent Decrees



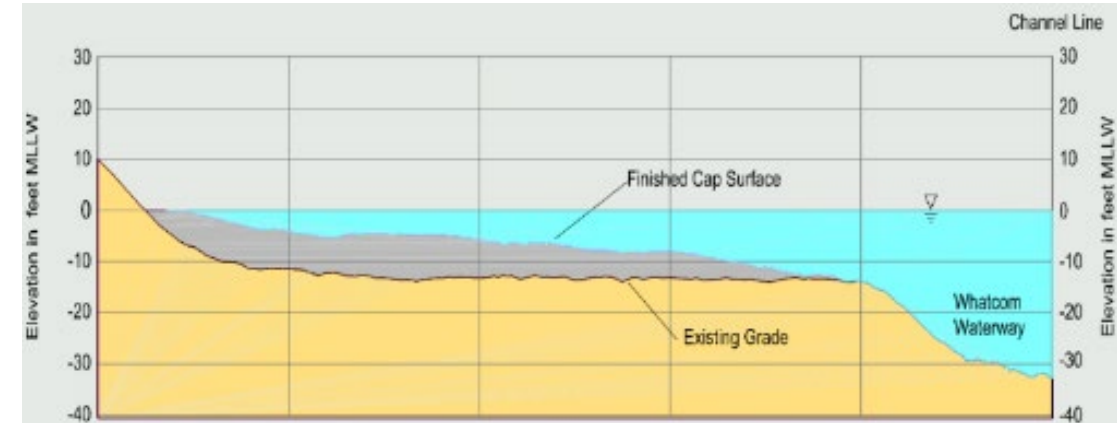
Bellingham Bay Pilot Project

- 1996 Cooperative Sediment Management Program Pilot Demonstration Project
 - Potential alternative to traditional processes
 - Cooperative approach between 14 federal, state, local, and tribal entities
- Integrated habitat restoration, sediment cleanup, land use, and source control
 - Comprehensive Strategy EIS
 - Cleanup Consent Decrees/informal NRD resolution
 - Two Whatcom Creek Waterway case studies



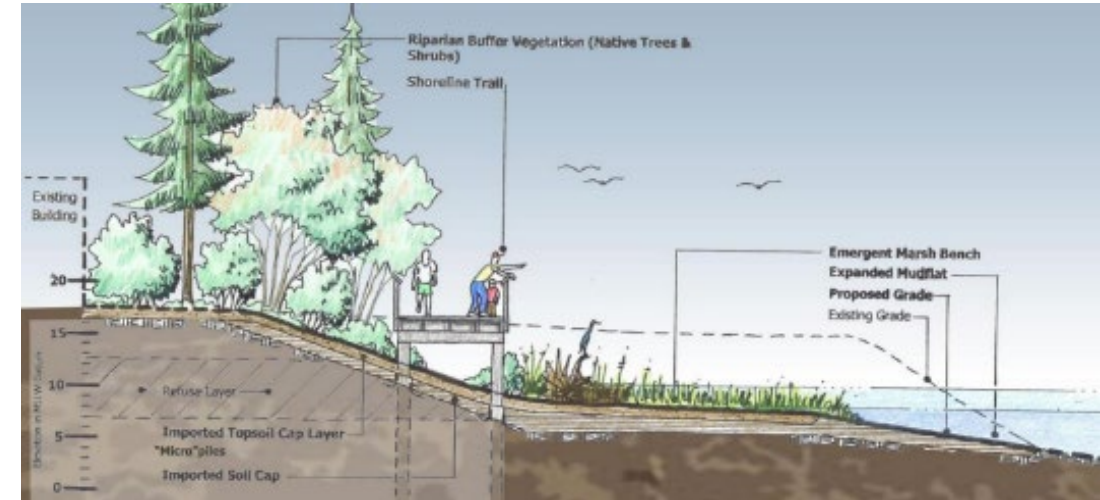
Whatcom Waterway Log Pond

- Highest mercury levels in Bellingham Bay
- 2001 integrated clean navigation dredging and cap/restoration construction
- 3-foot-thick sediment cleanup cap; up to 10 feet placed to restore intertidal habitat
- 10-year postconstruction monitoring and adaptive management
- Achieved cleanup and restoration criteria
 - Eelgrass meadow development and salmon/forage fish recovery



Whatcom Creek Landfill

- Contaminated seepage from historical shoreline landfills; intertidal habitat restoration opportunity in salmon estuary
- 2005 integrated cleanup (removal and capping), restoration, and public park redevelopment
- 10-year postconstruction monitoring and adaptive management
- All cleanup/restoration criteria achieved
- Salmon and forage fish recovery



Anacortes Scott Mill

- Regional priority cleanup/restoration site
- Contaminated sediments colocated with extensive wood and other debris
- 2010 to 2012 integrated cleanup (removal and capping), restoration, and public park/marina redevelopment
- 10-year postconstruction monitoring
- All cleanup/restoration criteria achieved
 - Eelgrass meadow development
- Cleanup/NRD closure (Consent Decree)



Shelton Harbor

- Regional priority cleanup/restoration site
- One of few watersheds in Puget Sound with increasing salmon runs (2000 dam removal)
 - Opportunity to restore salt marsh habitat in salmon migration corridor to improve recovery
- Cooperative stakeholder group
 - Aligned interests around habitat restoration
- 2017 to 2020 integrated cleanup (capping) and salt marsh restoration construction
- Cleanup Order/informal NRD resolution



Cooperative Projects Have Multiple Benefits

- Process and implementation efficiencies
- Cost-effective, with opportunities to leverage private and public funding
- Simpler processes are more successful, especially for NRD



Integrated Cleanup and Restoration

- Stakeholder coordination worth effort
- Win-win alignment on habitat restoration
- Priority habitats can be restored in working waterfronts and can also provide long-term protective cleanup remedies



THANK YOU



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